LUFTHANSA GROUP

Annual Report 2022

WE GROW.
WE SHAPE.
WE LEAD.



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The Lufthansa Group

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

XLS

T001 KEY FIGURES LUFTHANSA GROUP

		2022	2021	Change in %
Revenue and result				
Total revenue	€m	32,770	16,811	95
of which traffic revenue	€m	25,846	11,876	118
Operating expenses [1]	€m	33,662	20,090	68
Adjusted EBITDA [1,2]	€m	3,786	593	538
Adjusted EBIT [1,2]	€m	1,509	-1,666	
EBIT	€m	1,231	-2,316	
Net profit/loss	€m	791	-2,191	
Key balance sheet and cash flow statement figures				
Total assets	€m	43,335	42,538	2
Equity ratio	%	19.6	10.6	9.0 pts
Net indebtedness	€m	6,871	9,023	-24
Pension provisions	€m	2,069	6,676	-69
Operating cash flow [1]	€m	5,168	399	1,195
Capital expenditure (net)	€m	2,286	1,119	104
Adjusted free cash flow [1,2]	€m	2,526	-1,049	
Key profitability and value creation figures				
Adjusted EBITDA margin [1,2]	%	11.6	3.5	8.1 pts
Adjusted EBIT margin [1,2]	%	4.6	-9.9	14.5 pts
EBIT margin	%	3.8	-13.8	17.6 pts
Adjusted ROCE [1,2]	%	7.3	-7.4	14.7 pts
Lufthansa share				
Share price at year-end	€	7.77	6.18	26
Earnings per share	€	0.66	-2.99	
Dividend proposal	€	–	–	
Traffic figures and environmental data				
Flights	number	826,379	460,029	80
Passengers	thousands	101,774	46,949	117
Available seat-kilometres	millions	259,381	145,139	79
Revenue seat-kilometres	millions	207,035	89,397	132
Passenger load factor	%	79.8	61.6	18.2 pts
Available cargo tonne-kilometres	millions	14,194	11,867	20
Revenue cargo tonne-kilometres	millions	8,562	8,477	1
Cargo load factor	%	60.3	71.4	-11.1 pts
Specific CO_2 emissions	grammes	90.0	101.6	-11
Employees				
Employees as of 31 Dec	number	109,509	105,290	4
Average number of employees	number	106,889	107,643	-1

[1] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**
[2] Derivation ↗ **Financial strategy and value-based management, p. 22ff., Financial performance, p. 40ff.**

Date of publication: 3 March 2023.

Business segments

Passenger Airlines

T002 PASSENGER AIRLINES		2022	Change in %
Revenue	€m	22,760	148
of which traffic revenue	€m	20,687	171
Adjusted EBIT	€m	-300	91
Adjusted EBIT margin	%	-1.3	34.9 pts
Adjusted ROCE	%	-2.8	22.6 pts
Segment capital expenditure	€m	2,032	94
Employees as of 31 Dec	number	56,762	0

The Passenger Airlines segment comprises Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic.

MRO

T004 MRO		2022	Change in %
Revenue	€m	5,550	39
of which external revenue	€m	4,004	28
Adjusted EBIT	€m	511	41
Adjusted EBIT margin	%	9.2	0.2 pts
Adjusted ROCE	%	10.4	2.0 pts
Segment capital expenditure	€m	99	4
Employees as of 31 Dec	number	20,411	-1

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, operators of VIP jets and governments, as well as airlines.

Logistics

T003 LOGISTICS		2022	Change in %
Revenue	€m	4,627	22
of which traffic revenue	€m	4,430	22
Adjusted EBIT	€m	1,600	7
Adjusted EBIT margin	%	34.6	-4.7 pts
Adjusted ROCE	%	54.2	2.4 pts
Segment capital expenditure	€m	254	55
Employees as of 31 Dec	number	4,085	-2

In addition to Lufthansa Cargo AG, 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 investment in the cargo airline AeroLogic.

Catering

T005 CATERING		2022	Change in %
Revenue	€m	1,960	76
of which external revenue	€m	1,903	75
Adjusted EBIT	€m	-11	
Adjusted EBIT margin	%	-0.6	-3.4 pts
Adjusted ROCE	%	-1.6	-5.0 pts
Segment capital expenditure	€m	40	74
Employees as of 31 Dec	number	20,218	29

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.

The Executive Board
Deutsche Lufthansa AG

From left:

Michael Niggemann, Human Resources & Infrastructure, Labor Director
Born in 1974, lawyer,
Executive Board member since 2020,
with the Lufthansa Group since 2007

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

Christina Foerster, Brand & Sustainability
Born in 1971, MBA,
Executive Board member since 2020,
with the Lufthansa Group since 2002

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

Detlef Kayser, Fleet & Technology
Born in 1965, aerospace engineer,
Executive Board member since 2019,
with the Lufthansa Group since 2016

Harry Hohmeister, Global Markets & Network
Born in 1964, diploma in commercial air transport,
Executive Board member since 2013,
with the Lufthansa Group since 1985

Letter from the Executive Board

Carsten Spohr,
Chairman of the Executive Board

Ladies and gentlemen, dear shareholders,

The Lufthansa Group put the coronavirus pandemic behind it in the 2022 financial year. The recovery in demand was far stronger and unfolded far more rapidly than industry experts had anticipated at the start of the year, prompting us to significantly expand our capacities again. Overall, in the past year we once again welcomed more than 100 million passengers on board our aircraft.

Nevertheless 2022 was a challenging year. The start of the year was still impacted by the spread of the Omicron coronavirus variant. However, shortly thereafter demand picked up enormously and capacities were expanded so strongly within the span of a few months that the global air traffic system was at times overstretched during the summer months. This was mainly attributable to personnel shortages affecting airports, ground handling service providers, air traffic control and airlines. In addition, the war in Ukraine caused a significant rise in fuel prices.

The Lufthansa Group has nonetheless returned to positive earnings. We adjusted our forecast upwardly on several occasions over the course of the year. At EUR 1.5bn, Adjusted EBIT in the 2022 financial year was ultimately much better than initially expected. Group revenue amounted to around EUR 33bn and almost doubled year-on-year.

All of our core business segments contributed to this encouraging result. Lufthansa Cargo and Lufthansa Technik both achieved record results. Lufthansa Cargo's development was shaped by continuing strong demand for airfreight capacities and high yields. Lufthansa Technik benefited from the strong demand for maintenance and repair services in the context of the recovery of the global industry. The Lufthansa Group's passenger airlines significantly reduced their operating loss by comparison with the previous year, while SWISS and Austrian Airlines achieved an operating profit again. Due to the strong recovery in demand, we significantly increased yields.

The implementation of our restructuring programme helped to mitigate the effects of the high level of inflation. The measures realised to date have generated annual savings of EUR 3.2bn.

Due to the profit achieved, the strong booking figures and improvements in working capital management, Adjusted free cash flow reached a figure of EUR 2.5bn in the 2022 financial year – a new record for the Group. We were therefore able to significantly reduce our debt. With a volume of EUR 6.9bn, we have almost returned to the pre-crisis level of 2019. The pension deficit has also narrowed significantly on account of the rising interest rates.

The great progress made in strengthening our balance sheet meant that we were able to successfully end the government stabilisation measures which had been initiated due to the coronavirus crisis. The Economic Stabilisation Fund sold its remaining shares in Deutsche Lufthansa AG in mid-September, while we had already repaid all of the loans and participations provided by the German government at the end of 2021. The last repayable stabilisation funding in Switzerland, Austria and Belgium was redeemed by the end of 2022.

The Lufthansa Group is now looking to the future. We aim to make further progress towards the realisation of our medium-term targets in the 2023 financial year. Altogether we are expecting significant increases in revenue and earnings.

The motto of our annual report reflects our goal and our ambition:

WE GROW. WE SHAPE. WE LEAD.

We are growing again. With our capacity for innovation, we are shaping the future of our industry. And we are therefore further expanding our position as Europe's leading airline group.

Our employees are the key to this. It is they who make the difference relative to our competitors. Our passengers notice this every day, on board our aircraft and on the ground. The "We" principle is at the heart of everything we do, for it is only by working together that we will achieve our ambitious targets. We are therefore committed to a fair relationship with one another based on partnership, and to remaining an attractive employer. We attach great importance to offering our employees attractive prospects, since we aim to recruit and retain the best employees.

After the painful years of the pandemic, we are now back on our course of growth. Following the long period of constraints in their lives, people now have an even greater desire to travel. We assume that the economic recovery is set to continue in our passenger business in particular and that we will be able to continue to significantly expand our flight offer. To enable our envisaged growth, we have just launched one of the largest recruitment campaigns in the Company's history and are hiring a large number of new colleagues in product-related and service-oriented fields in particular. We will thus be able to systematically exploit market opportunities.

With the development of innovative products and services, we intend to fulfil our premium product promise and once again set standards in our industry. We have already taken the first few key steps in this direction. We have presented some of the details of our product and quality campaign. This year we will begin to introduce our new high-end Allegris product for all travel classes on long-haul routes. The renewal of around 30,000 seats is an unprecedented event in the Group's history. The Boeing 787 "Dreamliner" will be one of the first aircraft types to feature this product. We only recently welcomed this modern and efficient aircraft type to our fleet. Overall in 2023, we will take delivery of more than 30 new short- and long-haul aircraft.

We also aim to live up to our leading role in the industry in the area of corporate responsibility. We have set ourselves ambitious climate protection goals and aim to achieve a neutral carbon footprint by 2050. By 2030, we intend to already halve our net carbon emissions relative to their 2019 level. The Lufthansa Group is following a clearly defined reduction pathway here which has been successfully validated by the Science Based Targets initiative (SBTi). Fleet modernisation and increased use of sustainable fuels will contribute in particular to this goal. We are working closely with various partners in the fields of research and industry in order to promote their development.

We are pleased that you are accompanying us on our journey. And we look forward to welcoming you on board our aircraft again.

Frankfurt, February 2023

Carsten Spohr
Chairman of the Executive Board

Report of the Supervisory Board

Karl-Ludwig Kley,
Chairman of the Supervisory Board

Ladies and gentlemen, dear shareholders,

2022 was a year of great contrasts for our Lufthansa Group. Economically speaking it was a successful year. But we were not satisfied with our operational performance.

The start of the year was still impacted by the pandemic and the spread of the Omicron variant. When travel became possible again for many people at Easter, their desire to fly was revealed to be as great as ever. Strong demand, in combination with record results in the Logistics and MRO segments, led to a significant earnings improvement compared with prior years. Substantial increases in earnings and cash flow enabled us to repay the loans and silent participations from the Economic Stabilisation Fund (ESF) back in 2021. And when the ESF sold its remaining Lufthansa shares on 13 September 2022, the stabilisation measures in Germany ended completely in the reporting year. The repayable stabilisation funding was also repaid in full in Belgium, Austria and Switzerland in 2022. We are now able to develop our businesses without restrictions again.

However, operational stability caused us great concern in 2022. The Executive Board took remedial action over the course of the year, so the situation gradually improved in the second half-year. For many employees of the Lufthansa Group, 2022 was a year at the limits of their capacity. The Supervisory Board would like to thank the Executive Board and all of the Group's employees for their work. Their hard work paid off. However, there is still a great deal left to do to ensure that the positive trend from 2022 continues unbroken throughout this year.

In the 2022 financial year, the Supervisory Board oversaw the work of the Executive Board members and advised them. 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 provided regular reports on the Company's economic position and on the operational challenges in this financial year. Throughout the year, the Executive Board provided the Supervisory Board with regular reports on the current course of business. 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 Chairman of the Executive Board and other members of the Executive Board on an ongoing basis.

In 2022, the Supervisory Board held a total of five meetings. 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 and its committees 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. In particular, the tough operational situation, the impact of Russia's invasion of Ukraine, the competitive environment and sustainability issues were discussed on an ongoing basis.

At its meeting on 9 May 2022, the Supervisory Board approved the acquisition of seven Boeing 787-9 long-haul aircraft including a replacement engine, three Boeing 777 cargo aircraft (777F) and seven Boeing 777-8F cargo aircraft including a replacement engine. At the same meeting, the Supervisory Board also approved the extension of two 777F leases for a period of 84 months.

At its extraordinary meeting held on 6 July 2022, the Supervisory Board considered in particular the tough operational situation at the Passenger Airlines as a result of the build-up of flight delays and cancellations. The situation has since stabilised noticeably.

The meeting of 23 September 2022 – which was held in Zurich and thus at a Group company location for the first time since the coronavirus pandemic – considered the Group's strategic development and discussed this 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 2022.

Moreover, on 8 December 2022 the Supervisory Board approved the 2023 budget and the medium-term financial planning for 2024 to 2026 and authorised investments in order to upgrade 17 Airbus A350-900s and twelve Boeing 777-300s with the future cabin product generation. At this meeting the Supervisory Board also discussed reports on ESG (environmental, social & governance) issues, risk management including Internal Control Systems, cybersecurity and compliance.

Exercising their right as agreed with the ESF to attend meetings of the Supervisory Board of Deutsche Lufthansa AG, Annette Olschinka-Rettig, Head of Department for Equity Investments and ESF at Bundesrepublik Deutschland – Finanzagentur GmbH or her deputy Michael Haas joined the Supervisory Board's meetings of 2 March, 9 May and 6 July 2022 as well as the meetings of the Audit Committee held on 24 February, 28 April and 28 July 2022. Following the German government's sale of its remaining Lufthansa shares on 13 September 2022, the ESF's right to attend meetings of the Supervisory Board and its committees has now expired.

Executive Board remuneration

At its meeting held on 2 March 2022, in the context of the equity interest still held by the German government at this time and the remuneration restrictions thus applicable under the framework agreement with the Economic Stabilisation Fund (ESF) the Supervisory Board resolved once again to cancel the commitment to pay Executive Board members an annual bonus and long-term variable remuneration for the 2022 financial year. At the same time, the Supervisory Board set concrete targets for the Executive Board members in the context of the Company's management as in the previous year, both for the 2022 financial year and for the current four-year period up to and including 2025. In view of the challenges, in deviation from the remuneration system approved by the 2020 Annual General Meeting for the year 2022 these targets are based on operating cash flow and net debt (instead of the Adjusted EBIT margin and Adjusted ROCE). In line with the remuneration system, the Adjusted ROCE over the four-year period and the relative total shareholder return by comparison with DAX companies were the key criteria for the long-term target. The remuneration system approved by the Annual General Meeting will therefore once again be temporarily suspended for the 2022 financial year.

Following full repayment of the stabilisation funding in Germany in 2021 and the ESF's sale of its remaining equity interest in Deutsche Lufthansa AG in September, the conditions imposed by the ESF – including a ban on payment of variable remuneration to the Executive Board – no longer apply. In the context of the stabilisation of the Company's economic situation, at its meeting held on 8 December 2022 the Supervisory Board therefore decided to return to the Executive Board remuneration system approved by the Annual General

Meeting and to once again provide incentives for the Executive Board via the achievement of financial and non-financial targets. In this context, the Supervisory Board agreed that the members of the Executive Board are to receive long-term remuneration for the 2021 to 2024 assessment period as well as one-year and long-term variable remuneration for the 2022 assessment period and for the 2022 to 2025 assessment period respectively. The targets already specified by the Supervisory Board during the period of the stabilisation funding, at the start of the assessment period in question, apply. ↗ **Remuneration report, p. 280ff.**

Also at its meeting held in December 2022, on the recommendation of the Steering Committee the Supervisory Board resolved adjustments to the remuneration system for the members of the Executive Board which had been approved by the 2020 Annual General Meeting. Among other changes, the weighting of the sustainability targets for one-year (STI) and long-term variable remuneration (LTI) was increased to 20% in each case (previously 15% in each case), in order to reflect the growing significance of ESG issues. Moreover, in future 40% of the STI will be based on Adjusted EBIT (previously: 42.5% Adjusted EBIT margin) and 40% on Adjusted free cash flow (previously: 42.5% Adjusted ROCE), as absolute figures, in order to provide growth incentives and reflect the importance of liquidity management (including investing activities). In addition, in future 30% of the LTI will be calculated according to the relative total shareholder return by comparison with a leading airline industry index (previously: 42.5%, and by comparison with the DAX), while 50% will be calculated on the basis of the Adjusted ROCE (previously: 42.5%). ↗ **Remuneration report, p. 280ff.** The Supervisory Board also considered the appropriateness of the Executive Board's remuneration in this context. Executive Board remuneration was moreover reviewed in light of the Company's situation and was confirmed as appropriate. The new system will be put to the vote at the 2023 Annual General Meeting.

Reappointments to the Executive Board

At its meeting held on 2 March 2022, the Supervisory Board reappointed Christina Foerster as a member of the Executive Board of Deutsche Lufthansa AG, responsible for the "Brand & Sustainability" portfolio, and Michael Niggemann as a member of the Executive Board, responsible for the "Human Resources & Infrastructure" portfolio, in each case as of 1 January 2023 for a five-year term expiring 31 December 2027.

No changes to the Supervisory Board

No changes were made to the membership of the Supervisory Board of Deutsche Lufthansa AG or its committees in the 2022 financial year.

Attendance at meetings

Overall, the Supervisory Board members had an attendance rate of 99% for all meetings of the committees and the Supervisory Board in 2022. 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.

The meetings of the Supervisory Board and its committees are generally held as in-person meetings, with the possibility of video conferencing. With the exception of the Steering Committee meetings of 23 May 2022 and 1 November 2022 which were held as video conferences, all of the meetings of the Supervisory Board of Deutsche Lufthansa AG and its committees were held in person.

T006 INDIVIDUAL ATTENDANCE RATES 2022

	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		5/5		100%
Jörg Cebulla	5/5		5/5		100%
Erich Clementi	5/5				100%
Thomas Enders	5/5	6/6		1/1	100%
Jürgen Jennerke	5/5				100%
Michael Kerkloh	5/5		5/5		100%
Carsten Knobel	5/5		5/5		100%
Holger Benjamin Koch	4/5				80%
Harald Krüger	5/5		5/5	1/1	100%
Birgit Rohleder	5/5				100%
Miriam Sapiro	5/5				100%
Ilja Schulz	5/5	6/6			100%
Britta Seeger	5/5				100%
Birgit Spineux	5/5				100%
Astrid Stange	5/5				100%
Olivia Stelz	5/5				100%
Angela Titzrath	5/5				100%
Klaus Winkler	5/5		5/5		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). **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 this year using a detailed questionnaire. The work of the Supervisory Board was found to be carried out at a consistently high level overall. In addition, the members of the Supervisory Board and of the Audit Committee especially attended several training events offered by the Company in the past financial year. The topics covered by these events included, in particular, a training course for the members of the Audit Committee on the EU Taxonomy and two events for the members of the Supervisory Board concerning Lufthansa Cargo on 1 March 2022 and the customer and brand relationship on 22 September 2022. Two training events held on 9 May and 7 December 2022 focused on IT and digitalisation.

In September 2022, the Supervisory Board and the Executive Board issued an updated declaration of compliance with the German Corporate Governance Code. Furthermore, in September we adjusted the requirements profile for the Supervisory Board in view of the changes to the German Corporate Governance Code published in June 2022. We made a further adjustment to the Supervisory Board's requirements profile in December. In accordance with the recommendation provided in the 2022 German Corporate Governance Code, the Supervisory Board drew up a qualifications matrix for its members and approved this at its meeting held on 2 March 2023. **www.lufthansagroup.com/corporate_governance_declaration.** No conflicts of interest were disclosed in the 2022 financial year.

Work of the committees

In the 2022 financial year, the Supervisory Board 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 the chart ↗ C01 Supervisory Board Committees.

The Steering Committee met six times in 2022. As in previous financial years, the Steering Committee prepared the Supervisory Board meetings and considered the course of business in detail. At its meeting held on 23 May 2022, the Executive Board therefore notified the Steering Committee in detail of the impending submission of a non-binding offer to acquire a stake in ITA Airways. The Steering Committee also considered all of the issues relating to the remuneration received by the Executive Board. It discussed proposals for the adjustment of the Executive Board's remuneration at its meetings of 1 November and 30 November 2022. The Steering Committee also made recommendations to the full Supervisory Board on all personnel decisions concerning the Executive Board.

In 2022, the Nomination Committee met once and the Audit Committee met five times, always in the presence of the auditors. As an independent financial expert in line with the requirements of the German Stock Corporation Act and the German Corporate Governance Code, the Chair of the Audit Committee has particular knowledge and experience in the field of accounting, including international control procedures, and in relation to sustainability reporting. The Audit Committee discussed the annual financial statements for 2021 and the interim reports for 2022 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.

C01 SUPERVISORY BOARD COMMITTEES

as of 31 Dec 2022

Steering Committee	Audit Committee	Nomination Committee	Arbitration Committee in accordance with Section 27 Paragraph 3 Co-determination Act (MitbestG)
Karl-Ludwig Kley, Chairman	**Harald Krüger,** Chairman	**Karl-Ludwig Kley,** Chairman	**Karl-Ludwig Kley,** Chairman
Christine Behle, Deputy Chairwoman	**Alexander Behrens**	**Thomas Enders**	**Christine Behle,** Deputy Chairwoman
Thomas Enders	**Jörg Cebulla**	**Harald Krüger**	**Thomas Enders**
Ilja Schulz	**Michael Kerkloh**		**Ilja Schulz**
	Carsten Knobel		
	Klaus Winkler		
Six meetings in 2022	Five meetings in 2022	One meeting in 2022	No meetings in 2022

They also discussed in detail the 2023 budget and the Group operational planning for 2024 to 2026, 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, Eschborn, Germany. ↗ **Combined non-financial declaration, p. 93ff.**

The Arbitration Committee was not convened in the reporting period.

At its meeting of 8 December 2022, the Supervisory Board resolved to establish an ESG Committee with effect as of 1 January 2023. The purpose of this ESG Committee is to advise the Supervisory Board, its committees and the Executive Board on issues of sustainable corporate governance and the Company's business activities in ESG areas. The internal regulations for the Supervisory Board and the Audit Committee were adjusted in this context and in view of the provisions of the German Corporate Governance Code which were published in June 2022. Also at its meeting of 8 December 2022, the Supervisory Board elected Erich Clementi, Benjamin Koch, Ilja Schulz and Angela Titzrath as members of the ESG Committee and Erich Clementi as the Chairman of this committee. **www.lufthansagroup.com/corporate_governance_declaration.**

Audit and adoption of the annual financial statements as of 31 December 2022, 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 2022 Annual General Meeting, 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 2022 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 2023, 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 2023, 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 2022 annual financial statements of Deutsche Lufthansa AG as prepared by the Executive Board have thereby been adopted. We agree with the Executive Board's proposal to balance the net loss according to the German Commercial Code (HGB) for the 2022 financial year by means of a transfer from the capital reserve and not to pay a dividend.

Our economic success in the 2022 financial year makes us optimistic. With it, we have established a strong basis to cope with the current challenges and lead the Lufthansa Group towards a successful future.

Frankfurt, 2 March 2023

Karl-Ludwig Kley

For the Supervisory Board
Karl-Ludwig Kley, Vorsitzender

Lufthansa share

Lufthansa share price rises over the course of the year by 26%. | Share outperforms the market and principal competitors. | Number of shareholders remains on a high level.

Lufthansa share performs significantly better than the market

Based on a 2021 year-end price of EUR 6.18, the price of the Lufthansa share significantly outperformed the market as a whole in 2022. The share performance was also better than that of competitors.

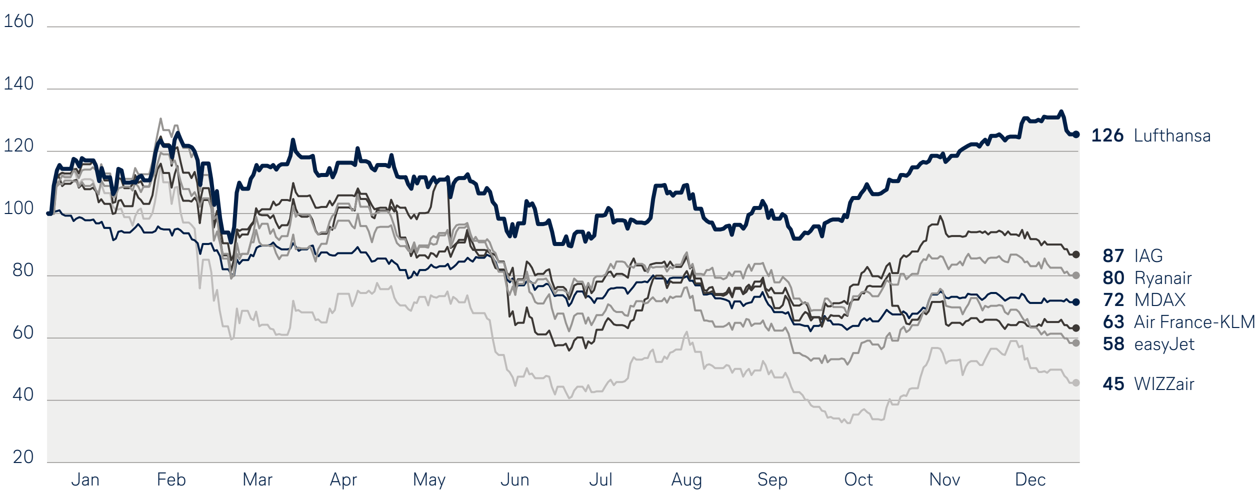
Driven by expectations that demand would start to recover from the spread of the Omicron variant in the previous months, the share price climbed to EUR 7.81 between the start of the year and mid-February 2022. Thereafter, the share price fell to EUR 5.51 on 6 July 2022, particularly due to the outbreak of the war in Ukraine and the resulting increase in the oil price, increasing concerns about the economy in connection with the sharp rise in inflation, and operational disruptions in the European air traffic system. The share price then recovered significantly around the time the Lufthansa Group published its half-year results, before falling back amid concerns that the strong rise in living expenses could depress consumer confidence and thus demand for flights. The share price rose again significantly at year-end, however. This reflected expectations that resurgent demand and the increase in yields would continue after the summer, despite an economic slowdown. Its performance was supported by another increase in the earnings forecast for the reporting year. The share price went up as a result to EUR 8.23 on 27 December 2022. The closing price at year-end 2022 was EUR 7.77. The share price therefore increased by 26% over the course of the 2022 financial year.

C02 **PERFORMANCE OF THE LUFTHANSA SHARE**

indexed as of 31 Dec 2021, compared with the MDAX and competitors, in %

LUFTHANSA'S SHARE PRICE AS OF 31 DEC 2022

7.77 €



The Lufthansa share thus performed significantly better than shares in the main competitors IAG and Air France-KLM, which fell by 13% and 37% respectively. Shares in European low-cost carriers also performed worse than the Lufthansa share. The WIZZair share suffered particularly from the effects of the war in Ukraine, as the airline has a regional focus on eastern Europe and had decided not to hedge its fuel expenses, a decision it has since revoked. As a result its share price fell by 55% over the course of 2022. The MDAX index fell by 28% over the same period.

T007 THE LUFTHANSA SHARE: KEY FIGURES

		2022	2021	2020	2019	2018
Year-end share price[1]	€	7.77	6.18	7.72	11.71	14.06
Highest share price[1]	€	8.23	9.12	11.90	16.78	22.05
Lowest share price[1]	€	5.51	5.36	5.03	9.17	12.35
Number of shares	millions	1,195.5	1,195.5	597.7	478.2	475.2
Market capitalisation (at year-end)	€bn	9.3	7.4	6.5	7.8	9.4
Earnings per share	€	0.66	-2.99	-12.51	2.55	4.58
Dividend per share	€	–	–	–	–	0.80
Dividend yield (gross)	%	–	–	–	–	4.1
Dividend payout	€m	–	–	–	–	380
Total shareholder return	%	25.7	-20.0	-34.1	-12.6	-33.3

[1] Share prices 2018 – 2020 adjusted for the effects of the issuance of new shares in connection with the capital increase in September 2021.

Intention is to resume dividend payments

With the end of the stabilisation measures from the Economic Stabilisation Fund (ESF), the legal restrictions for dividend payments imposed as a condition for the stabilisation have been lifted. The Lufthansa Group stands by its dividend strategy and, provided that the corresponding economic recovery materialises in line with forecasts, intends to let shareholders share directly in its profits again from the 2023 financial year onwards. ↗ **Financial strategy and value-based management, p. 22ff.**

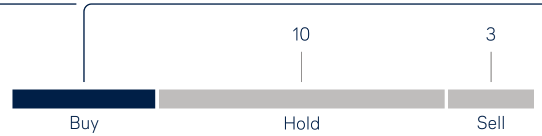
Balanced spread of analyst recommendations

At year-end, of the 18 equity analysts tracking the Company, five recommended buying the share, ten recommended holding it, and three selling it. While analysts positively underlined the operating recovery in the course of 2022, the ongoing strength of Lufthansa Cargo and the successful strengthening of its balance sheet in particular, they see the slower recovery of business travel and a potential slow-down in the airfreight market as potential risks for the share performance. The average target price at year-end 2022 was EUR 8.18 with a range of EUR 5.25 to EUR 10.00.

C03 ANALYSTS' RECOMMENDATIONS[1]

as of 31 Dec 2022

BUY
5



[1] Average target price: EUR 8.18, average of 18 analysts.
Range: EUR 5.25 to EUR 10.00.

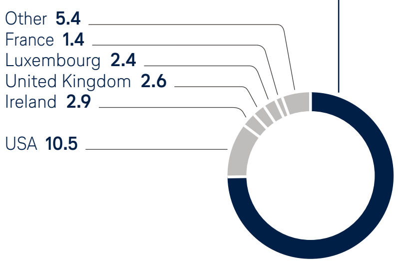
Share of German investors in the Company remains high, despite changes in the shareholder structure

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.

C04 SHAREHOLDER STRUCTURE BY NATIONALITY

as of 31 Dec 2022 in %

GERMANY
74.8



Free float: 85%

At the end of 2022, the shareholders' register showed that German investors held 74.8% of the shares (previous year: 87.8%). The sale of the ESF equity interest was partially offset by the investment from Kühne Aviation GmbH. The second largest group, with 10.5%, was shareholders from the USA. Investors from Ireland accounted for 2.9% of share capital. They were followed by the United Kingdom with 2.6%, Luxembourg with 2.4% and France with 1.4%. This ensured that the conditions of the German Aviation Compliance Documentation Act (LuftNaSiG) were met.

On the basis of the voting rights notification received, Kühne Aviation GmbH was the biggest shareholder at year-end 2022 with 15.01%, followed by BlackRock, Inc. with 3.19%.

According to the definition of Deutsche Börse, 85% of Lufthansa shares were in free float. As of the reporting date 49% (previous year: 49%) of the shares were held by institutional investors and 51% by private individuals (previous year: 51%). The number of shareholders remained very high by historical standards. It fell slightly from 639,000 at year-end 2021 to 635,000 at year-end 2022. 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 2022 are also available there.

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 5.4%. With market capitalisation of EUR 7.9bn, adjusted for the free float, the Lufthansa Group came in at number 38 (previous year: 48) in the ranking of DAX companies (including DAX 40) published by Deutsche Börse at year-end. The average daily XETRA trading volume of the share in 2022 was 7,564,664 shares (previous year: 7,119,436).

T008 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 Sustainabilty, EURO STOXX Sustainability, FTSE4Good Europe

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.

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, 12,593,861 ADRs were in circulation (31 December 2021: 13,267,656). 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 previous years, the Lufthansa Group again provided its shareholders with timely, comprehensive information in the 2022 financial year. In addition to the quarterly conferences, the Executive Board and Investor Relations team held many roadshows and investor conferences to inform institutional investors about current developments at the Group in 2022. Most of the events took place face to face again this year for the first time since the start of the coronavirus pandemic. In addition, the Supervisory Board Chair met investors in the context of a roadshow in early 2022, mainly to discuss corporate governance topics and the Company’s steps to reduce its emissions. In-depth discussions were also held with investors in debt instruments, especially in the context of financing activities. ↗ **Financing, p. 46f.**

In May 2022, the Group met with more than 2,300 shareholders who attended the Annual General Meeting, which was held exclusively online. This was significantly more than the number of visitors to the physical Annual General Meetings in the years before the coronavirus pandemic. Questions that shareholders had submitted in advance were answered in writing by shareholder services on the Company website before the Annual General Meeting took place. Any follow-up questions were answered via video by the Supervisory Board and Executive Board during the event. There was also an opportunity to send in audio and video messages prior to the meeting.

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.

COMBINED MANAGEMENT REPORT

To the extent that the combined management report refers to sources other than the combined management report or the consolidated financial statements (e.g. internet sites), the contents of these sources are not part of the combined management report and are solely for informational purposes. The references made in the combined management report are not necessarily an integral part of the combined management report.

Principles of the Group

Business activities and Group structure

Lufthansa Group is a leading European airline group. | Its portfolio of companies consists of Passenger Airlines and Aviation Services. | A six-member Executive Board manages the Group.

Lufthansa Group is a leading European airline group

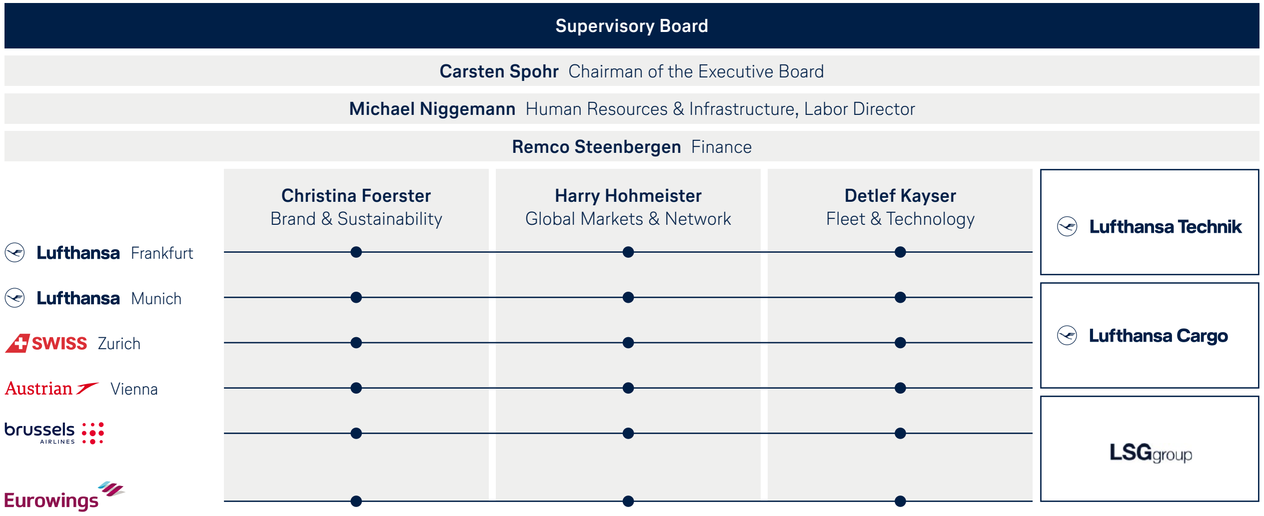
The Lufthansa Group is an aviation company with operations worldwide. It plays a leading role in its European home market.

The Passenger Airlines segment includes, on the one hand, the network airlines Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines. As part of the multi-hub strategy, they offer their passengers a broad range of flights from their global hubs in Frankfurt, Munich and Zurich as well as their national hubs in Vienna and Brussels. Lufthansa German Airlines also includes the regional airlines Lufthansa CityLine, Air Dolomiti and Eurowings Discover, the Lufthansa Group's holiday airline.

Besides the network airlines, Eurowings also belongs to the Passenger Airlines segment. This airline provides a comprehensive range of point-to-point connections for European short-haul destinations, in particular from German-speaking countries.

The financial reporting was changed at the beginning of the 2022 financial year to bring all of Lufthansa Group Passenger Airlines together in a single segment. This encompasses the Network Airlines and Eurowings business segments which were previously reported separately. ↗ **Notes to the segment reporting, p. 228ff.**

C05 **LUFTHANSA GROUP STRUCTURE**



Besides its Passenger Airlines business segment, the Lufthansa Group also comprises aviation services. This includes the Logistics, MRO and Catering segments in particular.

The Lufthansa Group also includes the Additional Businesses and Group Functions. These comprise Lufthansa AirPlus, Lufthansa Aviation Training and Lufthansa Systems especially.

The business segments and airlines of the Lufthansa Group are each under their own management. The Group strategy is defined and its implementation managed 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. ↗ **Business segments, p. 52ff.**

Six-member Executive Board manages Deutsche Lufthansa AG

The Executive Board of Deutsche Lufthansa AG has six members. The division of responsibilities for the Executive Board was adjusted with effect from 1 July 2022.

Carsten Spohr is the Chairman of the Executive Board of Deutsche Lufthansa AG.

Christina Foerster is responsible for the “Brand & Sustainability” portfolio. On 2 March 2022, the contract with Christina Foerster was extended ahead of schedule for a five-year period ending 31 December 2027.

Harry Hohmeister is responsible for the “Global Markets & Network” portfolio.

Detlef Kayser heads up the “Fleet & Technology” portfolio.

Michael Niggemann is in charge of the “Human Resources & Infrastructure” portfolio and is the Labor Director. On 2 March 2022, the contract with Michael Niggemann was extended ahead of schedule for a five-year period ending 31 December 2027.

Remco Steenbergen manages the “Finance” portfolio.

The Executive Board functions of Christina Foerster, Harry Hohmeister and Detlef Kayser have functional responsibility for certain cross-airline processes to realise synergies and coordinate the activities of Group airlines.

Strategies and goals

The Lufthansa Group's market position as a leading European airline group is to be strengthened by means of an accelerated transformation. | Airlines form the core of the Lufthansa Group. | Focus on consistent alignment with customer needs, innovation and digitalisation as well as value-oriented management. | Sustainability and corporate responsibility are an established part of the Group strategy.

GROUP STRATEGY

C06 MISSION STATEMENT OF LUFTHANSA GROUP

Position as leading European airline group

The Lufthansa Group is one of the biggest airlines worldwide and a 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 its 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 customer-friendliness and sustainability. 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.

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 service promises, connecting Europe with the world. The passenger airline business is supplemented by Aviation Services that have synergies with the airlines. The Group's structure – with activities throughout the airline value chain – enables the maximisation of synergies between segments, while at the same time promoting the scaling of Aviation Services' business from external markets. The aim is to continue strengthening the role of the airlines in the portfolio of business segments over the long term. ↗ **Business segments, p. 52ff.**

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

As a result of the coronavirus crisis and the war in Ukraine especially, the aviation sector is characterised by a dynamic market and competitive environment. Exogenous sources of uncertainty, resource bottlenecks, evolving customer requirements and shifts in the value chain necessitate change, but also offer opportunities. These include significantly shorter advance booking periods than before the coronavirus pandemic, a significant increase in the take-up of sustainable products and data-based optimisation of aircraft maintenance.

The Lufthansa Group actively used the coronavirus crisis to accelerate its process of transformation and establish a good starting position in order to succeed in the future market environment. For example, the complexity was reduced by simplifying the base and AOC structure – including by ending the flight operations of SunExpress Deutschland and passenger flight operations at Germanwings. Economies of scale will thus be realised consistently and flight operations with competitive structures and a good operating performance will be scaled up.

The Group's strategy envisages continuous transformation and modernisation of the Lufthansa Group in order to be prepared for a changed, highly dynamic geopolitical environment with significant impacts, including for supply and value chains as well as the supply of raw materials, and to be optimally positioned in the event of a high level of market volatility. The goal is to consistently act upon opportunities arising due to trends and market changes. Services, business models and organisational structures are to be continuously aligned with the complex and dynamic market environment. 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. In particular, a further increase in its customer orientation, accelerating innovation and digitalisation, corporate responsibility and sustainability, modern forms of work organisation and value-based management will ensure that the Lufthansa Group is ready for the future.

Within this long-term strategic framework, the Lufthansa Group has tactical areas of focus in line with specific internal and external requirements. For instance, one area it is focusing on in the short term is enhancing its attractiveness as an employer, both on external labour markets and in terms of internal development opportunities for talent.

In addition, the aim is to cut structural costs continuously in order to mitigate or fully compensate for the effects of inflation-related increases. So efficiency improvements in technical fleet management are being sought by pooling the fleet's engines across the Group in future, for example, in order to maximise their useful lives and better coordinate maintenance. The productivity of aircraft and crews is to be boosted by reducing the number of aircraft types in the long-haul fleet and permanent optimisation of operating processes and the route network. Efforts are also being made to turn fixed into variable costs, in order to minimise the effects of inflation-related cost increases, seasonality and slumps in demand.

Customers are at the heart of things, fulfilling the premium claim is a key area of action

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. Customers and their individual needs and wishes are at the heart of things. With the targeted ongoing development of the product portfolio, an increasingly individualised choice of selectable product components, an improved travel experience on the ground and on board, an interactive and personal dialogue, solution-oriented and accessible customer service and rapid digital solutions throughout the travel chain, customers are acknowledged as individuals and receive tailored solutions. The entire travel experience is intended to be individual, flexible and intuitive. The Lufthansa Group's ambition is to serve its customers as an attentive host and a contact who is reachable at any time and to offer them a hassle-free and sustainable range of services. It thus aims to forge long-term relationships with them.

In future, these goals will be achieved by means of an integrated product approach. Passengers will experience a holistically linked range of physical products, such as seating and lounges, attentive service from employees both on board and on the ground and digital travel solutions. The journey to achieve this vision encompasses three different levels of improvements and additions to the product range.

First of all, following the end of the coronavirus pandemic the company will once again flawlessly deliver on its promise as a premium provider, at every point of contact throughout the travel chain. The focus here is, in particular, on areas which are highly relevant for customers, which influence repeat purchases and which thus ensure value generation for the Lufthansa Group. Examples include ensuring stable, reliable flight operations, improvements to customer service, thanks to enhanced accessibility of company call centres, expanded digital service channels such as the chatbot and an upgraded catering offering.

In addition, the product range will be widened in line with customers' expectations. Specifically, this means a wider choice of individually selectable relevant product components as well as an improved travel experience on board and on the ground, in the premium segment in particular. For instance, through its refit with Allegris product generation seating, Lufthansa German Airlines will offer a new travel experience in every class on long-haul routes. SWISS is also investing in this premium product, with new seats in every class on its long-haul fleets. In future, even more customers of the Lufthansa Group's Passenger Airlines will have on-board Wi-Fi, thus enabling them to make use of new service options in the expanded in-flight entertainment system in addition to surfing and communication. The automation of customer services is also being further expanded. For instance, the digital customer portal enables customers to access all relevant information and resolve issues quickly and easily thanks to new, interactive self-service options. Digital customer services also strengthen the ability of the Lufthansa Group's Passenger Airlines to fulfil their role as hosts on the ground and on board.

Finally, customer loyalty and personal interaction are to have a special status. In this context, the Lufthansa Group is expanding its existing, somewhat transactional concept of customer loyalty and will in future demonstrate greater individual appreciation for every passenger. Its loyalty program will be upgraded with a wider choice of exclusive travel experiences and partner networks for Miles & More status customers and further dedicated offerings for customers who only fly a few times each year. For example, the use of sustainable travel solutions will be rewarded with additional miles or other benefits. In addition, the introduction of a travel ID which recognises customers at every point of contact, no matter which airline they are flying on, will make it possible to match services and offerings with the personal needs of Lufthansa Group Airlines passengers.

Overall, these measures will enable the Lufthansa Group to offer its customers a unique product experience and thus significantly differentiate itself from the competition.

Lufthansa Group to focus increasingly on sustainability and social responsibility

Responsibility is the foundation of business activities in the Lufthansa 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 and partners in the value chain responsibly and fairly.
↗ **Combined non-financial declaration, p. 93ff.**

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 sets itself specific efficiency targets for reducing carbon emissions in its core business segment that are line with the Paris Agreement and have been validated by the internationally recognised Science Based Targets initiative (SBTi) supported by the UN.

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 Lufthansa Group also works with policymakers and partners in industry, technology and research to promote the industrialisation and use of sustainable fuels. In addition, intermodal traffic is being systematically further expanded in all of its home markets.

The Lufthansa Group also includes sustainability aspects as a key factor in the design of its products and services. Through Compensaid and Squake, the Lufthansa Group offers passengers with the Group's own airlines and also those travelling with other airlines the option of reducing CO_2 emissions by purchasing sustainable fuels (SAF) or offsetting them through high-quality climate protection projects. Business trips made by Lufthansa Group's employees are also offset. In its product and service development, the Lufthansa Group applies the principle of Reduce – Recycle – Reuse – Replace to avoid waste. Here the aim is to replace disposable plastic and aluminium products with environmentally friendly products wherever possible. The focus 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. The Lufthansa Group is thus seeking to further improve on its already good position as an employer within the aviation industry as a whole. At the same time, large German companies serve as a benchmark. For instance, the Lufthansa Group offers its employees an extensive range of opportunities for their professional and personal development, thus contributing to employee satisfaction and safeguarding jobs. Diversity and equal opportunity are a matter of course.

In terms of social responsibility, the Company promotes greater equality of opportunity for disadvantaged people worldwide via the financial and personell 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 inclusion in the remuneration of the Executive Board members and the management levels and by the audited disclosures in the combined non-financial declaration. The Lufthansa Group also actively supports the measurement by relevant international ESG ratings, such as MSCI, Sustainalytics, CDP and ecovadis, to ensure transparency about activities and progress at all times. As well as the non-financial declaration which is required by law, the Lufthansa Group also reports according to TCFD and SASB standards, in order to meet its stakeholders' various needs.

Dialogue with the Company's stakeholders is also a component of sustainable corporate governance. This continuous exchange gives the Lufthansa Group an 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 continuing to be developed 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 which is attuned to the needs of their local markets 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 continuous 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. Conversely, since 2022 additional state-of-the-art long-haul aircraft like the Airbus A350-900 and Boeing 787-9 technology have strengthened the Lufthansa Group fleet.
↗ **Fleet, p. 26ff.**

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 supplements and strengthens the tourism portfolio of the Lufthansa Group with a range of short-, medium- and long-haul routes. Passengers are thus able to benefit from the wide feeder network and the established ground processes of Lufthansa Group Network Airlines. The global distribution strength of Lufthansa Group Airlines is also exploited.

Cooperation with partner airlines is becoming more important, in order to strengthen market presence in key traffic regions. The Lufthansa Group's successful joint ventures are therefore being developed and partnerships expanded in all key markets. The range of intermodal transport solutions that are seamlessly integrated into the travel chain is also being extended. The Lufthansa Group is also seeking to play an active role in the consolidation of the airline industry, in line with its strategic and financial goals.

Aviation Services to be aligned with market needs
With its Aviation Services, the Lufthansa Group has several companies that are global leaders in their respective sectors. In order to secure and build on their successful positioning, Aviation Services are permanently adapting their business models to changing market conditions and competitive environments. Lufthansa Cargo is increasingly participating in international eCommerce shipments through the use of the pure freight version of the medium-haul aircraft A321. The Company is moreover modernising and expanding its cargo centre in Frankfurt, in order to participate in the growing airfreight market. To improve its range of products and services, Lufthansa Technik is making increased use of data-based, digital solutions, focusing its portfolio on higher-margin segments such as medical goods and utilising attractive growth potential.

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 remaining 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 are currently being explored for Lufthansa Technik, 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 need for coordination, the organisational structure and governance processes of the Lufthansa Group are being continuously developed and adjusted in line with current requirements. The aim of the development is to achieve lean, flexible and efficient structures as well as quicker decision-making processes. These changes are being accompanied by an expansion of agile and cross-functional work methods. This also aims to support cultural change and promote a flexible and enterprise-based mentality.

FINANCIAL STRATEGY AND VALUE-BASED MANAGEMENT

C07 FINANCIAL STRATEGY

Sustainable increase of Company value

	Increased value creation	Generation of strong free cash flows	Maintain financial stability
Focus	— Improved return on capital — Improved profitability — Continuous reduction of environmental impacts	— Increase in operating result — Working capital management — Focused investing activities	— Adequate liquidity — Reduction in net indebtedness — Return to investment grade rating — Minimisation of financial risks
Targets	— Adjusted ROCE — Adjusted EBIT margin[1] — Specific CO_2 emissions	— Adjusted free cash flow[1]	— 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: increasing value creation, generating strong free cash flows and maintaining financial stability. The successful implementation of the financial strategy aims to further strengthen the Lufthansa Group balance sheet so that the Group can invest in future profitable growth and successfully overcome crises.

Finance Transformation Programme is intended to deliver improvements in the area of finance

The Lufthansa Group has successfully coped with the immediate impacts of the coronavirus crisis. Its financial management is thus now able to once again focus on the ongoing structural development of the Group's finance function. The Finance Transformation Programme was initiated in the reporting year in order to further improve the Lufthansa Group's finance function and thus support the Company's competitiveness and success.

The cornerstones of this programme are the review and improvement of financial steering, increased efficiency, the ongoing development of talent and employees as well as the modernisation of the finance IT landscape.

Increased 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 definition of Adjusted ROCE was revised in the 2022 financial year. The capital base is now 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 Lufthansa Group has set itself the objective of generating an Adjusted ROCE of at least 10% from 2024.

The Company's profitability is measured by Adjusted EBIT and the Adjusted EBIT margin, i.e. the ratio of Adjusted EBIT to revenue. 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. These include gains and losses on the disposal of assets and impairment losses, reversals of impairment losses and earnings attributable to other periods in connection with pension obligations. Since the 2022 financial year, these adjustments have also included staff-related restructuring expenses and non-operating extraordinary expenses for legal procedures and company transactions. This change was made to ensure greater comparability with the reporting of other companies in the industry and to increase the transparency of non-recurring items. In the reporting year, the expenses for valuation allowances, depreciation and amortisation and impending compensation payments that were directly caused by the war in Ukraine, as well as impairment losses on goodwill in the Catering segment, are the key issues that were excluded from the Adjusted EBIT calculation. ↗ **T021 Reconciliation of results, p. 43.**

From 2024, the Lufthansa Group will seek to achieve an Adjusted EBIT margin of at least 8%. ↗ **Forecast, p. 149ff.**

T009 **CALCULATION OF ADJUSTED ROCE**

in €m	2022	2021	Change in %
Revenue	32,770	16,811	95
Other operating income	2,547	1,711	49
Operating income	**35,317**	**18,522**	**91**
Operating expenses	34,085	20,840	64
Result from equity investments	−1	2	
EBIT	**1,231**	**−2,316**	
Adjusted EBIT	**1,509**	**−1,666**	
Taxes (assumption 25% of EBIT)	−308	579	
ROCE[1] in %	**5.9**	**−10.3**	**16.2 pts**
Adjusted ROCE[2] in %	**7.3**	**−7.4**	**14.7 pts**
Balance sheet total	43,335	42,538	2
Non-interest bearing liabilities			
of which liabilities from unused flight documents	4,898	3,340	47
of which trade payables, other financial liabilities, other provisions	6,189	5,136	21
of which advance payments, deferred income, other non-financial liabilities	3,407	3,287	4
of which others	5,605	6,894	−19
of which liquid funds	8,301	7,666	
Capital employed	14,935	16,215	−8
Average capital employed	**15,574**	**16,927**	**−8**
WACC in %	7.2	4.2	3.0 pts

[1] (EBIT – 25% taxes)/Average capital employed.
[2] (Adjusted EBIT – 25% taxes)/Average capital employed.

Finally, the Lufthansa Group incorporates the specific CO_2 emissions into its management system to lower the associated costs of reducing environmental impacts and to enable sustainable value creation. Management remuneration is also aligned with this goal. Progress made in reducing emissions also influences funding terms. The revolving line of credit concluded in April 2022 with a volume of EUR 2.0bn also takes the specific CO_2 emissions into consideration. Achievement of the envisaged reduction path or a failure to do so would result in a lower or higher interest rate in the reporting year in question. Information about the long-term goals for reducing carbon emissions can be found in the ↗ **Combined non-financial report/Climate protection, p. 99ff.**

The Company's value creation was positive again in the 2022 financial year. The Adjusted ROCE after tax was 7.3% (previous year: −7.4%), while the WACC rose by 3.0 percentage points year-on-year to 7.2% (previous year: 4.2%). Adjusted EBIT amounted to EUR 1,509m in the 2022 financial year (previous year: EUR −1,666m). The Adjusted EBIT margin was therefore 4.6% (previous year: −9.9%). ↗ **Earnings position, p. 40ff.** Specific CO_2 emissions per passenger-kilometre were 90.0 grammes in 2022, 11% lower than in the previous year (previous year: 101.6 grammes). ↗ **Combined non-financial declaration/Climate protection, p. 99ff.**

Restructuring forms basis for Lufthansa Group's return to profitable and sustainable growth

The Lufthansa Group has now almost completed its Group-wide restructuring and transformation programme. The programme has allowed the Company to align itself with the changes in the market environment created by the crisis. The modifications it made to the cost structures, particularly the reduction in fixed costs, reflected the lower market volumes and created the conditions for its return to a positive operating result.

Structural cost savings of EUR 3.5bn per year are to be achieved as a result of the restructuring by 2024. This includes measures to reduce staff costs with a volume of around EUR 1.4bn as well as further measures which are intended to achieve a permanent improvement in productivity, with a volume of roughly EUR 2.1bn. The latter include measures designed to reduce the level of organisational and operational complexity and to standardise and modernise the Group fleet.

By the end of the 2022 financial year, more than 90% of the measures had already been implemented and the cost base had thus been structurally reduced by around EUR 3.2bn per year. ↗ **Business segments, p. 52ff.**

Generation of strong free cash flows

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

The Company's net debt rose during the coronavirus pandemic. Thanks to strict liquidity management and successful financing measures, including the capital increase carried out in October 2021, the stabilisation measures were repaid in full, significantly earlier than originally planned. The generation of strong free cash flows is essential in order to further reduce debt and to safeguard the Company's long-term investment capability. In addition to increasing the operating result, the key levers for this are strict working capital management and focused investing activities. Through this, the Lufthansa Group plans to generate significantly positive Adjusted free cash flow in 2023 and 2024.

The definition of Adjusted free cash flow was amended in the 2022 financial year so that cash inflows and outflows from the sale and acquisition of companies or individual business units which are allocated to investing activities are no longer recognised. Moreover, since the 2022 financial year all cash flows that are related to pensions – including allocations to the pension funds and dividends paid out of them – have been shown as part of operating cash flow.

In the 2022 financial year, Adjusted free cash flow benefited in particular from the strong increase in bookings and related advance payments as well as improvements to working capital. It thus reached a record level of EUR 2,526m (previous year: EUR −1,049m). ↗ Financial position, p. 44ff.

Improvements in working capital management support cash flow generation

Working capital management is to be further intensified. Targeted measures such as strict receivables management, improving payment terms with suppliers, improvements to procurement processes and maintenance of inventories, in particular at Lufthansa Technik, are additional areas of optimisation. Free cash flow also plays a major role for managers' variable remuneration and in the performance dialogues with the business entities. The organisation is continuously made aware of its influence on Company value and incentives are established to increase the level of free cash flow.

Focused investing activities to maximise return on capital employed

The Lufthansa Group is making extensive investments in the modernisation of its fleet, on-board and ground products as well as infrastructure in order to ensure profitable long-term growth. However, the net investments should not exceed the value of the depreciation and amortisation at least up to and including 2024, thus within the period of the medium-term planning presented in the summer of 2021.

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. Greater use of leasing is intended to increase the level of flexibility for long-term fleet planning and to limit the use of capital. In the medium term, this will take the proportion of leasing above its current level of around 10%.

Following the strong reduction in investment spending due to the coronavirus pandemic, the Lufthansa Group significantly increased its volume of investment in the reporting year. The investment volume remained significantly lower than its pre-crisis level in 2019. However, compared with the previous year, net capital expenditure rose by 104% to EUR 2,286m (previous year: EUR 1,119m). Advance and final payments for aircraft and aircraft components along with aircraft and engine overhauls account for most of this. ↗ C14 Primary, secondary and financial investments, p. 44.

Now that the coronavirus crisis has been overcome, the goal is to resume dividend payments

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 crisis, the Lufthansa Group's dividend policy was to distribute to shareholders 20% to 40% of net profit, adjusted for non-recurring gains and losses. One condition for the payment of a dividend is that a distribution of the relevant amount is permitted by the net profit for the year as shown in the individual financial statements of Deutsche Lufthansa AG that are drawn up under German commercial law. For the 2023 financial year, the Group intends to return to its original dividend policy, provided that the economic recovery continues as forecast for the 2023 financial year.

Maintaining financial stability

Liquidity should be between EUR 8bn and EUR 10bn in future

The Lufthansa Group has decided to hold liquid funds of between EUR 8bn and EUR 10bn in future to protect against possible crises. The minimum liquidity level was increased again in view of the significant expansion of business activity. For capital efficiency reasons, part of the strategic liquidity reserve is held in the form of a revolving line of credit. An appropriate line of credit with a volume of EUR 2.0bn was agreed with a broad consortium of international banks in April 2022, replacing non-utilised bilateral lines of credit with a volume of around EUR 0.7bn. The Lufthansa Group's available liquidity thus increased by around EUR 1.3bn. At the end of the reporting year, it amounted to EUR 10.4bn (previous year: EUR 9.4bn). ↗ Financial position, p. 44ff.

Lufthansa Group benefits from good capital market access

The Lufthansa Group successfully refinanced itself on the capital market in the 2022 financial year. A total of EUR 786m of debt was raised through the issue of two borrower's note loans and by means of aircraft finance and other external financing. Together with the cash inflows from operating business, expiring liabilities were thus refinanced and the remaining stabilisation funds in Switzerland, Austria and Belgium were paid back early and in full. ↗ Financing, p. 46f.

Further reduction of debt as the core goal of financial strategy

The long-term financial strategy continues to focus on reducing the level of gearing. The generation of strong free cash flows in particular is intended to help reduce the volume of net debt. Income from the sale of business units which are to be sold off in whole or in part for strategic reasons may also potentially contribute to a reduction in the volume of debt.

At the end of the 2022 financial year, net indebtedness was EUR 6,871m. It was therefore 24% lower than the previous year (previous year: EUR 9,023m) and only slightly higher than the pre-crisis level at year-end 2019 (EUR 6,662m). ↗ Net assets, p. 48f.

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 funding mix should reduce financing costs, maintain a balanced maturity profile and diversify the Lufthansa Group's portfolio of creditors. In principle, newly raised funds should be subject to fixed interest rates. The volume of floating-rate liabilities should not exceed the volume of funds invested at a floating interest rate. Net debt is thus subject to a fixed interest rate and market-wide interest-rate changes do not have any material impact on the Group's interest burden. ↗ C17 Maturity profile of borrowings, p. 46.

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 "Baa3"). As a result of the coronavirus crisis and its impact, both agencies downgraded their ratings. However, in late November 2022 Standard & Poor's raised its rating to BB with a positive outlook. Moody's has given the Lufthansa Group a "Ba2" rating and raised its outlook to "stable" in early December 2022. Scope Ratings graded the Lufthansa Group at "BBB–" and therefore still in the investment grade range. Moreover, in July 2022 Scope Ratings raised its outlook to "stable".

T010 DEVELOPMENT OF RATINGS

Rating/outlook	**2022**	2021	2020	2019	2018
Standard & Poor's	BB/ positive	BB–/ stable	BB–/ negative	BBB/ stable	BBB–/ positive
Moody's	Ba2/ stable	Ba2/ negative	Ba2/ negative	Baa3/ stable	Baa3/ stable
Scope Ratings	BBB–/ stable	BBB–/ negative	BBB–/ negative	BBB/ stable	BBB–/ positive

The Group aims to restore its investment grade rating with all of the significant rating agencies. Investment grade ratings for the Company's debt ensure good access to the capital markets and low funding costs and thus financial flexibility. Conditions for an investment grade rating are further improvement in the operating result and a reduction of debt, among other things.

Gearing, measured by the ratio of Adjusted net debt to Adjusted EBITDA, should be limited to a figure of less than 3.5. With Adjusted net debt, the ratio takes into account both net indebtedness (including the financial obligations arising from Group leases, primarily for property and aircraft) and net pension obligations. Due to the market-wide increase in interest-rate levels in the reporting year, these decreased significantly to EUR 2.0bn (previous year: EUR 6.5bn).

In late 2022, the ratio of Adjusted net debt/Adjusted EBITDA was 2.3 (previous year: 25.8).

T011 ADJUSTED NET DEBT/ADJUSTED EBITDA

	2022 in €m	2021 in €m	Change in %
Net indebtedness[1]	6,624	8,776	-25
Net pension obligations	1,993	6,540	-70
Adjusted net debt	**8,617**	**15,316**	**-44**
Adjusted EBIT	1,509	-1,666	
Depreciation and amortisation	2,277	2,259	1
Adjusted EBITDA	**3,786**	**593**	**538**
Adjusted net debt/ Adjusted EBITDA	**2.3x**	**25.8x**	**-91**

[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. 49.

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 can therefore be taken into account in pricing at an early stage. ↗ Opportunities and risk report, p. 75ff., Notes to the consolidated financial statements, Note 45, p. 235ff.

Fleet and route network

Fleet modernisation progressing through acquisition of long-haul aircraft with the latest technology. | Fleet strategy continues to aim to standardise and reduce aircraft models. | Route network significantly expanded.

FLEET

T012 GROUP FLEET – NUMBER OF COMMERCIAL AIRCRAFT
Lufthansa German Airlines including regional airlines, Germanwings and Eurowings Discover (LH), SWISS including Edelweiss (LX), Austrian Airlines (OS), Brussels Airlines (SN), Eurowings (EW) and Lufthansa Cargo (LCAG) as of 31 Dec 2022

Manufacturer/type	LH	LX	OS	SN	EW	LCAG	**Group fleet**	of which lease	**of which temporarily decom-missioned**	Change compared with 31 Dec 2021
Airbus A220		30					30			
Airbus A319	37			15	36		88	19		-8
Airbus A320	94	31	31	16	59		231	30	5[3]	+3
Airbus A321	78	9	6		1	2[1]	96	3	4[4]	+4
Airbus A330	25	16		9			50	4	7[5]	
Airbus A340	34	9					43		7	
Airbus A350	21						21	5		+4
Airbus A380	14						14		10[6]	
Boeing 747	27						27			
Boeing 767			3				3			
Boeing 777		12	6				18	2		
Boeing 787	2						2			+2
Boeing 777F						16[2]	16	5		+1
Bombardier CRJ	28						28			-3
Bombardier Q Series							0			-6
Embraer	26		17				43			
Total aircraft	**386**	**107**	**63**	**40**	**96**	**18**	**710**	**68**	**33**	**-3**

[1] A321P2F operated by Lufthansa CityLine.
[2] Partly operated by AeroLogic, of which two aircraft attributed pro rata.
[3] Of which three aircraft will return to flight operations in 2023.
[4] Of which one aircraft is expected to return to flight operations in 2023.
[5] Of which three aircraft will return to flight operations in 2023.
[6] Of which two aircraft will return to flight operations in 2024.

Fleet structure to be further optimised
At the end of 2022, the Lufthansa Group fleet comprised 710 aircraft (previous year: 713 aircraft). The average age of the aircraft in the fleet was 13.1 years (previous year: 12.7 years).

The fleet shrank by three aircraft year-on-year. 24 aircraft were added, while 27 were disposed of. The additions to the fleet comprised 16 new aircraft (two Boeing 787-9s, five Airbus A321neos and nine A320neos) and eight used aircraft (four A350-900s, two A321P2Fs and one A320-200, each leased, and one Boeing 777F). On the other hand, in 2022 twelve older, comparatively inefficient aircraft were sold (three A321s, six A320s and three Bombardier CRJ900s) and the leasing agreements for 15 aircraft were ended. Since the start of the coronavirus crisis, 110 aircraft have been retired. In the same period, i.e. since the end of 2019, 57 aircraft have been added.

On long-haul routes, a further ten A380s remain decommissioned. Of these, six aircraft are to be returned to Airbus by November 2023, in line with the Group's fleet optimisation planning. One A380 was already taken out of long-term parking and reactivated in late 2022. Three further A380s are currently being reactivated and will gradually return to the operating fleet from summer 2023. Beside seven A340-600s in long-term parking, ten aircraft of the same type were reactivated in the 2022 financial year for temporary flight operations. The A380s and five A340-600s are stationed in Munich to ensure that passengers here are likewise offered a First Class product.

Ongoing fleet modernisation drives cost efficiency and supports reduced emissions

The Lufthansa Group made important decisions in 2022 in relation to the ongoing modernisation of its fleet. In particular, this entails the retirement of larger four-engine aircraft, which are less fuel-efficient. At the same time, the Group is exploiting market opportunities in order to move forward with fleet modernisation and to purchase modern aircraft at short notice and attractive conditions.

During the coronavirus crisis, many airlines cancelled orders at short notice and terminated leases ahead of schedule. This resulted in an increased range of modern aircraft available at attractive conditions and subject to short delivery periods. The Lufthansa Group exploited these opportunities and in 2021 purchased five Boeing 787-9s from a cancelled order and four Airbus A350-900s from leases which had been terminated early. These orders benefited from favourable purchase prices and low lease rates as well as short delivery times. All four A350-900 aircraft were delivered in the first six months of 2022, while two 787-9s were delivered in the second half of 2022.

In order to achieve further progress with the Group's fleet modernisation, seven additional 787-9 aircraft were ordered in the reporting year, which were also available at short notice because of a cancelled order. Moreover, nine cargo aircraft were purchased, of which two further 777F aircraft and seven new 777-8Fs. This aircraft type is being developed as the next-generation freighter in Boeing's 777X aircraft family and is intended to join the fleet from 2027 onwards. In addition, a further 777F was procured through a lease. Since June 2022, it has operated as part of Lufthansa Cargo's fleet.

The procurement of these 17 ultramodern long-haul aircraft will result in a further lasting improvement in the fleet's efficiency. 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, lower current costs, reduced fleet range and more sustainable flying.

At year-end 2022, there were 174 aircraft on the Lufthansa Group's order list. There are also options to buy a further 58 aircraft.

T013 FLEET ORDERS LUFTHANSA GROUP

	Fixed orders[1]	Deliveries	Additional options
Long-haul fleet			
Airbus A350	28	2023 to 2029	
Boeing 787	30	2023 to 2026	20
Boeing 777	20	2025 to 2028	24
Boeing 777F	9	2023 to 2030	
Short-haul fleet			
Airbus A220			14
Airbus A320	57	2023 to 2027	
Airbus A321	30	2023 to 2027	
Total aircraft	**174**	**2023 to 2030**	**58**

[1] Excluding contracted leases.

Flexible fleet planning enables adaptation to market developments

The Lufthansa Group is expecting the delivery of at least 30 aircraft in 2023, including short-haul aircraft from the A320neo family, long-haul A350 and Boeing 787 aircraft, and three freighters. Some of these aircraft will be procured through leases. In line with the planning, around 20 aircraft are to be sold or their leases ended in 2023. This planning is monitored continuously. The Group can modify the capacity on offer by extending or shortening temporary decommissioning and delaying or bringing forward 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. By the end of the decade, the number of long-haul aircraft operated by the Group will have decreased. 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.

The complete retirement of the aircraft types 747-400, 777-200ER, A340-600, A340-300, A330-200 and 767-300ER is offset by the introduction of the new 787-9s and 777-9s. The Group expects significant cost savings from these measures, especially in the areas of crew training, maintenance and operations.

In 2021 another model already reduced the range of aircraft in the fleet with the complete phase-out of the MD-11F. In 2022, Lufthansa Cargo took over modified A321P2F freighters in order to offer additional long-term freight capacity within Europe and on medium-haul routes.

Lufthansa Group continues to own a significant share of the fleet

Overall, around 90% of the total fleet is owned by the Lufthansa Group, and roughly 10% is leased. More than 84% of the owned fleet is unencumbered, i.e. not used as collateral under financing arrangements.

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 intends to expand the proportion of its fleet which is leased in the medium to long-term.
↗ **Financial strategy and value-based management, p. 22ff.**

ROUTE NETWORK

Route network of the Lufthansa Group significantly expanded

As part of the multi-hub strategy, Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines offer their passengers a broad range of flights from these airlines' hubs in Frankfurt, Munich and Zurich as well as 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. With Stockholm and Prague, Eurowings has further established its presence outside German-speaking countries. Eurowings Discover, the Lufthansa Group's holiday airline, and Edelweiss focus on tourism destinations for short-, medium- and long-haul and thus supplement the capacity of the hubs.

While the Lufthansa Group's route network was still strongly diminished by the coronavirus pandemic in the 2021 financial year, it was expanded in the reporting year. Over the course of the reporting year, the number of destinations offered roughly returned to the pre-crisis level. The range of tourist destinations was further developed. At the start of the second quarter of 2022 especially, capacity was once again significantly increased.

Intercontinental traffic also continued to stage a significant recovery, buoyed by the gradual removal of coronavirus-related travel restrictions. By the end of the reporting year, the number of flights offered to Africa and the Middle East had already exceeded 90% of the pre-crisis level. The range of flights to North and South America had returned to around 85% of its pre-crisis level. Asia alone is an exception, as a result of China's long, strict zero-Covid policy and the only gradual opening of the market in Japan. At the end of the year, the volume of routes offered was at only around 65% of its pre-crisis level.

Russian airspace remains closed to the airlines of the Lufthansa Group as a result of the sanctions imposed due to the war in Ukraine. This means significantly longer flight routes to Japan, South Korea, China and Central Asia in some cases. Continental direct flights to Russia and Ukraine have been suspended since late February 2022.

Employees

Lufthansa Group creates prospects for employees. | Comprehensive range of recruiting measures successfully launched. | Large number of agreements with labour union and collective bargaining partners provide for stability and predictability. | Focus on new partnership between labour union partners.

Human resources management prepares the Company for the future and creates prospects for employees
The coronavirus crisis and its impacts have significantly affected the development of the Lufthansa Group. Over the course of the crisis, the Company adjusted its fleet and its workforce in line with the structural changes to the market situation.

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 aspiration of Lufthansa Group Airlines to be a premium brand for passengers, shaping passenger experience. Moreover, they ensure reliable flight operations and efficient administrative processes. This is particularly true of the current period which, following a course of business adversely affected by the crisis, is now characterised by a significant expansion in business activities and operational challenges throughout the aviation system.

The Lufthansa Group attaches great importance to offering employees who already work for the Lufthansa Group and future employees attractive prospects. The working environment must enable the Lufthansa Group to attract and retain the best employees. Extensive new hiring is planned in the 2023 financial year to enable the further expansion of operations after the coronavirus pandemic. More jobs are being added again, especially in flight operations, IT and MRO. The necessary recruiting measures have started successfully.

Employees' core concerns were once again analysed in the reporting year through the Company-wide ("involve me!") employee survey. The strategic fields of action identified in previous years will be pursued through the Group-wide HR strategy. This includes a holistic approach in relation to equal opportunity and diversity, training opportunities for all employees, intensive promotion of talent and a balance between work and private life. These fields of action help to fulfil the Lufthansa Group's commitment to a fair and partnership-based relationship with its employees and to remain an attractive employer. ↗ **Combined non-financial declaration/ Employee concerns, p. 121ff.**

Number of employees increases in the reporting year
At year-end 2022, the Lufthansa Group had 109,509 employees worldwide (previous year: 105,290). This meant that the number of employees had risen by 4,219, or 4%, in the reporting year. The number of employees was 28,844 or 21% lower than before the crisis (31 December 2019: 138,353). The year-on-year increase in the number of employees reflects the trend in the Catering business segment. Here, the number of employees rose by 29% on the previous year due to the high volume of new recruitment. This was due to the recovery of business in North America especially. The number of employees declined in all the Group's other business segments.

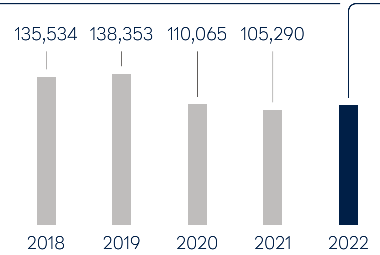
Translated into full-time positions, the Group had 93,690 employees at the end of 2022 (previous year: 89,607). This represents a year-on-year increase of 4,083 or 5%.

In Germany, the Group had 59,295 employees: this is 1,222, or 2%, fewer than in the previous year (previous year: 60,517). This decrease was attributable to fluctuation and staff entering retirement or leaving the Group through voluntary programmes. Up to the end of June in the reporting year, short-time work arrangements were also used, albeit considerably less than in 2021. This prevented the need for redundancies during the crisis. The Group's employees in Germany account for 54% of its overall workforce (previous year: 57%). The number of employees outside Germany increased by 5,441 or 12% to 50,214 (previous year: 44,773).

C08 NUMBER OF EMPLOYEES

as of 31 Dec

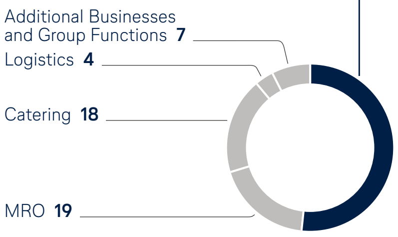
2022
109,509



C09 EMPLOYEES BY BUSINESS SEGMENTS

in %

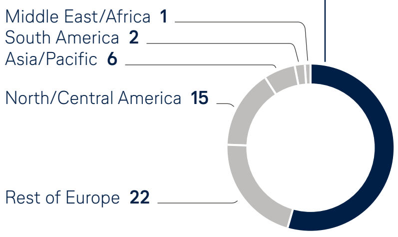
PASSENGER AIRLINES
52



C10 EMPLOYEES BY REGION

in %

GERMANY
54



As of the reporting date, the average age of the workforce was 42.9 years (previous year: 43.2 years). Average seniority was 13.4 years (previous year: 14.3 years). 30% of employees worked part-time in the reporting year (previous year: 32%). The rate of fluctuation was 15% (previous year: 15%).

At year-end, 1,245 apprentices were in training for around 30 occupations and various combined degree courses offered by the Lufthansa Group worldwide (previous year: 1,046).

Important agreements signed with collective bargaining partners

In the 2022 financial year, the Lufthansa Group, represented by the relevant industry associations or its subsidiaries, concluded a large number of new wage agreements with its collective bargaining partners. In some cases, these replaced previously applicable crisis agreements which had been concluded due to the impacts of the coronavirus pandemic.

This meant that, at the end of the year, collective bargaining agreements had been concluded and were in force for all of the workforce of Deutsche Lufthansa AG covered by these agreements and for the vast majority of employees involved in the Lufthansa Group's key flight operations.

On 4 August 2022, the Employers' Federation for Air Transport Companies (AGVL) and the trade union Vereinigte Dienstleistungsgewerkschaft e.V. (ver.di) reached agreement on a new wage agreement for the roughly 20,000 ground staff covered by collective bargaining agreements in Germany, particularly at Deutsche Lufthansa AG, Lufthansa Technik AG and Lufthansa Cargo AG. This agreement provides for a phased increase in basic pay, with a focus on lower pay groups, and runs for a period of 18 months at least until 31 December 2023. The increase of EUR 200 is backdated to 1 July 2022, with an increase of 2.5% but at least EUR 125 as of 1 January 2023 and an increase of 2.5% as of 1 July 2023. In this agreement, the collective bargaining partners focused on higher than average increases for the lower salary groups.

On 18 October 2022 AGVL agreed with the Vereinigung Cockpit pilots' union (VC) on behalf of its Lufthansa Group member companies, Lufthansa German Airlines and Lufthansa Cargo, that the basic pay of Lufthansa German Airlines and Lufthansa Cargo pilots would be increased by up to EUR 980 in two steps. Starting salaries will benefit particularly strongly from this agreement. The basic pay of people joining the profession as co-pilots will thus rise by around 20% over this period, while captains who have reached the final pay grade will receive 5.5% more. The agreement also includes a commitment to no industrial action up to the end of June 2023.

On 31 October 2022, AGVL reached agreement with the cabin staff union Unabhängige Flugbegleiter Organisation e.V. (UFO) on behalf of its Lufthansa Group member company, Deutsche Lufthansa AG, on a new framework and wage agreement as well as a new collective bargaining agreement on part-time work for the cabin staff of Deutsche Lufthansa AG.

This wage agreement has a minimum term that runs until 31 December 2023 and provides for a two-stage increase in basic pay. Starting salaries will benefit particularly strongly from this agreement. Cabin staff joining the profession will thus receive almost 17% more in basic pay, while cabin staff who have reached the final pay grade will receive nearly 9% more. In August 2022, an agreement was reached with UFO to make five one-off payments totalling EUR 1,200 for all cabin staff (pro rata for part-time employees). The benefits of the new framework agreement include working time models enabling flexibility, in order to achieve greater productivity during the summer months when demand is greatest. The new framework and wage agreement formally terminates the crisis agreement which was signed in June 2020 due to the coronavirus pandemic.

SWISS and the AEROPERS pilots' union agreed on the outline of a new collective agreement on 24 October 2022. It includes, among other things, improvements in the areas of social life planning and remuneration. The pilots voted on 13 January 2023 to accept the collective agreement put forward in December 2022. The new collective agreement takes retroactive effect as of 1 January 2023.

SWISS also agreed on a new collective agreement for cabin crew with the kapers cabin crew trade union on 8 December 2022. However, a majority of kapers members voted to reject it. The result of the ballot will be analysed in the weeks ahead and a decision taken on how to proceed. The existing collective agreement, which has not been terminated, remains in effect until further notice.

A wage adjustment was agreed for SWISS ground staff in Switzerland for 2023 and the existing collective agreement was extended until 31 December 2026. This extension formed part of the crisis agreement signed in 2021. All of the crisis measures agreed with the labour union partners in Switzerland at the start of the coronavirus crisis were terminated early from 1 January 2023, with the exception of a few operational adjustments which will be gradually rolled back over the course of the year.

Due to the high rate of inflation in 2022, the management of Austrian Airlines AG and its employees covered by a collective bargaining agreement agreed to end the pay cut which had been agreed in 2020 as of 31 December 2022 and to consider an increase to starting salaries for some occupational groups. In addition, a further inflation bonus is to be paid for 2022.

The employees of Brussels Airlines in Belgium benefit from a statutory indexation arrangement. All of its employees have thus received a 12% pay rise. A "cafeteria model" has also applied to some of the employees since 2021. The cafeteria model enables employees to pick individual social benefits from the Company. They are granted points for this purpose and can redeem them as they wish. The statutory indexation does not apply to the cafeteria model as a salary component. A corresponding upgrade is therefore being negotiated for this instrument.

An agreement has not yet been reached with the pilots of Eurowings Germany on the cancelled framework settlement. Their demand for more free days and longer rest periods is still the subject of negotiations.

A new wage agreement for the cabin staff of Eurowings GmbH was signed with the trade union ver.di on 19 January 2022. The key points of new wage agreements were agreed for Eurowings Technik GmbH and Eurowings Aviation GmbH on 17 August 2022 and 30 November 2022 respectively.

New partnership between labour union partners is to be developed

Within the scope of its social and collective bargaining policies, in every part of the Group the Lufthansa Group aims to achieve good working conditions and fair salary arrangements which strike a balance between the interests of employers and employees. Longer-term agreements establish planning certainty for both sides. The agreements concluded in the reporting year have made a significant contribution in this respect. As a rule, strikes are to be avoided. This objective is underpinned by a new understanding of labour relations and collective bargaining within the Lufthansa Group and between the Company and the trade unions.

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. 52ff.**

The Lufthansa Group passenger airlines are focusing on further improvements to the customer's travel experience along the entire travel chain and on expanding their sustainability activities.

Through its refit with Allegris product generation seating, the Lufthansa Group will offer its customers a new travel experience in every class on long-haul routes. Further examples are expanded digital service channels such as the chatbot and automated customer services. The digital customer portal enables customers to access all relevant information and resolve issues quickly and easily thanks to new, interactive self-service options. The travel ID which was introduced in the reporting year serves as a customer account for all network airlines and provides customers with a simple and easy means of registering and booking trips with Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines.

In addition, in the reporting year the passenger airlines directly integrated more climate-friendly flight options in their booking process. It is now even simpler for customers to offset the carbon emissions caused by their flights. Lufthansa German Airlines passengers can also directly compensate for their flight's carbon emissions on board via their mobile devices or using the on-board entertainment system.

Lufthansa Cargo is expanding its digital services. In addition to developing digital sales channels, the focus in 2022 was on improving data quality and therefore the associated increase in the efficiency of the handling processes. The goal here is to achieve greater efficiency in its cooperation with its partners throughout the supply chain. For example, the implementation of the Lufthansa Cargo "mobile digital handling" initiative is an important step towards replacing paper-based processes with digital solutions.

With its "Sustainable Choice" service, Lufthansa Cargo also offers its customers a carbon-neutral transport option for their freight.

The independent platform AVIATAR, developed by Lufthansa Technik, supports customers worldwide in real time with the management of complex fleet operations and helps to diagnose errors in individual components, thus supporting the digital transformation of aviation.

In addition, together with BASF, Lufthansa Technik is to start regular use of the fuel-saving surface technology AeroSHARK. Lufthansa Cargo and SWISS aircraft will be the first to be equipped with this new type of surface.

Moreover, in the reporting year Lufthansa Technik presented its Hydrogen Aviation Lab, Hamburg's new functional laboratory for the testing of maintenance and ground processes for future hydrogen-powered aircraft. For this purpose, an Airbus A320 will be converted into a field laboratory which will enable early research to be carried out under realistic conditions into the safe use of a potential energy source for future aviation.

The LSG group likewise focuses on innovation. In the reporting year, it implemented its "next" innovation programme with the goal of embedding its continuous, rapid innovation approach within the company. At the airline catering trade show WTCE, the LSG group presented innovations such as consumption analytics, an in-flight management suite as well as new features and improvements in the area of in-flight sales, such as pre-order and pre-select technology and a virtual try-on solution.

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.

In addition, via the Lufthansa Group CleanTech Hub, the latest technologies are being pooled and sustainable innovations developed in the field of climate protection. These relate to the following five core areas: Alternative Fuels and Emissions, Aircraft Hardware, Digital Solutions and Processes, Waste and Circular Economy, and Mobility of Tomorrow and Beyond.

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 laws on data and consumer protection, air traffic taxes, aviation security fees, take-off and landing rights or night-flight bans also affect the Lufthansa Group and the whole aviation sector.

In summer 2021, the European Commission presented its Fit for 55 legislative package, which contains regulatory proposals for achieving European climate protection objectives. 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). Subject to formal adoption, the co-legislators European Parliament and European Council agreed in December 2022 to gradually reduce the total number of emissions certificates and abolish the previous "free" allocations completely from 2026. This will make feeder traffic by European airlines more expensive and entails the risk of an increasing displacement of long-haul connections to hubs outside Europe, which will further distort competition between EU airlines and their competitors from the Middle East. To create an incentive to use sustainable fuels (SAF), which are many times more expensive than fossil kerosene, a decision was taken to provide a limited contingent of emissions certificates on a temporary basis to compensate for the additional costs of SAF. However, this does not sufficiently offset the additional expenses nor establish a level playing field with airlines from outside the EU. The blending quota that is expected to be adopted for sustainable aviation fuels, and the introduction of a kerosene tax that is currently under discussion, would result in significant competitive disadvantages and steep cost increases for European airlines. 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 transfer of traffic and emissions that is known as the carbon leakage effect. ↗ **Combined non-financial statement/Climate protection, p. 99ff.**

More stringent European and national consumer protection policies may lead to higher costs for the Lufthansa Group and its customers. These include, in particular, efforts to introduce insolvency protection for flights, automating compensation payments, and banning advance payment for tickets and no-show clauses.

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 within the EU and thus offers the potential for reducing not only carbon emissions and saving fuel but also avoiding delayed flights. The political debate is not over yet, and it remains to be seen whether and in what form a revision will take place.

The basic rule on the use of take-off and landing rights (slots) 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 and then reduced for subsequent periods due to the slump in air traffic caused by the crisis. For winter 2022/2023, the EU has taken the coronavirus pandemic and the war in Ukraine into consideration and defined a minimum slot use rate of 75%. It has authorised the European Commission to adjust this rate during this period in specific circumstances. The same exceptions (force majeure) as in winter 2022/2023 will apply in summer 2023, but with an 80% slot use rate. The European Commission has also begun the consultation process for a fundamental revision of the slot regulation. The European Commission is planning to publish a new draft of the reform project, where little progress has been made since 2012, in the third quarter of 2023. Its scope and contents will depend on the results of the consultations ↗ **Opportunities and risk report, p. 75ff.**

Economic report
Macroeconomic situation

World economic growth significantly slower in 2022 than in previous year. | Growth in Germany weaker than in other regions. | Euro depreciates against most main currencies. | Strong rise in inflation and interest rates. | Price of oil picks up considerably.

Significantly slower world economic recovery in the 2022 financial year
Following a robust recovery in 2021, world economic growth slowed significantly to 3.0% in the reporting year (previous year: 6.0%). This was due to the war in Ukraine and the strong rise in energy prices. The Middle East alone reported stronger growth, of 6.8%, in 2022 than in 2021 (previous year: 4.3%). In Europe, the economy grew by 3.6% (previous year: 5.8%). German economic growth was significantly weaker, with an increase of 1.9% (previous year: 2.6%).

T014 GDP DEVELOPMENT

in %	2022[1]	2021	2020	2019	2018
World	3.0	6.0	-3.1	2.6	3.3
Europe	3.6	5.8	-6.0	1.7	2.1
Germany	1.9	2.6	-4.1	1.1	1.0
North America	2.2	5.9	-2.9	2.3	2.9
South America[2]	3.7	6.8	-6.5	0.8	1.6
Asia/Pacific	3.2	6.4	-0.8	3.9	4.9
China	2.8	8.4	2.2	6.0	6.7
Middle East	6.8	4.3	-4.7	1.3	1.6
Africa	3.8	5.7	-2.5	2.2	3.1

Source: Global Insight World Overview as of 17 Jan 2023.
[1] Forecast.
[2] Excluding Venezuela.

Euro depreciates against most main currencies
The euro lost value against most main currencies on average over the course of the year. The average exchange rate against the US dollar was 11% lower than in the previous year. The euro fell by 7% against the Chinese renminbi and the Swiss franc. The euro experienced only a slight depreciation of 1% against the British pound. The euro appreciated against the Japanese yen by 6% on average.

T015 CURRENCY DEVELOPMENT EUR 1 in foreign currency

	2022	2021	2020	2019	2018
USD	1.0510	1.1821	1.1402	1.1192	1.1800
JPY	137.86	129.84	121.77	122.01	130.33
CHF	1.0040	1.0807	1.0704	1.1122	1.1548
CNY	7.0754	7.6243	7.8688	7.7320	7.8083
GBP	0.8523	0.8595	0.8888	0.8769	0.8848

Source: Bloomberg, annual average daily price.

Significant rise in inflation
The rate of inflation picked up significantly in the reporting year. At the end of the year, it averaged 9.7% worldwide (previous year: 5.7%). The rate of inflation was 9.2% in Europe and 8.6% in Germany. In response to the high inflation levels, the US Federal Reserve raised its base rate seven times in the reporting year. It had reached 4.5% at the end of 2022. The European Central Bank likewise raised its base rate on four occasions, and at the end of the reporting year it stood at 2.5%.

Strong rise in short and long-term interest rates
Short and long-term interest rates experienced strong increases on average over the year. In 2022, with an average 6-month Euribor of 0.68% short-term interest rates were positive again for the first time in over six years. In the long-term segment, the average 10-year euro swap increased significantly year-on-year, from 0.05% to 1.93%.

T016 INTEREST RATE DEVELOPMENT in %

Instrument	2022	2021	2020	2019	2018
6-month Euribor Average rate	0.68	-0.52	-0.37	-0.30	-0.27
6-month Euribor Year-end level	2.69	-0.55	-0.53	-0.32	-0.24
10-year euro swap Average rate	1.93	0.05	-0.14	0.26	0.96
10-year euro swap Year-end level	3.20	0.30	-0.26	0.21	0.81

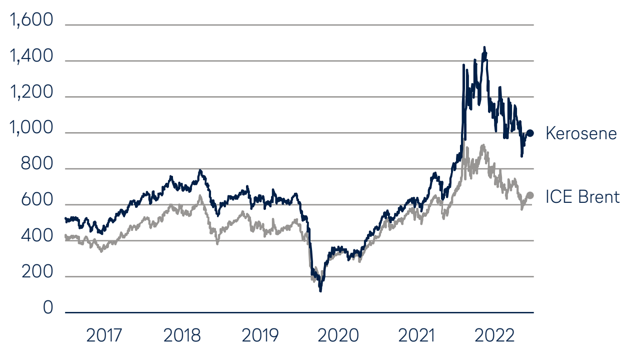
Source: Bloomberg.

The discount rate applied for discounting of pension obligations of Deutsche Lufthansa AG, which is derived from the average return on a basket of investment-grade corporate bonds, followed the general interest rate trend and rose to 4.2%, which is 2.9 percentage points higher than the previous year's figure of 1.3%.

Oil price significantly higher year-on-year
The shortage of oil worsened in the 2022 financial year due to the war in Ukraine. With prices between USD 76.10/barrel and USD 127.98/barrel, the average for 2022 was USD 99.03/barrel, which is 40% higher than in the previous year (previous year: USD 70.92/barrel). Towards the end of the reporting year, the price fell significantly due to the drop in demand for gas. On 31 December 2022, a barrel of Brent Crude cost USD 85.91 (year-end 2021: USD 77.78).

The jet crack, the price difference between crude oil and kerosene, moved between USD 9.79/barrel and USD 70.18/barrel in 2022. On average over the year, it traded at USD 40.41/barrel and thus 556% higher than in the previous year. The main factors behind this trend are the war in Ukraine, related ongoing supply shortages, scarce refinery capacities and the strong recovery in demand for air transport in the reporting year. On 31 December 2022, the jet crack was USD 39.34/barrel (year-end 2021: USD 10.99/barrel).

C11 **PRICE DEVELOPMENT OF CRUDE OIL AND KEROSENE**
in USD/t



Source: Lufthansa, based on market data.

Sector developments

Global passenger traffic stages a clear recovery from the effects of the coronavirus pandemic over the course of the 2022 financial year. | Airfreight market remains at very high level in historical terms. | MRO and airline catering markets also recover.

Significant improvement in global passenger traffic, rapid recovery leads to operational difficulties
The sales trend for global passenger traffic improved significantly over the course of the 2022 financial year. At the start of the year, it was still adversely affected by the Omicron coronavirus variant as well as the war in Ukraine. Over the course of the year, the further easing of international travel restrictions and the related rise in demand for flights resulted in a significant increase in passenger traffic sales.

Towards the end of the first half year of 2022, the market-wide expansion of supply caused the aviation system to experience a temporary overload. This was due to factors including airports' ground handling services, security checks, international air traffic control and the airlines suffering personnel shortages. Many airlines cancelled flights in order to ease the pressure on the system. The situation then stabilised over the course of the third quarter of 2022.

Total sales worldwide (revenue passenger-kilometres) in the reporting year increased by 64% on the previous year according to figures published by the International Air Transport Association (IATA) (previous year: 22%). Airlines from the Middle East registered the strongest growth, of 144% (previous year: 8%), followed by airlines from Europe, with 100% (previous year: 27%).

T017 SALES PERFORMANCE IN THE AIRLINE INDUSTRY

in % compared with previous year	Passenger-kilometres	Cargo tonne-kilometres
Europe	100	-12
North America	46	-5
Central and South America	63	13
Asia/Pacific	34	-9
Middle East	144	-11
Africa	85	-2
Global	**64**	**-8**

Source: IATA Air Passenger/Air Freight Market Analysis (12/2022).

Revenue passenger-kilometres were down by 32% compared with the pre-crisis level in the 2019 financial year. For European airlines, the decline was 22%.

According to IATA estimates, global passenger traffic yields rose by 8.4% (previous year: 3.8%) in the 2022 financial year. This was due in particular to a significant increase in the second half of 2022. Yields in the 2022 financial year thus exceeded the pre-crisis level by 2.3%.

Global airfreight traffic remains at a high level

The global market for airfreight declined slightly in the 2022 financial year but remained at a high level in historical terms. According to IATA, global airfreight volumes (measured in revenue cargo tonne-kilometres) fell by 8% year-on-year in 2022 (previous year: increase of 19%). European providers saw a decrease of 12% (previous year: increase of 22%).

However, according to IATA estimates global airfreight traffic yields rose by 7.2% (previous year: 24.2%), driven by strong increases in the first half of the year on account of disrupted supply chains and bottlenecks in the maritime transport industry. Yields then began to return to normal levels in the second half of the year, above all due to the higher volumes of passenger flows and a related increase in belly freight capacities in passenger aircraft. This was particularly noticeable on the North Atlantic routes in the second half of the year. Over the year as a whole, at 103.0% airfreight traffic yields for the overall industry exceeded their pre-crisis level.

Smaller losses expected for the global airline industry

The positive developments in passenger traffic in the reporting year mean that the global airline industry's losses are expected to fall significantly year-on-year. IATA predicts that the industry will suffer a net loss of USD 7bn for the 2022 financial year (previous year: USD 42bn). Prior to the coronavirus outbreak in 2019, the airline industry generated a net profit of USD 26bn.

On a regional basis, a net loss of USD 3bn is envisaged for the European airlines (previous year: loss of USD 12bn). On the other hand, for North America a net profit of USD 10bn is expected (previous year: loss of USD 2bn).

T018 EARNINGS DEVELOPMENT IN THE AIRLINE INDUSTRY

in USD bn	**2022[1]**	2021
Europe	-3	-12
North America	10	-2
Central and South America	-2	-7
Asia/Pacific	-10	-15
Middle East	-1	-5
Africa	-1	-1
Industry	**-7**	**-42**

[1] Forecast.
Source: IATA Industry Statistics (12/2022).

MRO and airline catering markets recover over the course of the year

The volume of demand for aircraft maintenance, repair and overhaul (MRO) services continued to rise in the reporting year as a result of the recovery of passenger traffic. The consultancy firm ICF predicts a market volume of USD 85bn for 2022, which represents a growth rate of 8% by comparison with the previous year and around 90% of the pre-crisis level. Of this amount, around USD 30bn is attributable to the Americas region (106% of the pre-crisis level), USD 28bn to the EMEA region (Europa, Middle East and Africa, 78% of the pre-crisis level) and USD 27bn to the APAC (Asia/Pacific region, 90% of the pre-crisis level). The first signs of a recovery in demand for MRO services emerged at the start of 2022, and this trend was then borne out over the course of the year in the form of a growing volume of flying hours, albeit subject to regional differences. The Americas region proved highly robust and was relatively unaffected by the Ukraine and energy crises. Following a decline in February and March 2022 as a result of the war in Ukraine, the EMEA region experienced a significant recovery in summer 2022. On the other hand, APAC only managed a weak recovery. This was due to China's restrictive zero-Covid measures in particular.

The airline catering industry recovered in the reporting year due to the global rise in demand for passenger traffic. However, as a result of the war of Ukraine, the industry was faced with additional challenges alongside the effects of the coronavirus pandemic. It was obliged to compensate for rising material and energy costs and high inflation rates. The tense labour market, particularly in the USA, impeded the ramp-up of production. The digitalisation of pre- and post-flight and in-flight services gained further ground. The trend towards pre-ordering and in-flight retail solutions remains intact, especially for short-haul traffic, Economy Class and leisure travel.

Course of business

Lufthansa Group moves on from coronavirus crisis. | Adjusted EBIT of EUR 1.5bn. | Passenger airlines significantly expand capacity again over the course of the year. | Lufthansa Cargo and Lufthansa Technik achieve record results. | All stabilisation measures successfully ended. | Significant improvement in balance sheet figures. | Important agreements signed with collective bargaining and labour union partners.

OVERVIEW OF THE COURSE OF BUSINESS

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

The Lufthansa Group's operating and financial performance improved significantly over the course of the 2022 financial year. While the first few months of the year were still affected by the spread of the Omicron variant, demand for flights picked up significantly over the remainder of the year, despite the war in Ukraine and the continuing travel restrictions in Asia. Demand rose in both the leisure travel and business travel segments. The passenger airlines' capacity was therefore continuously expanded.

Overall available capacity in the passenger business, measured in terms of seat kilometres, was 79% higher in the 2022 financial year than in the previous year and thus reached 72% of the pre-crisis level from 2019. Flight cancellations due to a market-wide overload of the aviation system prevented an even stronger recovery in the volume of available capacity. In view of the significant recovery in demand, the passenger airlines were able to significantly increase their yields.

The Lufthansa Group's freight business in its Logistics business segment remained positive in the 2022 financial year, driven by continuing strong demand for freight capacities and high yields. In the MRO segment too, the global increase in the use of fleets resulted in increased demand for maintenance and repair services. In the Catering segment, the worldwide recovery of the airline industry boosted the LSG group's positive course of business.

The Lufthansa Group also made significant progress with the implementation of its restructuring programme in the reporting period and almost completed this process. The measures implemented up to 31 December 2022 account for more than 90% of the overall annual savings of EUR 3.5bn that are to be achieved from 2024 onwards. This made it possible to limit the impacts of a strong rise in fuel costs and inflation-related increases in other areas in the reporting year. ↗ **Group strategy, p. 18ff.**

Lufthansa Group achieves Adjusted EBIT of EUR 1,509m

Due to the growing volume of business activities, traffic revenue for Lufthansa Group airlines in the reporting year rose by 118% year-on-year to EUR 25,846m (previous year: EUR 11,876m). Group revenue of EUR 32,770m was 95% higher than in the previous year (previous year: EUR 16,811m).

In the 2022 financial year, the Lufthansa Group was able to achieve a positive Adjusted EBIT again, in the amount of EUR 1,509m (previous year: EUR –1,666m). The Adjusted EBIT margin amounted to 4.6% (previous year: –9.9%). EBIT came to EUR 1,231m (previous year: EUR –2,316m).

The Logistics and MRO segments made particularly positive earnings contributions and both achieved record results in the reporting year. The Passenger Airlines segment significantly reduced its operating loss year-on-year. SWISS and Austrian Airlines recorded another positive operating result. In the Catering segment, the operating result primarily decreased due to the loss of the subsidies provided under the US CARES Act in the previous year as well as the market situation in Asia which remained challenging. ↗ **Business segments, p. 52ff.**

The net profit attributable to shareholders of Deutsche Lufthansa AG in the reporting year came to EUR 791m (previous year: EUR –2,191m).

Net capital expenditure rose by 104% to EUR 2,286m (previous year: EUR 1,119m). Operating cash flow primarily increased year-on-year due to the improvement in EBITDA, higher customer advance payments due to the rise in booking figures and improvements in the management of the remaining working capital to EUR 5,168m (previous year: EUR 399m). Adjusted free cash flow, which in addition to cash flow from investing activities also includes cash outflows for leases, came to EUR 2,526m (previous year: EUR −1,049m).

The equity ratio rose by 9.0 percentage points in the 2022 financial year to 19.6% (previous year: 10.6%), due to the decrease in net pension obligations and the positive earnings performance. Positive free cash flow brought net indebtedness down to EUR 6,871m, a reduction of 24% on year-end 2021 (31 December 2021: EUR 9,023m).

At the end of the 2022 financial year, the Group had available liquidity of EUR 10.4bn. ↗ **Financial position, p. 44ff.**

SIGNIFICANT EVENTS

War in Ukraine weighs on the world economy, the industry and the Group

The Russian invasion of Ukraine on 24 February 2022 had a strongly negative impact on the development of the world economy, the airline industry and the Lufthansa Group in the 2022 financial year. The strong increase in the price of kerosene was particularly relevant for the Lufthansa Group in this respect. The course of business also suffered due to the loss of the markets in Ukraine and Russia, the necessary adjustments to Asia-bound flight routes and sanctions-related impairment losses on goodwill and inventories in Russia. Flight bookings were only briefly affected.

Contracts with Christina Foerster and Michael Niggemann renewed early

At its meeting on 2 March 2022, the Supervisory Board of Deutsche Lufthansa AG voted to renew the contracts with Christina Foerster and Michael Niggemann ahead of schedule for five more years until 31 December 2027.

The Supervisory Board also adopted changes to the division of responsibilities in the Executive Board with effect from 1 July 2022. ↗ **Business activities and Group structure, p. 16f.**

Lufthansa Group agrees inaugural revolving credit facility of EUR 2.0bn

On 8 April 2022, the Lufthansa Group concluded for the first time a contract with a broad consortium of international banks for a revolving line of credit with a credit facility of EUR 2.0bn. This replaced existing unused bilateral credit lines of some EUR 0.7bn. The Lufthansa Group's available liquidity thus increased by around EUR 1.3bn. ↗ **Financial position, p. 44ff.**

Lufthansa Group purchases further state-of-the-art long-haul aircraft

On 9 May 2022, the Lufthansa Group decided to purchase seven Boeing 787-9 long-haul passenger aircraft, three Boeing 777F cargo aircraft and seven Boeing 777-8F cargo aircraft. It also decided to extend the leases for two Boeing 777F cargo aircraft which run until 2024. ↗ **Fleet, p. 26ff.**

Kühne Aviation GmbH holds 15% of issued capital

Through its notification of voting rights of 6 July 2022, Kühne Aviation GmbH notified Deutsche Lufthansa AG that on 5 July 2022 its interest in the shares of Deutsche Lufthansa AG had exceeded the threshold of 15% of issued capital and amounted to 15.01% on this date. ↗ **Lufthansa share, p. 12ff.**

ESF sells remaining shares and successfully completes stabilisation of Deutsche Lufthansa AG

Through its notification of voting rights of 14 September 2022, the Federal Republic of Germany notified Deutsche Lufthansa AG that on 13 September 2022 the remaining interest of the Economic Stabilisation Fund (ESF) in the shares of Deutsche Lufthansa AG had been sold in full. The Federal Republic of Germany had previously notified Deutsche Lufthansa AG through its notification of voting rights of 27 July 2022 that on 26 July 2022 the interest held by the ESF in the shares of Deutsche Lufthansa AG had fallen below the threshold of 10% of issued capital.

In November 2021, Deutsche Lufthansa AG had already repaid early all of the loans and deposits provided by the German government. With the sale of the remaining shares, the stabilisation of Deutsche Lufthansa AG in Germany was thus successfully completed. Moreover, all of the remaining restrictions under the stabilisation measures thus ended.

Following the completion of the stabilisation process, Deutsche Lufthansa AG paid the outstanding interest on the 2015 hybrid bond on 10 October 2022.

In addition, in the 2022 financial year the Lufthansa Group repaid early and in full all of the repayable stabilisation funding which it had received in Switzerland, Austria and Belgium ↗ **Financial position, p. 44ff.**

Lufthansa Group signs new agreements with ver.di, VC and UFO

On 4 August 2022, the Lufthansa Group or its Air Transport Employers Federation (AGVL) and the trade union ver.di signed a new wage agreement for the roughly 20,000 ground staff of Deutsche Lufthansa AG covered by collective bargaining agreements. This agreement provides for a phased increase in basic pay for lower pay groups in particular and runs for a period of 18 months. ver.di had previously called a one-day strike at the end of July.

On 18 October 2022, an agreement between the Lufthansa Group or AGVL and the Vereinigung Cockpit pilots' union (VC) provided, among other things, for an overall increase of EUR 980 in the basic pay of Lufthansa German Airlines and Lufthansa Cargo pilots. The agreement also includes a commitment to no industrial action for the framework and wage agreement up to the end of June 2023. The pilots had previously staged a one-day strike on 2 September 2022 which had been called by VC.

On 31 October 2022, the Lufthansa Group or AGVL and the trade union Unabhängige Flugbegleiter Organisation e.V. (UFO) concluded a new framework and wage agreement as well as a collective bargaining agreement on part-time work for the cabin staff of Deutsche Lufthansa AG. This wage agreement has a term which runs at least until 31 December 2022 and provides for a two-stage increase in basic pay.

In addition, SWISS, Austrian Airlines and Eurowings, among other companies, signed a large number of other agreements relating to various professional groups in the reporting year. ↗ **Employees, p. 29ff.**

Following a call by the Vereinigung Cockpit pilots' union, the pilots at Eurowings Germany held a one-day strike on 6 October 2022 and a three-day strike from 17 October to 19 October 2022 in support of their demand for more days off, stricter limits on working hours and longer rest periods, among other things.

SBTi validates climate protection goals of the Lufthansa Group

The Lufthansa Group has set itself ambitious climate protection targets and aims to achieve a neutral carbon footprint by 2050. By 2030, the aviation group already intends to halve its net carbon emissions relative to its 2019 level. The Lufthansa Group is following a clearly defined reduction path here. This was successfully validated by the Science Based Target initiative (SBTi) in August 2022. The Lufthansa Group was thus the first airline group in Europe with a scientifically based CO_2 reduction target in line with the goals of the Paris Climate Agreement of 2015. ↗ **Combined non-financial declaration/Environmental concerns, p. 98ff.**

Lufthansa Group invests in premium product

On 14 October 2022, the Lufthansa Group launched its current premium and quality campaign. For all travel classes on long-haul routes (i.e. Economy, Premium Economy, Business and First Class), the airline has introduced a new high-end product, Allegris, which has been exclusively designed for the Lufthansa Group. ↗ **Passenger Airlines business segment, p. 52ff.**

Rating agencies raise Deutsche Lufthansa AG's credit rating

On 30 November 2022, the rating agency Standard & Poor's raised Deutsche Lufthansa AG's credit rating from "BB–" with a stable outlook to "BB" with a positive outlook.

In addition, on 7 December 2022 the rating agency Moody's raised Deutsche Lufthansa AG's rating outlook from "negative" to "stable". ↗ **Financial strategy and value-based management, p. 22ff.**

EVENTS AFTER THE REPORTING PERIOD

Lufthansa submits offer to acquire equity interest in ITA Airways

On 18 January 2023, Deutsche Lufthansa AG submitted an offer (in the form of a letter of intent) to Italy's Ministry of Economy and Finance to acquire an equity interest in the country's national airline ITA Airways. The letter of intent was signed on 27 January 2023 by the Italian Economics and Finance Ministry and ITA Airways. Exclusive negotiations are now taking place.

The intention is that Deutsche Lufthansa AG should initially acquire a minority interest. Options are also to be agreed to purchase the remaining interests at a later date. If an agreement is signed, the transaction would require approval from the relevant authorities.

Financial performance

Lufthansa Group returns to profitability: Adjusted EBIT reaches EUR 1.5bn. | Revenue up by 95%. | Adjusted free cash flow of EUR 2.5bn. | Significant improvement in balance sheet figures: equity increases to EUR 8.5bn, net indebtedness falls by EUR 2.2bn to EUR 6.9bn. | EUR 10.4bn of liquidity available.

Key performance indicators adjusted
At the start of the 2022 financial year, the definition of key financial figures was adjusted in line with the market standard and in order to further improve the transparency of reporting. The figures for the previous year have been adjusted accordingly.

The reconciliation from EBIT to Adjusted EBIT now also adjusts restructuring expenses in the form of severance payments and significant costs of legal procedures and company transactions not arising in the normal course of business, as well as other material non-recurring expenses caused directly by extraordinary external factors. In the reporting year, this related to the direct effects of the war in Ukraine. This change was made to ensure greater comparability with the reporting of other companies in the industry and to increase the transparency of non-recurring items. ↗ **Notes to the segment reporting, p. 228ff.**

In addition, the definition of Adjusted ROCE was revised. The capital base is now 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 definition of Adjusted free cash flow has been amended so that cash inflows and outflows from the sale and acquisition of companies or individual business units which are allocated to investing activities are not recognised.

Moreover, since the 2022 financial year all cash flows that are related to pensions – including allocations to the pension funds and dividends paid out of them – have been shown as part of operating cash flow.

EARNINGS POSITION

Revenue and income

T019 **REVENUE AND INCOME**

	2022 in €m	2021 in €m	Change in %
Traffic revenue	25,846	11,876	118
Other revenue	6,924	4,935	40
Total revenue	**32,770**	**16,811**	**95**
Changes in inventories and work performed by the entity and capitalised	354	109	225
Other operating income[1]	2,031	1,502	35
Total operating income	**35,155**	**18,422**	**91**

[1] Without fixed asset write-ups and book gains.

Traffic increased over the course of the year; traffic revenue up by 118%
The Lufthansa Group's operating performance significantly improved over the course of the 2022 financial year. In particular, this was attributable to the significant growth in demand for flights.

Traffic at the passenger airlines of the Lufthansa Group rose significantly over the course of the year. Capacity (available seat-kilometres) was expanded over the course of 2022. It amounted to 57% of the pre-crisis level in 2019 in the first quarter, 74% in the second quarter and 78% in the third and fourth quarters. Over the year as a whole, capacity was 72% of the pre-crisis level.

Capacity was increased by 79% on the previous year, and the number of flights rose by 81%. Sales (revenue seat-kilometres) grew by 132%. The airlines in the Lufthansa Group carried around 102 million passengers in total in the 2022 financial year, 117% more than in the previous year. The passenger load factor rose by 18.2 percentage points to 79.8%. Traffic revenue in the passenger business picked up by 171% to EUR 20,687m (previous year: EUR 7,622m).

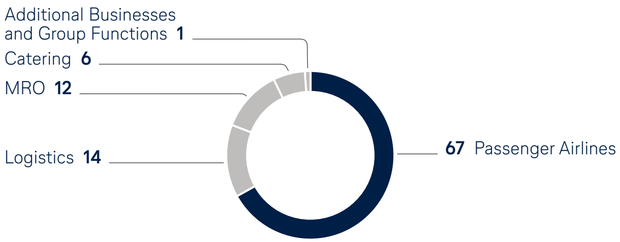
The Lufthansa Group's freight business remained at a high level in the reporting year. Demand for airfreight transport remained strong due to the global disruptions of supply chains. Since capacity was still limited, this was reflected in high freight rates. Capacity (available cargo tonne-kilometres) was up by 20% and sales (revenue cargo tonne-kilometres) increased by 1%. The cargo load factor fell by 11.1 percentage points to 60.3%. Traffic revenue in the cargo business went up by 21% to EUR 5,159m, mainly as a result of significantly higher yields (previous year: EUR 4,254m).

Overall traffic revenue for Lufthansa Group airlines rose in the reporting year by 118% year-on-year to EUR 25,846m (previous year: EUR 11,876m).

Further information on the regional breakdown of traffic revenue for the Passenger Airlines and Logistics segments can be found in the chapters ↗ **Business segments, p. 52ff.**

Other revenue up by 40%
Other revenue rose by 40% year-on-year to EUR 6,924m (previous year: EUR 4,935m). This was mainly due to the increase in external business activities and the associated higher revenues in the MRO (+28% to EUR 4,004m) and Catering (+75% to EUR 1,903m) business segments.

C12 **BUSINESS SEGMENTS' SHARE OF GROUP EXTERNAL REVENUE**
in %



Revenue up by 95%
Revenue, which consists of traffic revenue plus other revenue, rose by 95% in the 2022 financial year to EUR 32,770m (previous year: EUR 16,811m).

Further information on regional distribution of revenue can be found in the ↗ **Notes to the segment reporting, p. 228ff.**

Changes in inventory and other capitalised internal expenses went up by 225% to EUR 354m due to the higher volume of major maintenance events (previous year: EUR 109m).

Due to higher exchange rate gains, other operating income rose by 35% to EUR 2,031m (previous year: EUR 1,502m).

Total operating income thus increased by 91% in the 2022 financial year to EUR 35,155m (previous year: EUR 18,422m).

Expenses

Cost of materials and services up by 108% due to increased business activities and higher kerosene prices
The cost of materials and services for the Lufthansa Group in the 2022 financial year was 108% higher than in the previous year at EUR 18,634m (previous year: EUR 8,946m). This was attributable to the growth in business activities as well as higher prices, kerosene in particular.

Within the cost of materials and services, fuel expenses rose by 216% to EUR 7,601m (previous year: EUR 2,409m). This change is based on higher prices for crude oil and jet crack (the price difference between crude oil and kerosene). The 82% increase in volume and negative currency effects also had an impact here. The impact of significantly higher prices was offset by price hedging. The result of price hedging was EUR 929m (previous year: EUR 174m).

Due to the increased volume of business and the related growth in the use of materials and higher costs for emissions certificates, expenses for other raw materials, consumables and supplies and purchased goods rose by 61% to EUR 2,829m (previous year: EUR 1,754m).

Expenses for fees and charges rose year-on-year by 73% to EUR 3,730m on account of the increased traffic and higher prices (previous year: EUR 2,155m).

Expenses for external MRO expenses went up by 49% on the previous year to EUR 1,756m as a result of increasing flight activities and the related greater use of external service providers (previous year: EUR 1,181m).

Charter expenses rose by 109% to EUR 855m (previous year: EUR 409m). This increase resulted from the higher number of chartered passenger aircraft relative to the previous year.

Operating staff costs up by 38%
Operating staff costs of EUR 8,053m in the reporting year were 38% higher than in the previous year (previous year: EUR 5,836m). This increase resulted, above all, from the reduced impact of short-time work, the rise in variable remuneration as a result of the Company's economic recovery and the loss of the savings which had been realised through collective bargaining agreements signed in the context of the crisis. EUR 141m in government support for short-time work was used in the reporting year (previous year: EUR 865m). This was partially offset by the 1% decline in the average number of employees compared with the previous year.

T020 EXPENSES

	2022 in €m	2021 in €m	Change in %	Share of operating expenses in %
Cost of materials and services	18,634	8,946	108	55
of which fuel	7,601	2,409	216	23
of which fees and charges	3,730	2,155	73	11
of which external services MRO	1,756	1,181	49	5
of which charter expenses	855	409	109	3
Staff costs[1]	8,053	5,836	38	24
Depreciation[2]	2,277	2,259	1	7
Other operating expenses[3]	4,698	3,049	54	14
of which indirect staff costs and external staff	778	479	62	2
of which rental and maintenance expenses	648	531	22	2
Total operating expenses	**33,662**	**20,090**	**68**	**100**

[1] Without past service costs/settlement ↗ T021, p. 43.
[2] Without impairment losses ↗ T021, p. 43.
[3] Without book losses and write-downs on assets held for sale ↗ T021, p. 43.

Depreciation and amortisation at same level as in previous year

Depreciation and amortisation amounted to EUR 2,277m in the reporting year and were thus at roughly the same level as in the previous year (previous year: EUR 2,259m). This mainly related to aircraft and reserve engines (EUR 1,708m, previous year: EUR 1,691m).

Other operating expenses up by 54%

Other operating expenses rose by 54% to EUR 4,698m (previous year: EUR 3,049m), in particular due to higher foreign exchange losses, increased marketing and selling expenses, higher travel expenses and costs for outside staff, increased rental expenses for short-term or low-value rental properties and an increase in general maintenance costs.

Operating expenses up by 68%

Overall, operating expenses for the Lufthansa Group rose by 68% to EUR 33,662m (previous year: EUR 20,090m).

Earnings performance

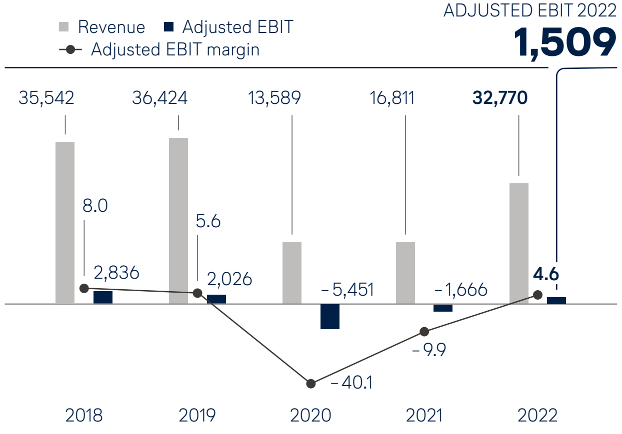
Adjusted EBIT of EUR 1,509m

The operating result from equity investments came to EUR 16m in the 2022 financial year (previous year: EUR 2m). It was adjusted for impairment losses on investments in the Catering segment (EUR 17m).

In the 2022 financial year, the Lufthansa Group achieved a positive Adjusted EBIT in the amount of EUR 1,509m (previous year: EUR −1,666m). The Adjusted EBIT margin, i.e. the ratio of Adjusted EBIT to revenue, improved by 14.5 percentage points to 4.6% (previous year: −9.9%).

Adjusted EBIT in the Passenger Airlines business segment amounted to EUR −300m (previous year: EUR −3,324m). The Logistics segment once again achieved record earnings with Adjusted EBIT of EUR 1,600m (previous year: EUR 1,495m). With an Adjusted EBIT of EUR 511m, the MRO segment also achieved a record result (previous year: EUR 362m). The Catering segment registered a negative Adjusted EBIT of EUR −11m (previous year: EUR 31m). The other Group companies, which under IFRS 8 do not require separate reporting, and the Group Functions reduced the Group's Adjusted EBIT by a total of EUR −255m (previous year: EUR −309m).

C13 DEVELOPMENT OF REVENUE, ADJUSTED EBIT in €m
AND ADJUSTED EBIT MARGIN in %



EBIT of EUR 1,231m

Based on EBIT, as a key performance indicator Adjusted EBIT is adjusted for clearly defined, non-plannable earnings components for the purpose of better comparability. The adjustments relate to write-downs and write-backs, earnings from the disposal of non-current assets and effects of changes in pension plans. Since the 2022 financial year, restructuring expenses in the form of severance payments, significant costs of legal procedures and company transactions not arising in the normal course of business and other material non-recurring expenses caused directly by extraordinary external factors have also been adjusted.

EBIT amounted to EUR 1,231m in the 2022 financial year (previous year: EUR −2,316m). The difference relative to Adjusted EBIT was therefore EUR −278m (previous year: EUR −650m).

The adjustments mainly comprise expenses of EUR 113m directly associated with the war in Ukraine, other impairment losses of EUR 202m (of which EUR 156m relating to goodwill in the Catering segment), and net income of EUR 63m in connection with restructuring measures (previous year: net expense of EUR 581m). The net income results from netting restructuring expenses against the reversal of unused provisions following the successful conclusion of restructuring measures.

The result from operating activities came to EUR 1,232m in the 2022 financial year (previous year: EUR −2,318m).

Financial result of EUR −182m

The financial result amounted to EUR −182m in the reporting year (previous year: EUR −288m). The result from equity investments included in this figure came to EUR −1m (previous year: EUR 2m).

Net interest amounted to EUR −419m (previous year: EUR −441m). Due to the rise in interest rate levels, higher interest expenses for floating-rate liabilities were more than made up for by higher interest income on short-term investments. The Group's financing strategy of entering into fixed-rate liabilities in the amount of its net debt thus paid off. ↗ **Financial strategy and value-based management, p. 22ff.**

T021 RECONCILIATION OF RESULTS

	2022		2021	
in €m	**Income statement**	**Reconciliation Adjusted EBIT**	Income statement	Reconciliation Adjusted EBIT
Total revenue	**32,770**		**16,811**	
Changes in inventories and work performed by the entity and capitalised	354		109	
Other operating income	2,193		1,602	
of which book gains et al.		−59		−30
of which write-ups on capital assets		−4		−70
of which reversal of provisions for restructuring/ M&A projects and material legal disputes		−98		–
of which extraordinary other income		–		–
of which badwill	–	–	–	–
Total operating income	**35,317**	**−161**	**18,522**	**−100**
Cost of materials and services	−18,676		−8,946	
of which extraordinary cost of materials and services		42		–
Staff costs	−8,108		−6,328	
of which past service costs/settlement		20		−89
of which restructuring costs		35		581
Depreciation	−2,478		−2,351	
of which impairment losses		202		92
Other operating expenses	−4,823		−3,215	
of which impairment losses on assets held for sale		13		8
of which expenses incurred from book losses		28		56
of which expenses for material legal disputes		6		102
of which expenses for M&A projects		37		–
of which extraordinary other operating expenses		39		–
Total operating expenses	**−34,085**	**422**	**−20,840**	**750**
Profit/loss from operating activities	**1,232**		**−2,318**	
Result from equity investments	−1		2	
Impairment loss on investments accounted for using the equity method		17		–
EBIT	**1,231**		**−2,316**	
Total amount of reconciliation Adjusted EBIT		278		650
Adjusted EBIT		**1,509**		**−1,666**
Amortisation		2,277		2,259
Adjusted EBITDA		**3,786**		**593**

Other financial items improved to EUR 238m (previous year: EUR 151m) and mainly related to positive effects from the recognition in profit or loss of the convertible bond measurement, strategic interest rate swaps and foreign exchange hedges.

Income taxes came to EUR –246m (previous year: EUR 413m). For companies with a history of losses, deferred taxes were only capitalised for losses in the current financial year where their future use was sufficiently probable. The effective tax ratio was 23%.

After taking minority interests of EUR –13m (previous year: EUR 2m) into account, the net profit for the period attributable to the shareholders of Deutsche Lufthansa AG amounted to EUR 791m (previous year: EUR –2,191m).

Earnings per share came to EUR 0.66 (previous year: EUR –2.99). ↗ **Notes to the consolidated financial statements, Note 16, p. 193.**

T022 PROFIT BREAKDOWN OF THE LUFTHANSA GROUP

	2022 in €m	2021 in €m	Change in %
Operating income	35,317	18,522	91
Operating expenses	–34,085	–20,840	–64
Profit from operating activities	**1,232**	**–2,318**	
Financial result	–182	–288	37
Profit/loss before income taxes	**1,050**	**–2,606**	
Income taxes	–246	413	
Profit/loss after income taxes	**804**	**–2,193**	
Profit/loss attributable to minority interests	–13	2	
Net profit/loss attributable to shareholders of Deutsche Lufthansa AG	**791**	**–2,191**	

No dividend payment envisaged for the 2022 financial year

In principle, the Lufthansa Group's dividend policy is to distribute to its shareholders 20% to 40% of net profit, adjusted for non-recurring gains and losses. One condition for the payment of a dividend is that the net profit for the year as shown in the individual financial statements of Deutsche Lufthansa AG that are drawn up under German commercial law allows for a distribution of the relevant amount. Due to the negative results of the past few years due to the coronavirus pandemic, this condition was not met in the reporting year. From the 2023 financial year onwards, shareholders shall again share directly in Company profits, provided that the corresponding economic recovery materialises in line with forecasts. ↗ **Financial strategy and value-based management, p. 22ff., and Forecast, p. 149ff.**

FINANCIAL POSITION

Capital expenditure

Investment volume up on previous year

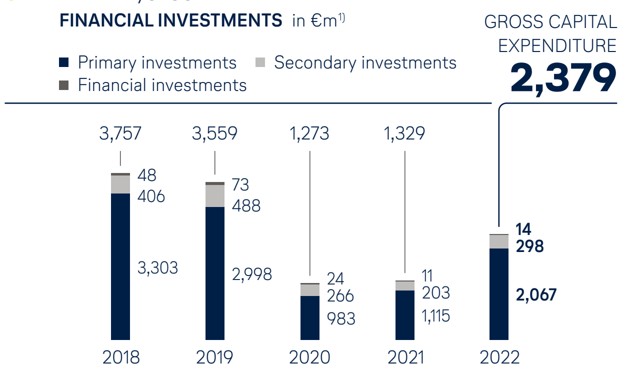
The Lufthansa Group once again increased its capital expenditure in the 2022 financial year. Compared with the previous year, the Lufthansa Group's gross capital expenditure (excluding the purchase of shares) rose by 79% to EUR 2,379m (previous year: EUR 1,329m).

Primary investment in down payments and final payments for aircraft, aircraft components, and aircraft and engine overhauls rose by 85% to EUR 2,067m (previous year: EUR 1,115m). This therefore amounted to 87% of total capital expenditure. EUR 821m was attributable to advance payments for future deliveries (previous year: EUR 510m).

Capital expenditure for other items of property, plant and equipment and for intangible assets, known collectively as secondary investment, increased by 47% to EUR 298m (previous year: EUR 203m). Property, plant and equipment, such as technical equipment and machinery, and operating and office equipment accounted for EUR 217m of the total (previous year: EUR 129m). EUR 81m (previous year: EUR 74m) was invested in intangible assets such as licences and software.

Financial investments (excluding share purchases) with a total volume of EUR 14m (previous year: EUR 11m) mainly comprised cash outflows from loans to third parties.

C14 PRIMARY, SECONDARY AND FINANCIAL INVESTMENTS in €m[1]



[1] Excluding share purchases.

The Passenger Airlines accounted for the bulk of capital expenditure with EUR 2,032m (+94% year-on-year). ↗ **Fleet, p. 26ff.**

Capital expenditure of EUR 254m (+55%) in the Logistics segment consisted mainly of the final payment for a delivered cargo aircraft as well as further advance payments for future deliveries. Capital expenditure of EUR 99m (+4%) in the MRO business segment was mainly to finance joint ventures and other property, plant and equipment. Capital expenditure of EUR 40m (+74%) in the Catering segment primarily consisted of essential replacement investments in production facilities.

Including payments for replacement parts for aircraft, proceeds from the sale of assets (aircraft especially) and dividend and interest income the Lufthansa Group's net capital expenditure came to EUR 2,286m (previous year: EUR 1,119m).

Cash flow

Operating cash flow up to EUR 5,168m
In the reporting year, the Lufthansa Group achieved positive operating cash flow of EUR 5,168m (previous year: EUR 399m). The improvement year-on-year is mainly attributable to the improvement in EBITDA. The cash inflow from the change in working capital (EUR 1,694m, previous year: EUR 1,347m) and from the other balance sheet items (EUR 402m, previous year: EUR −481m) also increased. The improvement in the other balance sheet items was associated, in particular, with lower pension-related cash outflows as well as non-recurring effects arising from the repayment of deferred other taxes and charges in the previous year.

The inflow from the change in working capital resulted, in particular, from the increase in liabilities from unused flight documents and successful management of trade receivables and payables.

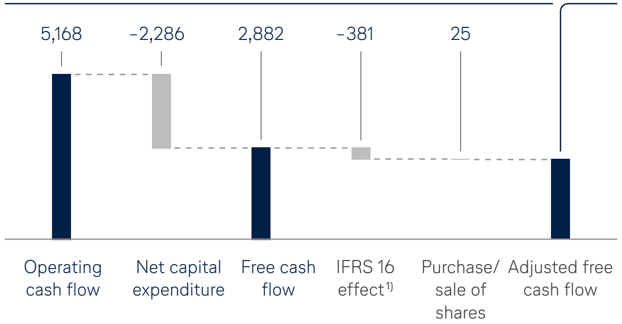
The liabilities from unused flight documents rose by EUR 1,558m in the reporting year (previous year: increase of EUR 1,276m).

The operating recovery resulted in a rise in the volume of trade receivables and also trade payables. However, the increase in payables (EUR 1,158m) exceeded the increase in receivables (EUR 591m). In particular, this is attributable to the negotiation of longer payment deadlines with suppliers as well as strict receivables management.

EUR 748m of the operating cash flow related to payments to former employees on the basis of pension obligations (previous year: EUR 630m). In addition, allocations were made to pension plans in the amount of EUR 394m (previous year: EUR 486m), while investment income from plan assets of EUR 970m (previous year: EUR 270m) was utilised in connection with pension payments. Cash flowing into or out of the plan assets was for the first time also reported in operating cash flow in the reporting year. A net cash outflow of EUR −172m thus arose in connection with pensions. The figures for the previous year have been adjusted accordingly. The net outflow in 2021 accordingly amounted to EUR −846m.

C15 **ADJUSTED FREE CASH FLOW**
in €m

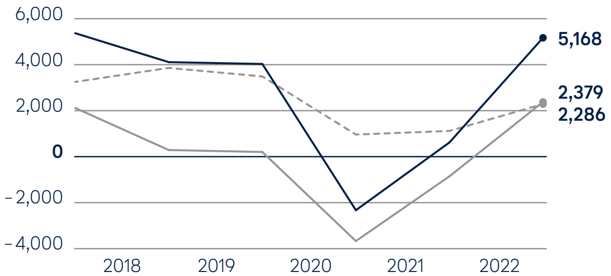
2022
2,526



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

C16 **CASH FLOW AND CAPITAL EXPENDITURE** in €m

— Operating cash flow
-- Capital expenditure (net)[1] — Adjusted free cash flow



[1] Excluding share purchases.

Adjusted free cash flow of EUR 2,526m
Gross capital expenditure (without share purchases) by the Lufthansa Group came to EUR 2,379m (previous year: EUR 1,329m) and includes the primary, secondary and financial investments mentioned above. This was offset by the increase in repairable spare parts for aircraft of EUR 143m (previous year: reduction of EUR 21m). Expenditures of EUR 46m were made for share purchases (previous year: EUR 27m).

Income from the disposal of non-current assets of EUR 175m (previous year: EUR 192m) mainly related to the sale of a total of twelve aircraft. Interest and dividend income went up by 346% to EUR 107m (previous year: EUR 24m). This brought total net cash used for investing activities to EUR 2,286m. This was 104% above the previous year's figure (previous year: EUR 1,119m).

After deducting this net cash used for investing activities, free cash flow for the 2022 financial year was positive at EUR 2,882m (previous year: EUR –720m).

Adjusted free cash flow improved to EUR 2,526m (previous year: EUR –1,049m). It includes cash outflows for leases (repayment portion) as shown in cash flow for financing activities. These came to EUR 381m in the reporting year (previous year: EUR 354m). In addition, a correction has been made to the cash flows from the purchase or sale of shares in companies. These amounted to a net figure of EUR –25m in the reporting year (previous year: EUR –25m).

Financing

Stabilisation successfully completed
On 13 September 2022, the Economic Stabilisation Fund (ESF) sold in full its remaining interest in the shares of Deutsche Lufthansa AG. The stabilisation of Deutsche Lufthansa AG in Germany was thus successfully completed. Moreover, all of the remaining restrictions under the stabilisation measures thus ended.

Following the completion of the stabilisation process, Deutsche Lufthansa AG paid the outstanding interest on the 2015 hybrid bond on 10 October 2022.

In addition, in the 2022 financial year the Lufthansa Group repaid early and in full all of the stabilisation funding which it had received in Switzerland, Austria, Belgium and the United States. The government stabilisation measures were accordingly successfully ended.

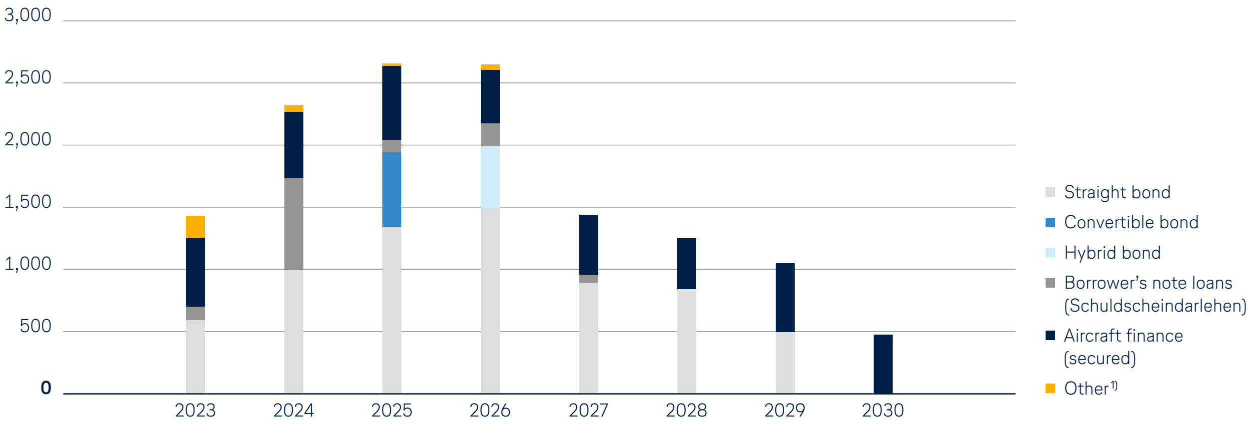
Financing activities result in cash outflow of EUR 2,266m
Financing activities in the 2022 financial year gave rise to an outflow of net cash of EUR 2,266m (previous year: inflow of EUR 2,874m).

This resulted from the repayment of financial liabilities as well as the repayment made in relation to stabilisation measures in the overall amount of EUR 2,664m. As well as the scheduled capital repayments on aircraft financing and leasing (EUR 932m), four maturing borrower's note loans in the overall amount of EUR 525m were repaid.

In addition, the loans received by the LSG group under the US CARES Act in the amount of EUR 157m and the state loans in Switzerland (EUR 419m), Austria (EUR 240m) and Belgium (EUR 340m) were repaid in full. Moreover, the unused portion of the state loan in Switzerland, with a volume of EUR 1,074m, was terminated.

Interest and dividend payments came to EUR 387m (previous year: EUR 291m).

C17 **MATURITY PROFILE OF BORROWINGS**
as of 31 Dec 2022 in €m



[1] Mainly bilateral loans; does not include operating lease payments.

On the other hand, the cash inflow from new financing measures on the capital market amounted to EUR 786m. In particular, these were two borrower's note loans amounting to EUR 165m, Japanese operating leases for nine aircraft amounting to EUR 469m and asset-backed securities (ABS) financing measures by AirPlus amounting to EUR 120m.

Furthermore, the Lufthansa Group has bilateral credit lines with banks. In particular, a central revolving line of credit with a volume of EUR 2.0bn was agreed in April 2022. This was unused as of the end of the 2022 financial year. On 31 December 2022, unused credit lines totalled EUR 2,119m (previous year: EUR 735m).

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

Liquidity

Total available liquidity of EUR 10.4bn

Balance-sheet liquidity (total of cash, current securities and fixed-term deposits) increased compared with the end of 2021 by 8% to EUR 8,301m, despite the net repayment of financial debt due to the positive Adjusted free cash flow (31 December 2021: EUR 7,666m). EUR 7,087m was available centrally to Deutsche Lufthansa AG at year-end 2022.

Including its freely available credit lines at year-end 2022, the Company's available liquidity thus amounted to EUR 10.4bn (31 December 2021: EUR 9.4bn).

T023 ABBREVIATED CASH FLOW STATEMENT OF THE LUFTHANSA GROUP

	2022 in €m	2021 in €m	Change in %
Profit/loss before income taxes	1,050	-2,606	
Depreciation and amortisation/reversals	2,444	2,255	8
Net proceeds on disposal of non-current assets	-30	30	
Net interest/result from equity investments	420	439	-4
Income tax payments/reimbursements	-288	-101	185
Significant non-cash expenses/income	-524	-484	8
Change in trade working capital	1,694	1,347	26
Change in other assets and liabilities	402	-481	
Operating cash flow	**5,168**	**399**	**1,195**
Investments and additions to repairable spare parts and cash outflows for acquisitions of equity investments	-2,568	-1,335	-92
Purchase/disposal of shares/non-current assets	175	192	-9
Dividends and interest received	107	24	346
Net cash from/used in investing activities	**-2,286**	**-1,119**	**-104**
Free cash flow	**2,882**	**-720**	
Purchase/disposal of securities/fund investments	**-1,155**	**-1,686**	**31**
Capital increase	–	3,309	-100
Capital reduction	–	-1,218	-100
Transactions through minority interests	-1	–	
Non-current borrowing and repayment of non-current borrowing	-1,878	1,074	
Dividends paid	-8	-19	58
Interest paid	-379	-272	-39
Net cash from/used in financing activities	**-2,266**	**2,874**	
Changes due to currency translation differences	18	33	-45
Cash and cash equivalents as of 1 Jan	**2,305**	**1,804**	**28**
Cash and cash equivalents as of 31 Dec	**1,784**	**2,305**	**-23**

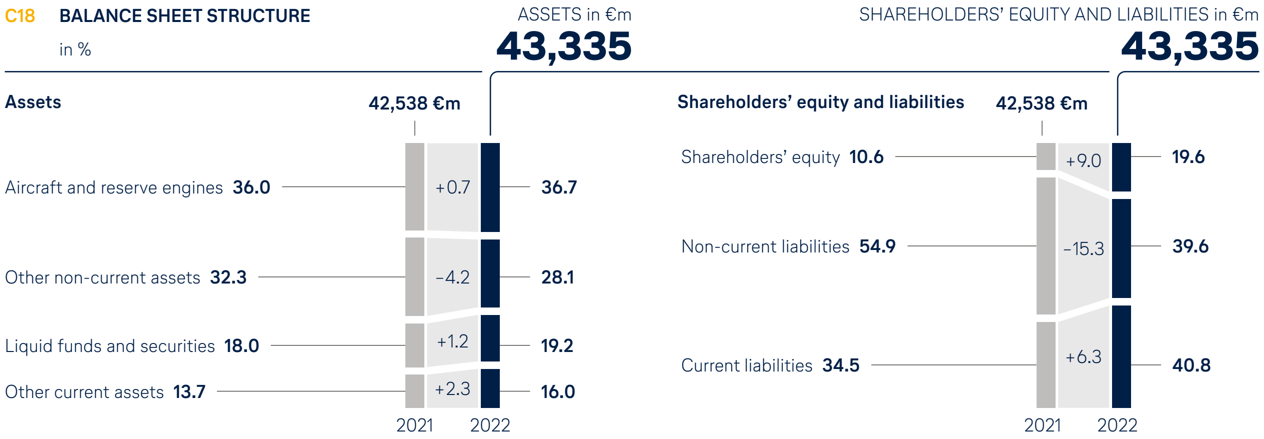
NET ASSETS

Total assets up by EUR 797m
Total Group assets as of 31 December 2022 rose by EUR 797m over year-end 2021 to EUR 43,335m (31 December 2021: EUR 42,538m).

Non-current assets were down by EUR 983m at EUR 28,080m (31 December 2021: EUR 29,063m). This accounts for 65% of total assets (31 December 2021: 68%). Current assets rose by EUR 1,780m to EUR 15,255m (31 December 2021: EUR 13,475m). Their share of total assets was thus 35% (31 December 2021: 32%).

Shareholders' equity rose by EUR 3,984m to EUR 8,474m (31 December 2021: EUR 4,490m). Altogether, non-current funding accounted for 59% of total assets (31 December 2021: 65%). Non-current financing covered 91% of non-current assets (31 December 2021: 96%). Current funding came to 41% of total assets (31 December 2021: 35%).

C18 **BALANCE SHEET STRUCTURE**
in %



Assets

Non-current assets down by EUR 1.0bn
At year-end 2022, non-current assets of EUR 28,080m were EUR 983m lower than at year-end 2021 (31 December 2021: EUR 29,063m).

This change has resulted from the decrease in capitalised deferred taxes (EUR −1,733m), primarily on account of the tax effects arising from a valuation-related decrease in pension obligations. The increase in aircraft and reserve engines (EUR +572m) and repairable spare parts for aircraft (EUR +187m) had a compensating effect, as did the increase in value for derivative financial instruments (EUR +226m).

The value of aircraft and reserve engines came to EUR 15,890m as of year-end 2022 (31 December 2021: EUR 15,318m). Down payments were made on current orders and investments in major maintenance events and new aircraft (two Boeing 787s, one B777F, five Airbus A321s and eight A320s). As of 31 December 2022, the fleet of the Lufthansa Group comprised 710 aircraft in total. ↗ **Fleet, p. 26ff.**

Current assets up by EUR 1.8bn
Current assets as of 31 December 2022 rose by EUR 1,780m to EUR 15,255m (31 December 2021: EUR 13,475m). This change is largely due to the increase in cash and cash equivalents, including current securities (EUR +635m), higher current trade and other receivables on account of the expansion of business activities (EUR +416m) and the increase in derivative financial instruments (EUR +319m).

Assets held for sale of EUR 319m mainly related to six aircraft held for sale.

Shareholders' equity and liabilities

Shareholders' equity up by EUR 4.0bn; equity ratio rises to 19.6%
As of 31 December 2022, shareholders' equity increased by EUR 3,984m in comparison with year-end 2021 and amounts to EUR 8,474m (31 December 2021: EUR 4,490m), primarily as a result of the valuation adjustments recognised through other comprehensive income for pensions (EUR +3,028m) and the profit in the reporting year (EUR +804m).

The equity ratio therefore increased by 9.0 percentage points compared with year-end 2021 to 19.6% (31 December 2021: 10.6%).

T024 DEVELOPMENT OF EARNINGS, EQUITY, EQUITY RATIO AND RETURN ON EQUITY

		2022	2021	2020	2019	2018
Profit/loss after income taxes[1]	€m	804	-2,193	-6,766	1,245	2,196
Equity[1]	€m	8,474	4,490	1,387	10,256	9,573
Equity ratio[1]	%	19.6	10.6	3.5	24.0	25.1
Return on equity[1]	%	9.5	-48.8	-487.8	12.1	22.9

[1] Including minority interests.

Non-current liabilities and provisions decrease by EUR 6.2bn year-on-year

Non-current provisions and liabilities were down by EUR 6,213m to EUR 17,153m (31 December 2021: EUR 23,366m).

Non-current borrowing of EUR 13,270m was EUR 1,771m lower than at year-end 2021 (31 December 2021: EUR 15,041m). Apart from maturity-related reclassifications, this decline is largely due to the repayment of the long-term stabilisation measures under the US CARES Act as well as the funding provided by the Belgian government and the government-guaranteed loans in Switzerland. ↗ Financing, p. 46f.

Net pension obligations, i.e. pension provisions less asset surpluses at some pension plans, which are presented separately in non-current assets, fell by EUR 4,547m to EUR 1,993m (31 December 2021: EUR 6,540m). Pension provisions declined by EUR 4,607m to EUR 2,069m (31 December 2021: EUR 6,676m), mainly as a result of the 2.9 percentage-point rise to 4.2% for the interest rate applied for discounting of pension obligations in Germany and Austria (previous year: 1.3%). This effect was partly compensated for by the decline in the value of the plan assets.

Current liabilities and provisions up by EUR 3.0bn

Current provisions and liabilities went up by EUR 3,026m to EUR 17,708m as of 31 December 2022 (31 December 2021: EUR 14,682m). This change is attributable to higher liabilities from unused flight tickets (EUR +1,558m) and higher current trade payables and other financial liabilities (EUR +1,474m).

Net indebtedness down by EUR 2.2bn on the previous year

At year-end 2022, positive free cash flow brought net indebtedness down to EUR 6,871m, a reduction of EUR 2,152m on year-end 2021 (31 December 2021: EUR 9,023m).

Adjusted net debt, the sum of net indebtedness and net pension obligations less 50% of the hybrid bond issued in 2015, was down by EUR 6,699m compared with year-end 2022 to EUR 8,617m (31 December 2021: EUR 15,316m).

The ratio of Adjusted net debt/Adjusted EBITDA was thus 2.3 (previous year: 25.8).

T025 CALCULATION OF NET INDEBTEDNESS

	2022 in €m	2021 in €m	Change in %
Liabilities to banks	1,558	2,461	-37
Bonds	6,659	6,697	-1
Lease liabilities	2,444	2,370	3
Other non-current borrowing	4,490	5,142	-13
	15,151	**16,670**	**-9**
Other bank borrowing	21	19	11
Group indebtedness	**15,172**	**16,689**	**-9**
Cash and cash equivalents	1,790	2,307	-22
Securities	6,511	5,359	21
Net indebtedness	**6,871**	**9,023**	**-24**
Pension provisions	2,069	6,676	-69
Pension surpluses	76	136	-44
Net pension obligation	**1,993**	**6,540**	**-70**
Net indebtedness and net pension obligations	**8,864**	**15,563**	**-43**

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

Revenue and Adjusted EBIT of the Lufthansa Group significantly outperform original forecast. | Lufthansa Cargo and Lufthansa Technik achieve record results. | Strong cash flow development leads to significant reduction in debt. | Improved balance sheet strengthens the Group's resilience in the event of future crises.

COMPARISON WITH ORIGINAL FORECAST

Revenue and Adjusted EBIT of the Lufthansa Group significantly outperform original forecast

The Lufthansa Group prepared and announced its outlook for the 2022 financial year with the publication of the Annual Report 2021 on 3 March 2022. The uncertainty relating to the coronavirus pandemic and the war in Ukraine meant that it was not possible to provide a detailed outlook for the 2022 financial year. The financial outlook was only fleshed out over the course of the 2022 financial year. The earnings forecast was raised on several occasions.

In March 2022, the Lufthansa Group forecast a year-on-year increase in revenue and a year-on-year improvement in Adjusted EBIT for the 2022 financial year. In August 2022, the Group provided further details regarding its earnings outlook, indicating that it expected to achieve positive Adjusted EBIT of at least EUR 0.5bn. It raised its forecast in November 2022, with a predicted Adjusted EBIT in excess of EUR 1bn. It then raised its forecast once more in December 2022, to around EUR 1.5bn. A 95% increase in revenue and an Adjusted EBIT of EUR 1,509m (previous year: EUR –1,666m) meant that these forecasts were met. Thanks to the earnings improvement, the return on capital (Adjusted ROCE) was also positive at 7.3% in the reporting year (previous year: –7.4%).

Main KPIs of the Lufthansa Group develop in line with forecasts

The Lufthansa Group forecast an improvement in its operating cash flow for the 2022 financial year. Gross capital expenditure was expected to amount to around EUR 2.5bn. Adjusted free cash flow was thus likewise expected to improve on the previous year. These forecasts were met, with an increase in operating cash flow to EUR 5,168m (previous year: EUR 399m), gross capital expenditure of EUR 2,379m and Adjusted free cash flow of EUR 2,526m (previous year: EUR –1,049m). Net indebtedness was significantly reduced due to the clearly positive free cash flow.

Forecast for specific carbon emissions was achieved

The Lufthansa Group expected a decrease in specific carbon emissions in the 2022 financial year compared with the previous year. With a decrease in carbon emissions per passenger-kilometre of 11%, this forecast was met. This mainly reflected the higher load factor for flights.

T026 DEVELOPMENT OF SIGNIFICANT KPIS

		Result 2021[1]	Forecast for 2022[1]	Result 2022
Revenue	€m	16,811	above previous year	32,770
Adjusted EBIT	€m	–1,666	improvement compared with previous year	1,509
Operating cash flow	€m	399	above previous year	5,168
Capital expenditure (gross)	€m	1,329	around 2,500	2,379
Adjusted free cash flow	€m	–1,049	improvement compared with previous year	2,526
Net indebtedness	€m	9,023	dependent on development of Adjusted free cash flow	6,871
Adjusted ROCE	%	–7.4	dependent on development of Adjusted EBIT	7.3
Specific CO_2 emissions	grammes	101.6	below previous year	90.0

[1] According to new definition of the figures.
[2] As stated in the Annual Report 2021; according to new definition of the figures.
[3] Result 2019.

OVERALL STATEMENT BY THE EXECUTIVE BOARD ON THE ECONOMIC POSITION

Following the 2020 and 2021 financial years which were significantly affected by the coronavirus pandemic, the Lufthansa Group returned to a positive trend in the reporting year and thus finally put the coronavirus crisis behind it.

Due to the significant rise in demand for flights in 2022, the Lufthansa Group increased its capacities to 72% of the pre-crisis level, nearly doubled its revenue year-on-year and once again achieved a clearly positive Adjusted EBIT, in the amount of EUR 1.5bn.

Its positive earnings performance was driven by the Logistics and MRO segments which both achieved record results. The passenger airlines also considerably reduced their operating loss year-on-year, even though the spread of the Omicron variant at the start of 2022 caused significant losses. The strong recovery in demand meant that yields increased significantly over the course of the year. With structural cost savings thanks to the successfully implemented restructuring programme, the higher fuel costs and further inflation-related increases in other areas were compensated for.

The Lufthansa Group also further strengthened its balance sheet and reduced its debt in the reporting year. As well as the earnings improvement and higher advance payments due to the positive bookings trend, improvements in working capital management and disciplined investing activities also contributed to this trend. The government stabilisation measures due to the coronavirus crisis finally ended in the reporting year as a result of the sale of the remaining shares held by the ESF in Deutsche Lufthansa AG and the repayment of the remaining state loans in Switzerland, Austria and Belgium. Liquidity was increased significantly beyond the pre-crisis level, in order to lessen the impact of future crises.

Overall, the Lufthansa Group thus registered an extremely positive operating and financial performance. The Executive Board is confident that the Lufthansa Group will maintain this trend and continue to build on its position as Europe's leading airline group.

Business segments

Passenger Airlines business segment

Passenger Airlines focusing on fleet modernisation and improvements to product and services. | Further expansion of sustainability activities planned. | Significant improvement in operating and financial performance over the course of the year. | Significant reduction of Adjusted EBIT loss.

T027 **KEY FIGURES PASSENGER AIRLINES**[1]

		2022	2021[1]	Change in %
Revenue	€m	22,760	9,194	148
of which traffic revenue	€m	20,687	7,622	171
Total operating income	€m	23,785	9,785	143
Operating expenses[2]	€m	24,100	13,114	84
Adjusted EBITDA[2]	€m	1,466	-1,554	
Adjusted EBIT[2]	€m	-300	-3,324	91
EBIT	€m	-279	-3,598	92
Adjusted EBIT margin[2]	%	-1.3	-36.2	34.9 pts
Adjusted ROCE	%	-2.8	-25.4	22.6 pts
Segment capital expenditure	€m	2,032	1,049	94
Employees as of 31 Dec	number	56,762	56,858	0
Average number of employees	number	56,054	58,208	-4

[1] Previous year's figures have been adjusted due to changes in segment reporting. ↗ **Notes to the segment reporting, p. 228ff.**
[2] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**

Business activities

Passenger Airlines offers their customers a differentiated and high-quality product
The financial reporting was changed at the beginning of the 2022 financial year to bring all of Lufthansa Group Passenger Airlines together in a single segment. This encompasses the Network Airlines and Eurowings business segments which were previously reported separately. The Passenger Airlines segment thus includes Lufthansa German Airlines, SWISS, Austrian Airlines, Brussels Airlines and Eurowings, whose results are also reported individually.

Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels 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. Eurowings is positioned as a value carrier with an exclusive focus on point-to-point traffic.

The Passenger Airlines segment also includes the regional airlines Lufthansa CityLine, Air Dolomiti, Edelweiss Air, Eurowings Discover, and Germanwings, whose passenger flight operations have been discontinued, as well as the equity investment in SunExpress, the joint venture with Turkish Airlines.

Moreover, commercial joint ventures with leading international airlines extend the Passenger Airlines route network. 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 exist.

Course of business

Restructuring programmes almost completed
Passenger Airlines almost completed its restructuring programmes in the reporting year. The focus was on lowering costs, securing liquidity and improving profitability.

Expansion of capacity leads to temporary overload of aviation system

Due to the considerable increase in demand for flights, Passenger Airlines significantly increased its capacities within a short period. In the summer of 2022, this resulted in a temporary overload of the aviation system. Passenger Airlines and many competitors cancelled flights in order to ease the pressure on the system. Together with a large number of operational measures to optimise flight operations which were implemented in consultation with system partners, a significant improvement was thus achieved over the course of the third quarter of 2022.

Fleet modernisation continues

The Passenger Airlines are driving forward with modernising and unifying their fleets. Older aircraft models are being retired and new, efficient aircraft with lower fuel needs and less carbon emissions are joining the fleet. 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. ↗ **Combined non-financial declaration/Environmental concerns, p. 98ff., and Climate protection, p. 99ff.**

At the end of the 2022 financial year, the Passenger Airlines fleet had a total of 692 aircraft (previous year: 698 aircraft). ↗ **Fleet, p. 26ff.**

Further expansion of product and services planned

Lufthansa Group Passenger Airlines are continuing to expand their product range in line with customer expectations. Customers will thus be offered a wider choice relevant of individually selectable product components as well as an improved travel experience on board and on the ground, in the premium segment in particular. This includes fitting aircraft with Allegris product generation seating which will offer a new travel experience in every class on long-haul routes. Over 100 new Lufthansa Group aircraft such as Boeing 787-9s, Airbus A350s and Boeing 777-9s flying to destinations all over the world will offer the Allegris experience. Aircraft already used for Lufthansa German Airlines such as Boeing 747-8s will also be refitted. The simultaneous improvement of the travel experience in every class and the replacement of over 30,000 seats throughout the Group are unprecedented events in the history of the Lufthansa Group. The Company is thus underlining its clear premium positioning and commitment to quality.

Further examples include improvements to customer service, e.g. the enhanced accessibility of company call centres, and expanded digital service channels such as the chatbot and an upgraded catering offering. The automation of customer services is also being further expanded. For instance, the digital customer portal thus enables customers to access all relevant information and resolve issues quickly and easily thanks to new, interactive self-service options.

Passenger Airlines integrates more climate-friendly flying option into booking process

Lufthansa Group Passenger Airlines are set to further expand their sustainability activities. Among other measures, it is now even simpler for customers of Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines to offset the carbon emissions caused by their flights. When making a booking on the website they will be provided with three specific options for a more climate-friendly flight immediately after selecting their flight ticket.

These airlines' passengers will first of all have the option of sustainable aviation fuels, which are currently produced using biogenic waste materials. This directly reduces carbon emissions. Another possibility is carbon offsets through high-quality climate protection projects implemented by the non-profit organisation myclimate in Germany and other countries. These projects promote measurable climate protection by reducing CO_2 emissions and improving the quality of life and biodiversity at a local level. A combination of these two options is available as a third possibility.

Lufthansa German Airlines passengers can also directly compensate for their flight's carbon emissions on board via their mobile devices or using the on-board entertainment system.

Details of additional Passenger Airlines sustainability activities can be found in the following chapters providing further information about the individual airlines and in the ↗ **Combined non-financial declaration, p. 93ff.**

Operating performance

Operating performance significantly improved over the course of the reporting year

The operating performance of Lufthansa Group Passenger Airlines significantly improved over the course of the 2022 financial year. The Passenger Airlines were still suffering from low demand due to the spread of the Omicron variant in the first quarter of 2022, but demand for flights picked up significantly over the remainder of the year, despite the war in Ukraine and ongoing travel restrictions in Asia.

T028 TRENDS IN TRAFFIC REGIONS
Passenger Airlines

	Net traffic revenue external revenue		Number of passengers		Available seat-kilometres		Revenue seat-kilometres		Passenger load factor	
	2022 in €m	Change in %	**2022** in thousands	Change in %	**2022** in millions	Change in %	**2022** in millions	Change in %	**2022** in %	Change in pts
Europe	8,821	142	82,627	110	104,940	78	82,485	99	78.6	+8.5
America	6,012	235	9,864	163	92,158	84	74,914	161	81.3	+24.1
Asia/Pacific	1,854	281	2,869	261	27,935	98	22,393	276	80.2	+38.0
Middle East/ Africa	2,089	148	6,414	109	34,348	58	27,243	104	79.3	+18.0
Not assignable	1,911	126								
Total traffics	**20,687**	**171**	**101,774**	**117**	**259,381**	**79**	**207,035**	**132**	**79.8**	**+18.2**

Traffic figures are expanded over course of year

The Passenger Airlines' available capacity was continuously expanded over the course of the reporting year in line with the recovery of demand. It amounted to 57% of the pre-crisis level in 2019 in the first quarter, 74% in the second quarter and 78% in the third and fourth quarters.

Overall, available capacity in the 2022 financial year was at 72% of the pre-crisis level and 79% higher than in the previous year. The number of flights increased by 81%. Sales rose by 132%. The Passenger Airlines transported 101.8 million passengers in the 2022 financial year, 117% more than in the previous year (previous year: 46.9 million). The passenger load factor was 18.2 percentage points higher year-on-year, at 79.8% (previous year: 61.6%).

After adjustment for exchange rates, yields rose by 15.0%. Traffic revenue at the Passenger Airlines increased by 171% to EUR 20,687m year-on-year due to the higher traffic and increased yields (previous year: EUR 7,622m).

T029 TRAFFIC FIGURES PASSENGER AIRLINES

		2022	2021	Change in %
Flights	number	816,903	451,854	81
Passengers	thousands	101,774	46,949	117
Available seat-kilometres	millions	259,381	145,139	79
Revenue seat-kilometres	millions	207,035	89,397	132
Passenger load factor	%	79.8	61.6	18.2 pts

Financial performance

Revenue up by 148% on previous year

Revenue in the Passenger Airlines business segment rose by 148% in the reporting year to EUR 22,760m due to higher traffic revenue compared with the previous year (previous year: EUR 9,194m). Operating income of EUR 23,785m was 143% up on the previous year (previous year: EUR 9,785m).

Exchange rate-adjusted unit revenues (RASK) went up by 31.2% year-on-year thanks to higher yields and load factors. They were thus 10.8% higher than the pre-crisis level in 2019.

T030 OPERATING FIGURES PASSENGER AIRLINES

	2022 in € cent	2021 in € cent	Change in %	Exchange-rate adjusted change in %
Yields	9.1	7.6	19.6	15.0
Unit revenue (RASK)	9.0	6.5	37.1	31.2
Unit cost (CASK) without fuel and emissions trading expenses	6.3	7.3	-14.1	-17.1

Expenses rise by 84%

Operating expenses of EUR 24,100m were 84% higher than in the previous year (previous year: EUR 13,114m).

Exchange rate-adjusted unit costs (CASK) excluding fuel and emissions trading expenses fell by 17.1% year-on-year thanks to positive economies of scale as a result of increased traffic and further progress with implementing the cost reduction programme. They were 9.8% higher than the pre-crisis level.

T031 OPERATING EXPENSES PASSENGER AIRLINES

	2022 in €m	2021 in €m	Change in %
Cost of materials and services	14,492	6,240	132
of which fuel	7,106	2,157	229
of which fees	3,467	1,905	82
of which charter	385	97	297
of which MRO services	1,636	1,070	53
Staff costs[1]	4,584	3,154	45
Depreciation and amortisation[2]	1,766	1,770	0
Other operating expenses[3]	3,258	1,950	67
Total operating expenses	**24,100**	**13,114**	**84**

[1] Without past service costs/settlement.
[2] Without impairment losses.
[3] Without book losses.

The cost of materials and services of EUR 14,492m was 132% higher than in the previous year (previous year: EUR 6,240m). In particular, fuel costs rose by 229% year-on-year to EUR 7,106m (previous year: EUR 2,157m) due to the expansion of flight operations and despite hedging against higher kerosene prices. Expenses associated with flight irregularities amounted to EUR 223m (previous year: EUR 51m). This item does not include compensation payments to passengers, which amounted to EUR 331m in the reporting year (previous year: EUR 25m). These are netted against revenue. Expenses for fees and charges increased due to volume and price factors by 82% to EUR 3,467m (previous year: EUR 1,905m).

Despite the 4% decline in the average number of employees, staff costs rose by 45% to EUR 4,584m (previous year: 3,154m). This was attributable to the strong decrease in short-time work in particular.

Depreciation and amortisation were at the same level as in the previous year, at EUR 1,766m (previous year: EUR 1,770m).

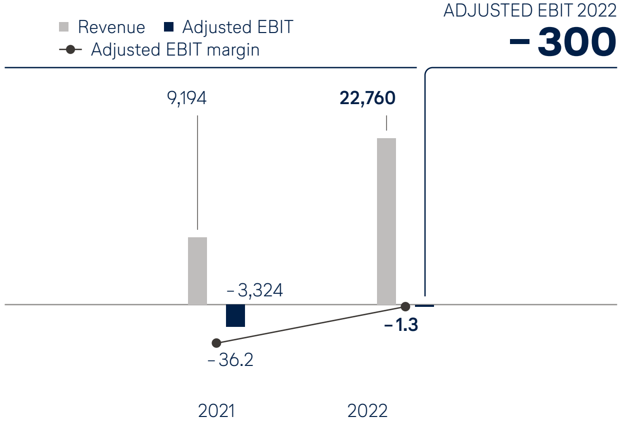
Other operating expenses rose by 67% to EUR 3,258m (previous year: EUR 1,950m) due to the expansion of flight operations.

Adjusted EBIT of EUR –300m

Adjusted EBIT in the 2022 financial year accordingly amounted to EUR –300m (previous year: EUR –3,324m). The operating loss was thus significantly reduced compared with the previous year. While the start of the year in particular was still impacted by the spread of the Omicron variant, the Passenger Airlines achieved a positive Adjusted EBIT in the third and fourth quarters of the reporting year. The Adjusted EBIT margin was –1.3% (previous year: –36.2%).

EBIT in the reporting year was EUR –279m (previous year: EUR –3,598m). The difference to Adjusted EBIT came mainly from net income from the reversal of restructuring provisions once the measures had been completed and from impairment losses on aircraft. In the previous year, restructuring expenses in particular had adversely affected earnings.
↗ Earnings position, p. 40ff.

C19 PASSENGER AIRLINES: DEVELOPMENT OF REVENUE, ADJUSTED EBIT in €m AND ADJUSTED EBIT MARGIN in %



Segment capital expenditure increases 94% year-on-year

Segment capital expenditure rose by 94% to EUR 2,032m in the reporting year (previous year: EUR 1,049m).

Number of employees almost unchanged

At the end of 2022, the number of employees was at 56,762 roughly on par with the previous year (previous year: 56,858).

LUFTHANSA GERMAN AIRLINES

T032 KEY FIGURES LUFTHANSA GERMAN AIRLINES[1]

		2022	2021	Change in %
Revenue	€m	13,173	5,061	160
Total operating income	€m	13,781	5,499	151
Operating expenses[2]	€m	14,228	7,748	84
Adjusted EBITDA[2]	€m	403	-1,397	
Adjusted EBIT[2]	€m	-466	-2,268	79
EBIT	€m	-432	-2,587	83
Adjusted EBIT margin[2]	%	-3.5	-44.8	41.3 pts
Employees as of 31 Dec	number	34,408	35,738	-4
Average number of employees	number	34,402	36,545	-6
Flights	number	408,419	227,427	80
Passengers	thousands	51,784	23,544	120
Available seat-kilometres	millions	149,412	82,962	80
Revenue seat-kilometres	millions	119,363	50,067	138
Passenger load factor	%	79.9	60.3	19.6 pts

[1] Including regional partners and Eurowings Discover.
[2] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**

Lufthansa German Airlines is the largest airline in Germany. It has hubs at the two biggest German airports in Frankfurt and Munich and offers its customers a premium product with transfer connections to the entire world.

The regional airlines Lufthansa CityLine and Air Dolomiti, Eurowings Discover as well as Germanwings, whose passenger flight operations had been stopped, 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.

At the end of the reporting year, the fleet of Lufthansa German Airlines comprised 386 aircraft.

Fleet renewal continues
Lufthansa German Airlines is driving forward the modernisation of its fleet. In the 2022 financial year, the Company took delivery of its first two Boeing 787s in Frankfurt. The state-of-the-art Dreamliner only consumes around 2.5 litres of kerosene per passenger and 100 kilometres, which represents a reduction of around 30% compared to its predecessor and is thus helping to bring down carbon emissions.

In addition, four leased A350s with a modern Business Class and seven aircraft from the Airbus A320 family joined the fleet in the reporting year. ↗ **Fleet, p. 26ff.**

Intermodal traffic to be expanded
Lufthansa German Airlines is continuing to expand intermodal traffic in order to improve its environmental footprint. Deutsche Bahn became the first intermodal partner of the Star Alliance on 1 August 2022, providing climate-friendly travel to and from flight departures and arrivals. Deutsche Bahn and Lufthansa German Airlines are thus sending another strong signal for greater sustainability in the mobility sector.

Premium and quality campaign at Lufthansa German Airlines
Lufthansa German Airlines is investing in the expansion of its premium positioning. For all of its travel classes on long-haul routes (i.e. Economy, Premium Economy, Business and First Class), the airline has introduced a new high-end product, Allegris, which has been exclusively designed for the Lufthansa Group.

The largest investment in premium products in the Company's history underlines Lufthansa German Airlines' commitment to its position as the leading Western premium airline.

Lufthansa German Airlines is driving digitalisation forward
Lufthansa German Airlines aims to establish a leading digital customer experience and thus to generate substantial economic value. The "Lufthansa Digital Hangar", which was implemented in the reporting year, is establishing a new culture and new work methods, attracting digital talent and developing knowledge and skills in order to speed up the development of digital solutions. In addition, a significant volume of investment in the digitalisation of core airline processes (e.g. crew management and technical fleet management) was approved.

Important agreements signed with collective bargaining and labour union partners
Important wage agreements were signed with collective bargaining and labour union partners in the reporting year. These encompass the ground staff covered by collective bargaining agreements, the pilots and the cabin crew of Deutsche Lufthansa AG. ↗ **Employees, p. 29ff.**

Changes in the management of Lufthansa German Airlines
Jens Ritter took over as Chief Executive Officer of Lufthansa German Airlines on 1 April 2022. He was previously a member of the Executive Board and Chief Operating Officer at Eurowings. He replaced Klaus Froese, who has returned to working as a captain for Lufthansa German Airlines.

Jörg Beißel has also been the new Chief Financial Officer at Lufthansa German Airlines since 1 April 2022. He was previously the Lufthansa Group's Head of Corporate Controlling and replaced Patrick Staudacher, who left the Company at the end of April 2022.

Karl-Hermann Brandes became the new Chief Operating Officer of Lufthansa German Airlines on 1 September 2022. He was previously Head of Flight Operations at Lufthansa German Airlines. He replaced Ola Hansson, who has opted to return to SWISS.

Traffic significantly expanded during the reporting year
In the 2022 financial year, Lufthansa German Airlines carried 51.8 million passengers and therefore 120% more than in the previous year (previous year: 23.5 million). Capacity increased by 80% year-on-year. It was thus at 70% of its 2019 pre-crisis level. Sales climbed by 138% compared with the previous year. The passenger load factor was 19.6 percentage points higher than the previous year's level, at 79.9% (previous year: 60.3%). Yields rose by 18.9% after adjusting for exchange rates. Traffic revenue climbed by 182% to EUR 11,961m due to the increased volume of traffic (previous year: EUR 4,241m).

Revenue up by 160% year-on-year, Adjusted EBIT is EUR –466m
In the reporting year, revenue at Lufthansa German Airlines rose due to the increase in traffic revenue over the previous year by 160% to EUR 13,173m (previous year: EUR 5,061m). Operating income increased by 151% to EUR 13,781m (previous year: EUR 5,499m).

Operating expenses of EUR 14,228m were 84% higher than in the previous year (previous year: EUR 7,748m). The cost of materials and services rose by 133%, mainly as a result of increased fuel expenses (+249%) due to volume, price and exchange rate factors as well as higher fees and charges (+86%). Staff costs were 47% higher than in the previous year due to the strong decrease in short-time work and the salary increases agreed in collective bargaining agreements.

Accordingly, Adjusted EBIT in the 2022 financial year amounted to EUR –466m (previous year: EUR –2,268m). The operating loss was thus significantly reduced compared with the previous year. At the same time, Lufthansa German Airlines achieved a positive Adjusted EBIT in the third and fourth quarters of the reporting year. The Adjusted EBIT margin was –3.5% (previous year: –44.8%). EBIT came to EUR –432m (previous year: EUR –2,587m). The difference to Adjusted EBIT came mainly from net income from the reversal of restructuring provisions once the measures had been completed and from impairment losses on aircraft.

SWISS

T033 KEY FIGURES SWISS[1]

		2022	2021	Change in %
Revenue	€m	4,805	2,098	129
Total operating income	€m	4,977	2,186	128
Operating expenses[2]	€m	4,501	2,581	74
Adjusted EBITDA[2]	€m	923	51	1,710
Adjusted EBIT[2]	€m	476	-395	
EBIT	€m	472	-349	
Adjusted EBIT margin[2]	%	9.9	-18.8	28.7 pts
Employees as of 31 Dec	number	9,045	8,743	3
Average number of employees	number	8,730	9,301	-6
Flights	number	123,118	66,285	86
Passengers	thousands	15,050	7,133	111
Available seat-kilometres	millions	44,423	26,420	68
Revenue seat-kilometres	millions	35,467	15,007	136
Passenger load factor	%	79.8	56.8	23.0 pts

[1] Including Edelweiss Air.
[2] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**

SWISS is the biggest airline in Switzerland. With its sister company Edelweiss Air, which specialises in tourist 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 and sensitive goods worldwide.

The SWISS fleet consisted of 107 aircraft at the end of the reporting year.

SWISS celebrates 20th anniversary

SWISS celebrated its 20th anniversary in the 2022 financial year. Since making its first flight on 31 March 2002, SWISS has become one of Europe's leading airlines and is an important contributor to the promotion of Switzerland as a place for business and tourism.

Restructuring programme contributes to financial stability

The restructuring programme implemented in the context of the coronavirus pandemic made a significant contribution to SWISS' financial stability in the reporting year. SWISS was thus able to repay the bank loan guaranteed by the Swiss Confederation ahead of schedule at the end of May 2022.

Important agreements signed with labour union partners

SWISS successfully completed the negotiations with its labour union partners in the reporting year. SWISS and the AEROPERS pilots' union agreed on a new collective agreement for SWISS pilots. A new collective agreement was reached with the kapers trade union for cabin crew, but a majority of the union members voted to reject it. The existing collective agreement, which has not been terminated, therefore remains in effect until further notice. The current collective agreement for SWISS ground staff was extended until 31 December 2026. ↗ **Employees, p. 29ff.**

Premium positioning further strengthened

SWISS has strengthened its premium positioning in the growing leisure travel segment and introduced a Premium Economy Class for its Boeing 777-300ER long-haul fleet.

Passengers benefit from more private space and greater comfort, which is provided by such measures as 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. This new travel class has been available on all twelve of this aircraft type since July 2022.

Consistent implementation of sustainability strategy

SWISS has continued working hard on implementing its sustainability strategy. SWISS and the Lufthansa Group have entered into a strategic partnership with Synhelion in order to introduce solar fuel to the market. SWISS will be the first airline worldwide to use carbon-neutral "sun-to-liquid" fuel. In addition, SWISS has invested in Synhelion within the scope of a financing round and is thus holistically working towards the accelerated market introduction of solar fuels.

Moreover, SWISS is the first airline worldwide to use innovative AeroSHARK technology on passenger flights with its Boeing 777 fleet. The optimised aerodynamic properties imitate the characteristics of shark skin, which is particularly hydrodynamic, and enable annual savings of up to 15,200 tonnes of CO_2.

Finally, in cooperation with the Swiss Federal Railways (SBB), SWISS has expanded its intermodal services. Since July 2022, SWISS passengers have been offered for the first time a combined international train and plane service on the line which runs from the main train station in Munich to Zurich Airport. In addition, the tourist destinations Lucerne and Interlaken were integrated in SWISS' route network in the reporting year.

Capacity and passenger numbers rising significantly

In the 2022 financial year, the number of passengers carried by SWISS rose 111% to 15.0 million (previous year: 7.1 million). Capacity was expanded by 68% year-on-year and was thus at 70% of its 2019 pre-crisis level. The number of flights rose by 86% compared with the previous year. Sales were up by 136%; the passenger load factor was 23.0 percentage points higher than the previous year's level, at 79.8% (previous year: 56.8%). Yields rose by 16.9% after adjusting for exchange rates. Traffic revenue went up by 185% to EUR 3,958m (previous year: EUR 1,389m).

Revenue increases by 129% year-on-year, positive Adjusted EBIT of EUR 476m achieved

Increased flight operations and higher yields in the reporting year enabled revenue at SWISS to rise by 129% to EUR 4,805m (previous year: EUR 2,098m). The cargo business continued to make a significant contribution (around 15%) to SWISS' total revenue. Operating income of EUR 4,977m was 128% up on the previous year (previous year: EUR 2,186m).

Operating expenses increased by 74% to EUR 4,501m (previous year: EUR 2,581m). The cost of materials and services rose by 113%, mainly as a result of increased fuel expenses (+187%) due to volume, price and exchange rate factors as well as higher fees and charges (+66%). Staff costs were 44% higher than in the previous year.

In the 2022 financial year, SWISS thus achieved a positive Adjusted EBIT of EUR 476m (previous year: EUR –395m). The Adjusted EBIT margin was 9.9% (previous year: –18.8%). EBIT came to EUR 472m (previous year: EUR –349m).

AUSTRIAN AIRLINES

T034 **KEY FIGURES AUSTRIAN AIRLINES**

		2022	2021	Change in %
Revenue	€m	1,871	743	152
Total operating income	€m	1,949	775	151
Operating expenses[1]	€m	1,946	1,024	90
Adjusted EBITDA[1]	€m	121	-111	
Adjusted EBIT[1]	€m	3	-249	
EBIT	€m	-1	-239	100
Adjusted EBIT margin[1]	%	0.2	-33.5	33.7 pts
Employees as of 31 Dec	number	5,659	5,793	-2
Average number of employees	number	5,609	6,039	-7
Flights	number	95,040	56,201	69
Passengers	thousands	11,142	5,008	122
Available seat-kilometres	millions	21,700	11,324	92
Revenue seat-kilometres	millions	17,240	7,011	146
Passenger load factor	%	79.4	61.9	17.5 pts

[1] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**

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

At the end of the reporting year, the fleet of Austrian Airlines comprised 63 aircraft.

Austrian Airlines is investing in fleet expansion and is committed to sustainability

Austrian Airlines took delivery of its first two out of a total of four Airbus A320neos in the reporting year. With the introduction of this modern and efficient short and medium-haul aircraft, Austrian Airlines is confirming its commitment to resource-conserving aviation. Thanks to the innovative technology of its Pratt & Whitney engines and its improved aerodynamics, the A320neo's fuel consumption is up to 20% lower than that of similar, older-generation aircraft. In addition, the noise footprint on take-off is around 50% smaller than for similar aircraft types. These new planes are thus making an important contribution to the environmental efficiency of Austrian Airlines and providing cost-effectiveness improvements, while also representing an important, long-term investment in the airline's Vienna base.

Austrian Airlines repays government loan

In November 2022, Austrian Airlines repaid ahead of schedule the outstanding EUR 210m balance of the syndicated loan which it had taken out. The airline thus successfully brought to a close the government stabilisation measures.

Changes in the Austrian Airlines Executive Board

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 the Lufthansa Group.

Passenger numbers and load factor rising in the reporting year

With 11.1 million passengers, Austrian Airlines carried 122% more customers in the reporting year than in the previous year (previous year: 5.0 million). Capacity was expanded by 92% year-on-year and was thus at 76% of its level prior to the outbreak of the coronavirus pandemic in 2019. Sales were up on the previous year by 146%. The passenger load factor was 17.5 percentage points higher year-on-year, at 79.4% (previous year: 61.9%). Yields rose by 8.0% after adjusting for exchange rates. Traffic revenue went up by 166% to EUR 1,777m (previous year: EUR 669m).

Revenue increases by 152% year-on-year, positive Adjusted EBIT of EUR 3m achieved

Revenue at Austrian Airlines rose by 152% to EUR 1,871m in the 2022 financial year due to higher traffic and increased yields (previous year: EUR 743m). Operating income rose by 151% year-on-year to EUR 1,949m (previous year: EUR 775m).

In the 2022 financial year, operating expenses of EUR 1,946m were 90% higher than in the previous year (previous year: EUR 1,024m). Positive effects from the cost-cutting program dampened the increase in costs. The cost of materials and services rose by 142%, mainly as a result of increased fuel expenses (+243%) due to volume, price and exchange rate factors as well as higher fees and charges (+86%) due to volumes and prices. Staff costs rose by 35% year-on-year.

In the 2022 financial year, Austrian Airlines thus achieved a positive Adjusted EBIT of EUR 3m (previous year: EUR -249m). The Adjusted EBIT margin was 0.2% (previous year: -33.5%). EBIT came to EUR -1m (previous year: EUR -239m).

BRUSSELS AIRLINES

T035 KEY FIGURES BRUSSELS AIRLINES

		2022	2021	Change in %
Revenue	€m	1,217	560	117
Total operating income	€m	1,289	599	115
Operating expenses[1]	€m	1,363	777	75
Adjusted EBITDA[1]	€m	35	-65	
Adjusted EBIT[1]	€m	-74	-178	58
EBIT	€m	-75	-189	60
Adjusted EBIT margin[1]	%	-6.1	-31.8	25.7 pts
Employees as of 31 Dec	number	3,235	3,021	7
Average number of employees	number	3,200	3,035	5
Flights	number	52,571	29,645	77
Passengers	thousands	6,829	3,479	96
Available seat-kilometres	millions	16,267	10,525	55
Revenue seat-kilometres	millions	12,690	7,073	79
Passenger load factor	%	78.0	67.2	10.8 pts

[1] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**

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.

The Brussels Airlines fleet consisted of 40 aircraft at the end of the reporting year.

Brussels Airlines expands medium-haul fleet

In the 2022 financial year, Brussels Airlines added two medium-haul aircraft and one long-haul aircraft to its fleet in response to the rapid recovery of its markets. Brussels Airlines' medium-haul fleet thus now consists of 31 aircraft, while it has a long-haul fleet of nine aircraft. In 2023, the airline envisages significant further growth in its medium-haul segment with the planned introduction of three Airbus A320neos and two seasonal CRJ1000 wet leases. Moreover, the airline will begin the modernisation of its fleet in 2023 with the envisaged addition of three A320neos. Two further A320neos are set to follow in 2024. ↗ **Fleet, p. 26ff.**

Brussels Airlines successfully completes turnaround programme and plans future growth

Brussels Airlines successfully completed its REBOOT Plus turnaround programme in the 2022 financial year. The cost savings achieved have set the company up for future growth and further strengthened its market position. At the same time, efforts to further improve Brussels Airlines' unit cost position are continuing.

Brussels Airlines repays government loan ahead of schedule

In December 2022, Brussels Airlines repaid in full and ahead of schedule the government loan of EUR 290m which it had taken out in July 2020. The government stabilisation measures were thus successfully brought to a close.

Changes in the Brussels Airlines Executive Board

Tilman Reinshagen has been a member of the Brussels Airlines Executive Board and Chief Operating Officer (COO) since 1 July 2022. He was previously Vice President Ground Operations Hub Airlines Frankfurt and has replaced Edi Wolfensberger, who took over as Eurowings's COO on 1 April 2022.

On 31 January 2023, Peter Gerber, CEO of Brussels Airlines, resigned his post and left the Lufthansa Group. Christina Foerster, Member of the Executive Board of the Lufthansa Group, has taken charge of the airline's management on a temporary basis until a long-term replacement is appointed.

Significant improvement in operating performance

With 6.8 million passengers, Brussels Airlines carried 96% more customers in the reporting year than in the previous year (previous year: 3.5 million). Capacity was expanded by 55% year-on-year and was thus at 74% of its 2019 pre-crisis level. Sales climbed by 79% compared with the previous year. The passenger load factor was 10.8 percentage points higher year-on-year, at 78.0% (previous year: 67.2%). Yields rose by 18.9% after adjusting for exchange rates. Traffic revenue increased with the expansion of traffic by 127% to EUR 1,140m (previous year: EUR 503m).

Revenue up by 117% year-on-year, Adjusted EBIT comes to EUR –74m

Increased flight operations and higher yields in the 2022 financial year enabled revenue at Brussels Airlines to rise by 117% to EUR 1,217m (previous year: EUR 560m). Operating income climbed by 115% to EUR 1,289m (previous year: EUR 599m).

Within the scope of the increase in flight operations, operating expenses went up by 75% to EUR 1,363m (previous year: EUR 777m). The cost of materials and services was 105% higher than in the previous year, mainly as a result of higher fuel expenses (+175%) due to volume, price and exchange rate factors and higher fees and charges due to volumes and prices (+68%). Staff costs were 34% higher than in the previous year.

In the 2022 financial year, Brussels Airlines thus significantly reduced its operating loss year-on-year. Adjusted EBIT came to EUR –74m (previous year: EUR –178m). The Adjusted EBIT margin was –6.1% (previous year: –31.8%). EBIT came to EUR –75m (previous year: EUR –189m).

EUROWINGS

T036 KEY FIGURES EUROWINGS

		2022	2021	Change in %
Revenue	€m	1,857	822	126
Total operating income	€m	2,032	926	119
Operating expenses[1]	€m	2,262	1,176	92
Adjusted EBITDA[1]	€m	-17	-21	19
Adjusted EBIT[1]	€m	-197	-226	13
EBIT	€m	-200	-227	12
Adjusted EBIT margin[1]	%	-10.6	-27.5	16.9 pts
Employees as of 31 Dec	number	4,415	3,563	24
Average number of employees	number	4,113	3,290	25
Flights[2]	number	137,755	72,420	90
Passengers[2]	thousands	16,969	7,792	118
Available seat-kilometres[2]	millions	27,579	13,914	98
Revenue seat-kilometres[2]	millions	22,276	10,240	118
Passenger load factor[2]	%	80.8	73.6	7.2 pts

[1] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**
[2] Previous year's figures adjusted.

Eurowings is positioned as a value carrier with a focus on point-to-point traffic in Europe

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

Eurowings' route network focuses on European point-to-point traffic and addresses the structural growth in the leisure travel segment. With 96 aircraft, eleven international bases and an attractive route network, Eurowings is one of Europe's biggest holiday airlines.

Eurowings consists of two different flight operations. While Eurowings Germany offers flights from Germany to European destinations, Eurowings Europe covers pan-European routes. Eurowings Europe operates from its international bases in Palma de Mallorca, Salzburg, Prague, Stockholm and Pristina and offers travellers a growing selection of holiday destinations and attractive city connections in Europe. In summer 2023, Eurowings is set to open a further base in Graz.

Eurowings Europe Limited established to ensure continued pan-European growth

An important milestone was achieved with the founding of the new company Eurowings Europe Limited in Malta in May 2022 in order to achieve continued Europe-wide growth and to reduce complexity. The new company will enable Eurowings to focus on the leisure travel segment, which is enjoying structural growth, beyond its existing home markets and with the capacity to scale its offering.

The new company's first commercial flight was on 3 November 2022. The flight operations of Eurowings Europe are to be gradually transferred to the new company Eurowings Europe Limited by April 2023.

Eurowings opens new base in Stockholm

Eurowings has further expanded its offering in northern Europe by opening a new base in Sweden's capital Stockholm. In March 2022, it initially stationed two Airbus A320s there. Eurowings is thus offering attractive direct connections from Scandinavia to holiday and city destinations throughout Europe for the first time.

Start of code-share agreement with Smartwings

Eurowings has launched the first phase of its code-share agreement with Smartwings, the leading Czech airline. Since March 2022, Eurowings connections from its Prague base have also been offered under Smartwings flight numbers and are marketed via the Smartwings website and other channels.

Eurowings begins introduction of Airbus A320neo

In the 2022 financial year, Eurowings introduced to its fleet the first six of a total of 13 aircraft from the Airbus A320neo family. This highly efficient and quiet short- and medium-haul jet offers a 50% reduction in noise emissions and a decrease of up to 20% in kerosene consumption have both reduced carbon emissions. Eurowings has ordered a total of eight A320neos and five A321neos. ↗ **Fleet, p. 26ff.**

Eurowings hires employees and signs new wage agreements

In line with its growing flight capacity over the course of the reporting year, Eurowings added around 750 cockpit and cabin positions in its two flight operations. Eurowings is thus continuing the recruitment drive which it initiated in 2021 and responding to the expected recovery of business which will likely gather pace in 2023. The airline successfully completed an extensive realignment in the wake of the coronavirus crisis and is now focusing on tourist destinations and the growing leisure travel segment. It also increased its ground staff in the reporting year.

Eurowings signed new agreements with collective bargaining and labour union partners in the reporting year which reflect the special conditions seen in 2022 and offer employees a clear perspective. These agreements covered the employees of Eurowings Technik, Eurowings Germany, Eurowings Europe and Eurowings Aviation. ↗ Employees, p. 29ff.

Miles & More is Eurowings' new loyalty programme

The Eurowings Boomerang Club – the airline's previous bonus programme – was suspended at the end of June 2022. Since then, Eurowings customers have exclusively benefited from Miles & More, the Lufthansa Group's loyalty programme. The focus on Miles & More also enhances Eurowings' positioning as a value airline and offers another clear differentiating factor in relation to low-cost competitors.

Changes to management

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 has replaced Frank Bauer, who has taken on the role of Head of Controlling for the Lufthansa Group.

On 1 April 2022, Edi Wolfensberger took over as Chief Operating Officer at Eurowings. He replaced Jens Ritter, who left Eurowings at the end of March 2022 in order to take over as Chief Executive Officer at Lufthansa German Airlines. Edi Wolfensberger was previously Brussels Airlines' Chief Operating Officer.

Capacity and passenger numbers rising significantly

In the 2022 financial year, the number of passengers carried by Eurowings rose 118% to 17.0 million (previous year: 7.8 million). With an increase of 98%, capacity almost doubled and was at 85% of the pre-crisis level, while the number of flights rose by 90%. The bottlenecks in the European air traffic system over the summer months resulted in flight changes at short notice and thus prevented even stronger growth. Sales nonetheless rose by 118%; the passenger load factor was 7.2 percentage points higher than the previous year's level, at 80.8% (previous year: 73.6%). Yields per revenue seat-kilometre rose by 8.0% after adjusting for exchange rates. Traffic revenue went up by 126% to EUR 1,851m (previous year: EUR 820m).

Revenue up by 126% year-on-year, Adjusted EBIT comes to EUR –197m

In the reporting year, Eurowings' revenue rose by 126% to EUR 1,857m (previous year: EUR 822m) due to volume and price factors. Operating income of EUR 2,032m was 119% up on the previous year (previous year: EUR 926m).

As part of the expansion of capacity, operating expenses increased significantly by 92% to EUR 2,262m (previous year: EUR 1,176m). The cost of materials and services was 149% higher than in the previous year. Fuel expenses picked up significantly (+238%) due to volume, price and exchange rate factors. Expenses for fees and charges rose primarily due to volumes (+101%), while expenses for aircraft charters went up as a result of the seasonal use of external wet lease partners (+492%). Staff costs rose by 54% due to the recruitment activities in the context of the ongoing expansion of the airline's flight programme following the coronavirus crisis and the end of short-time work.

Despite the extensive investments made in future growth, the airline was able to reduce its operating loss year-on-year in the 2022 financial year. Adjusted EBIT came to EUR –197m (previous year: EUR –226m). A positive Adjusted EBIT was achieved in the third quarter of 2022. The Adjusted EBIT margin was –10.6% (previous year: –27.5%). EBIT in the reporting year was EUR –200m (previous year: EUR –227m).

Logistics business segment

Lufthansa Cargo benefits from continuing strong demand for airfreight and again achieves record earnings. | Expansion of freighter fleet. | Digital services are expanded. | Sustainable logistics solutions improve environmental footprint.

T037 KEY FIGURES LOGISTICS

		2022	2021	Change in %
Revenue	€m	4,627	3,800	22
of which traffic revenue	€m	4,430	3,644	22
Total operating income	€m	4,733	3,865	22
Operating expenses[1]	€m	3,171	2,394	32
Adjusted EBITDA[1]	€m	1,770	1,644	8
Adjusted EBIT[1]	€m	1,600	1,495	7
EBIT	€m	1,575	1,497	5
Adjusted EBIT margin[1]	%	34.6	39.3	-4.7 pts
Adjusted ROCE[1]	%	54.2	51.8	2.4 pts
Segment capital expenditure	€m	254	164	55
Employees as of 31 Dec	number	4,085	4,162	-2
Average number of employees	number	4,088	4,210	-3

[1] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**

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 shipments, the subsidiary Heyworld, which specialises in tailored solutions for the e-commerce sector, Customs Broker, the customs and customs clearance specialist, and the Lufthansa Group's 50% stake in the 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. Among the special products offered, such as the transport of live animals, valuable cargo, post and hazardous goods, it is primarily the demand for carriage of temperature-controlled goods that is continuously increasing. 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 its own eleven Boeing 777F freighters and two Airbus A321Fs, 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 21 777F freighters on behalf of the two shareholders, Lufthansa Cargo and DHL Express. Lufthansa Cargo is responsible for marketing the capacities of five of these aircraft.

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

Course of business

Lufthansa Cargo expands freighter fleet to open up new growth potential

Lufthansa Cargo is investing in future growth potential in the fast-growing eCommerce segment. An initial two A321 passenger aircraft were permanently converted to freighters in the 2022 financial year in response to the growing demand for airfreight connections within Europe, in order to ensure short delivery times. These two aircraft are operated by Lufthansa CityLine.

As a further investment to expand the capacity of its freighter fleet, Lufthansa Cargo ordered three current-generation 777Fs and seven next-generation 777-8F freighters from Boeing in the reporting year. The first 777F was delivered in June 2022 and is in service with AeroLogic.

In addition, leases for two 777F freighters which were due to run until 2024 were extended for a further seven years, until 2031, in the reporting year.

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 2022 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 Lufthansa Cargo's "mobile digital handling" is an important step towards replacing paper-based processes with digital solutions. In the past financial year, 100% of all air waybills were processed digitally for the first time by means of electronic air waybills (eAWBs).

Ground infrastructure being modernised at the Frankfurt hub

Implementation of the comprehensive infrastructure programme that includes the development and renovation of the logistics centre at the home Frankfurt hub continued in the 2022 financial year. The programme was designed so that the company 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 is due to be completed in 2030. Interim operation and renovation of the RFS high-bay storage began in the reporting year.

Lufthansa Cargo is reducing carbon emissions and developing sustainable logistics solutions

Since April 2021, Lufthansa Cargo has offered a weekly freight flight which is powered by sustainable fuels and is thus carbon neutral. The 150th carbon-neutral flight took place in 2022.

Moreover, all Lufthansa Cargo customers are able to transport their freight in a carbon-neutral manner by selecting the "Sustainable Choice" option. Overall, sustainable aviation fuels accounted for 1.8% of the fleet's overall consumption in the 2022 financial year.

In order to further improve the fleet's carbon footprint, from 2023 all 777Fs will be equipped with an innovative surface technology. The AeroSHARK film, which imitates shark skin, reduces aircraft air resistance and thus reduces fuel consumption. ↗ **Combined non-financial declaration/Climate protection, p. 99ff.**

Changes in the management of Lufthansa Cargo

On 1 March 2022, Dietmar Focke joined the Executive Board at Lufthansa Cargo AG, where he is responsible for Operations and HR. He previously headed up Engine Services at Lufthansa Technik. He replaced Harald Gloy, who left Lufthansa Cargo on 28 February 2022 and took up a new role as Lufthansa Technik's new Chief Operating Officer and Labor Director on 1 July 2022.

Operating performance

Lufthansa Cargo demonstrates strong operating performance

The course of business in the Logistics segment remained at a record level in the 2022 financial year. Due to the coronavirus pandemic, market-wide freight capacity remained reduced on account of the loss of capacity in the bellies of passenger aircraft. Demand for freight capacity remained high even when things began to get back to normal in the second half of the year. Operational stability was maintained despite the adverse conditions such as lockdowns in China and detours caused by the need to fly around Russian airspace.

T038 TRENDS IN TRAFFIC REGIONS
Lufthansa Cargo

	Net traffic revenue external revenue		Available cargo tonne-kilometres		Revenue cargo tonne-kilometres		Cargo load factor	
	2022 in €m	Change in %	**2022** in Mio.	Change in %	**2022** in Mio.	Change in %	**2022** in %	Change in pts
Europe	294	25	607	24	271	9	44.7	-6.1
America	2,033	18	6,288	27	3,519	4	56.0	-12.2
Asia/Pacific	1,808	25	3,933	1	2,913	-5	74.1	-4.4
Middle East/Africa	295	26	999	26	528	3	52.8	-11.6
Total	**4,430**	**22**	**11,827**	**17**	**7,231**	**0**	**61.1**	**-9.9**

Lufthansa Cargo doubles yields compared with the pre-crisis level

Lufthansa Cargo expanded its capacity in the 2022 financial year by 17% year-on-year, above all due to the recovery of passenger flight operations and the related increase in belly capacities. On the other hand, freighter capacities decreased – despite the introduction of a Boeing 777F in 2022 and two 777Fs in the previous year – as a result of the complete retirement of the MD11 fleet during the previous year due to the need to fly around Russian and Ukrainian airspace. When compared with the year before the crisis, 2019, capacity was 18% lower. Sales were unchanged year-on-year. The cargo load factor fell by 9.9 percentage points to 61.1% (previous year: 71.0%), in particular due to the expansion of belly capacities on routes with a relatively low level of demand for airfreight. Yields adjusted for exchange rate effects increased in all Lufthansa Cargo traffic regions and were overall 17.7% higher than in the previous year. They thus reached a new all-time high in the history of Lufthansa Cargo. They were 132.5% higher than the 2019 pre-crisis level.

Traffic revenues increased due to the higher yields by 22% to EUR 4,430m (previous year: EUR 3,644m). Traffic revenues rose in all traffic regions.

The Americas and Asia/Pacific remain Lufthansa Cargo's main traffic regions. The two regions account for nearly 90% of capacity and sales.

Capacity was expanded in all traffic regions, and sales were increased in all traffic regions except Asia/Pacific. However, the cargo load factor declined in all traffic regions year-on-year.

T039 TRAFFIC FIGURES AND OPERATING FIGURES LOGISTICS

		2022	2021	Change in %
Available cargo tonne-kilometres	millions	11,827	10,134	17
Revenue cargo tonne-kilometres	millions	7,231	7,198	0
Cargo load factor	%	61.1	71.0	-9.9 pts
Yields	€ cent	61.3	50.6	21.1[1]

[1] Exchange rate-adjusted change: 17.7%.

Financial performance

Revenue up 22% year-on-year

Revenue in the Logistics segment rose by 22% to EUR 4,627m in 2022 (previous year: EUR 3,800m). Higher yields due to capacity reductions across the industry were responsible for the increase. Operating income increased by a total of 22% to EUR 4,733m (previous year: EUR 3,865m).

Expenses went up by 32%

Operating expenses came to EUR 3,171m in the reporting year, a year-on-year increase of 32% (previous year: EUR 2,394m).

T040 OPERATING EXPENSES LOGISTICS

	2022 in €m	2021 in €m	Change in %
Cost of materials and services	2,295	1,665	38
of which fuel	486	251	94
of which fees	274	259	6
of which charter expenses	1,287	945	36
of which MRO services	111	95	17
Staff costs[1]	425	367	16
Depreciation and amortisation[2]	170	149	14
Other operating expenses[3]	281	213	32
Total operating expenses	**3,171**	**2,394**	**32**

[1] Without past service costs/settlement.
[2] Without impairment losses.
[3] Without book losses.

The cost of materials and services rose year-on-year by 38% to EUR 2,295m (previous year: EUR 1,665m). There was a 94% price- and currency-related increase in fuel expenses to EUR 486m (previous year: EUR 251m).

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 36% to EUR 1,287m (previous year: EUR 945m).

Staff costs increased in 2022 by 16% to EUR 425m (previous year: EUR 367m). The 3% decline in the average number of employees was offset by the end of short-time work in Germany and salary increases as a result of collective bargaining agreements and pay rounds.

Depreciation and amortisation rose year-on-year by 14% to EUR 170m (previous year: EUR 149m).

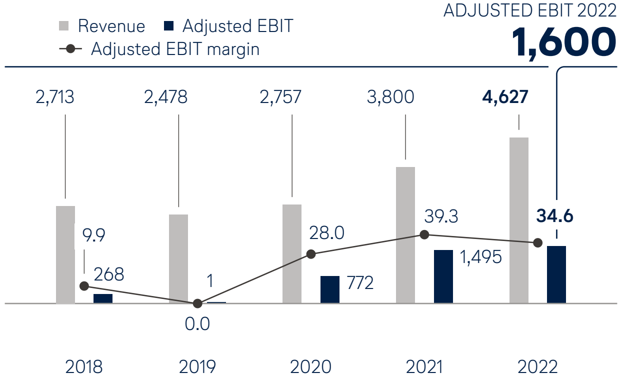
Other operating expenses went up by 32% to EUR 281m, mainly due to currency effects (previous year: EUR 213m).

Lufthansa Cargo generates new record result totalling EUR 1,600m

Adjusted EBIT increased accordingly by 7% in 2022 to EUR 1,600m (previous year: EUR 1,495m). Lufthansa Cargo thus again improved on the record earnings generated in the previous year. The Adjusted EBIT margin fell by 4.7 percentage points to 34.6% (previous year: 39.3%).

EBIT rose year-on-year by 5% to EUR 1,575m (previous year: EUR 1,497m).

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



Segment capital expenditure up 55% on the year

Investment in the Logistics segment increased in the reporting year by 55% to EUR 254m (previous year: EUR 164m). This mainly related to the delivery of a Boeing 777F freighter and prepayments for two additional 777F freighters during the reporting year.

Staff numbers decline by 2%

The number of employees at year-end fell by 2% to 4,085 (previous year: 4,162).

MRO business segment

Higher demand for flights leads to increased demand for MRO services. | Revenue up significantly on the previous year. | Volume of new business at record high. | Adjusted EBIT achieves new record. | Lufthansa Technik expands its digital services significantly.

T041 KEY FIGURES MRO

		2022	2021	Change in %
Revenue	€m	5,550	4,003	39
of which with companies of the Lufthansa Group	€m	1,546	886	74
Total operating income	€m	5,951	4,408	35
Operating expenses[1]	€m	5,384	4,021	34
Adjusted EBITDA[1]	€m	689	536	29
Adjusted EBIT[1]	€m	511	362	41
EBIT	€m	456	163	180
Adjusted EBIT margin[1]	%	9.2	9.0	0.2 pts
Adjusted ROCE[1]	%	10.4	8.4	2.0 pts
Segment capital expenditure	€m	99	95	4
Employees as of 31 Dec	number	20,411	20,569	-1
Average number of employees	number	20,116	21,328	-6
Fully consolidated companies	number	25	25	–

[1] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**

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 30 plants offering technical aviation services worldwide. The company also holds direct and indirect stakes in 64 companies. Lufthansa Technik AG serves more than 800 customers worldwide, including OEMs, aircraft leasing companies, operators of VIP jets, governments and armed forces, as well as airlines. Around one third of its business comes from entities in the Lufthansa Group and two thirds from clients outside the Lufthansa Group.

Course of business and operating performance

Higher demand for MRO services and favourable US dollar drive record earnings
Lufthansa Technik reported a positive performance throughout the reporting year. Increasing demand for flights, particularly in the summer months, led to rising demand for maintenance and repair services, which in turn had a positive impact on revenue and earnings. The favourable performance of the US dollar supported results, enabling record earnings despite rising costs of materials and services and staff costs, and supply chain disruptions worldwide. The restructuring measures implemented during the coronavirus crisis to ensure a stronger long-term position in the independent MRO market were largely completed and made a sustainable contribution to the improved cost base. An increase in national and international business more than offset the Russian business, which was discontinued completely at the start of the war in Ukraine.

Focus on recruiting new professionals
The need for qualified staff increased significantly in the reporting year, both in production and administrative areas. Lufthansa Technik is responding to this need with various national and international recruiting activities under the heading of "We are Aviationeers". Lufthansa Technik opened a new site in Valencia, for example, to meet the high demand for digital services.

The number of apprentices at Lufthansa Technik again neared its pre-crisis level in the reporting year. A total of 186 young people started their apprenticeship at the company's sites in Germany. An additional 23 students on combined degree programmes were also recruited.

Strategic decisions for the future taken to create a Digital Tech Ops Ecosystem

In addition to the steep rise in demand for physical MRO services, the upward trend in digital MRO services continues unabated, since they will in future enable physical maintenance inspections to be organised at lower cost and more reliably. Lufthansa Technik is already shaping this digital transformation of technical aircraft operations with its two products, AVIATAR as a platform for data-based analytics solutions, and flydocs as a digital records and asset solution. Swiss Aviation Software AG, the world market leader in maintenance and engineering/MRO software with its AMOS product, was acquired at the end of 2022 to develop the company's competitive position in the digital space.

Lufthansa Technik is creating a digital tech ops ecosystem by merging these three products. The three units will remain independent but combine their products, which previously had a modular design. It will then be possible for the first time to cover all the data generated along the entire value stream for technical operations. These data, combined with the digital know-how of all three independent solutions providers and the all-round engineering skills of Lufthansa Technik, will be leveraged to create new products, faster digitisation and thus added value for clients. The new integrated system will reduce MRO costs, further improve process efficiency and operating stability, boost the availability of aircraft and enhance their value.

At the end of the reporting year, the data from 2,683 aircraft (31% more than the previous year) were already connected to the AVIATAR platform via monetarised contracts.

Lufthansa Technik also acquired Lufthansa Industry Solutions, the IT advisory and systems integration business that specialises in artificial intelligence and data analytics. The company supports corporate digitalisation initiatives both within and outside the Lufthansa Group, and last year was able to further increase its share of business with customers outside the Lufthansa Group.

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.

Lufthansa Technik and BASF began regular use of the fuel-saving surface technology AeroSHARK. AeroSHARK imitates the characteristics of sharkskin, which is particularly hydrodynamic, and so optimises the aerodynamics of relevant areas of the aircraft, which means it uses less fuel. The first passenger aircraft fitted with AeroSHARK, a Boeing 777, took off in October 2022. In December 2022, Lufthansa Technik received the supplemental type certificate from the EASA for the standardised modification of Boeing 777 aircraft. This means the roll-out of the sharkskin technology across part of the fleet can begin at the launch customers Lufthansa Cargo and SWISS.

Moreover, in the reporting year Lufthansa Technik presented its Hydrogen Aviation Lab, Hamburg's new functional laboratory for the testing of maintenance and ground processes for future hydrogen-powered aircraft. For this purpose, a former Lufthansa Airbus A320 will be converted alongside joint project partners into a field laboratory which will enable early research into the safe use of a potential energy source for future aviation to be carried out under realistic conditions.

Important contracts to be renewed and signed

Lufthansa Technik serviced 4,242 aircraft under long-term component contracts at the end of 2022. 28 new customers were acquired in the course of the year and 706 new contracts with a volume of EUR 9.6bn signed, of which EUR 3.6bn was with companies in the Lufthansa Group.

They included new long-term contracts for strategic component supplies with the airlines WIZZair, Frontier Airlines and Volaris. The new contracts reflect rapidly growing fleets at these three airlines and so enable new synergies and flexibility for further growth. Based on these three customers' current fleet plans, the new total component support (TCS) contracts will cover some 1,000 aircraft from the Airbus A320 family in a few years. In addition to component supplies, the contracts offer strategic solutions for parts supplies, tailored to the airlines' individual needs and based on intensive use of predictive maintenance and other intelligent AVIATAR solutions.

Alongside classic MRO services and digital services for civil and commercial aircraft operators, security products for government clients also saw increased demand in 2022. Lufthansa Technik established a new business unit, Defence Programmes, to further strengthen its activities with military customers. An agreement to support the German navy's new P-8A Poseidon aircraft fleet was signed in the reporting year in partnership with Boeing and ESG Elektroniksystem- und Logistik GmbH. Another P-8A operator, Royal New Zealand Air Force, was an additional customer acquired for component support in December. Two Airbus A321LR (long-range) aircraft were delivered to the German armed forces and are available immediately for transporting air force troops and members of the German parliament. The second government aircraft, an Airbus A350-900, was also formally delivered to the Bundeswehr and the cabin modification on the third is already well advanced.

Personnel changes in the Executive Board of Lufthansa Technik

Harald Gloy became Chief Operating Officer and Labor Director on 1 July 2022. He completes the Executive Board of Lufthansa Technik, which includes CEO and Chair Sören Stark, and CFO Dr William Willms.

Financial performance

Revenue up 39% on the year

Revenue in the MRO segment climbed by 39% in 2022 to EUR 5,550m (previous year: EUR 4,003m). Lufthansa Technik profited from the recovery in flight hours among its customers, secured long-term customer contracts and the rise in the US dollar over the course of 2022.

Both external revenue and revenue from within the Group increased year-on-year. Performance was driven by the MRO units Engine Services and Aircraft Component Services in particular. Operating income rose by 35% to EUR 5,951m (previous year: EUR 4,408m).

Expenses up by 34% or less than revenue

In the reporting year, operating expenses increased in a lower proportion to revenue by 34% to EUR 5,384m (previous year: EUR 4,021m).

T042 **OPERATING EXPENSES MRO**

	2022 in €m	2021 in €m	Change in %
Cost of materials and services	3,066	2,075	48
of which other raw materials, consumables and supplies	1,806	1,195	51
of which external services	1,260	880	43
Staff costs[1]	1,379	1,082	27
Depreciation and amortisation[2]	178	174	2
Other operating expenses[3]	761	690	10
Total operating expenses	**5,384**	**4,021**	**34**

[1] Without past service costs/settlement.
[2] Without impairment losses.
[3] Without book losses.

The cost of materials and services rose by 48% due to higher volumes and prices to EUR 3,066m (previous year: EUR 2,075m). This was the result of the positive commercial performance, which led to an increase in material consumption and higher external services.

Staff costs of EUR 1,379m were 27% higher than in the previous year (previous year: EUR 1,082m).

Depreciation and amortisation rose by 2% to EUR 178m (previous year: EUR 174m).

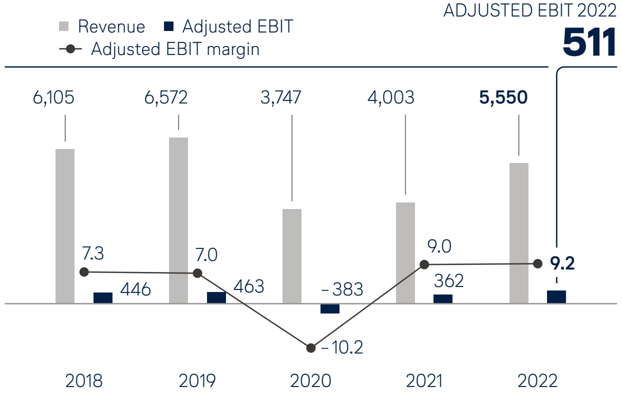
Adjusted EBIT reached a record EUR 511m

Adjusted EBIT improved in the reporting year by 41% to EUR 511m (previous year: EUR 362m), which was a new record. The Adjusted EBIT margin improved by 0.2 percentage points to 9.2% (previous year: 9.0%).

EBIT rose year-on-year by 180% to EUR 456m (previous year: EUR 163m). The difference to Adjusted EBIT stems mainly from write-downs due to the cessation of business in Russia.

The previous year's figure was reduced by significant restructuring expenses and depreciation and amortisation in connection with assets held for sale.

C21 **MRO: DEVELOPMENT OF REVENUE, ADJUSTED EBIT** in €m **AND ADJUSTED EBIT MARGIN** in %



Segment capital expenditure up by 4%

Segment capital expenditure in the MRO segment went up by 4% to EUR 99m (previous year: EUR 95m). This was due to the investment policy, which remains restrictive. Capital expenditure mainly related to financing joint ventures and other property, plant and equipment.

Number of employees stable

The number of employees at the end of the year declined year-on-year by 1% to 20,411 (previous year: 20,569), driven in particular by the restructuring measures completed in the reporting year and the hiring freeze in the previous year. Increased recruitment enabled the number of employees to rise again in the fourth quarter of 2022.

Catering business segment

Business profits from global recovery in the sector. | Earnings down on the previous year due to the absence of positive non-recurring effects. | New partnerships expand product portfolio. | Global sustainability agenda takes shape.

T043 KEY FIGURES CATERING

		2022	2021	Change in %
Revenue	€m	1,960	1,113	76
of which with companies of the Lufthansa Group	€m	57	28	104
Total operating income	€m	2,011	1,352	49
Operating expenses[1]	€m	2,015	1,299	55
Adjusted EBITDA[1]	€m	66	112	-41
Adjusted EBIT[1]	€m	-11	31	
EBIT	€m	-182	-24	-658
Adjusted EBIT margin[1]	%	-0.6	2.8	-3.4 pts
Adjusted ROCE[1]	%	-1.6	3.4	-5.0 pts
Segment capital expenditure	€m	40	23	74
Employees as of 31 Dec	number	20,218	15,626	29
Average number of employees	number	18,709	15,546	20
Fully consolidated companies	number	79	79	–

[1] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**

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 network of joint ventures and partnerships around the globe. The SCIS Air Security subsidiary provides security services in North America.

The LSG Group has organised its business activities into three regions: Emerging Markets, Asia/Pacific and the Americas. The LSG Group's European business was sold in 2020.

Course of business and operating performance

Global recovery in the airline industry supports the positive performance of the LSG Group

The consequences of the coronavirus pandemic, rising material and energy costs, high inflation rates and a tight labour market presented challenges for the catering sector and the LSG Group in the reporting year.

The global upward trend in flight bookings and strict cost management nevertheless enabled the LSG Group to post a positive performance in the reporting year. It was particularly strong in the North American market, also due to currency effects. There were signs of an increasing market recovery in Latin America and the Emerging Markets region. In Asia, by contrast, business recovered slowly due to ongoing travel restrictions and quarantine requirements in some countries.

Contracts signed and renewed in all regions and segments

LSG Sky Chefs extended key airline catering contracts in the reporting year, including with Delta Airlines at 28 stations, with Air France-KLM at eleven stations and with Copa Airlines at 22 stations. The company also signed new agreements at several sites around the world, including with Condor, Greater Bay Airline, Turkish Airlines, Virgin Atlantic and Air New Zealand. The number of airline customers came to 185 in the reporting year (previous year: also 185).

Retail inMotion renewed its onboard retail contract with Aer Lingus for three years and with Spirit Airlines for five years, also winning Eurowings Discover and Greater Bay Airline as new customers. The expert brand also relaunched its boutique business (in-flight shopping) on all intercontinental flights of Lufthansa German Airlines with a new product range.

In Convenience Retail, the contract with 7-Eleven in the USA was renewed for 3.5 years and Fifth Season was acquired as a new customer. In the Ghost Kitchen unit, where virtual brands are used by delivery services to generate additional income, twelve new sites were added to the network in the reporting year, above all in the Americas region (USA and Latin America).

Focus on partnership network and innovation

The LSG Group signed strategic partnership agreements with NotCo, Kaelis and Cuisine Solutions in the first half of 2022. The aim is to expand the range of food technology and sustainable food and equipment solutions.

At the same time, the “next” innovation programme was launched, with the goal of embedding its continuous, rapid innovation approach within the company. At the largest airline catering trade show WTCE, held in Hamburg in June, the LSG group presented innovations such as consumption analytics, an in-flight management suite as well as new features and improvements in the area of in-flight sales, such as pre-order and pre-select technology and a virtual try-on solution.

Global sustainability strategy is developed further

The LSG Group’s sustainability strategy – based on the three pillars of People, Planet and Prosperity – was further developed in the reporting year in regional working groups. Various projects with quantifiable targets were jointly defined. The activities in the “People” pillar concentrate on the diversity of the workforce. The “Planet” dimension emphasises sustainable product and production management, while the activities in the “Prosperity” pillar relate to improved waste management.

In the reporting year, Retail inMotion launched its sustainability strategy, known as Prism, which is intended to have a long-term impact across all IT solutions and units. All the initiatives by the LSG Group and its expert brands are managed within the framework of the overarching sustainability strategy. The aim is to embed sustainability at the heart of all the company’s activities.

Change in Executive Board of LSG Group

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 Kristin Neumann, who left the Company. Wilken Bormann was previously Head of Lufthansa Group Finance.

Financial performance

Revenue up on previous year by 76%

Revenue at the LSG group increased by 76%, to EUR 1,960m compared with the previous year due to positive business performance in all regions, especially North America (previous year: EUR 1,113m).

Other income fell by 79%, to EUR 51m, largely due to the cessation of subsidies received under the US CARES Act in the previous year (previous year: EUR 239m).

Operating income rose by 49% to EUR 2,011m (previous year: EUR 1,352m).

Expenses 55% higher than previous year

Operating expenses increased in the reporting year by 55% to EUR 2,015m (previous year: EUR 1,299m).

The cost of materials and services rose by 88% due to higher volumes and prices to EUR 784m (previous year: EUR 416m).

Staff costs went up by 35% due to higher volumes and prices to EUR 833m (previous year: EUR 615m). The average number of employees went up by 20%.

Depreciation and amortisation fell by 5% to EUR 77m (previous year: EUR 81m).

Other operating expenses increased by 72% to EUR 321m (previous year: EUR 187m), partly due to higher revenue-based airport fees.

T044 **OPERATING EXPENSES CATERING**

	2022 in €m	2021 in €m	Change in %
Cost of materials and services	784	416	88
Staff costs[1]	833	615	35
Depreciation and amortisation[2]	77	81	-5
Other operating expenses[3]	321	187	72
Total operating expenses	**2,015**	**1,299**	**55**

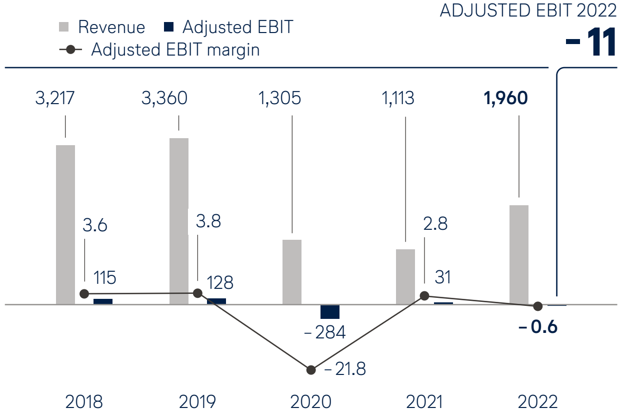
[1] Without past service costs/settlement.
[2] Without impairment losses.
[3] Without book losses.

Adjusted EBIT of EUR –11m

Adjusted EBIT fell to EUR –11m in the absence of subsidies received pursuant to the US CARES Act (previous year: EUR 31m). Without these subsidies the previous year, Adjusted EBIT would have been up on the year. The Adjusted EBIT margin amounted to –0.6% (previous year: 2.8%).

EBIT fell to EUR –182m (previous year: EUR –24m). The difference to Adjusted EBIT stems primarily from impairment losses of EUR 156m on goodwill, and other impairment losses and expenses in connection with the war in Ukraine.

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



Segment capital expenditure up by 74%

Segment capital expenditure of EUR 40m was 74% higher than in the previous year (previous year: EUR 23m) and consisted largely of essential replacement investments in production sites.

Number of employees up by 29%

The number of employees as of 31 December 2022 rose by 29% on the previous year to 20,218 (previous year: 15,626) due to the high volume of new recruitment resulting in particular from the recovery of business in North America.

Additional Businesses and Group Functions

AirPlus makes progress with renewing its IT and product environment. | Lufthansa Aviation Training profits from recovery in air travel. | Lufthansa Systems remains successful in airline IT market. | Earnings of Group Functions on par with previous year.

T045 KEY FIGURES ADDITIONAL BUSINESSES AND GROUP FUNCTIONS

		2022	2021	Change in %
Total operating income	€m	2,768	1,732	60
Operating expenses[1]	€m	3,050	2,060	48
Adjusted EBITDA[1]	€m	-138	-189	27
Adjusted EBIT[1]	€m	-255	-309	17
EBIT	€m	-301	-434	31
Segment capital expenditure	€m	45	49	-8
Employees as of 31 Dec	number	8,033	8,075	-1
Average number of employees	number	7,922	8,351	-5

[1] Previous year's figures have been adjusted due to amendments in the definition of the figures. ↗ **Financial performance, p. 40ff., Notes to the segment reporting, p. 228ff.**

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 55 countries worldwide. The company served more than 53,000 corporate customers in total in 2022.

The recovery in business travel management made great progress in 2022. Whereas the first few months of the year were still affected by the coronavirus pandemic, the easing of worldwide travel restrictions over the remainder of the year resulted in strong demand for business travel. As a result, AirPlus billing volume rose by 111% in the reporting year compared with the previous year.

The renewal of the IT and product environment also made great progress. Customers were migrated for the first time with their central AirPlus company account and the AirPlus merchant agreement to the new, cutting-edge platform, so all AirPlus payments solutions are now available in live operations on the new platform. As of 2022, AirPlus also offers Apple Pay as a mobile payment solution for the company credit card AirPlus Corporate Card. In the growth area of B2B payments, a significant increase in customers and transaction volumes was reported. AirPlus also established an important independent source of financing in the reporting year with the start of its asset-backed commercial paper programme.

Adjusted EBIT of AirPlus in the reporting year came to EUR -74m (previous year: EUR -150m).

Lufthansa Aviation Training profits from rapid recovery in air travel

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.

The rapid recovery in air travel caused further increases in demand for training cockpit and cabin crew, and LAT again expanded its training volume year-on-year in the reporting year. Demand in the Pilot Training segment came to almost 90% of its pre-crisis level in 2019. Investments were again made in new training equipment in 2022. In addition to a cabin emergency evacuation trainer (CEET) for the types

Boeing 777 and 787, a full-flight simulator for the Boeing 787-9 in service with Lufthansa German Airlines went into operation in June 2022.

After a break of more than two years due to the pandemic, the European Flight Academy resumed operations in summer 2022 and began new training courses for civilian aircraft pilots. The training concept was updated, made more efficient and adapted to market requirements during the break. One priority was to maintain the high standards for selection and training, which are acknowledged worldwide as being of high quality. The theoretical part of the training takes place in Bremen or Zurich and lasts for around 24 months, with practical training given at sites in Goodyear, USA, Grenchen, Switzerland, and Rostock-Laage in Germany.

LAT's Adjusted EBIT amounted to EUR –1m in the 2022 financial year (previous year: EUR 10m).

Lufthansa Systems continues its success in the Airline IT market
The recovery of the airline industry after the coronavirus pandemic continues, and Lufthansa Systems was also able to strengthen its position in the international airline IT market. Digitalisation remains one of the most important areas of activity for its approximately 350 customers, and one in which the experts from Lufthansa Systems are in great demand. The company also provides support for numerous projects within the Lufthansa Group that contribute to greater harmonisation of the IT environment. To meet rising demand for IT know-how, the IT services provider is recruiting some 300 new employees worldwide.

Including all of its equity investments, the IT company generated Adjusted EBIT of EUR 3m in the reporting period (previous year: EUR 10m).

Group Functions results on level with 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 revenue for Group Functions rose in the reporting year due to higher exchange rate gains and internal invoicing of central Group services by 77% to EUR 1,663m (previous year: EUR 937m). Operating expenses of EUR 1,870m were 64% up on the previous year (previous year: EUR 1,143m) due to a corresponding rise in exchange rate expenses, staff and other operating costs. Adjusted EBIT of EUR –207m was roughly on par with the previous year (previous year: EUR –206m).

Result for Additional Businesses and Group Functions below previous year
Total operating income for Additional Businesses and Group Functions rose by 60% to EUR 2,768m in the 2022 financial year (previous year: EUR 1,732m). Operating expenses climbed by 48% to EUR 3,050m (previous year: EUR 2,060m). Adjusted EBIT came to EUR –255m (previous year: EUR –309m). The smaller loss at AirPlus was partly offset by lower earnings at LAT. EBIT in the reporting year was EUR –301m (previous year: EUR –434m). The difference to Adjusted EBIT stems mainly from expenses in connection with the planned sale of Group operations.

Opportunities and risk report

The management of opportunities and risks is integrated into all business processes. | Risks are identified early, managed proactively and monitored. | Opportunities are exploited selectively.

OPPORTUNITY AND RISK MANAGEMENT

Opportunity management process

For the highly dynamic global airline industry, opportunities can arise both externally – from new customer requirements, market structures, ongoing consolidation or changes in the regulatory environment – and internally – from new products, innovations, quality improvements and further 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 processes. 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 relevant for the Group are incorporated into the Group strategy ↗ **Group strategy, p. 18ff.** The individual business segments also identify their own specific opportunities. ↗ **Business segments, p. 52ff.**

Objectives and strategy of the risk management system

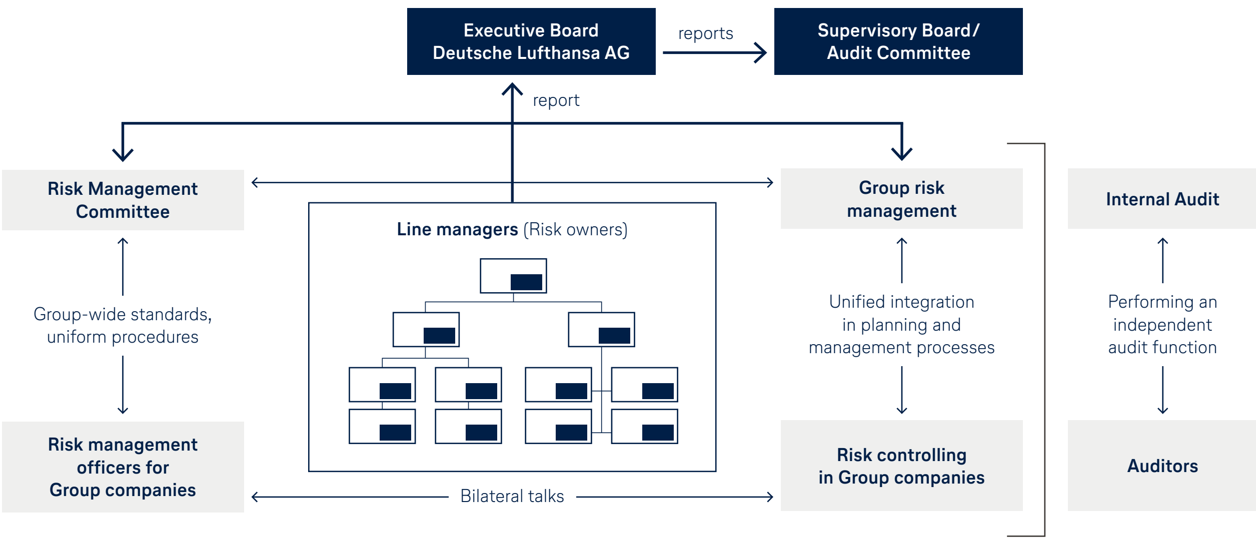
Risk management at the Lufthansa Group aims to fully identify material risks, to present and compare them transparently and to assess and manage them. Risk owners are obliged to monitor and manage risks proactively and to include relevant information in the planning, management and control processes. 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, including the Logistics, MRO and Catering segments, as well as Lufthansa Aviation Training, AirPlus, Miles & More, Lufthansa Global Business Services, the IT companies and the Delvag Group.

The chart ↗ **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 effectiveness of the Lufthansa Group's risk management.

The Risk Management Committee ensures, on behalf of the Executive Board, that processes, structures and rules are established to identify, manage and assess business risks at an early stage 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 material 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 appropriateness, effectiveness, and economic viability of the risk management system practised in the Lufthansa Group. The last suitability test took place in 2022 with an effective-ness test scheduled for 2023.

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 the 2022 financial year, the audit outcome was that the statutory requirements of Section 91 Paragraph 2 AktG 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 operating 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, the risk management process involves 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. Chart ↗ C24 **Lufthansa risk evaluation for qualitative and quantitative risks** shows the different categories used.

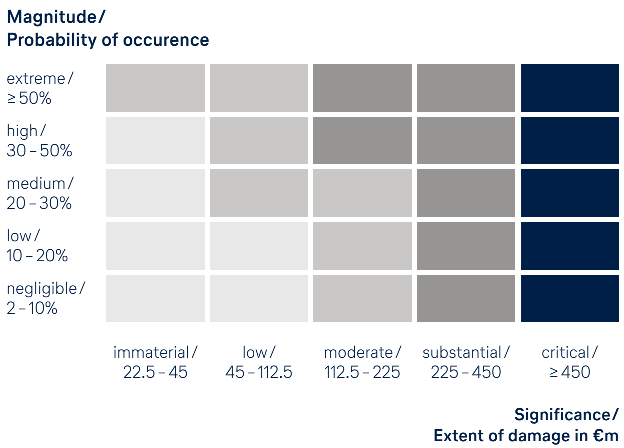
Quantitative risks are those whose potential effect on earnings can be estimated. A distinction is made between different probabilities of occurrence. The extent of loss is given as the potential monetary impact on the planned Adjusted EBIT. Depending on the type of risk, this may relate either to relatively infrequent event risks, such as an IT failure following a cyberattack, 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 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 assessment 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. 80ff.**, 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 operating 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

The Lufthansa Group's risk management system includes a concept for calculating its risk-bearing capacity. 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 risk. The top quantitative risks are weighted and aggregated on the basis of the risk value; the top qualitative risks are also incorporated into the model and assessed on an aggregate basis. This presentation is part of the quarterly reporting to the Executive Board. This procedure meets the requirements of IDW PS340 as revised.

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 seriously adverse impact on the Company and their occurrence is highly likely. The CSR contents along with the mitigating instruments and measures were updated in 2022. 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 established processes and continuous market observation. Opportunity management is also an integral part of the annual strategy and planning processes.

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

In this report, opportunities are defined as possible future developments or events which may lead to a deviation from plans that is positive for the Company.

Macroeconomic opportunities

Economic environment

The Lufthansa Group's forecast for 2023 is based on the expectation that future macroeconomic conditions and sector developments will correspond to the description given in the ↗ **Forecast, p. 149ff.** Based on Global Insight forecasts, the Lufthansa Group thus expects the global economy to grow by 1.9% in 2023. 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 home markets.

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 the Ukraine war is over swiftly, bringing with it an end to the international air traffic restrictions. This could lead to greater demand for flights and freight capacities.

The disruptions caused by the war in Ukraine, particularly on energy markets, with drastic price increases in some cases, and the subsequent impact on global supply chains continue to weigh on consumers and large sections of the economy. If markets stabilise again this could have a positive effect on costs and demand for the Lufthansa Group.

Ongoing stimulus measures in the main global economies could also lead to a further upswing in demand and thus 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 continue to recover from the coronavirus crisis in the years ahead, and return to its pre-crisis level in 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. The prerequisite for this is that the available market capacities do not increase faster than demand, for instance, due to the reactivation of aircraft that had been temporarily retired as a result of the crisis.

Market consolidation

Before the coronavirus pandemic, a consolidation trend was prevalent in the fragmented European airline industry, which was interrupted by the pandemic and its effects on the financial situation of almost all airlines.

In the medium term, however, the negative financial consequences of the pandemic could 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

Restructuring programme

The Lufthansa Group is adapting to the market changes brought about by the crisis. This also entails creating the conditions for generating reasonable profits on a long-term basis by cutting costs and increasing efficiency.

Additional opportunities for the Lufthansa Group would arise if the steps taken are more successful than planned and additional measures with a positive earnings impact are identified and implemented. Net profit for the period could develop overall better than forecast in both cases. ↗ **Failure to achieve assumed improvement in the restructuring programme, p. 83ff.**

Fleet modernisation

The Lufthansa Group benefits from strategically renewing its fleet. Modernising and simplifying the fleet structure helps to cut emissions, increase fuel efficiency and reduce maintenance and staff costs, thus directly improving earnings.

For the Lufthansa Group additional opportunities would arise 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 and the resolution of bottlenecks in the supply chain.

Partnerships and cooperation

Partnerships with other airlines are important to strengthen the market presence in key traffic regions. The Lufthansa Group's successful joint ventures are therefore being developed and partnerships expanded in all key markets.

The Lufthansa Group airlines based in economically strong regions are 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 technical innovations

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. Efficiency gains, cost savings and additional income that exceed planned amounts as a result of innovation and digitisation represent an opportunity.

As an airline group, the Group 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.

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 CleanTech Hub of the Lufthansa Group, for instance, pools airline know-how with ideas from global start-ups and academia to cope better with the challenges of climate change with first-class technology and the opportunities it makes possible.

The Lufthansa Group's particular commitment to sustainability, which is reflected in its above-average performance in the main CSR ratings, also opens up opportunities for the Company in several areas as sustainability aspects are playing an increasingly important role for customers and capital markets alike. The increasing relevance of the subject for investment decisions could also result in the Lufthansa Group obtaining better financing conditions than companies that are less committed.

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 the demand for certified offsets is becoming increasingly important, especially in the business travel and airfreight segments. The Lufthansa Group's pioneering role here creates particular opportunities.

Opportunities from the legislative framework

Political decisions at national and European level continue to exert a strong impact on the international aviation sector and thus also 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. ↗ **Legal and regulatory factors, p. 33.**

In addition, the easing of the remaining global travel restrictions related to the coronavirus pandemic could lead to higher demand for flights and thereby a better business performance by the Company than expected. In particular, the opening up in China could have a positive overall effect on revenue.

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 costs and income.

Financial opportunities

Financial market developments also represent opportunities for the Lufthansa Group. Favourable changes in fuel prices, exchange rates, interest rates or a higher credit rating than in the assumptions used for planning and forecasting may result in lower expenses and/or higher income.

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. 88f.**

RISKS AT AN INDIVIDUAL LEVEL

The table below 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.

Macroeconomic risks

Uncertain economic environment

The Lufthansa Group's forecast for 2023 is based on the expectation that future macroeconomic conditions and sector developments will correspond to the description given in the ↗ **Forecast, p. 149ff.** If the global economy performs worse than forecast, this is expected to have a negative effect on the Lufthansa Group's business.

T046 TOP RISKS LUFTHANSA GROUP

	Significance	Magnitude	Change compared with previous year	Description
Quantitative risks				
Fuel price movements	critical	extreme	→	↗ p. 88f.
Revenue risks	critical	extreme	→	↗ p. 82
Risk of failure to achieve cost savings targets	critical	extreme	↑	↗ p. 83
Cyber and IT risks	critical	high	→	↗ p. 85f.
Crises, wars, political unrest, terrorist attacks or natural disasters	critical	high	↑	↗ p. 81f.
Breaches of compliance requirements and data protection regulations	critical	medium	→	↗ p. 86
Exchange rate losses on pension fund investments	critical	negligible	→	↗ p. 89
Risks due to irregularities in flight operations (incl. reputation)	substantial	extreme	↑	↗ p. 82
Exchange rate movements	substantial	extreme	→	↗ p. 89
Provider risk	substantial	high	↑	↗ p. 84
Counterparty risk	substantial	negligible	↑	↗ p. 89
Qualitative risks				
Pandemic diseases	critical	high	→	↗ p. 82
Flight operations risks (with information security risks)	critical	low	→	↗ p. 84f.
Regulatory risks resulting from climate change	substantial	extreme	→	↗ p. 87f.
Human resources	substantial	extreme	↑	↗ p. 83f.
Strategic fleet sizing	substantial	high	→	↗ p. 84
Increased noise legislation	substantial	high	→	↗ p. 88
Digital transformation – entry of new competitors (Lufthansa Technik)[1]	critical	medium	→	↗ p. 83
Risks from breaches of hygiene and food safety standards (Catering)[1]	critical	low	→	↗ p. 85

[1] Risk evaluation on segment level.

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, the war in Ukraine, a possible global recession, long-term high 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 the war in Ukraine, the continued critical security situation in the Middle East and North Africa, and the latent risk of terrorist attacks on air traffic and aviation infrastructure, in Germany too, could have concrete effects on business operations and on the safety of the Lufthansa Group's flight operations, customers and employees.

In addition, the coronavirus pandemic increases the risk of staff shortages and financial bottlenecks at airports, which could come at the expense of high-quality safety measures. This is primarily the case in states which had deficits in air safety even before the pandemic. When the Lufthansa Group identifies defects, it takes additional steps to mitigate them.

The Ukraine war and the sanctions it has caused, including potential countermeasures, could affect the development of the global economy and cause further increases in the prices of important energy sources such as oil and gas, and other resources. 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, additional fuel costs due to airspace closures, higher costs due to a shortage of energy and raw materials or more stringent statutory security requirements.

Any further escalation in the Ukraine war could affect the insurance coverage of airlines worldwide. In particular there is a risk of insurance coverage being cancelled immediately in the event of direct military action between Russia, USA, China, the United Kingdom and France, and in the event of incidents constituting a casus foederis under Article 5 of the NATO treaty. To address this risk and ensure continuity of flight operations, the Lufthansa Group companies are engaged in discussions with governments and aviation authorities in their respective home markets.

Because of its strong symbolic effect, civil aviation is still a potential target of terrorist attacks. Geopolitical trends also mean there is an increasing risk of sabotage to traffic and other critical infrastructure by actors commanded or supported by states. Military conflicts between states are a high risk, 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.

To analyse, track and manage these risks, the Lufthansa Group monitors the global security situation and current events extensively – 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. Any indirect effects of the coronavirus pandemic are also taken into account. If necessary, deficits are compensated for by additional measures that may affect all relevant functional areas. In addition, perceptions of Germany, and of Switzerland, 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, the Group has specially trained employees 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. Passengers receive optimal protection from infection by means of safety measures adapted to the situation and based on the Lufthansa Group's pandemic planning.

The health risks to customers and employees have now declined significantly thanks to increasing immunity within the population. There remains a risk of further financial losses, which could be significant, in the event that new virus variants emerge which are able to evade the immunity in the population and again cause severe illness. Moreover, there is the specific danger of the pandemic in China spreading, resulting in broad sections of the population being infected with the virus in the months ahead, and thus impacting Lufthansa Group's business in China.

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 the macroeconomic development. In the past, 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, the war in Ukraine, 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.

Revenue risks

The entire Lufthansa Group is exposed to revenue risks, and there is still a high level of uncertainty concerning future market developments. In addition to the potential for a resurgence of more serious infections in individual countries, the sharp increase in inflation due to higher energy prices and particularly the resulting slower economic growth will have an impact on future demand and booking patterns. These trends make it enormously difficult to forecast revenue and they increase 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, further economic fluctuations, current market and competitive developments, potential changes in customer behaviour for reasons of climate protection, geopolitical influences and unpredictable events with a global impact. These challenges will be addressed in the short term, in particular by adjusting capacity. Sales, product, and cost-cutting measures are also being taken. In the long term, unit costs are to be improved systematically and sustainably by continuous efficiency gains and as the result of segment-specific restructuring projects.

Risks due to irregularities in flight operations

In many of the functional areas necessary for the smooth processing of international air traffic (including security checks, ground services, baggage handling, and air traffic control), staff shortages became very obvious in summer 2022 and have still not been fully overcome. Flight delays and flight cancellations can result. This entails risks for the operating airlines, which range from reputational damage to rising costs for compensating and supporting the passengers affected. Numerous steps to improve the operating processes are therefore being taken in coordination with service providers and system partners, and additional staff are being recruited to increase internal capacities.

Risks due to digital transformation and market entry of new competitors in the Lufthansa Technik segment

The market position of original equipment manufacturers (OEMs) results in barriers to entry for independent providers of aircraft maintenance, repair and overhaul (MRO) services, especially for new aircraft models, and makes it more difficult to gain access to licences and intellectual property. OEMs will use the resulting competitive advantages in the aftermarket to compensate for the reduced volume of new business and high development costs. Expanding and maintaining their market position in this environment is a key challenge for MRO providers. Lufthansa Technik uses contractual agreements and strong partnerships with the OEMs to ensure that purchasing conditions remain competitive and licences for relevant technologies can still be obtained. Digital platforms and product offerings are also becoming increasingly established for the planning, management and awarding of physical MRO fulfilment and are altering the traditional contractual and customer relations between the MRO provider and the airline. New competitors and established industry players are trying to transform the market with data-based services and digital capabilities. Lufthansa Technik also has a broad portfolio in this strategically important area, with an expanded range of digital MRO and technical operations products (AVIATAR, AMOS, Flydocs), and is well established with airline customers.

Company-specific risks

Failure to achieve assumed improvement in the restructuring programme

The Lufthansa Group is striving to achieve significant improvements in the cost base, productivity and efficiency of all business units with its restructuring programme.

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. Despite this, it may become apparent in the course of implementation that the expected effects cannot be achieved in full or only later than originally assumed. There is also a possibility 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. The sharp rise in the inflation rate, with the resulting increases in staff costs and the cost of materials, creates a risk of inverse effects that counteract the cost savings and productivity increases to a greater extent than previously expected.

Human resources

LABOUR DISPUTES

The strike risk remains, since some collective bargaining agreements are still being negotiated. Flight operations at Eurowings Germany are one case in point, where demands from cockpit and cabin staff could be backed up with strike action. No new wage and framework agreement was reached with the Vereinigung Cockpit pilots' union for the cockpit crew at Deutsche Lufthansa AG and Lufthansa Cargo either. The pay increase only obtained an agreement not to strike until the end of June 2023. Without an agreement before then, there will be another risk of strikes.

However, the strike risk is considerably reduced by the collective agreements for flight attendants of Deutsche Lufthansa AG and payscale ground staff of Deutsche Lufthansa AG, Lufthansa Technik AG, Lufthansa Cargo AG, which run until the end of December 2023, as well as the agreements for all staff of SWISS and Austrian Airlines. If the trade unions are successful in their demands, this may result in higher staff costs. Strikes can also lead to reputational damages and tangible economic impacts for the Lufthansa Group.

COOPERATION BETWEEN WORKS COUNCILS AND LABOUR UNIONS

Effective, trust-based collaboration with the co-determination partners are a key factor for the Company's success. The coronavirus pandemic made it necessary to introduce short-time work across the Company. It has also highlighted the need for organisational restructuring, including a reduction in staff through a redundancy programme.

These restructuring activities were (re)negotiated in the course of 2020 and 2021 and short-time work continued into the first quarter of 2022. The focus is now again on making the Lufthansa Group financially successful, retaining staff and recruiting new employees, especially in the relevant home markets.

In addition, changes in the market due to or following the coronavirus pandemic also made further reorganisation necessary (without any staff redundancies) at Deutsche Lufthansa AG. The negotiations in this regard continued until the end of 2022.

Regardless of the agreements already reached, further demands from labour union partners cannot be ruled out, particularly in view of the forecast inflation rates. The unions for cockpit staff of Deutsche Lufthansa AG and Lufthansa Cargo have agreed to refrain from taking any industrial action in areas covered by wage settlements until 30 June 2023. There is still a risk of conflict, however, if a follow-on agreement for the period after 30 June 2023 cannot be concluded.

EMPLOYEE COMMITMENT

Strong demand for flights in the second half of 2022 brought the operating areas of the Lufthansa Group to the limits of their capabilities. Short-term secondment of additional administrative staff to operating areas relieved some of the pressure at peak times. Despite this, the strong surge in business resulted in staff overload, which had an adverse impact on the customer experience that could be provided and on employee satisfaction. A large number of flights were cancelled in summer 2022 in direct response to this and in order to relieve pressure on the system overall. Wage increases that were postponed because of the crisis also had a negative impact on employee engagement. In addition, the build-up of restructuring and transformation pressures led to a potential loss of confidence and a lack of orientation. In order to boost commitment and become more attractive as an employer, the working conditions for staff were revised and their future prospects significantly improved. The Lufthansa Group deliberately uses its employer branding and HR marketing activities to support additional hiring, and is making improvements to its recruitment process and employee experience. Various apprenticeships, student and trainee programmes were resumed to this end, and talents in a variety of groups were supported and systematically networked. Finally, an assortment of professional development programmes were initiated to enable employees to work on their personal and career development following the crisis.

STAFF STRUCTURE

Differences between strategic HR requirements, the existing skill sets of employees and how they are distributed across the companies in the Lufthansa Group constitute a structural HR risk. The Lufthansa Group will recruit a large number of new employees in 2023. Both the administration of recruitment activities and the professional integration of new employees pose great challenges for the organisation. There is a risk of frustration at long recruitment processes and inefficient onboarding. The Lufthansa Group addresses this risk across the Group with a recruitment task force, strategic HR planning, the development of a skills model and by strengthening employer branding and recruitment.

Supplier risks

The economic effects of the current geopolitical situation and disruptions in supply chains also affect suppliers to the Lufthansa Group. Factors such as the energy crisis, a lack of raw materials and staff shortages or the insolvency of an important supplier mean there is a risk of disruptions in the supply of goods and services, which in turn jeopardise business continuity. Furthermore, there is a risk of significant price increases or that rights to services under existing maintenance contracts which have already been paid for could be lost. Purchasing at the Lufthansa Group regularly identifies providers that are critical for business continuity and assesses the relevant risk. In order to address the risk of interruptions to supplies or a price increase in time or to mitigate it, there is a regular process of dialogue with relevant suppliers. Suitable instruments are also used, such as changing the terms of payment, reviewing contracts regularly and implementing a system to visualise and manage the risks of any supply chain disruption.

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, competition and cost risks mentioned above, there is a risk of oversizing 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 Group and capacity for the next four years.

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 personal injuries and damage to property, This is divided into environmental factors (for example, weather or bird strike), technical factors (such as engine failure), organisational factors (for instance, contradictory instructions) and the human factor.

The significant expansion of flight operations following the pandemic was continuously monitored by the Lufthansa Group's safety management systems, in order to identify potential risks at an early stage and take mitigation measures where necessary.

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. Other sources of information, for example, accidents and hazardous situations around the world that come to light, are also analysed and the results 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 as a result of 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. They are becoming increasingly professional, more international and more numerous. This is borne out by the Group's 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, the industry, 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 new hybrid working practices, 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. In line with the current risk assessment, measures are defined that also include partners and providers of the Lufthansa Group when they are implemented in the IT systems and processes. The 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 of 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 suppliers 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.

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 such as 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 as well as 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. For example, the Group uses special software to compile insider lists, and to publish any ad hoc announcements, and has the corresponding policies, information letters and process descriptions at hand. The Corporate Compliance Office also conducts online training courses for those 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 and 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 adverse effect this may have on the proceedings and in accordance with DRS 20 No. 154, the risks have not been quantified. 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 ↗ **Consolidated financial statements, Note 36, p. 218ff., and Note 46, p. 251ff.**

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.

Ryanair has brought an action for annulment before the General Court (of the European Union) against the decisions by the European Commission approving state aid in the form of stabilisation measures for companies in the Lufthansa Group. At stake are the state stabilisation measures to support Deutsche Lufthansa AG, against which Condor has also brought an action for annulment, and those given to Austrian Airlines AG and Brussels Airlines SA/NV. The Lufthansa Group believes the chances of success of these actions are slim. If the actions are successful, however, the decisions by the European Commission would be declared null and void. Lufthansa could appeal to the European Court of Justice against the ruling. Depending on the outcome, the state aid may have to be repaid, although Deutsche Lufthansa AG, Austrian Airlines AG and Brussels Airlines SA/NV have already returned the stabilisation funding they received in full. SWISS also repaid all the state-guaranteed loans it received in 2022.

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.

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 CO_2 emissions by 55% compared with 1990. Air transport is particularly affected by the revision of the Emissions Trading System (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 System, EU ETS, which has been associated with the Swiss Emissions Trading System 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. 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 will 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-CO_2 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 CO_2 emissions for the time being. In addition to wide-ranging measures to limit CO_2 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 proactively prevent any regulations that could distort competition. ↗ **Combined non-financial declaration, p. 93ff.**

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, which have never since been exceeded. The assumption is that this framework will allow for further growth. 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. 93ff.**, 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 bodies across the business areas. ↗ **Notes to the consolidated financial statements, Note 45, p. 235ff.**

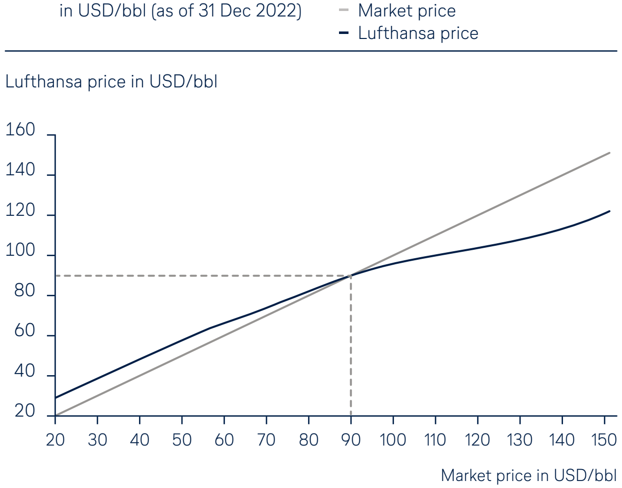
Fuel price movements
In the 2022 financial year, the price of crude oil was on average 40% higher than in the previous year. In addition, the price difference between crude oil and kerosene, known as the jet crack, has also increased significantly. Whereas the jet crack was USD 6.16/barrel on average in 2021, it came to USD 40.41/barrel in 2022.

In the reporting year, the Lufthansa Group consumed 7.6 million tonnes of kerosene. At around EUR 7,601m, fuel expenses constituted a major item of expense for the Lufthansa Group in 2022. Severe fluctuations in fuel prices can have a significant effect on earnings. A change in the year-end fuel price of +10% (–10%) in 2023 would probably increase (reduce) fuel costs for the Lufthansa Group by EUR 543m (EUR –571m) 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. The target hedging level for fuel hedging was 75% as of 31 December 2022. The aim is to reduce fluctuations in fuel prices. The Lufthansa Group uses standard financial market instruments in fuel hedging. Hedges are mainly in crude oil with option combinations for reasons of market liquidity. Limited protection against higher prices is accepted in exchange for maximising the benefits derived from any fall in prices. At the same time forward hedges were concluded for the price difference between kerosene and crude oil, and between gas oil and crude oil. The instruments used will be settled by payments and will not result in physical deliveries. As of 31 December 2022, there were crude oil and kerosene hedges for circa 62% of the forecast Group fuel requirement for 2023 in the form of futures and options. Crack hedges were also taken out for 39% of the fuel requirement. Around 20% of the forecast fuel requirement for 2024 was hedged at that time. As fuel is priced in US dollars, fluctuations in the euro/US dollar exchange rate can also have an additional 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 2023[1)]

in USD/bbl (as of 31 Dec 2022)



[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”. Eighteen foreign currencies are hedged because their exposure is particularly relevant to the Lufthansa Group. The USD is the only one of these currencies for which there is a net requirement. 52% of this net requirement for 2023 of USD 6.0bn was hedged as of 31 December 2022. ↗ **Notes to the consolidated financial statements, Note 45, p. 235ff.**

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. The risk of significant losses is limited by the use of hedging mechanisms. ↗ **Financial strategy and value-based management, p. 22ff.**

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. 222ff.**

OVERALL STATEMENT ON OPPORTUNITIES AND RISKS

The coronavirus pandemic was a watershed for the airline industry and thus also for the Lufthansa Group, but demand recovered significantly faster than previously expected in 2022. Global air traffic is now expected to return to its pre-crisis level as early as 2024.

The global uncertainty about the course of the pandemic has decreased significantly. At the same time the magnitude of other risks has increased significantly due to the outbreak of the Ukraine war, the resulting sharp rise in energy costs, and risks to the business cycle. Despite this, the liquidity risk was significantly reduced thanks to business performance that was significantly better than expected, as well as equity and debt financing measures, combined with the repayment of most of the stabilisation measures. 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 almost completed restructuring programme, the positive net income generated in 2022 and the scenarios on which its financial planning is based, the Executive Board does not consider that the continued existence of the Lufthansa Group is at risk.

DESCRIPTION OF THE INTERNAL CONTROL SYSTEM

The Lufthansa Group's Internal Control System (ICS) covers all the principles, procedures and steps intended to ensure effective, economical and accurate key processes and compliance with the relevant legal regulations. It is based on the COSO framework (Committee of the Sponsoring Organizations of the Treadway Commission). The framework defines the elements of the control system and sets the standards for measuring the appropriateness and effectiveness of the ICS.

The Lufthansa Group has an overarching, integrated ICS and risk management methodology with standardised processes to define necessary controls, document them according to uniform rules and test them regularly to ensure that they are effective and appropriate.

The ICS aims to ensure the reliability of operating information, compliance with internal and external requirements and the avoidance of financial losses.

To achieve this objective, the Internal Control System applies four principles:

The principle of functional separation states that executive activities (e.g. purchasing), recording activities (e.g. financial accounting, inventory accounting) and administrative activities (e.g. inventory management) that are carried out within a business process (e.g. the purchasing process, from the calculation of requirements through to payment), should not be performed by the same person.

The principle of control states that in a well-functioning control system, risks to the objectives of the ICS should be mitigated by means of process-integrated and process-independent activities.

The need-to-know principle states that employees should only have access to the information they need for their work. This also covers the corresponding security measures for IT systems.

The transparency principle states that reference concepts must be established for processes, which enable an external party to judge whether those involved are working in accordance with the relevant reference concept. At the same time, this defines the expectations of the organisation's leaders.

Overall responsibility for the ICS required to manage risk lies with the Executive Board of the Lufthansa Group, which defines the scope and the format of the systems in place based on the specific requirements of the Lufthansa Group.

The Executive Board has established a risk management and internal control organisation, led by the Head of Corporate Controlling, for the continued development and monitoring of the ICS process, and to drive the ongoing integration and harmonisation of the existing control activities in accordance with legal and operational requirements.

This organisation consists of a central unit that acts as the process owner for the ICS and risk management process, and transfers its methodological competence to the wider organisation by means of policies. The annual review of the policy's scope ensures that all material components are included in the ICS.

Each organisational unit covered by the ICS policy is obliged to take part in the ICS process, or is exempt from this obligation if it is not covered. Companies within its scope must provide an ICS officer and an ICS coordinator (a decentralised ICS unit) to implement the policy in the organisational unit and to operate the ICS. The decentralised ICS unit is obliged to implement an appropriate and effective ICS within its sphere of responsibility, based on the mandatory methodology for the Group.

Their different business activities mean that the scope of the activities to be performed by each unit varies. It depends partly on the materiality of the unit for the consolidated financial statements and the specific risks associated with the respective operating segment.

In order to obtain a realistic opinion of the effectiveness of the Internal Control System at Group level, this organisation ensures its implementation and continued methodological development in the Lufthansa Group.

The results of the monitoring activities are reported annually in the Executive Board meetings to evaluate the Company's overall risk situation. The Head of Corporate Controlling supports the Executive Board with the operation and monitoring of the ICS and with reporting to the Audit Committee of the Supervisory Board.

The central ICS unit is responsible for monitoring and coordinating the entire process so as to guarantee an appropriate and effective ICS within the Lufthansa Group.

This process ensures the scope of the ICS system, that it is up-to-date and that the monitoring activities are carried out to the extent required.

The rule-based ICS process is represented by an ICS lifecycle. This consists of the steps illustrated below, which run sequentially or in parallel:

- Scoping phase
- Determination of target requirements
- Maintenance phase
- Effectiveness test
- Coordination of test results
- Activity monitoring
- Quality assurance of self-assessments
- ICS reporting

The ICS lifecycle is mapped in full in a governance risk and compliance IT tool.

The scope of the ICS is defined by a catalogue of topics. This not only includes topics related to financial reporting, but also additional processes and topics from general areas, such as Treasury, Taxes, IT, Compliance and operational topics.

In addition to the general requirements for an ICS-relevant topic (e.g. that it should capture the risks of a defective organisational structure or process documentation), elements specific to the function or contents must be added for each area or category by Central Group Functions or the Group companies.

The ICS for the Lufthansa Group and its constitutive elements are covered by regular audits by the Internal Audit function.

They take place either as part of the risk-based annual audit plan, or in the course of audits performed on request in the course of the year.

Mandatory ICS effectiveness audits are also carried out across the Group for all the topics in the ICS catalogue on the basis of the annual audit plan. These audits mostly take the form of self-assessments, and are also performed regularly by the Internal Audit function.

Any findings of limited effectiveness are documented as to-do activities with defined responsibilities and deadlines. The companies are responsible for implementation. These activities are monitored at the level of the company and the Group.

The central ICS unit prepares a report on the effectiveness of the ICS in the first quarter of the following year to comply with the legal requirements of Section 107 Paragraph 3 AktG. The report provides information to the Supervisory Board's Audit Committee about the results of the effectiveness testing and the activities still to be com-pleted from the previous reporting period.

The company ICS officer is responsible for internal reporting within the respective companies. Ideally this takes place in the first quarter of the following year, but may vary from one company to another.

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 aims 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.

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Note: This combined non-financial declaration is part of the Lufthansa Group’s Annual Report 2022 and contains references to disclosures in the Annual Report. It is published on the Lufthansa Group website.

About this combined non-financial declaration

For the 2022 financial year, Deutsche Lufthansa AG is publishing a combined non-financial declaration in accordance with Sections 315b and 315c of the 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 material aspects and reporting on the following key issues: 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 sustainability in the supply chain.

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 Company's impact on non-financial aspects is therefore also taken into account in the Group risk management system of the Lufthansa Group. ↗ **Opportunities and risk report, p. 75ff.**

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. The disclosures reflect the perspective of both the Group and Deutsche Lufthansa AG, unless otherwise indicated. This combined non-financial declaration was subject to a voluntary limited assurance engagement in accordance with ISAE 3000 (revised). This external limited assurance engagement does not cover the reference to the GRI Standards which exceeds what is required by law. ↗ **Independent auditor's report on a limited assurance engagement regarding the combined non-financial declaration, p. 322ff.**

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 in accordance with the compulsory EU Taxonomy Regulation and voluntarily in accordance with TCFD and SASB and with reference to the GRI Standards

In accordance with the EU Taxonomy Regulation (2020/852), the Lufthansa Group makes compulsory disclosures on whether and to what extent the activities of the Company are related to economic activities that are classified as taxonomy-eligible or taxonomy-aligned within the meaning of the regulation. ↗ **Applicability of the EU Taxonomy Regulation (EU) 2020/852, p. 143ff.** Within the scope of the EU Taxonomy Reporting, the Audit Committee of the Supervisory Board has received training covering the application of the EU Taxonomy for the Lufthansa Group.

Furthermore, the Lufthansa Group published additional information on its website in 2022 concerning the 2021 financial year 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). The qualitative climate scenario analysis in the TCFD report was expanded to include a quantitative climate scenario analysis in the reporting year. These reports are also planned for the financial year 2022 and will be published on the Lufthansa Group's websites.

The combined non-financial declaration reports with reference to the GRI Standards. ↗ T201 **GRI Content Index, p. 307ff.**

Disclosures on the business model

The Lufthansa Group is a global aviation group with a total of 319 fully consolidated subsidiaries. The Lufthansa Group's business model is described in detail in the combined management report. ↗ **Principles of the Group, p. 16ff.**

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. In order to contribute towards

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

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.

An overview of the goals and comments on Lufthansa Group activities to support them can be found in ↗ T202 **Sustainable Development Goals, p. 313ff.**

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 focuses on the three dimensions of increasing value creation, generating free cash flows and maintaining financial stability. The concept and the associated performance indicators are described in detail in the chapter ↗ **Financial strategy and value-based management, p. 22f.**

Variable management remuneration is also linked to non-financial factors such as specific CO_2 emissions. ↗ **Remuneration report, p. 280ff.**

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. After the stakeholder survey last conducted in October 2018, the Lufthansa Group had planned to conduct another wide-ranging survey in the reporting year. However, this will now take place in 2023 due to the impact of the coronavirus pandemic.

In its materiality analysis conducted in the reporting year, the Lufthansa Group intensively researched the interests and demands of the public, investors, customers, employees as well as international reporting standards in order to select the aspects and concerns to be evaluated. 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.

The results of the materiality analysis were noted with approval by the management in accordance with section 289c (3) HGB in the reporting year. They form the basis for selecting the aspects and concerns described in this combined non-financial declaration.

C27 **ASPECTS, ISSUES AND PERFORMANCE INDICATORS**

Aspects	Environmental concerns	Customer concerns	Employee concerns
Issues / Performance indicators	**Climate protection** CO_2 emissions Status of CO_2 reduction target verified by the SBTi	**Operational stability** Departure punctuality	**Attractiveness as an employer** Engagement Index External rankings employer ratings
	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 positions Number of nationalities employed in the Lufthansa Group
	Waste management Reduction of food waste		**Transformation capability**
			Health and safety at work Health Index Number of work-related injuries

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 aspect[2]	**Responsible supply chain management**		

[1] Immaterial as defined in Section 289c Paragraph 3 German Commercial Code (HGB), voluntary presentation at specific request of addressees.
[2] Interdisciplinary aspect represented quantitative in the non-financial declaration.

Environmental concerns, customer concerns and employee concerns are of particular importance for the Lufthansa Group's business. Furthermore, the aspects of business ethics and compliance, including the fight against corruption and bribery as well as respect for human rights and responsible supply chain management are of great relevance to the Lufthansa Group.

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. Effective 1 January 2023, the Supervisory Board established an ESG Committee to advise the Supervisory Board, its committees, and the Executive Board on environmental, social, and good governance issues that are essential to the sustainable economic development of the Company.

The Executive Board member in charge of the Lufthansa Group's Brand & Sustainability function is responsible for the Company's environmental, climate and social impact at Executive Board level. The Corporate Responsibility department reports directly to the Executive Board member for Brand & Sustainability and is primarily responsible for ESG strategy, ESG reporting and ratings, customer concerns and ESG communication in cooperation with the respective departments of the Lufthansa Group. In addition, the management of help alliance, the Lufthansa Group's aid organisation, reports functionally to the Corporate Responsibility department.

The ESG strategy is reviewed annually and discussed with the Executive Board as part of the Strategic Roadmap Discussions. The focus during the reporting year was on the CO_2 mitigation pathway and supporting measures.

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

Chairman of the Executive Board. The GEC is an committee at senior management level and consists of the Executive Board of Deutsche Lufthansa AG, the CEOs of the segment parent companies and the main passenger airlines and the heads of the Group's Strategy and Communications departments. The Group Policy Committee (GPC), chaired by the Chairman of the Executive Board, discusses politically significant issues, including those relevant to sustainability, and prepares decisions. Individual managers within the committees are responsible for implementing concrete activities and projects. The Sustainability Circle, headed by the Corporate Responsibility department, was established in 2021 and continued in 2022. Its objective is to promote a Group-wide dialogue on sustainability topics. The members of this committee are the Corporate Responsibility officers of the Group companies and relevant Group functions.

External ratings

Lufthansa Group's sustainability management is rated positively, above the industry average

The Lufthansa Group's commitment to climate protection with its focus on CO_2 management was awarded a climate score of "A-" (previous year: "B") by the non-profit rating organisation CDP on 13 December 2022. This rating remains better than the industry average. The extensive, verified and transparent CO_2 disclosure broken down into Scope 1, 2 and 3, received an "A" score for each section, as did the governance, risk management and emission reduction measures sections. 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 2022. The FTSE4GOOD is a sustainability and corporate governance index family created by London-based provider, FTSE Russell. Companies that are particularly committed in the area of corporate social responsibility (CSR) are included in this index. The Lufthansa Group is above the industry average in the "Airlines and Customer Services" category and has achieved the highest possible score for "Climate Change" and "Corporate Governance". In the MSCI rating, the Lufthansa Group improved from "A" to "AA" in financial year 2022, making the Lufthansa Group the leader in the aviation sector. Over the past five years, the Lufthansa Group has continuously improved its rating in this important category from "BBB" to "AA".

The Lufthansa Group received a score of 27.8 from rating agency Sustainalytics in December 2022. As in the previous year, this means that it was classified as "medium risk" due to its high CO_2 relevance. It ranked 14th out of 70 in the "Airlines" sub-category. Sustainalytics rates the management of the Lufthansa Group as strong in terms of the main Environment, Social and Governance aspects.

Rating agency VE (Moody's ESG Solutions) rated the Lufthansa Group's ESG management, with 44 points, likewise above the industry average. This ensured that 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 CO_2-intensive sector is particularly noteworthy.

ISS ESG has rated the Lufthansa Group as Prime C+. This puts the Group (along with two other airlines) among the industry leaders of the 47 companies rated by ISS ESG in this sector.

C28 SUSTAINABILITY RATINGS
as of 31 Dec 2022

MSCI ESG RATINGS	AA	ecovadis	Silver 2022 ecovadis Sustainability Rating
ISS ESG	C+	V.E Part of Moody's ESG Solutions	44 Score on 100
CDP Disclosure Insight Action	A-	Sustainalytics	27.8 Medium Risk
FTSE4Good		ECPI Sense in sustainability	

The sustainability commitment of the Lufthansa Group regularly undergoes a voluntary external evaluation by the sustainability rating platform ecovadis In November 2022, the Lufthansa Group's commitment was reconfirmed for a further year when it received "Silver Status". The Lufthansa Group was once again rated better than comparable companies.

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 CO_2 emissions produced by burning kerosene and the noise caused by aircraft taking off and landing. Ground transportation, which is responsible for aircraft loading and handling, also generate CO_2 emissions. In addition, waste is produced on board and on the ground for 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.

A Strategic Roadmap Discussion (SRD) was held in the reporting year to discuss sustainability aspects impacting the environment in greater detail. SRD is an established format in which relevant strategic topics are discussed with the Executive Board of the Lufthansa Group. The content focused on the areas of action "Low emissions in flight operations" and "Circular economy and waste on board". These presentations were also attended by the Lufthansa Group's top management tier, the Group Leadership Team (GLT).

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), the German Aviation Association (BDL), the Federation of German Industries (BDI), the German Equities Institute (DAI) and econsense, the Forum for Sustainable Development of German Business, which the Lufthansa Group joined in 2004, the year the association was officially founded. 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 has direct contact with national ministries and EU bodies through the associations. ↗ **Opportunities from the legislative framework, p. 79f., and Regulatory risks, p. 87f.**

SWISS joined the Swiss business association swisscleantech in the reporting year. As a business association for a climate-ready economy, swisscleantech promotes ambitious energy and climate policies, offers its members access to knowledge, best practices, and decision-makers, and promotes the exchange of ideas between business, science, and politics.

The Lufthansa Group follows a strategic environmental programme that is implemented 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 from across the Group that is relevant to the environment – such as on energy consumption – so this information can be employed in business decisions. This database is continuously developed and supplemented with new requirements. The resource consumption recorded in this database and the emissions calculated on this basis are also used to determine the Lufthansa Group's total carbon footprint, with annual audits by external experts. The total carbon footprint is provided in detail and in a transparent manner to CDP, a global non-profit organisation.

The "Make change fly" communications campaign was also designed in the reporting year and launched in May 2022. The goal of this campaign is to use different themes and bold examples to support the communication of the Lufthansa Group's sustainability activities worldwide and to illustrate its sustainability measures.

Many Lufthansa Group companies use certified environmental management systems
To ensure continuous progress, the environmental management system in the Lufthansa Group includes 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 30% of the Company's divisions had a certified environmental management system in place in 2022 (measured by the number of employees in Lufthansa Group companies/ locations with a certified environmental management system).

The efforts of Lufthansa German Airlines in Munich and Lufthansa CityLine to minimise their environmental impacts contribute directly to the Lufthansa Group's ambitious goals. Since November 2021, Lufthansa German Airlines in Munich and Lufthansa CityLine have received EMAS (Eco-Management and Audit Scheme) validation and ISO 14001 certification in a combined registration. The integrated management framework provides the opportunity to become even more effective and efficient, to generate synergies and to realize systematic improvements in joint projects. A team of some 30 environmental coordinators in Frankfurt and Munich is working to achieve this goal. They are drawing on the experience of more than 20 years of environmental management at Lufthansa CityLine, the world's first airline officially certified by EMAS. The organisations were audited and validated for the first time together, and presented the first joint environmental statement. At the same time, Lufthansa German Airlines began preparations for the introduction of an environmental management system in Frankfurt, which is planned to be integrated into the joint system in 2023.

Air Dolomiti was revalidated under EMAS and recertified under ISO 14001 in the reporting year.

Austrian Airlines is also preparing to introduce an EMAS environmental management system.

Lufthansa Cargo has been certified worldwide according to the environmental management standard, ISO 14001. The subsidiaries Jettainer and time:matters have also 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 worldwide within a process-oriented, integrated management system, which is certified under ISO 14001 and ISO 45001 and provides a stable organisational basis for implementing the regularly updated environmental strategy, ensuring compliance with relevant legislation and identifying risks and actively taking advantage of opportunities. The ISO 14001 certification has been in place since 1996 and has been continually extended to all Lufthansa Technik sites since 2012. The Lufthansa Technik group passed its monitoring audit successfully in the reporting year.

Organisational foundations and responsibilities

The Group function Corporate Responsibility, which reports directly to the Executive Board Brand & Management function, 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 coordinators. 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.

CLIMATE PROTECTION

Concept

Four-pillar strategy defines climate protection measures
Progress in climate change in the aviation sector can only be made through cooperation and by combining various skill sets of different players, such as manufacturers, airports, air traffic control, airlines and policymakers. 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 four action areas also form the basis for the Lufthansa Group's conceptual approach and activities to improve fuel efficiency and reduce CO_2 emissions from aircraft operations.

C29 THE FOUR PILLARS FOR CLIMATE PROTECTION

Technological progress	Improved infrastructure	Operational measures	Economic instruments
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 (CORSIA) Voluntary compensation option

1. TECHNOLOGICAL PROGRESS

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.

Measures to technically modify the existing fleet are also constantly examined and implemented in cooperation with partners from research and industry.

In the past decade, the Lufthansa Group 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 SAF.

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 Airlines for Europe (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.

Furthermore, the Lufthansa Group seeks to persuade as many passengers who travel via its hubs as possible to use intermodal modes of feeder-transportation to open up additional potential for reducing the number of particularly short flights. By offering expanded 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 efficient use of 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 developing many activities to save fuel.

4. ECONOMIC INSTRUMENTS

Economic measures for climate protection, such as the mandatory Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and voluntary offsetting of CO_2 are vitally important as long as sustainable aircraft fuel and propulsion technologies are not available in sufficient quantities. In addition to voluntary offsets by the Company, the Lufthansa Group is therefore continuously expanding the possibilities for customers to offset carbon emissions.

Lufthansa Group supports climate protection through broader commitment

More targeted political support and financial support mechanisms are needed to develop technologies and speed up the market introduction of sustainable aviation fuels if the targets set as part of the Lufthansa Group's climate protection commitment are to be attained in a sector that is difficult to decarbonise. This is why the Lufthansa Group is involved in a wide range of private and government-funded research and development initiatives. Working with the scientific community, it has also funded atmospheric research to contribute to a better understanding of the global climate.

Lufthansa Group calculates its carbon footprint each year

The carbon footprint of the Lufthansa Group represents the total of all carbon dioxide and greenhouse gas emissions generated by its operations as defined by the internationally recognised Greenhouse Gas Protocol standard – including emissions from the supply chain. This is verified by an independent external audit organisation. Based on the results, the Lufthansa Group develops measures to reduce its direct and indirect CO_2 emissions or reviews the effectiveness of the measures.

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 companies of the Lufthansa Group. The Emissions Management Committee, which is headed by the Corporate Responsibility and Group Controlling functions, regularly discusses current developments in national and supranational emissions legislation and calculates their impact.

Two other committees also work on the topic of SAF. 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.

The Corporate Responsibility department has established an additional committee in 2022 to investigate and address the climate impacts of air transport that go beyond CO_2. This committee comprises representatives from Flight Operations and Corporate Responsibility and meets on a regular basis.

Targets

Lufthansa Group supports the climate protection targets of the aviation sector

In October 2021, the Lufthansa Group supported IATA's decision to make its existing emission reduction targets more ambitious, setting itself the goal of reducing net CO_2 emissions to zero by 2050 (net zero target).

All the airlines of the Lufthansa Group are members of the "Aviation Alliance Fit for 55", an alliance of European airlines and airports founded in 2022. The partners in the alliance have committed to the goal of carbon-neutral aviation by 2050 and have proposed competition-neutral solutions at the European level to achieve this goal.

Lufthansa Group also defines its own expanded emission reduction targets

As befits its pioneering role in climate protection, the Lufthansa Group defined its own carbon reduction targets, which are more ambitious. The Lufthansa Group's plan to reduce CO_2 emissions was validated by the Science Based Targets initiative (SBTi) in the summer of 2022. The SBTi, a joint initiative of CDP, United Nations Global Compact, World Resources Institute (WRI) and World Wide Fund for Nature (WWF), develops criteria for climate protection in companies and validates the corresponding corporate targets. With its SBTi validation, the Lufthansa Group was the first airline group in Europe with a scientifically based CO_2 reduction target in line with the goals of the Paris Climate Agreement of 2015. It is one of the first three airlines worldwide whose reduction targets have been validated by the SBTi.

Specifically, the Lufthansa Group has aligned its policies with SBTi criteria and committed to reducing its CO_2 intensity, i.e. its CO_2 emissions per transported tonne-kilometre (passenger and freight), by 30.6% from 2019 to 2030. This target may only be achieved by reducing fuel consumption or by substituting fossil fuel with SAF.

Over and above the reduction required by the SBTi targets, the Group will achieve its self-imposed target of cutting net CO_2 emissions in half by 2030 compared to 2019 with voluntary offsets. The Lufthansa Group aims to be carbon-neutral in 2050.

Emission reduction targets are part of Executive Board remuneration

Emission reduction targets are an element of the long-term variable remuneration of 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 (LTI) of the Executive Board. The reduction of specific CO_2 emissions was also defined as focus topic of the sustainability targets within the long-term variable remuneration in 2022. Derived from the current corporate strategy, according to which the reduction targets are based on the indicator CO_2 per tonne-kilometer transported, analogous to the target system of the validated SBTi targets ↗ **Remuneration report, p. 280ff.**
In December 2022, the Supervisory Board furthermore resolved to increase the share of the strategic and sustainability targets within long-term variable remuneration from 15% to 20% as of 2023.

Measures

1. TECHNOLOGICAL PROGRESS

Fleet renewal is continuously driven forward
Even though many projects are still far from being ready for large-scale production, the research and development of new, sustainable technologies in the aviation sector has been very dynamic for several 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 monitors these developments closely and analyses them on an ongoing basis with respect to their future viability and relevance.

Fleet renewal remains the key driver for reducing CO_2 in the short and medium term. In 2022, a total of 24 aircraft went into service with the Lufthansa Group airlines, including Airbus A320neos, A321neos, A350-900s, Boeing 787-9s 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. In turn, a total of 27 older aircraft were removed from the Group fleet. ↗ Fleet, p. 26ff.

Technical measures being developed for the existing fleet
Measures to retrofit the existing fleet are also constantly examined and implemented where appropriate. The AeroSHARK surface coating developed by Lufthansa Technik and BASF Coatings GmbH, which is named after the microscopic ribbing modelled on shark skin, reduces the air resistance of every aircraft.

In 2022, the AeroSHARK technology was further improved and approved for mass production, with the result that in October 2022 SWISS conducted its first scheduled flight with a Boeing 777-300ER on which a 950 square metre area had been modified with AeroSHARK. Lufthansa Cargo operated the first flight of a modified Boeing 777F with around 800 square metres of AeroSHARK in February 2023. Both SWISS and Lufthansa Cargo will fit all aircraft of these two types with AeroSHARK, which will save about 8,400 tonnes of fuel and about 26,600 tonnes of CO_2 annually.

Lufthansa Technik has also been marketing AeroSHARK to airlines outside the Lufthansa Group since receiving approval at the end of 2022. Many airlines and aircraft leasing companies have already expressed interest in fitting a three-digit number of Boeing 777F and 777-300ER aircraft with AeroSHARK.

Sustainable aviation fuels to be used more widely
Demand for SAF from private and corporate customers continued to rise in the reporting year. The key factors behind this demand included user-friendly integration in the booking platforms in the private customer segment as well as the expansion of services offered in the business travel segment beyond airfreight. 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 for this purpose. Therefore the Lufthansa Group has been able to offer all customers SAF together with the corresponding reportable Scope 3 emission reductions.

Global SAF production capacity, and therefore availability, has so far been very limited. In order to continually safeguard the supply of SAF, the Lufthansa Group has developed a three-part strategy.

1. Up to USD 250m for the procurement of SAF on the spot market has been released through 2024 by decision of the Executive Board. The supplier portfolio was significantly diversified in the reporting year. Aircraft can now be refuelled with SAF in Lyon and Bordeaux as well as in Frankfurt and Vienna.

2. In the medium term, options for long-term supply commitments around the world are under consideration. These offer considerable production volumes and security of supply from around 2025 onwards. Letters of intent were signed with fuel suppliers in the reporting year to provide up to 2.5 million tonnes of sustainable fuels for the Lufthansa Group airlines between 2025 and 2030.

3. In the long term, 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. For instance, several new partnerships with SAF manufacturers around the world are being established and consolidated via the Lufthansa Group's CleanTech Hub. 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 on research into the direct use of sunlight for fuel synthesis. In the reporting year, SWISS thus made a financial investment in Synhelion, a manufacturer of solar fuels, with the aim of accelerating the market launch of the technology. This is the Lufthansa Group's first investment in a fuel manufacturer. SWISS will be the first airline in the world to use solar aviation fuel.

At the political level, the Lufthansa Group continues to support competition-neutral concepts for mandatory blending quotas in Germany (PtL quota) and Europe (ReFuel EU).

2. IMPROVED INFRASTRUCTURE

Single European airspace should reduce emissions
The EU Commission's legislative proposal for the further development of the European airspace (SES2+) is intended to help harmonise and optimise European air traffic management. This will be based on the results of Europe's Single European Sky ATM Research Program (SESAR), which is developing, testing and introducing new technologies, procedures and standards throughout Europe.

The EU Commission's target of a 10% increase in efficiency through shorter flight paths and thus lower CO_2 emissions is to be achieved primarily through the SESAR programme. In parallel to this, however, measures to increase airspace capacity are also crucial for a stable flight timetable. The Lufthansa Group provided support in this area by investing in modern communication technologies, among other ways. The Lufthansa Group recognised the relevance of the development of the European airspace by continuing its participation in the industry consortium SESAR Deployment Manager (SDM) as a member and with the active support of experts.

The implementation of these technologies, processes and standards in daily operations is jointly coordinated by the members of the industry consortium SDM. In 2022, SDM coordinated 341 projects throughout Europe. The Lufthansa Group participated in 13 of these projects and was also actively involved in SESAR research and demonstration projects (SESAR3) with various airlines of the Lufthansa Group and Lufthansa Systems as an IT provider. The Group has also stepped up its involvement in SESAR research and demonstration projects with the aim of accelerating the implementation of short-term efficiency gains. The Lufthansa Group receives funding from the European Union for its active participation.

Intermodal transport offers to Lufthansa Group hubs are being expanded
The Lufthansa Group, in cooperation with the German, Austrian and Swiss national railway companies (Deutsche Bahn, Österreichische Bundesbahnen and Schweizerische Bundesbahnen) and some bus operators in the home markets, offers 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. One focus in the reporting year was on expanding rail services at the Zurich hub. As a result, the cooperation with SBB was expanded to include six destinations in Switzerland. For the first time, there is also an international connection between the main train station in Munich and Zurich Airport with a stopover in Bregenz, Austria.

Deutsche Bahn joined the Star Alliance in 2022, making it the world's first intermodal partner in an air transport alliance. This will enable more than 220 daily joint services operated by Lufthansa German Airlines and Deutsche Bahn between Frankfurt Airport and 24 short-haul destinations to also be used by Star Alliance partners.

3. OPERATIONAL MEASURES

Numerous projects to save fuel reduce carbon emission significantly
Making optimal use of the aircraft fleet to particular routes based on the demand on these routes is a key task in every flight operation, and ensures that the overall passenger load factor of each flight is optimised.

In addition, 24 fuel-saving projects were under way across the Group in the reporting year. These projects comprise activities relating to performance and procedures, weight reduction, flight route optimisation and technical developments.

Another 33 thousand tonnes of CO_2 emissions were permanently eliminated in the reporting year. The quantity of kerosene saved amounted to around 10.5 thousand tonnes – this is equivalent to approximately 127 return flights between Munich and New York with an Airbus A350-900 aircraft.

Examples of three of these 24 fuel-saving projects are detailed in the section below.

More efficient concepts for take-off and landing are being implemented and the digitalisation of approach technologies are being advanced
The Lufthansa Group collaborates with the German air traffic control (Deutsche Flugsicherung, DFS), on various projects aimed at introducing the modern, satellite-based RNP (Required Navigation Performance) navigation technology, which is also required by the International Civil Aviation Organization (ICAO). For example, Lufthansa German Airlines used a new fuel-saving RNP approach route in Frankfurt in 2022.

Lufthansa German Airlines realised additional fuel savings of about 90 tonnes in 2022 by optimising the planned flight paths for arrivals and departures in Munich.

The Lufthansa Group and DFS embarked on a joint project in the reporting year with the goal of increasing the use of fuel-saving continuous descent arrival procedures on a number of approach routes to Frankfurt Airport.

Artificial intelligence methods are to lay the foundation for future optimisation of arrivals and departures
Jointly with DFS, Lufthansa German Airlines conducts flight track analyses based on artificial intelligence methods as part of the EU-funded research and development project, ALBATROSS. This innovative concept was applied for the first time in 2022, starting with the Frankfurt airspace. Initial findings suggest potential for "greener flying", with the result that the project partners have begun to develop feasible measures on this basis.

OPS Sustainability Program implemented to help achieve the CO_2 reduction targets by 2030
The OPS Sustainability Program is a three-step approach to the sustainable reduction of CO_2emissions. It was launched in November 2022 by the experts from the Operations Efficiency department in cooperation with all flight operations of the Lufthansa Group and will run until 2030. Measures to improve efficiency are being implemented in a number of areas of action along the operational production chain – from flight preparation to in-flight optimisation measures and handling services on the ground to the data-based evaluation of completed flights. The programme combines ideas for projects that are on the verge of implementation with entirely original ideas and approaches. All Lufthansa Group airlines benefit equally from the individual measures and projects thanks to a standardised, cross-airline approach and continuous dialogue. The Airbus Green Procedures are one result of this collaboration. These are a series of measures designed to ensure efficient and sustainable flight operations, and will be established as a standard for all Lufthansa Group airlines.

The first of the three steps consists of 93 ideas for projects that will be implemented in stages through 2025. They will also involve targeted training and communication measures based on a comprehensive analysis of flight data. In the subsequent steps from 2025 onwards, the individual measures will be harmonised across the airlines of the Lufthansa Group. Projects that have not yet been fully identified and evaluated in the first step will be implemented thereafter. The reductions in CO_2 emissions achieved in the OPS Sustainability Program will be continuously tracked and reported, which makes them an essential building block for achieving the Lufthansa Group's SBTi targets.

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.

Carbon emissions being offset mandatorily
The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which was agreed with the International Civil Aviation Organization (ICAO) in October 2016, has offset growth-related CO_2 emissions in international air traffic by the purchase of certificates since 2021. CORSIA is designed to offset all emissions from the aviation sector that exceed the carbon emissions of the 2019 baseline, as defined by the ICAO. The pilot phase (2021 to 2023) is based on the 2019 emissions volume and, for the years 2024 to 2035, on 85% of the emissions from 2019. In 2021, the first year of the CORSIA pilot phase, the Lufthansa Group did not make any carbon offset payments due to the decline in traffic caused by the crisis. The same situation is expected for 2022. Whether and how many CORSIA offsets will be required for 2023 depends primarily on how fast air traffic will recover in the states participating in the CORSIA pilot phase.

The EU Emissions Trading Scheme (EU ETS) for air traffic has managed and limited CO_2 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) and the United Kingdom (UK ETS) for flights between the EEA and Switzerland and the United Kingdom impose additional obligations to surrender emission allowances.

The Lufthansa Group works with A4E (Airlines for Europe) to monitor and support the revision process of the European Emissions Trading Directive at the political level. The project aims to harmonise CORSIA and EU ETS in order to avoid double regulation.

The Lufthansa Group companies emitted some 7.4 million metric tonnes of CO_2 in the reporting year within the scope of the EU ETS, CH ETS and UK ETS. In 2022, the Lufthansa Group expects national registry authorities (including the UK ETS) to allocate to its companies emission certificates corresponding to 3.8 million tonnes of CO_2 emissions. For further information on the provisions recognised in connection with the obligation to submit CO_2 emissions certificates to the competent authorities, please refer to ↗ **Notes to the consolidated financial statements, Note 36, p. 218ff.**

Compensation offers for customers are being expanded
The Lufthansa Group's measures and commitments for CO_2 neutralisation through economic instruments are to be considered independently of the options for voluntary CO_2 compensation by customers. The Lufthansa Group further expanded its existing options for the voluntary offset of CO_2 by passengers in the reporting year. Of particular note here is the integration of "more sustainable" flight options in the booking processes of Lufthansa German Airlines, SWISS, Austrian Airlines, Brussels Airlines and Eurowings.
↗ Customer concerns/Product and services, p. 117ff.

Lufthansa Group voluntarily offsets its employees' business travel
Since 2019, the Lufthansa Group has been offsetting the carbon emissions of all employees' business flights globally. In 2022, 50,651 tonnes of CO_2 were offset via the climate protection organisation, myclimate.

Other climate protection measures

CleanTech Hub seeks innovative approaches to climate protection
In November 2021, the Lufthansa Group CleanTech Hub (CTH) was launched with the goal of bundling the latest technologies and advancing sustainable innovations for climate protection in the five focus areas "Alternative Fuels and Emissions," "Aircraft Hardware", "Digital Solutions and Processes", "Waste and Circular Economy", and "Mobility of Tomorrow and Beyond". In doing so, the Lufthansa Group specifically seeks technology-driven ideas and project partners that can contribute to sustainable aviation. The Group received 96 applications at the four events (pitch days) that were held through the end of 2022. A total of 27 companies, start-ups and research institutions presented their concepts and ideas with 15 of these ideas being shortlisted and now being further developed with the support of the different departments.

The CTH is promoting the most promising ideas focussing emissions reduction and waste management together with internal and external partners as part of its focus for 2022.

Maintenance and ground processes of future generations of aircraft are in early testing
In 2021, Lufthansa Technik and its partners from industry and research initiated a project funded by the Hanseatic City of Hamburg in which extensive maintenance and ground processes for handling hydrogen technology were designed and tested. In 2023, an Airbus A320 will serve as a fully functional permanently sited laboratory and be equipped with a liquid hydrogen (LH_2) infrastructure. In a parallel process, a virtual development platform will be created at DLR, which, together with the laboratory, will provide new impetus for the design process of the next generation of aircraft.

After the aircraft arrived in Hamburg in the summer of 2022, work began on creating the necessary conditions under immission control law, for example with regard to the German Hazardous Incidents Ordinance and Dangerous Goods Regulations.

In light of this, Lufthansa Technik's main contribution 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 is committed to climate research
The Lufthansa Group has been involved in various research projects examining the atmosphere and the climate since 1994. In particular as part of the European research infrastructure IAGOS (In-service Aircraft for a Global Observing System), the Lufthansa Group collaborates closely with its research partners from the Karlsruhe Institute of Technology and the Jülich Research Centre to equip selected passenger aircraft with measuring instruments that collect data about the condition of the atmosphere on scheduled flights. This data is freely accessible and is used by around 300 organisations worldwide. It helps scientists to acquire new knowledge about climate change and the atmosphere and to detect long-term changes.

Experts from Lufthansa German Airlines and Lufthansa Technik joined forces with the research partner in 2022 to fit the third long-haul jet with the IAGOS Core Measurement System. This compact system is permanently installed and analyses, among other parameters, the ozone, carbon monoxide and water vapour in the atmosphere on every flight. Additionally, the Jülich research centre and Lufthansa Technik are developing a concept for installing the IAGOS Core Measurement System on an A350 in the future. The initial results and the way forward were discussed in 2022.

The new D-KULT research project on the feasibility of climate-optimised flight routes was launched in 2022. The project was developed in a collaboration between the Lufthansa Group, the DLR, DFS, the German Meteorological Service (DWD), Airbus and other partners and is funded by the German Federal Aviation Research Programme. SWISS participated in a project that has applied to the EU for funding. From 2023 onwards, this project will focus on reducing non-CO_2effects, such as those caused by condensation trail cirrus clouds. The data sources and IT applications required for climate-optimised flight planning, as well as the related processes for cooperation between the meteorological service, the scientific community and airlines, are being developed and tested in the two coordinated projects.

CO_2 emissions from ground processes are to be reduced

Processes on the ground, such as real estate management and handling processes on the airport apron, also produce CO_2 emissions. In its efforts to reduce CO_2 emissions caused by processes on the ground, the Lufthansa Group focuses on three areas of action - the procurement and use of renewable energies, the increase of energy efficiency in building operations, and the achievement of CO_2-neutral ground mobility. The Group also aims to meet the milestone of switching to carbon-neutral mobility on the ground in its home markets by 2030. The Lufthansa Group will develop suitable measures of effectiveness in the defined areas of action in accordance with its objectives. This reporting year marked the start of developing a comprehensive strategy for reducing CO_2 emissions from ground processes, including organisational structures with overarching responsibility in the future and the implementation of optimised control mechanisms.

1. PROCUREMENT AND USE OF RENEWABLE ENERGIES

The target defined by the Lufthansa Group in 2019 of meeting the electricity demand in the domestic markets of Germany, Austria, Switzerland and Belgium using 100% green electricity was achieved in 2020 and has been continued since then. Green electricity certificates for Germany and Switzerland are being purchased for this purpose. These certificates guarantee the production of green electricity from new plants (for Switzerland partially in 2022, and in full from 2023) and contribute to the expansion of renewable energies. Green electricity is supplied directly via the airports in Austria and Belgium.

During the reporting year, the Lufthansa Group's energy purchasing department, which is bundled centrally in the purchasing organisation of Lufthansa Global Business Services (LGBS), has started looking at integrating power purchase agreements (PPAs) and purchase contracts for electricity from, for instance, solar power plants and wind farms into the electricity purchasing process for the years to come and will put them out to tender in 2023. The Lufthansa Group aims to become less dependent on traditional energy suppliers in the long term and to purchase energy directly from renewable energy producers.

2. INCREASED ENERGY EFFICIENCY IN BUILDINGS DURING CONSTRUCTION, RENOVATION AND OPERATION

The Lufthansa Group is aiming to gradually increase the energy efficiency of its building operations by continuously reviewing and optimising the operation of its real estate with regard to energy consumption and efficiency and by implementing appropriate improvement measures.

The measures taken in this area are anchored in the Group-wide real estate policy. Since 2022, this has also included a comprehensive set of binding energy specifications for sustainable real estate management. This means, for example, that sustainability aspects must be considered for new leases or the construction of new buildings, renovations, as well as repair and maintenance projects based on a predefined checklist. Each business unit is responsible for the decentralised implementation of the measures. The effectiveness of the measures and the identification of further measures is monitored in part through the regular performance of energy audits within the EU.

A package of measures for short-term energy savings in the area of real estate management was implemented in 2022 in response to the energy crisis in Europe, which has been characterised by high energy prices and potential risks regarding security of supply since the start of the war in Ukraine. These measures include the reduction of office room temperatures and indoor lighting times, as well as raising employee awareness on the topic of energy saving, for example via the intranet, digital communication and notices in the buildings.

3. ACHIEVE CO_2-NEUTRAL MOBILITY ON THE GROUND

The Lufthansa Group aims to achieve CO_2-neutral mobility in its ground processes by 2030 with electromobility or the use of other emission-free vehicles. The existing fleet of apron vehicles and company cars will be used more efficiently, and the targeted replacement of these vehicles with electric or other alternative drive systems within the Lufthansa Group will be driven forward. The intention is to maintain operational stability in terms of the charging infrastructure, energy consumption and efficiency, as well as vehicle availability and performance.

These processes are the responsibility of the fleet management in each company. For the Lufthansa Group's operational fleet, the focus will initially be on the locations in Frankfurt, Munich, Hamburg, Vienna and Zurich when purchasing new vehicles or converting existing vehicles to carbon-neutral drive systems. In the reporting year, a total of eight electric apron vehicles were purchased for these locations. This meant that, for instance, Lufthansa Engineering and Operational Services (LEOS), the Lufthansa Group's ground handling specialist, put two fully electrically powered aircraft tugs into operation at Frankfurt Airport in 2022. LEOS is the first customer for this type of aircraft tug, which was made by a German manufacturer. The tug, which is 100% battery powered, can move an aircraft with a take-off weight of up to 352 tonnes between parking areas, maintenance halls and take-off positions. LEOS has been testing novel and sustainable ground handling solutions in collaboration with the Frankfurt Airport operator since 2014 as part of the E-PORT AN initiative. Two hybrid tugs are already in use, in addition to the two hybrid aircraft tugs that went into operation in the reporting year.

This brings the total number of electric vehicles at these locations to 15 in 2022 (including seven vehicles in 2021), which is equivalent to around 1.5% of these locations' total operational vehicle fleet.

For Lufthansa Group company cars, the focus is on the locations in Germany. The number of all-electric company cars in the Lufthansa Group's German fleet rose from 47 vehicles in the previous year to 97 in the reporting year. This represents a share of 13%.

If the implementation path is to be accelerated, the availability of vehicles and technology, especially for vans and crew buses, is crucial, as is the expansion of the electric charging infrastructure on the apron, which is the responsibility of the airports. These operational interdependencies require the Lufthansa Group to maintain continuous dialogue with its system partners, including airport operators, building operators, vehicle manufacturers, ground handling service providers and energy suppliers. The Lufthansa Group has assessed its requirements and needs concerning the development and expansion of the charging infrastructure. It has addressed these issues with the airport operators in Frankfurt, Munich, Hamburg, Vienna and Zurich and is in ongoing discussions with the airports on the progress of implementation.

Performance indicator

Absolute CO_2 emissions increase to 23.1 million tonnes; specific CO_2 emissions per passenger-kilometre decrease to 90.0 grammes

The absolute CO_2 emissions resulting from the combustion of aviation fuel through Lufthansa Group aircraft in 2022 increased by 68.6% to 23.1 million tonnes (previous year: 13.7 million tonnes) due to the rise in demand and the expanded flight offers. CO_2 emissions per tonne-kilometre transported declined by 3.7% to 836.7 grammes (previous year: 869.2 grammes). Specific CO_2 emissions per passenger-kilometre were 11.4% lower than in the previous year at 90.0 grammes (previous year: 101.6 grammes).

The decline in the Group fleet's specific emissions compared with the previous period was mainly due to an increase in the passenger load factor and changes in the route network that resulted in an increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less weighty in the calculation as the flight distance increases.

The Lufthansa Group is also reporting on the status of its CO_2 reduction target verified by the SBTi for the first time, which came to 2.2% below base year 2019.

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 activities at the Lufthansa Group comprise 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 Ops Performance/Air Side Management Lufthansa Airlines department, which meets regularly to discuss current operational and technical developments on the topic of active noise abatement and works with the System Partnership Management Group Airlines department. The committee is the central point of contact and stakeholder of the Fleet & Technology Executive Board function 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 Regio Forum in Frankfurt and supports the Lufthansa Group's participation in various aircraft noise commissions.

C30 ACTIVE NOISE ABATEMENT

Investments in quieter aircraft	Noise-reducing technologies for the existing fleet	Participation in noise research	Development of optimised flight procedures and flight routes	Dialogue with residents near airports and other stakeholders
Introduction of the latest aircraft, such as the Airbus A320neo and A350-900 Retirement of older models	Retrofitting of noise-reducing vortex generators to the existing fleet	Continuous collaboration and exchange with partners from research and industry Development and analysis of new noise-reduction measures	Cooperation with system partners Development and testing of new methods Use of new navigation technology	Continuous exchange with residents, as in the Airport and Regional Forum Active participation to aircraft noise commissions

Targets

Aircraft noise is 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 single most effective measure for reducing aircraft noise at the source is the modernisation of the fleet. The Lufthansa Group modernises its fleet continuously. Aircraft that were introduced in 2022, including the Airbus A320neo, A321neo, A350-900, Boeing 787-9 and Boeing 777F, have modern engines and are much quieter than similar older aircraft types. ↗ Fleet, p. 26ff., 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 of Lufthansa German Airlines and SWISS have been retrofitted with this modification. Due to the crisis, the retrofitting of the expanded fleet of six A320 aircraft at Austrian Airlines is still pending.

Retrofitting the remaining Eurowings A320 aircraft with vortex generators was continued in 2022 and is due to be completed at the end of March 2023. The modification will then be retrofitted on twelve additional aircraft, with one aircraft that has not yet been retrofitted scheduled to exit the Eurowings fleet in the summer of 2023. The modification is 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 for example 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 (DLR), the Lufthansa Group looks for noise sources that can be eliminated. For this purpose, an appropriate process was developed in which noise measurements from airports are synchronised with the corresponding flight data from Lufthansa German Airlines and analysed for anomalies by flight noise experts from the German Aerospace Center. The process was applied and refined through the end of 2022 on the basis of a case study of noticeable landing noises.

The testing of the Low Noise Augmentation System (LNAS) developed by the German Aerospace Center to optimise approaches in Frankfurt was completed in 2022. A large number of pilots supported the project on a voluntary basis.

The experts at the German Aerospace Center are now evaluating the data. Lufthansa German Airlines collaborated with the Environmental and Neighbourhood House (Umwelt- und Nachbarschaftshaus: UNH), the office of the dialogue forum in Frankfurt, to equip all aircraft of the A320 family, with the exception of the A321neo, with the LNAS system.

The LNAS uses aircraft data to recommend optimal configuration and speed. The aim of the testing is to examine whether approaches can be made more efficient and quieter while observing safety regulations.

In a new project launched in 2022, the German Aerospace Center plans to extend the LNAS function to departures in cooperation with the Lufthansa Group.

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, for instance, with German air traffic control (Deutsche Flugsicherung, DFS) as well as international partners. ↗ **Climate protection, p. 99ff.**

In 2022, Lufthansa German Airlines studied 37 precision approaches with aircraft from the A320 family with an increased glide angle of 3.2 degrees using GPS navigation technology (GBAS-CAT II) in the European SESAR DREAMS project in Frankfurt. Increased glide angles translate into higher flyover altitudes, which reduces noise below the approach path.

The research revealed that an increased glide angle of 3.2 degrees using GPS technology can lead to a noise reduction of 0.2 to 0.8 decibels in different sections of the landing approach.

Lufthansa German Airlines and DFS also demonstrated the feasibility of approaches from higher altitudes with the aid of GPS technology. Due to the greater range of this technology compared to the conventional instrument landing system (ILS), aircraft can fly at higher altitudes for a longer period of time during the approach.

In addition to GPS technology, the state-of-the-art Required Navigation Performance (RNP), which is also satellite-based, plays an important role in the introduction of new flight procedures at European airports. RNP is an aircraft navigation service required by the International Civil Aviation Organisation (ICAO).

In Vienna, Austrian Airlines worked in collaboration with Austrocontrol to complete the preliminary work for the implementation of the new RNP approach. This will make an innovative approach procedure that combines new and traditional navigation technologies available from November 2022. The modern RNP navigation technology helps make approaches in close proximity to the airport more precise and less noisy while avoiding long diversions. The conventional instrument landing system (ILS) is then used for the final approach. Pilots can use this procedure when flying any aircraft with no additional effort due to the existing extensive training measures implemented in the Lufthansa Group. It will first be applied during low-traffic periods. Its potential will be tested during a one-year noise reduction and practicality evaluation phase.

In Stuttgart, the planning and dialogue for a new shortened RNP westbound and southbound departure route from Runway 07 (“TEDGO” route) continued in 2022. The aircraft noise commission in Stuttgart approved a one-year trial period on the basis of the noise analyses by Lufthansa Group experts and external specialists.

5. DIALOGUE WITH RESIDENTS NEAR AIRPORTS AND OTHER STAKEHOLDERS

In addition to technical and operating improvements, the Lufthansa Group has for many years been involved 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, Lufthansa German Airlines (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 (Deutsche Flugsicherung, DFS) and the airline association BARIG. The airline is an influential member of the Active Noise Abatement expert panel and its sub-working groups. These activities focus on the optimisation of flight procedures over densely populated areas, such as the Segmented Approach RNP-Y at Frankfurt Airport, which was developed in cooperation with experts of the Lufthansa Group in 2022. This procedure reduces the noise load over large cities like Offenbach and Mainz by allowing aircraft to bank later on their final approach.

The Lufthansa Group was also involved in the Alliance for Aircraft Noise Protection at the Hamburg location in 2022.

The Lufthansa Group is also actively involved in some of the aircraft noise commissions (Fluglärmkommissionen) required in Germany by the Air Traffic Act (Luftverkehrsgesetz).

Performance indicator

99.4% of the operational Group fleet meet aircraft noise standard
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 10 decibels or more. As of 29 October 2022 (end of the summer flight timetable), 99.4% of the aircraft – virtually the Group's entire operating fleet – met this criterion.

WASTE MANAGEMENT

Concept

Passenger Airlines in the Lufthansa Group define long-term basis to systematically reduce waste on board and promote circular economy
Sustainable and efficient waste management is an essential part of the Lufthansa Group's environmental strategy and is therefore material for Group companies in all operating segments.

Global developments such as the coronavirus pandemic and the effects of armed conflicts, the political framework, many existing and new waste policies, customer needs, different product concepts and the restricted conditions on board passenger airlines generally call for action to be taken on waste, and this is particularly important in the context of sustainable waste management. For these reasons the passenger airlines in the Lufthansa Group jointly defined a general framework in the reporting year for dealing responsibly with in-flight waste. Its scope of application was extended to all the passenger airlines and covers all categories of in-flight waste.

The concept for comprehensive waste reduction is based on the waste hierarchy of EU Directive 2008/98/EC. The R strategies of a circular economy form the foundation of the increasingly circular management of in-flight waste based on the aspects defined in the EU waste hierarchy. The guidelines for the systematic reduction of in-flight waste are therefore, in order of priority: Reduce – Reuse – Recycle – Recover – Replace.

Onboard waste is divided into three categories, namely single-use waste, food waste and reusable waste, and are used to apply the respective waste reduction concept. Single-use waste refers to materials that become waste after being used once in-flight or after a flight event, without any defined recycling processes. Food waste means all food disposed of during or after the flight event. Reusable waste includes materials that are already treated as part of a circular system at the passenger airlines, but later leave this circular system and become waste without any downstream recycling processes.

Applicable national and international rules for the treatment of in-flight waste represent major obstacles for the implementation of this concept. In addition to continuously encouraging the sustainable treatment of in-flight waste, the Lufthansa Group is therefore campaigning to reconcile sustainable development with the political framework for waste management. In the reporting year, for example, the Lufthansa Group joined forces with various other airlines and the industry association IATA in a joint working group entitled "Smarter Handling of International Catering Waste". It published written comments on EU Directive 1069/2009 in which the Lufthansa Group and all the other signatories make clear demands for greater compatibility between regulations for controlling contagious animal diseases, or epizootics, and a circular economy. This would make it possible to feed more resources into the circular economy over the long term. Various actors in the value chain, such as manufacturers, catering partners, cabin crew and waste disposal companies, are also involved in promoting the efficient reduction of in-flight waste.

Organisational foundations and responsibilities

The Corporate Responsibility department is responsible for integrating sustainable waste management into the Lufthansa Group's environmental strategy.

The Lufthansa Group Corporate Responsibility and Product Management departments are jointly responsible for the management and coordination, conceptual work, target setting and monitoring at Group level. To ensure that all the entities in the Group are networked, a permanent working group has been set up, made up of representatives of the passenger airlines, which regularly discusses the progress made and challenges faced and draws up joint standards.

Individual concepts and measures for achieving the targets are planned and their effectiveness evaluated by the Product Management function of the Lufthansa Group and the individual passenger airlines. The passenger airlines use a decentralised and independent approach to implement the measures. Various airlines in the Lufthansa Group have already taken diverse measures to fulfil these tasks. Air Dolomiti has set up an internal focus group, SWISS created a new role within its product management for sustainable waste management in the reporting year, and Lufthansa German Airlines, SWISS and Austrian Airlines are continuing their Ambassador programmes aimed at cabin crews with a focus on sustainability. These programmes encourage specific members of the cabin crew to dedicate themselves to the subject of sustainability on board. Acting as ambassadors, they make their colleagues aware of the topic, identify potential and bring it to the attention of those responsible, in order to promote sustainable developments in the handling of in-flight waste.

In addition, Lufthansa Group Product Management is represented on various international committees, such as the Sustainable Cabin and the Smarter Handling of International Catering Waste working groups of the airline association IATA. By regularly attending meetings they share their experiences, challenges and knowledge and launch concrete joint projects, including transatlantic recycling tests or lobbying for better conditions, in order to make progress towards the joint goal of the sustainable treatment of resources on board.

Targets

Passenger airlines focus on reducing single-use and food waste on board

The Lufthansa Group passenger airlines are committed to fostering the sustainable use of in-flight resources. The specific targets for reducing waste on board were revised in the Group working group established in the reporting year, extended to all passenger airlines and presented to the Lufthansa Group's Executive Board for discussion at the end of 2022. Concrete targets for 2025 in the categories of single-use waste and food waste were prioritised to reflect the urgency of the acute environmental impacts, the political environment and also customer expectations.

Single-use waste
For the passenger airlines in the Lufthansa Group it is of the utmost importance that finite resources can stay in a closed loop for as long as possible, in order to reduce their consumption. The passenger airlines have therefore decided to return all in-flight plastic and aluminium items to the circular economy and to no longer have any single-use plastic and single-use aluminium items on board from 2025 onwards.

Food waste
The passenger airlines intend to reduce food waste on short-haul flights across the Group by 50% compared with 2019 by 2025.

Food waste is also to be reduced on long-haul flights. Since the data is not yet of sufficient quality, the passenger airlines are working with the catering partners to sufficiently improve the data transparency regarding food waste on board, in order to also formulate targets for long-haul flights.

Reusable waste
Since the main focus of the targets is to reduce single-use and food waste, only isolated measures have been taken occasionally to reduce reusable waste on board.

Lufthansa Cargo also concentrates on increasing its recycling quotas

99% of Lufthansa Cargo's waste at the hubs is used to generate energy or is recycled. Lufthansa Cargo has set two specific targets for 2025 to increase the recycling share in this field. At the Frankfurt hub, the intention is to increase the share of waste that is recycled to 40% by 2025. In addition, Lufthansa Cargo is aiming to increase its worldwide recycling quota for plastic waste to 100% by 2025 and is currently working out how to generate the metrics for this.

Measures

Passenger airlines reduce in-flight waste in all categories

1. REDUCE
The Lufthansa Group's passenger airlines took deliberate steps to reduce in-flight waste in various ways in the reporting year, often even before the flight event.

Single-use waste
Several of the passenger airlines in the Lufthansa Group phased out or reduced their coronavirus restrictions in the reporting year.

Lufthansa German Airlines and Eurowings Discover reduced the number of face masks and Eurowings Discover and SWISS reduced the number of disinfectant wipes kept on board. Air Dolomiti also cut the volume of towelettes loaded per outbound and return flight by more than half.

SWISS, Austrian Airlines and Brussels Airlines increasingly switched back to on-demand services, in order to reduce the amount of onboard waste. Selected articles, such as disinfectant wipes, cream for coffee, and jam are now offered by the cabin crew and not handed out automatically, which significantly reduces the consumption of these products.

Lufthansa German Airlines, SWISS and Edelweiss also reduced onboard waste by removing single-use plastic packaging, stirring sticks and straws, among other things.

In response to bans on single-use plastic items in India, particularly in Mumbai, SWISS took additional measures in August 2022 to reduce the amount of single-use plastic on routes from Zurich to Mumbai. At the same time, these measures serve as a test for potential future changes on all SWISS flights.

Food waste
As part of the new working group, all the passenger airlines in the Lufthansa Group carried out a survey of food waste with a common minimum standard in spring 2022. This was the first step towards the systematic monitoring of food waste, which will enable further ways of reducing waste to be identified. Lufthansa German Airlines and Eurowings Discover also carried out initial trials using artificial intelligence to gather data on food waste in April 2022. Food left over on trays was analysed using weighing scales, cameras and an algorithm. This technology is being tested for routine use in processes in future. The results are also intended to show whether more precise and continuous measurement of food waste with correspondingly granular targets, and the data-driven management of the loading process is possible.

Food waste at the passenger airlines that offer food for purchase on European flights can already be managed and planned in advance on the basis of sales figures with the help of an algorithm. The average share of perishable products thrown away in 2022 was reduced as follows:

— Lufthansa German Airlines by 45%
— SWISS by 52%
— Austrian Airlines by 55%
— Eurowings by 19%
— Air Dolomiti by 29%

In order to avoid food waste before the flight event, the options for ordering meals in advance were expanded in the reporting year. At SWISS and Austrian Airlines they were introduced on a test basis in the form of pre-ordered products to purchase in Economy Class on short-haul flights, and at SWISS in the form of pre-selected products in Business Class and First Class on long-haul flights. In the long term, the aim is to further optimise the volume of products loaded and match it to customer requirements. The plan is also for Lufthansa German Airlines to introduce these services in 2023 and for SWISS and Austrian Airlines to extend their range.

Further individual preventive measures also help to reduce food waste before the flight event. Eurowings Discover continued to optimise and reduce the loading of baked goods in Business Class on incoming long-haul flights in line with passenger numbers in 2022. Eurowings Discover reduced the volume of bread loaded for return flights in Business Class by 40 percentage points. SWISS adjusts the ratio of meals with and without meat in line with customer demand on an ongoing basis. Brussels Airlines reduced the volume of hot meals loaded in Business Class on outbound long-haul flights by 10 percentage points in July 2022. Eurowings, in turn, increased the proportion of reloadable meals, which in contrast to fresh products do not have to be kept in a cold chain, in order to reduce food waste.

Steps to reduce food waste on board and after the flight event that were implemented or tested in the previous year were continued in the reporting year. Fresh products left over on the final flights of the day are offered to passengers for sale at reduced prices at SWISS, Austrian Airlines and Eurowings. This made it possible to sell an additional 80,000 products and thus save on food waste.

Lufthansa German Airlines is planning to implement this concept for its Onboard Delights range in Economy Class on short-haul flights in 2023.

Reusable waste
Eurowings Discover has distributed amenity kits directly to passengers since 2022 and no longer laid them out on all the available seats, regardless of the number of passengers. This avoids the need to collect unused amenity kits again and stops them from being damaged. Air Dolomiti also stopped the print version of its in-flight magazine in January 2022 and now offers an alternative digital version in its in-flight programme. This represents a reduction of 4,080 kilogrammes in weight and onboard waste every year.

2. REUSE
In the reporting year the passenger airlines in the Lufthansa Group developed and introduced various types of reuse concepts.

Single-use waste
Lufthansa German Airlines, Brussels Airlines and Edelweiss tested and implemented the reuse of various products in 2022 that would otherwise produce single-use waste.
At Lufthansa German Airlines, for example, a reusable cup process is being developed for the Onboard Delights product in Economy Class on short-haul flights, which will be implemented in 2023 if the findings are positive. Brussels Airlines introduced the collection and reloading of unused cutlery sets in Economy Class on long-haul flights in April 2022.
In September 2022, the airline also implemented modified rules on handling ultra-high-temperature (UHT) dairy products on board, so that they can be consumed in full on return flights from the United States to Brussels. Edelweiss also saves 5.2 tonnes of single-use plastic lids a year by introducing reusable tableware (Edelweiss Box). Austrian Airlines has also replaced its previously non-reusable trays made of corn starch with a reusable alternative on selected long-haul flights.

Food waste
As of July 2022, Brussels Airlines reloads wine bottles that are still more than half full on subsequent flights.

Reusable waste
Cabin crew members at Eurowings Discover collect unused amenity kits for reloading as of 2022. SWISS also tested this procedure, and added trials of recycling and reconditioning methods. Over the one-week trial period, 29% of the collected amenity kits could be reloaded on subsequent flights without any additional work, and 71% could be reconditioned or recycled. This process will be made routine from 2023.

3. RECYCLE
The passenger airlines in the Lufthansa Group increased their recycling in various ways in 2022 in order to return onboard waste to the circular flow of materials.

Single-use waste
Lufthansa German Airlines and Eurowings Discover made efforts in the reporting year to also promote and implement closed-loop recycling, and not only conventional recycling. This means structuring the recycling process so that the recycled product is used to make another recyclable product, often even the same type of product, and that this recyclability is ensured thereafter. Lufthansa German Airlines carried out a successful trial in late 2021 and, in spring 2022, introduced closed-loop recycling for bottles made of PET plastic that have been left in the cabin on Lufthansa German Airlines. The collection takes place in Frankfurt in cooperation with the airport operator. This enabled 88 tonnes of PET to be returned to a selected manufacturer of water bottles for closed-loop recycling in 2022. Lufthansa German Airlines and Eurowings Discover are planning to implement and expand the concept together in Munich. The idea is for all suitable PET articles from the in-flight products offered by both airlines to be returned to the same closed-loop recycling process. The project is in the concept phase and is expected to be put into practice in 2023.

Lufthansa German Airlines, SWISS, Austrian Airlines and Eurowings Discover also joined an IATA initiative to promote transatlantic recycling and the reuse of in-flight materials which would otherwise become single-use or food waste. Severe restrictions in the United States have previously meant that very few resources can be recycled or reused. This joint initiative aims to establish demonstration processes on certain routes, which can be applied to all US destinations at a later date. The project is in the concept phase and is intended to be implemented in 2023.

The passenger airlines in the Lufthansa Group continued their established in-flight recycling processes in 2022. Air Dolomiti, for instance, collects PET and glass bottles as well as aluminium cans separately, thus enabling the caterer to recycle these products. SWISS has published redesigned, compact recycling instructions for cabin crew, which is intended to facilitate recycling on board. Austrian Airlines held a special collection campaign for plastic bottle lids and donated the recycling revenue to a good cause. Eurowings has also recycled glass bottles from its sales programme since July 2022.

Reusable waste
SWISS introduced new recycling processes for its First Class cosmetics in the reporting year. As of September 2022, the recyclable cosmetic products in its amenity kits are collected, cleaned and refilled if they are left behind on board. Passengers can also take the products home with them and have them refilled in one of the cosmetics manufacturer's shops in Switzerland. The cosmetics dispensers in the aircraft toilets have been refilled since December 2022 and replaced after three months for hygienic reasons; the used containers are recycled.

Furthermore, in September 2022, SWISS carried out a trial with a textile recycling partner to transfer textiles that can no longer be used on board to a routine recycling and downcycling process. Apart from the passenger blankets, all products from which cotton thread can be made are suitable for textile recycling. Passenger blankets are a composite of different fabrics and can be turned into insulation material or cleaning cloths. Once the results have been successfully validated at the end of 2022, SWISS will make these processes routine.

4. RECOVER
The passenger airlines in the Lufthansa Group use in-flight waste in various ways to avoid its disposal.

Single-use waste
Austrian Airlines uses its ReOil process to turn single-use plastic cups and other single-use packaging into synthetic crude oil using a patented process. Up to one litre of crude oil can be recovered from one kilogramme of single-use plastic. As part of the one-week special “Clean up Week” campaign, the Austrian Airlines cabin crew collected single-use packaging that was transformed into a total of 4,800 litres of crude oil. The proceeds of EUR 800 were donated to help alliance.

Reusable waste
In partnership with the Miles & More WorldShop, Lufthansa German Airlines introduced another Upcycling Collection, in which products that are no longer in use at Lufthansa German Airlines but still have a sentimental value are turned into new, high-quality products. Old uniforms, blankets and life-jackets that are no longer in use for various reasons are made into high-quality new products such as laptop bags or rucksacks.

5. REPLACE
The passenger airlines in the Lufthansa Group minimised the impact of their in-flight waste in various ways in 2022 by making decisive changes to the products.

Single-use waste
Air Dolomiti replaced single-use plastic lids on Business Class meals with paper ones. The airline is also gradually moving to products with a high share of recycled material, such as napkins and tray doilies, which in Business Class are already made completely of recycled paper. They also use water bottles made of recycled PET. Eurowings and Edelweiss have switched from single-use plastic to a compostable cellulose film for packaging selected products. Edelweiss has also replaced single-use plastic bags with paper bags for its in-flight sales, and switched from single-use plastic to kraft paper for packaging the headphones in Economy Class. Lufthansa German Airlines replaced its single-use plastic teaspoons with bamboo ones in February 2022. The replacement of single-use plastic stirrers with bamboo sticks was initiated on European routes in 2021 and extended to intercontinental routes in September 2022. Lufthansa German Airlines is also continuing its development partnership with external partners to develop sustainable alternatives for plastic lids and plastic film. The aim is to test these products in 2023. Austrian Airlines is also planning to offer ear-plugs only in paper packaging from 2023, in order to reduce plastic waste further.

Reusable waste
SWISS has changed the composition of materials used in its amenity kits. The new Premium Economy Class amenity kit is now made of recycled paper and kraft paper and can thus simply be disposed of along with recycled paper, whereas the new Business Class amenity kits are made of 100% recycled polyester. Edelweiss also ensured that its amenity kit is made of 70% recycled materials.

Lufthansa Cargo advances closed-loop recycling and upcycling initiatives
Since 2022, Lufthansa Cargo has been using a plastic film to protect freight that consists of 10% recycled materials, is only 14µ thick and is more biodegradable. In Frankfurt, Lufthansa Cargo is working on a solution to close the loop by returning the used films to the manufacturer and to integrate them into the manufacture of new film. The manufacturer plans to increase the amount of recycled material in the film over time.

Selected loading equipment and loading aids at Lufthansa Cargo are being upcycled and given a new lease of life. Individual, limited-edition design objects are the result, some of which are designed and produced in cooperation with the Institute for Recycling, Ecology and Design (IRED) in Frankfurt and WfB Rhein-Main, a workshop for disabled people. The upcycled products are sold by the Lufthansa Cargo fan shop. All the profits are donated to the organisation Cargo Human Care.

Performance indicators

The definition of performance indicators for waste reduction is being revised.

Food waste at the passenger airlines in the Lufthansa Group was reduced on short-haul flights by 46% compared with 2019 in the reporting year.

In 2022, Lufthansa Cargo achieved 92.5% of its target of increasing to 40% by 2025 the share of waste returned for recycling at the hub in Frankfurt.

Customer concerns

High customer satisfaction is a key success factor for 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. Long-term customer relations require reliable travel solutions, attentive customer services, individual experiences as well as simple, flexible processes. Capital expenditure on a modern aircraft fleet and the continuous further development of the offerings – including in terms of sustainability and digital services – are intended to make flying attractive for customers of the Lufthansa Group.

The rapid rise in demand caused disruptions in the stability of flight operations during the main travel periods in the reporting year. Significant staff shortages at the airlines and airport operators in particular meant that many flights were cancelled and flight timetables changed. This resulted in a steep increase in customer enquiries and requests for compensation. The Lufthansa Group therefore particularly intensified those measures capable of strengthening the operational stability of the passenger airlines in the Lufthansa Group and invested in improving products and services throughout the travel chain.

Sustainable and innovative new products are awarded

The Lufthansa Group won the "Performance in Environmental Sustainability" prize at the Business Travel Europe Awards 2022 hosted by BTN Group – a leading global information platform for the travel industry. The prize was awarded in recognition of the many sustainable travel offers and services, which are increasingly in demand. For example carbon-neutral flights were therefore integrated directly into the online booking portal as an option for the first time in spring 2022. Special carbon-neutral flights were also offered to corporate customers.

Skytrax, a specialist advisory firm that researches quality in the global airline industry, awarded two prizes to the SWISS First Class Lounge, one for best Lounge and another for "Best First Class Lounge Dining". SWISS also received several Onboard Hospitality Awards from the leading magazine for hospitality in the travel industry. The SWISS amenity kit is made of sustainable materials, was designed with a partner for in-flight equipment and can be reused by customers for their own individual purposes. It won an award for "Best Premium Economy Class Amenities".

The process for the Re-Use Box in the SWISS Saveurs service took first place in the category "Best for onboard service equipment for crew". Its ease of use on board and the fact that it reduces food waste by selling products from earlier flights were the reasons for its prize-winning performance.

The Beyond Meat Burger from SWISS, in association with the technology provider for in-flight sales and service processes, was selected as the catering innovation of the year. As an addition to the vegetarian trend it convinced the jury with its sustainability and taste.

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 in the Group companies that meets the requirements of the European General Data Protection Regulation (EU GDPR). 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. 75ff.**

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 the 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 timetables, flight cancellations and delays. The rapid recovery in demand for flights and the resulting substantial capacity increases came up against staff shortages at the airlines and all system partners, including baggage handling, security checks and air traffic control. In addition to structural causes, the main reasons for the staff shortages were high absentee rates due to the coronavirus.

Organisational foundations and responsibilities

Responsibility for operational stability lies with the airlines in the Lufthansa Group. The Executive Board function Fleet & Technology is responsible for making it transparent and defining overarching standards.

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, including with system partners.

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.

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 target for the passenger airlines in the Lufthansa Group is to handle 85% of all flights on time.

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.

Measures

Diverse measures to ensure operational stability and improve the customer experience
In the reporting year, the focus was especially on getting flight operations back up to speed and stabilising processes, and on the related capacity and process adjustments in the Lufthansa Group. Measures to adapt to the changing operating environment were initiated and implemented in coordinated processes as part of the Group-wide, interdisciplinary Customer Quality programme. The effects on different customer processes were addressed. Coordination was intensified between commercial planning, operational implementation and customer communication, particularly in the popular summer months. This included providing early information about upcoming flight cancellations to the customer areas concerned, such as the call centres. Many administrative employees supported operational functions during the summer holidays in order to cope with high customer demand.

Wide-ranging initiatives launched with system partners
The airlines in the Lufthansa Group worked intensively with system partners such as airport operators and the German air traffic control service provider, Deutsche Flugsicherung, to find solutions to the post-pandemic challenges. This particularly applied to passenger check-in and baggage handling services, where the aim was to achieve stable flight operations. For example, in regular dialogue with the major German airports, summer operations in 2022 were prepared based on capacity planning. Additional individual intensive discussions about current capacities and the corresponding bottlenecks and countermeasures were held at the local operating level.

The operational disruptions that occurred throughout the aviation industry, especially in the summer 2022, were significantly reduced over the remainder of the year due to the measures taken by the Lufthansa Group and its system partners.

Performance indicator

Departure punctuality at Lufthansa Group airlines is below target
The annual average departure punctuality was 66.0%, which is 15.3 percentage points below the previous year (81.3%). 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 lower performance compared with the previous year can be attributed above all to the significantly higher passenger numbers (+119% compared with the previous year) and reduced resources in all areas of the air traffic system. One of the main reasons for the delays were bottlenecks in air traffic control, which caused 14.5% of all delays at Lufthansa Group airlines. In addition, staff shortages due to the high levels of sickness among ground services providers and airlines had an adverse effect on punctuality during the summer holidays, when there were a large number of flights and high load factors, among other things.

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 conducted to continuously review all passenger airline products and services along the travel chain to measure their concrete benefit to the customer. Questions cover improvements to seats, lounges, catering options, 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. Customer feedback in the reporting year showed that the travel experience no longer fulfilled the demands made of it, due to a large number of restrictions and the absence of further developments during the coronavirus pandemic. Many investments in the customer experience were postponed in the past two years as a result of crisis-mitigation measures.

In the reporting year, the airlines in the Lufthansa Group refocused on quality and capital expenditure in the customer experience, in order to live up to its own premium standards once again. New product standards are also to be set from 2023. The reason for this is that customers are already now increasingly expecting individual and appreciative offers, sustainable and tailored travel solutions and a flexible range of choices that meet their needs. The travel experience has to be straightforward and seamless. This applies throughout the entire travel chain, from inspiration and purchase to information, travel experience on board and on the ground, and services. Frequent travellers in particular expect additional appreciation for their loyalty. Furthermore, it is vital to develop a long-term relationship with each passenger. Findings from timely customer involvement form the basis for strategic decisions. Combining the elements mentioned above is therefore also an integral part of the customer strategy for products and services. It is based on trend analyses, market research findings, observation of competitors and feedback from numerous customers.

In addition to the monthly analysis of social media and continuous virtual or personal dialogue with premium passengers, the passenger airlines in the Lufthansa Group continue to rely on customer satisfaction survey – the Passanger Satisfaction Tracking (PST). This survey is now back at its pre-crisis level, with over 30,000 customer responses per month. It records and reports the Net Promoter Score, i.e. the proportion of customers recommending the airlines, as well as customer satisfaction along the entire travel chain. The PST also regularly asks in more detail about current topics of interest to customers, such as the handling of flight irregularities and the perception of sustainable travel solutions. The customer online panel surveys conducted in 2021 during the coronavirus pandemic were migrated to the Lufthansa Group CoCreationHub in 2022. Customers are actively involved in an early stage of product development via an online platform that is permanently accessible and offers a means of direct dialogue in the form of surveys, workshops and interviews. More than 1,500 participants have already made use of this opportunity, with an average activity rate of 30%, peaking at up to 65%.

Organisational foundations and responsibilities

As part of the reorganisation of the Lufthansa Group decided by the Supervisory Board in March 2022, responsibility for the design and strategic concept of the entire customer and brand experience at the Lufthansa Group was assigned to the Executive Board function Brand & Sustainability. Within this function the Customer Experience and Brand Portfolio Management & Global Marketing departments were particularly affected by the changes.

Since the reorganisation, Customer Experience has been responsible for the design and strategic concept for the entire customer experience along the physical and digital customer journey, and sets the standards for the passenger airlines in the Lufthansa Group. This department is also responsible for all customer care at the passenger airlines.

Brand Portfolio Management & Global Marketing is responsible for the Lufthansa Group's holistic brand portfolio and the global marketing strategy. It aims to maximise the goodwill of the passenger airline brands and enable appropriate brand differentiation. In addition, the unit is responsible for implementing marketing activities in all corporate customer markets and the marketing activities for private customers in all non-home markets, as well as for defining marketing strategies and standards. The further development of the loyalty programme at the Lufthansa Group Passenger Airlines, the programmes to generate additional income and the retail portfolio is also the responsibility of this unit.

Lufthansa German Airlines, SWISS, Austrian Airlines, Brussels Airlines, Eurowings and Eurowings Discover are independently responsible for the brand-specific design and implementation of their on-board and ground product, marketing and top customer management, which fall under the responsibility of each company's respective Chief Commercial Officer (CCO). Representatives from the Executive Board functions Brand & Sustainability, Global Markets & Network and the airline CCO functions meet regularly in the Customer Commercial Committee to discuss and make relevant decisions on customer-focused topics and on an annual basis regarding the product project portfolio.

Targets

Raising customer satisfaction is an integral part of Group strategy

A strict focus on customer needs is required to generate sustainably commercial value for the Lufthansa Group and the passenger airlines. The customer strategy for all passenger 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 indicates a passenger's willingness to recommend, is used to measure performance. For Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines the absolute target has been set at 55, and for Eurowings at 50.

Measures

Customer satisfaction ratings and feedback are incorporated into the development of measures

Twelve metrics were established in 2022 to provide information about customer opinion along the entire travel chain, such as satisfaction with cabin design, in-flight and ground staff, digital services and sustainable products. Based on these findings and analyses of customer commentaries, various measures were implemented in the reporting year. The top priority was to get back to fulfilling the promise as a premium provider. Initial investments were thus made to expand the product range, such as in the food and beverages on offer and digital 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. The focus is on sustainable concepts and in-flight products, intermodal travel and easy access to carbon offsets for flight-related CO_2-emissions.

New cabin design in all flight classes improves on-board experience

The introduction of a new generation of products developed exclusively for the Lufthansa Group in First, Business, Premium Economy and Economy Class began in the reporting year. Customers have been involved in the development of these products since 2017 by means of customer tests, focus groups and surveys, as well as seat and ergonomics tests. The Premium Economy Class was introduced at the SWISS Boeing 777 fleet in the reporting year on the basis of the newly developed Lufthansa Group seat product.

The implementation of direct aisle access from every Business Class seat, especially in the premium area on board Lufthansa German Airlines, began with the next-generation Airbus A350 and Boeing 787 aircraft that joined the Lufthansa Group fleet in 2022. More than 30,000 new seats will offer passengers a new long-haul travel experience in all classes starting in 2023. The intention is to invest a total of EUR 2.5bn in product and service by 2025, in order to further improve the customer experience at every point of the journey.

Passenger airlines upgrade food and drink range

Measures to enhance the quality and quantity of the product range were necessary after the coronavirus pandemic, especially in terms of the choice of food and drink and the quality of meals on offer. The free aperitif service was thus resumed in the reporting year, with alcoholic drinks and snacks, and a choice in the first meal on long-haul flights by Lufthansa German Airlines in Economy Class. On short-haul flights, the products introduced in 2021 – Onboard Delights at Lufthansa German Airlines, SWISS Saveurs at SWISS and Austrian Melangerie at Austrian Airlines – were supplemented and replaced in the reporting year by upgrading the quality and choice of food and creating new menus. The Tastefully Austrian programme at Austrian Airlines was launched on short and medium-haul flights in Business Class in the reporting year. International meals are offered on flights from Vienna, while classic Austrian dishes can be chosen on flights to Vienna. SWISS customers in First, Business and Economy Class and Austrian Airlines customers in Economy Class have since this year been able to choose from a range of fresh dishes before travelling and order them in advance. This offer will also be available next year on Lufthansa German Airlines' Economy and Business Class flights.

Lounge services expanded

Improvements were also made on the ground in the reporting year, including the opening of new lounges, such as the new Bistro Lounge in Frankfurt. The range of existing lounges, like The LOFT Lounge by Brussels Airlines in Brussels, was also equipped with new workspaces and a children's corner. The lounges in Newark, Dusseldorf, Washington and Hamburg were upgraded with new interior decoration, new furniture and an improved selection of food and drink. For 2023, the plan is to devise new lounge concepts, such as a Green Lounge, where the focus is on sustainability, or making access to the lounge easier with biometric solutions.

Lufthansa Group reduces single-use products and food waste

Customers of the Lufthansa Group expect sustainable products to be used on board and waste to be reduced at the same time. As part of their sustainable waste management, the passenger airlines in the Lufthansa Group jointly defined a generally applicable framework in the reporting year for dealing responsibly with in-flight waste. The focus here is on reducing waste from single-use products and food. A variety of measures are being taken, such as reducing the amount of single-use plastic on board and intelligent planning of the loading process. ↗ **Environmental concerns/Waste management, p. 110ff.**

Intermodal services offer sustainable alternative forms of travel to and from the hubs of the Lufthansa Group

The Lufthansa Group, in cooperation with national railway companies and some bus operators in the home markets, also offers a variety of options for travel to and from the hubs in addition to flights. These intermodal services are integrated into Lufthansa Group products via a flight number and are largely equivalent to a flight in terms of the service package for customers. To make intermodal travel even more attractive, it was made easier and faster for passengers to change their means of transport in all intermodal partnerships. These measures include, for example, simplified baggage check-in at their own front door for SWISS passengers and priority access to security checks at Frankfurt Airport for Lufthansa Express passengers. 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.

In the reporting year, around 450 intermodal connections were offered every day from and to the Lufthansa Group hubs. The world's first intermodal partnership between the German national railway operator and the Star Alliance, a grouping of 26 airlines, was established in late summer 2022. It sends a strong signal for more sustainability in the mobility sector. ↗ **Environmental concerns/Improved infrastructure, p. 103.**

Voluntary carbon offset options allow customers to make a personal contribution

The Lufthansa Group enables its passengers to voluntarily offset or reduce the carbon emissions generated by their flights. This includes both the opportunity to reduce emissions directly by purchasing sustainable aviation fuel, and to offset them via long-term projects to protect the climate. The opportunity to offset carbon emissions when booking a flight was implemented at all passenger airlines in the Lufthansa Group during the first half of 2022. Customers also have the chance to offset carbon emissions at other points in the travel chain, on board during the flight, for example, at Lufthansa German Airlines, SWISS and Eurowings Discover. In addition, a new "green" fare was introduced in August 2022 on a test basis in the Scandinavian market. It includes the full carbon offset in the price by using sustainable fuel and offsetting CO_2 emissions with climate action projects. If it is successful, the Lufthansa Group will extend this fare to other markets too.

The Lufthansa Group only uses certified projects for its carbon offsets that meet the highest quality standards (CDM, Gold Standard and Plan Vivo). The projects also help to improve the quality of life and biodiversity at their location. The Lufthansa Group has partnered with the non-profit organisation myclimate, and with Climate Austria for Austria for more than ten years. Austrian Airlines and its partner Climate Austria also use some of the funds for national offset projects that had previously been certified by the Austrian Environment Ministry.

The emissions of flights within Europe and within Germany by business customers are automatically offset via myclimate when using the Corporate Value Fares programme. Private customers of the Lufthansa Group also have the option of offsetting or reducing their emissions through the Compensaid platform.

Carbon emissions generated by flights can also be reduced by purchasing sustainable aviation fuels (SAF), in addition to offsetting through a portfolio of high-quality climate protection projects. The amount of SAF purchased for this purpose must meet contractually agreed sustainability criteria. The scheme is based on the EU Renewable Energy Directive (2018/2001). Additional criteria have also been defined, for instance, that SAF is free of palm oil, and is purchased in addition to mandatory quotas and is not included in the EU Emissions Trading Scheme. Double counts are also ruled out. Passengers are free to combine these two offset and reduction options in any transaction.

The option of reducing carbon emissions for individual air transport services was also made available in the Logistics business segment in 2021. Lufthansa Cargo customers can offset individual shipments through climate projects with the Sustainable Choice product, or reduce carbon emissions in combination with SAF. Lufthansa Cargo offers global freight forwarders a bulk agreement that allows them to use large volumes of SAF to reduce carbon emissions. Entire charter flights can also be operated on a carbon-neutral basis. Lufthansa Cargo recently completed the 150th joint flight with one of its customers.

Availability of call centres and complaint processing times improved

Summer 2022 was difficult for the whole European airline industry, and it was important to once again live up to the premium promise in terms of the availability of call centres and the processing of complaints. By increasing the number of call centre staff and expanding other service channels, such as the digital chatbot assistant, availability above the target of 90% was again delivered by October 2022. Complaints management was also speeded up and simplified by automating the process.

Digital solutions facilitate customer dialogue

In addition to increasing the use of chatbot assistants, new self-service offerings have made customer service and dialogue easier and faster since 2022. Delayed baggage can now be reported directly from a mobile phone, for instance, and a delivery request sent in just a few minutes. There is no longer any need to stand in line for baggage tracing at the airport. Customer information services were optimised in the reporting year by successively revising electronic customer messaging, in the event of delays or short-term gate changes, for example. It is also planned to introduce explanatory videos and a feedback function in 2023.

Loyalty and customer retention are reimagined

In order to build long-term customer relationships, the Lufthansa Group is modifying its previous concept of customer loyalty and will in future demonstrate greater individual appreciation for every passenger. This is intended to make its offering more attractive and individual for members of the Miles & More programme. As of the reporting year, as “HON for a Day”, members with the frequent flyer status of Senator have the opportunity of getting a brief impression of the exclusive services and privileges on offer with the highest frequent flyer status in the Miles & More programme (HON Circle). The loyalty programme was also upgraded for customers with fewer flights per year. They can benefit from additional bonuses and status miles, for example, by solving temporary, gamified tasks in the Miles & More app, the Lufthansa Group’s frequent flyer and bonus programme.

The retail segment was expanded by means of the strategic partnership with the airport operator Fraport, and further incentives created to take part in the Miles & More programme. The planned realignment of the Miles & More programme was communicated to the public at the end of the reporting year. All the new features of the status programme apply to flights from 1 January 2024.

New customer profile reduces complexity

The passenger airlines in the Lufthansa Group introduced the new Travel ID customer profile in the reporting year. It enables users to log in to the platforms of Lufthansa Group airlines, access their Miles & More account and make use of many offers and benefits with just one ID.

Performance indicator

The NPS for Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines was 35 in 2022 and thus below the target of 55. At Eurowings the NPS was 37, also below the target of 50.

This is particularly due to the restrictions in services required by the pandemic, as well as the operational difficulties during the summer months. For customers, this meant that flights were cancelled or had to be rebooked at short notice. Strikes at airports and the Lufthansa Group passenger airlines in the autumn, and weather-related flight irregularities in December also had an adverse effect.

The NPS is a component of the target agreement and the variable remuneration of the Executive Board.

Employee concerns

Employees are one of the key success factors for the Lufthansa Group. This applies particularly at a time when business is being expanded significantly after the crisis-induced downturn during the coronavirus pandemic. Employee concerns are thus a focus of the Lufthansa Group's HR strategy.

After a number of challenging years due to the crisis, the Lufthansa Group is again positioning itself as a modern, attractive employer. This is necessary to strengthen the loyalty of existing employees, and also to attract talents from outside the Company.

Changes within the aviation sector and the structural transformation of today's working world have a direct impact on the employees of the Lufthansa Group. It is therefore necessary to keep developing the skills and knowledge of employees continuously in order to stay financially successful. The Lufthansa Group makes use of extensive training and continuing education opportunities in this context.

Employee health and occupational safety also continue to be key areas of action for the Lufthansa Group, especially against the backdrop of the 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 in order to further promote creativity, flexibility and the ability to innovate and to minimise legal liability risks. Various initiatives, such as increasing the quota of women in management and the long-established organisational integration 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 functions of Human Resources & Infrastructure and Brand & Sustainability. Close cooperation among all departments facilitates the development of sustainable measures to improve action relating to employee concerns. At the same time, the Executive Board member for the Human Resources & Infrastructure function 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 largest companies in the Lufthansa Group. 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 Lufthansa Group

The success of the Lufthansa Group depends largely on the competence, the enthusiasm, the commitment and the ideas of its employees. Now that the pandemic has been overcome, it is particularly important to maintain and develop employee morale, to recruit new employees, to have a coordinated personnel strategy, and to take steps to ensure the Company remains an attractive employer.

Employee retention and employer attractiveness measures are refined continuously in order to maintain employee satisfaction, even at times of strong fluctuations in demand and high inflation. At the same time, the needs of the workforce are very different, since the Group comprises 177 nationalities.

In addition to the advantages for employees offered by collective bargaining agreements, the Lufthansa Group provides a broad portfolio of company-specific, country-specific and generalised benefits for employees. Certain groups of employees can choose from various flexitime models, for example, so that they can organise their working hours much more independently. This makes it possible to combine work and leisure on an individual basis and makes the Group more attractive as an employer at the same time. Specific transitional benefits, pension schemes and arrangements for taking parental leave are also on offer.

Unrestricted freedom of association is an established feature of 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 supervisory boards subject to 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 senior executives are flexible and adapted continually
The Lufthansa Group has supported its employees to work flexibly for many years, both in terms of when and where they work. Mobile devices play the most important role here and have been made available to almost all employees for several years now. Works agreements on mobile working have also been signed in many companies in the Lufthansa Group. They aim to reconcile the interests of employees with those of the respective company.

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 senior executive who also works part time. In addition, senior executives and non-payscale employees can take sabbaticals.

Uniform performance and potential assessment ensures that talent is retained
To ensure that employees have the opportunity to shape their career within the Group in line with their individual talents and interests, a standard process for measuring performance and potential for most of the administrative and management staff has been implemented. The top performers and high potentials identified are systematically networked, brought to the fore, and inspired to maintain their engagement with the Lufthansa Group.

As the Lufthansa Group continues its economic recovery, the talent programmes – including the apprenticeship and trainee programmes – are being significantly expanded and enriched with new content, particularly relating to sustainability. This creates a broad and attractive portfolio of development and engagement opportunities for high performers and high potentials.

Organisational foundations and responsibilities

The overall topic of employer attractiveness is primarily the responsibility of HR Policies, HR Services & Digitalization and HR Management Executives, as well as Employer Branding & Talent Management. The HR Policies, HR Services & Digitalization and HR Management Executives departments report directly to the Executive Board member for Human Resources & Infrastructure. The Employer Branding & Talent Management department reports directly to the Executive Board member for Brand & Sustainability. Both departments are jointly responsible for maintaining and further strengthening the Lufthansa Group's position as an attractive employer. The topics Compensation and Benefits, Employer Branding, Talent Management and Human Resources Marketing, which have a significant impact on employer attractiveness, are firmly established within the departments.

Targets

Lufthansa Group strives to become more attractive as an employer
The Lufthansa Group aims to position itself as an even more attractive employer, and has set itself the long-term goal of being among the top employers in Germany. It also intends to position itself as a top employer outside Germany. Detailed targets for achieving these aims will be developed in 2023.

Attractiveness as an employer is considered from both an internal and an external perspective. 2022 was mainly defined by the rebuilding of flight operations and high demand in the summer. Since more new employees are to be recruited in future, employer attractiveness as perceived by external applicants is a crucial factor. At the same time, the employees in the Lufthansa Group make a decisive contribution to passenger satisfaction and thus to the success of the Company. Another important goal is therefore to increase the motivation of existing employees while improving employer attractiveness within the Group.

Measures

Workforce is informed transparently
The Executive Board of the Lufthansa Group continuously keeps 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, i.e. a mix of face-to-face events and webcasts, since autumn 2021. The range of events was successively extended in 2022.

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.

In addition, senior executives were asked to stay in permanent contact with their staff in 2022, regardless of whether they were working from home or on short-time work, in order to be able to identify personal needs and concerns and respond to them. The senior executives were also able to download the latest information on their mobile devices using a special app for senior executives.

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 and share information about different topics. These include initiatives to coordinate the social engagement of employees. Over 70,000 employees of the Lufthansa Group have access to the platform.

Key remuneration components and additional benefits are resumed

Many of the crisis agreements signed during the coronavirus pandemic have expired or were discontinued ahead of schedule. Important remuneration components were also reactivated in the reporting year. These include the bonus programme for non-payscale staff and senior executives at Deutsche Lufthansa AG, which was suspended in 2020 and 2021, and has been resumed with a new system of performance indicators. The Time-Out programme can now also be used again. These offer non-payscale staff the opportunity to convert variable payments into additional time off on a flexible basis.

Environmental and social targets were also included as performance criteria in the short-term and long-term remuneration components for senior executives. The variable bonuses are therefore dependent on achieving targets relating to customer and employee satisfaction and on reducing the carbon emissions of the Lufthansa Group fleet.

The bicycle leasing offer that had also been suspended was restarted with a new provider; and gives some 58,000 employees the opportunity to lease a bike on preferential terms. Electric vehicles were subsidised in order to systematically increase the proportion of electric company cars. About 50% of new company car orders are now electric thanks to this measure.

The Lufthansa Group will make greater use of flexible structures and options in remuneration components going forward, to ensure the ongoing development of the terms of employment. Greater flexibility enables employees to give more consideration to their individual needs.

Performance indicators

Engagement Index declines to 2.4

The Engagement Index 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 2022. With the exception of the LSG group, all major Group companies were included.

Whereas a detailed employee survey was carried out in the previous year, the scope of the 2022 survey was narrower. 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 2.4 and decreased by 0.1 compared with the previous year's value of 2.3. The reasons for the decline vary widely between different groups of employees. In some areas it is the cost savings that were required to maintain the competitiveness of the Lufthansa Group, while in others the working environment and the sometimes excessive employee workload caused by the steep rise in demand in summer 2022 played a role.

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 59,295 Lufthansa Group employees in Germany (as of 31 December 2022), some 78% benefit directly from collective bargaining arrangements. The remaining 22% are largely senior executives 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. In the Europe region, 98% of the employees at Austrian Airlines and 89% of those at SWISS have an employment contract covered by collective agreements.

Employer ranking reflects attractiveness of companies in the Lufthansa Group
To position itself as an employer that attracts new talent, the Lufthansa Group places particular emphasis on the opinions of young people in its employer rankings. In the 2022 reporting year, the Lufthansa Group in Germany ranked 16th among economics students in the Trendence Institute ranking and 9th in the Universum Global ranking (previous year: 13th and 9th place). Among engineers, Lufthansa Technik ranked 15th and 11th (previous year: 13th and 10th). Lufthansa Systems and Lufthansa Industry Solutions took 34th and 65th place among IT students in the Trendence ranking (previous year: 39th and 60th). The Universum Global ranking does not report separately for the two subsidiaries, but the Lufthansa Group came in 24th place among IT students.

In the Professionals category, the Lufthansa Group was in 15th place in the Trendence ranking for Business Studies (previous year: 13th place) and Lufthansa Technik took 15th place (previous year: 22nd place) for Engineers. Lufthansa Systems garnered 34th place for IT (previous year: 43rd place) and Lufthansa Industry Solutions 72nd place (previous year: 61st place).

In the Universum Global ranking, the Lufthansa Group took 12th place in Business Studies and 15th place in IT. Lufthansa Technik was at number 14 in Engineering. The Lufthansa Group considers that the results are satisfactory, given the volatile economic challenges to which the aviation industry is exposed.

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 also emphasise 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 also affects the goal of promoting existing talents and attracting new ones. As a result, legal requirements are fulfilled, and the basic conditions for the Group to remain innovative and capable of change are created. This includes such aspects as mandatory training and the establishment of binding governance on the holistic approach for human resources departments, in order to promote diversity and equality of opportunity.

Diversity and equal opportunities are also developed continuously by the equal opportunities commissioner. In particular, the focus is on gender equality, work-life balance and promoting a working environment that is free of discrimination.

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. Throughout Germany, employees have access to a family service portal where they can search for daycare 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 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, HR management and representatives of disabled employees, who meet regularly to discuss further steps to include people with disabilities. Other ways of providing support are also encouraged, such as placing orders with workshops for disabled people.

Organisational foundations and responsibilities

The Corporate HR Governance and Employer Branding & Talent Management departments are responsible for managing and processing legal issues associated with the topic of diversity and equal opportunity as well as the Group's political, strategic and operational positioning. The Corporate HR Governance department is part of the Human Resources & Infrastructure Executive Board function. The equal opportunities commissioner is also part of this department.
The Employer Branding & Talent Management department reports directly to the Executive Board member for Brand & Sustainability.

Targets

Proportion of women in management positions is to be increased
The Lufthansa Group addresses diversity and equal opportunities using a variety of approaches. The 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 female 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. These 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 FüPoG targets that apply to Deutsche Lufthansa AG, the Lufthansa Group has voluntarily set another target. By 2025, the Lufthansa Group aims to increase the proportion of women in management to 25% (as of 31 December 2022: 20.4%). Management refers here to the senior executives at Leadership Circle level who are regarded as equivalent to senior managers.

Lufthansa Group positions itself as a company of integrity
Furthermore, the Lufthansa Group aims to create the basis for its employees to realise their maximum potential. To achieve this, the Lufthansa Group positions itself as a responsible employer that acts with integrity. This effort includes minimising liability risks and strengthening the zero-tolerance policy within a work environment that is free of discrimination and harassment.

Measures

New projects and initiatives aimed at increasing the proportion of women with management responsibility
Within the Executive Board project “Female Leadership Boost” launched in 2021, the Lufthansa Group has set itself the task of sustainably establishing the topic of gender diversity in its leadership culture. The project includes mandatory awareness training on diversity in general for all top senior executives of the Lufthansa Group, and, as of 2022, a broad portfolio of individual development measures for talented women, in addition to a fixed percentage of women on shortlists for management positions. The portfolio comprises special programmes for junior managers and networks for them to share their experiences. The Power Up network is the most important – it provides a platform for exchanging views and various events (including training sessions and panel discussions).

Diversity and equal opportunities are strengthened
The Lufthansa Group promotes a non-discriminatory working environment in which all employees can develop their talents, regardless of their sexual orientation, identity or origin. This includes creative activities which are also implemented in collaboration with employee networks (where possible). The empowerment and diversity network Power Up is an example of such an employee network. It was established in 2021 and brings together leadership, empowerment and diversity initiatives within the Lufthansa Group, and offers an additional platform for communicating events and information. These initiatives are supported by the Executive Board and by senior executives of various companies within the Lufthansa Group with a common goal of greater diversity. In the reporting year, the network expanded its areas of focus and the scope of its activities with, for example, podium discussions concerning current topics.

In addition, Lufthansa German Airlines demonstrated its clear commitment to openness and diversity by means of specially painted exteriors. An Airbus A320neo with “Lovehansa” lettering has been flying to international destinations on a regular basis since summer 2022. Another aircraft was painted with the lettering “Diversity wins” for the 2022 football World Cup. This livery prominently underlines the Company’s attitude towards diversity.

For Christopher Street Day, various activities of the “Diversifly” LGBTIQ network were supported, such as the “Diversifly Pride Takeoff” event which took place during this period and featured in-house guests, external guests from other company networks as well as representatives from politics and business. In-house fundraising campaigns were also held at various locations in support of the German AIDS Foundation. In order to promote dialogue and mutual understanding and acceptance, the new format #queerstories was launched on the initiative of Diversifly in the reporting year. This provides employees with the opportunity to share experiences from their working lives within the Lufthansa Group through short interviews. In particular, this is intended to present examples of LGBTIQ-related stories as well as the challenges which the queer community faces in the work environment. On IDAHOBIT Day (International Day Against Homophobia, Biphobia, Interphobia, and Transphobia), the rainbow flag was hoisted in front of the Lufthansa Aviation Center (LAC) in Frankfurt, while the foyer of the LAC was lit up in rainbow colours for Pride Day Germany.

Childcare opportunities are expanded
In addition to existing childcare opportunities for children under the age of three, new childcare opportunities were introduced for children over the age of three in the reporting year to strike a better balance between work and family life. The number of places reserved at daycare centres in Frankfurt was increased for this purpose.

Commitment to combat inequality, discrimination and harassment is to be stepped up
The Lufthansa Group confirms its commitment to combat racist, xenophobic and anti-Semitic behaviour. In the reporting year, the Lufthansa Group signed the declaration of the International Holocaust Remembrance Alliance (IHRA). In this context, it also entered into a partnership with the American Jewish Committee in order to develop further mandatory awareness training courses for the Company alongside its existing courses.

Moreover, Group-wide activities were planned covering the subject of sexual harassment in the workplace and a decision was made to further strengthen the Company's zero tolerance approach. The platform #RespectLimits, which provides comprehensive information on this issue was set up for this purpose. In this context, the Lufthansa Group initiated the development of a single point of contact structure in the reporting year – i.e. an improved reporting system with a defined contact person for the Group as a whole and in defined companies. The goal is to establish a standard, professional process for the reporting of cases throughout the Group.

Performance indicator

Proportion of women in management positions is to be increased through further initiatives and activities
On 31 December 2022, women accounted for 9.4% of positions at the first management level in the Group and 15.4% at the second management level.

Overall, the proportion of women in management roles in the Lufthansa Group at the end of 2022 was 20.4%. Further initiatives and activities are required in order to achieve the defined goals. The measures in this area are to be revised in 2023.

People from a total of 177 countries work in the Lufthansa Group today.

TRANSFORMATION CAPABILITY

Concept

Multiple changes call for long-term transformation process and continuous transformation support
In the Lufthansa Group too, the ongoing structural transformation of work environments shaped by factors such as the growing automation of tasks and the trend towards holistic and creative work packages is set to bring changes to workplaces and the nature of jobs at ever shorter intervals. This will give rise to a permanent need for transformation. Demographic trends are intensifying this effect. Digitalisation and an increasing level of artificial intelligence-based automation are progressively supplanting certain abilities of humans in various professions and job profiles. The nature of work within the Company is also changing.

To adapt to this development, companies are well advised to establish a continuous transformation process for their employees, In general, the focus for employee transformation is on safeguarding the Company's future viability and performance. This should be accomplished through specific training and development, employees' ability to adapt and learn and the targeted transfer of knowledge. The Lufthansa Group considers that the transformation of its workforce due to automation, digitalisation and the changed sustainability requirements – in relation to environmental, social and governance issues – are an important topic in order to preserve the Company's competitiveness and future viability.

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 keep their knowledge and abilities up to date at all times.

Regular professional training courses are, for instance, offered for employees, particularly in safety-related areas. At the same time, a 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 assist with the related changes. This process will be initiated in 2023.

In this context, a process was established that enables employees to analyse the future viability of their own skill sets, and to compare them with the current and future requirements of their tasks. For this purpose, all of the employees in the Lufthansa Group have access to over 15,000 innovative learning opportunities for self-directed learning. In addition, all of the Group's employees were granted access to an additional catalogue of learning opportunities consisting of over 1,000 seminars and covering topics such as IT, human resources and personal and professional development in the reporting year.

The Group's "Lufthansa Group Campus" pursues targeted strategic activities in order to promote cultural and organisational development. Qualification courses for senior executives and top management support a forward-looking corporate culture of collaboration and assist with organisational changes. Established partnerships with leading international business schools have been reactivated with this end in mind.

Routine training courses are a 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 elements of the training which cabin crew receive.

Working environments are being further developed
Mobility and flexibility are key building blocks for modern working environments. As of 31 December 2022, about 100,000 employees of the Lufthansa Group had access to cloud-based software. Expanded availability at further subsidiaries enabled an increase on the previous year (31 December 2021: 54,000). In addition to hardware, cloud-based software is an important basis for remote working and flexible working.

All Lufthansa Group employees are offered modern networking 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 HR Policies, HR Services & Digitalization and the Employer Branding & Talent Management departments have core responsibility for transformation capability as an overarching topic. The HR Policies, HR Services & Digitalization department reports directly to the Human Resources & Infrastructure Executive Board member. The Employer Branding & Talent Management department reports directly to the Executive Board member for Brand & Sustainability. These two departments are closely linked and are responsible for developing initiatives and ideas for the development of the Lufthansa Group's transformation capability.

Targets

Ongoing development of staff skill sets is being pursued
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.

Measures

New formats help employees to return to work and support their development
Two initiatives were launched in the reporting year in order to help employees on short-time work to return to the Company and to reinforce their ties with it. "ReJoin" provides reintegration assistance, while "ReConnect" provides additional offerings for individual teams and for larger groups of employees, with the goal of bringing people in the Lufthansa Group together again.

In late April 2022, an "X-Days" initiative took place. This focused on digital work, culture and well-being and featured almost 100 sessions held in person, in hybrid form and in a purely virtual format. More than 12,000 attendances were registered in the space of ten days. This event continued in November 2022 with new topics. Overall, the second time around 47 sessions were offered and 2,072 employees successfully took part.

Cross-functional working, exchange of knowledge and experience are to be strengthened
With its "CanDo!" platform, the Lufthansa Group pursues the goal of promoting the exchange of knowledge and experience between various employees and experts within the Lufthansa Group as well as efficiently organising cross-functional collaboration. This platform has been available throughout the Group since April 2022 and registered well over 5,000 users as of 31 December 2022. It is used in talent management programmes and tools, for example, for project assignment management purposes in trainee programmes and for the placement of mentors.

Focus is on transformation and change

Within the scope of the establishment of a new organisational structure at Deutsche Lufthansa AG, a unique placement and application process was launched in order to promote the skills-based rotation of employees from areas of the Company with surplus human resources to those with a need for further staff, while spanning a range of professional fields. Supported by applicant training courses and information events, almost 180 employees have found an alternative position via these rotation opportunities.

A network of employees who are driving forward the process of transformation and based in various departments and companies was initiated in the reporting year. The process of learning from one another through a community of individuals who are responsible either for staff or for transformation projects is being utilised in order to develop transformation components and facilitate the implementation of related projects.

In addition, an internal “change driver” training course was again offered in the reporting year. A total of 50 employees from various Group companies took part. With their knowledge, they are actively supporting the change projects underway in their departments.

Apprenticeship as Service Management Professional continues

The Service Management Professional apprenticeship for training Lufthansa German Airlines cabin crew continued successfully in 2022. It is recognised as an additional professional qualification by the Chamber of Industry and Commerce (IHK). The programme covers professional service skills, fundamental 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 cabin crew profession and opens up new career paths (such as purser), while at the same time promoting individual personal development. In the reporting year, 324 employees successfully completed the qualification programme. This means that 1,494 employees have successfully completed this training since the start of the programme.

Lufthansa Group helps its employees to act sustainably in relation to environmental and social issues in their fields of work

In order to achieve its ambitious sustainability goals, the Lufthansa Group intends to enhance its employees’ capacity to integrate sustainability in their daily work as an integral basis of their decision-making and activities. The regular employee survey “involve me!” has likewise demonstrated the high level of interest in this. In cooperation with the University of Mannheim (recognised as a “university of excellence”) the Company’s Corporate Responsibility department designed and implemented a “SustainABILITY” programme for employees for this purpose in the reporting year. This four-day programme included lectures from experts at the university and guest speakers from other large German companies, as well as interactive formats for use in everyday work. All Lufthansa Group employees were able to apply to participate. Out of 350 applicants, 125 participants were then selected from 22 different Group companies and various management and employee levels. A before-and-after evaluation demonstrated that 96% of participants would recommend the programme, while almost 90% stated that, upon completing the programme, they felt empowered to integrate greater responsibility for sustainability in their fields of work. The participants remain networked via a platform which, among other purposes, is used for dialogue between experts and for sustainability-related collaborative learning. Since October 2022, employees who have not taken part in the programme are now likewise able to network via this platform and take part in the dialogue. This programme is due to be expanded in 2023. As well as university material, the expanded version will also feature core aspects of the Lufthansa Group’s strategic sustainability management activities.

Performance indicator

Detailed survey provides comprehensive transformation capability information

The Lufthansa Group’s general and digital transformation capability can be determined by means of 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 2021 survey allowed management to identify concrete fields of action and initiate specific measures by way of groundwork to establish the Group’s transformation capability and prepare staff for relevant changes. The introduction of new tools for the purpose of enhanced internal communication and collaboration is one example of this capacity for digital transformation. These tools will be introduced together with training courses for employees to ensure their effective use. In the reporting year, however, a shortened survey was carried out which does not include any specific insights relating to the transformation capability issue.

HEALTH AND SAFETY AT WORK

Concept

Occupational health and safety are material action areas
Occupational health and safety have been central areas of action 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 Medical Services (including Psychosocial Counselling and Health Management) and all of the other business units of the Lufthansa Group is designed to ensure a rapid response and enable the effective development and implementation of preventive approaches for long-term employee health.

The Medical Centres in Hamburg, Frankfurt and Munich provide a holistic range of healthcare services spanning occupational and aviation medicine, infectious diseases, tropical medicine and travel medicine, outpatient and emergency care and socio-medical counselling. This is supplemented with comprehensive individual and collective psychosocial services. The easy access to these services for employees was further developed during the coronavirus pandemic by means of a range of innovative formats providing information and enabling dialogue. Employees making use of remote working practices were thus likewise provided with a direct opportunity to receive information and take part in this exchange. The dialogue with the Medical Services of SWISS and Austrian Airlines – which had been hampered by short-time work and staff cutbacks in 2020 and 2021 – was once again stepped up at an international level.

The occupational safety function consistently implements preventive measures to avoid accidents, health risks and occupational illnesses. In the Group companies in Germany, the Lufthansa 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. They are required to deal with this directly when they are appointed to their position.

Medical Services improve structures following the pandemic
In the post-pandemic phase, the Medical Services departments of Deutsche Lufthansa AG, SWISS and Austrian Airlines detected a significant level of need among senior executives and employees for the full range of preventive and healthcare services. In addition, the department has an authorisation for the further training of occupational medicine specialists.

Every part of the Medical Services department, including Psychosocial Counselling and Passenger Medical Care, is certified according to the DIN ISO 9001:2015 quality management system. This certificate was renewed on the basis of an external audit in summer 2022.

As a company with operations worldwide, infectious disease, vaccination, tropical medicine and travel medicine issues are a core aspect of the Lufthansa Group's medical activities in the areas of collective prevention, healthcare for individual employees and expert advice for committees, senior executives and the Executive Board. Medical Services is also responsible for determining the need for protection due to infection hazards.

Psychosocial counselling provides stability in difficult situations
Psychological and psychosocial factors have a major 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. This counselling was largely provided in virtual form during the coronavirus pandemic. True to the motto "No one should be left alone with their problems", various digital formats covering psychosocial issues (podcasts, webinars, videos, newsletters) were designed in order to reach as many employees working from home, on short-time work or working shifts as possible. Counselling is now once again being provided face-to-face.

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 managers in the individual Group companies identify needs specific to target groups and set up related services. Group-wide interventions and the strategic development of health management are headed by Lufthansa Group Health Management.

In 2022, health managers and senior executives once again had access to a comprehensive range of services, thus enabling provision of appropriate health promotion services in line with report findings at the level of individual teams or the Group company in question. Employees are also able to sign up for a large number of individual measures which are designed to improve their personal health.

Organisational foundations and responsibilities

Occupational health and safety is jointly managed by Occupational Safety as well as Medical Services & Health Management. These two departments have been transferred to the subsidiary Lufthansa Group Business Services (LGBS) which provides core HR services for the Lufthansa Group. The managing director of LGBS is a member of the HR Committee and reports to the Executive Board member for Human Resources & Infrastructure. The central steering body for all issues concerning occupational health and safety in the Lufthansa Group is the Occupational Safety Committee, which monitors the implementation of all aspects of occupational health and safety across the Group. The minimum standards adopted by the Committee are binding throughout the entire Lufthansa Group. These are fed back to the individual companies through their own occupational health and safety coordinators. The occupational health and 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 opportunities for employer concerns and employee concerns, in 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. The goal of occupational health and safety is to prevent accidents at work and occupational illnesses through preventive action and, if they nonetheless occur, to draw the necessary conclusions from accidents to prevent them from happening again, to the extent possible.

The mission of the Medical Services department is to safeguard the social welfare of the Company's employees. This objective includes the positive integration of employees with health problems and disabilities in the work environment. Measures which are designed to foster a corporate culture that is conducive to good health are an integral goal.

Measures

Specialists strengthen Medical Services
In the reporting year, the process of hiring new specialists was gradually initiated in order to fulfil the defined goals of Medical Services and expand the department's portfolio of specialist medical skills.

Information and communication are continuously adjusted in line with evolving requirements, as key to preventive measures
The Company's coronavirus safety plans (for the use of workspaces, for instance) and risk assessments adjusted as appropriate (for flight operations, for example) were continuously updated in the reporting year. Further transparency was provided by means of extensive communication via the intranet, while maintaining established formats such as newsletters, podcasts and articles. The department continued to provide all of the operational activities within its remit – such as occupational and aviation medicine examinations – while complying with applicable regulatory safeguards. A close dialogue with all the healthcare authorities ensured that measures implemented complied with the applicable quality requirements.

Coronavirus vaccination strategy is continued
Following the coronavirus vaccination campaigns carried out in summer 2021 (more than 14,000 individual vaccinations) and in winter 2021/2022 (over 9,000 individual vaccinations), Medical Services offered vaccinations to boost employees' personal immunity and protect against serious coronavirus illness alongside its annual flu vaccine campaign at its three locations in October 2022 (more than 7,000 individual vaccinations).

Psychosocial counselling and occupational health management provide support for senior executives and employees
Group online formats covering health promotion and the prevention of illness were made available to overcome the specific 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.

The specific, and in some cases pandemic-related, intervention requirements were continuously reviewed and appropriate healthcare services developed, in close cooperation with the individual Group companies' health managers.

Health care for employees on assignments abroad is improved
In October 2022, a new system of medical care for employees on assignments abroad (cockpit and cabin crew in particular) was established through an agreement signed with a service provider active worldwide. This replaced the previous panel doctor system and will ensure improved standards of comprehensive medical care for employees. For example, they will now be able to choose from a wider range of doctors outside their home country.

Occupational safety is developed further
Occupational Safety is taking part in a central programme for the standardisation of compliance training, for the ongoing development of high and uniform standards of instruction and to ensure that its provision is centrally managed. These courses are being optimised for employees and managers in order to enhance their attractiveness for users. Issues associated with working from home are also taken into consideration.

The Occupational Safety Committee decided to replace the occupational safety survey previously conducted at the Group's companies outside Germany with a local audit performed by an external auditor. Audits were carried out in North America in the reporting year as a pilot project. Over the next few years, they are to be expanded to cover further companies and countries.

To improve the level of transparency relating to work-related injuries in the different parts of the Lufthansa Group, additional companies in Germany were included in the data registration process in the reporting year. In subsequent years, companies in other countries will also be gradually integrated into the data collection process.

Performance indicators

Health Index as key indicator for employee health declines slightly
In the reporting year, the Health Index was again tracked through the "involve me!" employee survey. The score dropped to 2.4, compared with the previous year's score of 2.3. The result is presented on a scale from 1 (best score) to 5 (lowest score). With the exception of the LSG group, all major Group companies were included in the reporting year.

Accident figures enable effectiveness audits
In 2022, the accident figures included relevant companies that are insured in Germany by the largest employers' liability insurance association (BG-Verkehr) and that employ a total of 50% of the Lufthansa Group's employees worldwide and 93% of its employees in Germany. The reporting was expanded by comparison with 2021, and further companies are being gradually added.

A fatal work accident leading to the death of an employee occurred in the reporting year for the first time in many years. The Lufthansa Group is supporting this employee's relatives as well as affected colleagues through psychological counselling provided by Medical Services and is assisting the government investigating authorities with their inquiries into the cause of the accident.

For every one million hours worked, the initial incidence of work-related injuries in the reporting year was 6.6. However, the figure calculated for 2022 is provisional since the data will be compared with the employers' liability insurance association at a date after the publication of this report. The adjusted rate of work-related injuries for the year 2021 is 4.9 per one million hours worked (compared with a rate of 3.7 initially reported in 2021). All events that resulted in downtime of at least one calendar day are included in the calculation of this indicator.

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. The Lufthansa Group connects people, cultures and economies in a sustainable way. Credible corporate citizenship enhances the Company's image, increases the loyalty of its employees and strengthens the trust of its customers.

help alliance, the Lufthansa Group's aid organisation, is a central pillar of the Lufthansa Group's corporate citizenship and social responsibility and an element of its sustainability strategy.

Emergency relief during humanitarian crises and disasters is another integral aspect of the Group's corporate citizenship. Lufthansa Cargo cooperates with well-known aid organisations.

Employees volunteer
The activities focus on social and humanitarian projects, which are clustered in and managed by help alliance. 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 help alliance.

In 2022, the Lufthansa Group covered all the costs of administration, fundraising and communication for help alliance. This ensures that 100% of all other donations are used to fund project work.

Organisational foundations and responsibilities

help alliance is a non-profit limited liability company (gGmbH) and wholly-owned subsidiary of Deutsche Lufthansa AG with headquarters in Frankfurt. 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 role of help alliance in the Lufthansa Group's ESG strategy is underlined by its close cooperation with the Corporate Responsibility department, whose management is responsible for participation.

Targets

Contribution to sustainable social development is made
The main objective of help alliance is to provide disadvantaged young people access to education and empower them to lead a self-sufficient life. Its 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

In 2022, help alliance expanded the voluntary work aspect of its aid projects and provides opportunities for social engagement through local volunteer groups at 24 locations. It also supported 17 new projects in the areas of education, work and income. All the help alliance volunteer project managers and communities met up in person for the first time in 2022, on the occasion of International Volunteering Day, which falls on 5 December. This two-day event featuring discussions and workshops was intended to reinforce awareness of the Lufthansa Group' social engagement activities and foster a sense of belonging.

help alliance supports people in Ukraine
Following the outbreak of the war in Ukraine in February 2022, the employees of the Lufthansa Group were keen to help people in Ukraine. The help alliance communities active in Europe provided particularly strong support. At the Lufthansa Group's locations in Frankfurt, Munich and Sofia, they organised campaigns in March and April 2022 to put together aid packages containing items such as medicines, baby food and power banks which action groups and NGOs then transported to the Ukrainian border.

In addition, help alliance organised a charity concert of classical music at the Isarphilharmonie concert hall in Munich in June 2022. The purpose of this concert was to raise money to renovate and re-equip the music school in Bucha, Ukraine, and to offer local children music-based trauma therapy. In total, a sum of EUR 90,000 in donations was collected at the charity concert and afterwards. The donations were passed on to a Ukrainian partner organisation which is using them to fund the renovation work. Staff at the Bucha school of music are providing the therapeutic measures.

Girls' refuge opened in India
In early September 2022, together with a local partner organisation in Dehradun, northern India, help alliance opened a new girls' refuge for 200 girls who have been rejected by their parents. The construction of this building took almost three years and was made possible by EUR 450,000 in donations from help alliance and other partners and organisations. The new building offers the girls and young women a safe environment in which they are able to learn and to develop as individuals, thus helping them to lead self-sufficient lives. A local partner organisation is responsible for the related project activities. These included funding the construction work and fitting out the new girls' refuge. help alliance has already approved a follow-up request for financial support for further project activities which the local partner organisation submitted for 2023.

Performance indicator

Disadvantaged people receive support
In 2022, help alliance was responsible for 55 aid projects in 24 countries with a project volume of EUR 3.3m. 74% of the funds were allocated to educational projects, 20% to work and income-related activities and 6% to emergency relief measures.

In addition, Lufthansa Group employees at 24 locations participated in local volunteering communities.

Impact assessment of corporate citizenship is 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 help alliance's annual activity report. Approximately 38,000 disadvantaged people around the world received help through these projects in the reporting year.

Business ethics and compliance

Responsible conduct in accordance with applicable laws and internationally recognised standards, while respecting human rights, is a core aspect of the corporate culture of the Lufthansa Group. 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 companies of the Lufthansa Group.

Code of Conduct provides framework for acting with integrity and responsibility
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 give substance to the framework provided by the Code of Conduct and to maintain a clear system of rules. 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 continuously improved and optimised in line with legal requirements, court rulings and the specific risks applicable to the business activities of the Lufthansa Group. Currently, it comprises the following elements: Integrity (Anti-Corruption), Capital Market Compliance, Competition Compliance, Embargo Compliance, Export Compliance, External Workforce Compliance and Anti-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 therefore established rules in several guidelines for transparent and compliant conduct with business partners and government representatives as well as its own conduct to avoid conflicts of interest. In particular, the guidelines include instructions on the handling of gifts, invitations and other benefits as well as donations and sponsorships.

Group-wide compliance culture is promoted
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. As part of its measures to promote a compliance culture, which are aimed at motivating all Group employees to internalise this behaviour, the boards and senior executives in all of the Lufthansa Group companies with operative businesses provide regular information about these approaches. They thus act as role models for their employees and continuously express their expectations regarding the integrity of all business decisions and all business actions of the Lufthansa Group. Twice a year,

it will be recorded whether the boards of the Group companies with operative businesses are living up to their role model function by communicating a "tone from the top" message. The Corporate Compliance Office prepares the compliance topics which the corresponding boards of the Group company then communicate to their employees. These compliance topics thus reach every level in the hierarchy.

Advisory services are an integral part of the Compliance Management System

A key element of the Compliance Management System is advisory services. Any employee can contact the local compliance managers or the Corporate Compliance Office with questions related to compliance at any time. In addition, the Corporate Compliance Office provides an app which helps employees comply with the applicable guidelines even on business trips and on an ad hoc basis. This app currently covers how to deal with business partners and public officials as well as proper conduct in situations where there may be a conflict of interest. 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

Boards, senior executives and employees in relevant areas or functions are required to complete compliance training where this is necessary from the point of view of compliance risks. Depending on the specific level of risk they are exposed to and the content of the training, the target groups are obliged to attend either web-based or on-site training. 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. Web-based compliance training is offered for the Integrity (anti-corruption), Competition, Capital Market and External Workforce Compliance modules. 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. On-site training is offered for functions exposed to risk every three years for the Embargo and Export Compliance module and for the other compliance modules in accordance with the level of need or on demand. The Corporate Compliance Office has defined target groups for each compliance module in order to assign employees to training courses as required, in line with their level of risk exposure. In case of organisational changes, the Corporate Compliance Office will cooperate with the Lufthansa Group companies closely and continuously in order to adjust the target groups in a dynamic and timely manner.

Risk-based business partner due diligence aims to ensure integrity of suppliers and service providers

The Lufthansa Group has implemented a risk-based business partner due diligence system in its Central Purchasing department which is intended to safeguard the integrity of suppliers and service providers. Before a business relationship is entered into with an external business partner, the potential partner will be assessed from a risk perspective in order to identify early on any potential compliance risks which may arise if a cooperation is entered into with this business partner. Depending on the risk classification, further steps may be implemented within the scope of the business partner due diligence process which include a more in-depth assessment, more detailed questionnaires and careful identification and clarification of any irregularities or warning signs detected. This may result in a decision not to enter into a business relationship or else to terminate it. Depending on the specific risk classification, existing business relationships will likewise be regularly reviewed within the scope of this due diligence.

Whistle-blower channels make it possible to report compliance violations

The Lufthansa Group has various whistle-blower channels in place which can be used to report possible compliance violations, including potential breaches of anti-corruption legislation and regulations. Each employee is able to contact their direct superiors, the compliance managers in the Group company in question or else the Compliance Office directly. In addition, the Lufthansa Group has an electronic whistle-blower system and an ombudsperson who is also accessible to external whistle-blowers. The electronic whistle-blower system is provided in ten different languages and enables whistle-blowers to pass on in writing at any time any information they become aware of or which they have observed. They are able to decide whether they wish to remain anonymous. The electronic whistle-blower system is available on the Lufthansa Group website. 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.

Any information received is assessed for plausibility using an established procedure. If a compliance violation is indeed suspected, the hint will be investigated by the Corporate Compliance Office in cooperation with Corporate Business Security under strict observance of confidentiality and control by the responsible Compliance Committee. If, at the end of a procedure, a violation of the Lufthansa Group's compliance guidelines is determined, depending on the circumstances of the individual case, the Lufthansa Group may pursue appropriate disciplinary measures against those involved, from training and awareness measures up to termination of their employment.

Protection for whistle-blowers is of great importance to the Lufthansa Group. The Lufthansa Group will therefore not tolerate any actions to the detriment of employees who report compliance violations. Any infringement of the compliance rules will be treated as a compliance violation and will be pursued.

Internal Audit department audits the effectiveness and appropriateness of the Compliance Management System
The Compliance Management System is monitored at several different levels. The annual inspections of the Internal Control System include a check as to whether the companies which are required to maintain this system have up-to-date documentation of all of the relevant measures, processes and tools of the Compliance Management System. In addition, the Group companies are obliged to ensure effective fulfilment of and adherence to certain requirements of the Compliance Management System in their processes and business procedures and to report their findings to the Corporate Compliance Office within the scope of their compliance reporting. Moreover, within the scope of regular audits, Internal Audit reviews the appropriateness and effectiveness of the Compliance Management System at the Group companies and identifies any previously undetected weak points.

In the 2022 financial year, Internal Audit carried out a total of 19 compliance-related audits at 18 Group companies.

Organisational foundations and responsibilities

The Group-wide implementation, development and communication of the Lufthansa Group Compliance Management System is the responsibility of the Corporate Compliance Office, which is part of the central Legal department. The head of the Legal department and Chief Compliance Officer reports directly to the Human Resources & Infrastructure Executive Board function and presents two Compliance Reports per year to the Executive Board and the Supervisory Board's Audit Committee and one per year to the Supervisory Board. The Executive Board has created a network of committees, consisting of a Group Compliance Committee and central compliance committees in the main subsidiaries to provide support with steering and implementing the central Compliance Management System across all companies. A worldwide network of compliance managers at the Group companies support the Group Compliance Office as well as the ongoing development and implementation of the Compliance Management System. As well as cooperation in relation to specific compliance tasks, the Corporate Compliance Office regularly notifies the compliance managers of changes to the Compliance Management System and of other compliance topics, including via the regular communication platform, Compliance Manager Academy. The compliance managers report to the Corporate Compliance Office twice a year on compliance issues specific to the Group companies via a standardised process.

Targets

Compliance Management System aims to ensure rules-compliant conduct and prevent unlawful conduct
The aim of the Compliance Management System is to ensure conduct in compliance with rules 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. 75ff.**

Measures

New risk evaluation concept enables monitoring of implementation of measures, as well as identification of compliance risks
Regular assessment of compliance risks is an important aspect of any compliance management system. In the reporting year, the Corporate Compliance Office completed its revision of the Group-wide approach for compliance risk analyses. The updated concept is based on a uniform approach in all of the Group companies with operative businesses. The aim is not only to identify and evaluate relevant compliance risks but also to manage the implementation of risk-minimising measures defined by the Compliance Management System in the business processes of the Group companies. A web-based IT system in line with this concept was developed in the fourth quarter of 2022 and will be introduced in the first quarter of 2023. Following the introduction of this IT application, the Corporate Compliance Office will perform an initial risk and measures assessment

in the 2023 reporting year. The implementation process involves a test phase with some of the Group companies before all of the Group companies with operative businesses are brought on board. Each Group company will thus be able to continuously evaluate and monitor its compliance risks and the implementation status of the Compliance Management System in its business unit.

Web-based compliance training courses are updated
Due to the restructuring implemented within the Group companies, the assignment profiles for web-based compliance training were revised in the reporting year on the basis of the new structure and the new positions. This affects Deutsche Lufthansa AG and Lufthansa Technik AG.

In cooperation with the Corporate Compliance Office, Group Training & Learning Management is sourcing new web-based compliance training for all of the compliance modules on the external market. The goal is to offer the Group's employees a more effective and efficient learning experience and thus to achieve lasting success in terms of the learning outcome. The new web-based compliance training courses are due to be introduced in 2023.

Performance indicators

The Lufthansa Group monitors its Compliance Management System via various performance indicators in line with its defined purpose. These include training ratios, number of hints and "tone from the top" communication.

Overall in 2022, 30,935 employees in 157 Group companies took part in web-based compliance training. This is equivalent to a 94.7% participation ratio. In addition, 34 on-site training courses were offered with a total of 2,126 participants.

The Lufthansa Group received a total of 46 hints in the reporting year via its various channels. 20 of these were compliance-related. Six hints were investigated in detail via the described procedure.

In the reporting year, all 189 participating companies which play an active role in business life confirmed that their Executive Board members had held at least one communication session with their company's employees in order to promote a culture of compliance.

RESPECT FOR HUMAN RIGHTS

Concept

Respect for human rights is a key issue for Lufthansa Group
As an employer, the Lufthansa Group directly contributes to the livelihoods of more than 109,000 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 Guiding Principles on Business and Human Rights
- Sustainable Development Goals (SDG)
- National Action Plan for Business and Human Rights (NAP)
- OECD Guidelines for Multinational Enterprises
- IATA Resolution against Trafficking in Persons

German National Action Plan on Business and Human Rights provides 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.

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. 141ff.**

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.

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 these issues into regular training for flight personnel. These employee groups are made particularly aware of potential signs of human rights violations. Ongoing regular training sessions were suspended in the reporting year 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.

Senior executives and employees are given awareness training on specific target groups

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 senior executives and Human Resources departments at Group companies in these countries are made aware of their duty of care to avoid human rights abuses. A corresponding annex has been added to the employment contracts of these senior executives.

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 Executive Board member in charge of the Human Resources & Infrastructure portfolio 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 are implemented

The companies are obliged to identify human rights risks and the type and number of suspicious incidents. Individual complaints also can be made by third parties to the external ombudsperson – confidentially if so desired.

Furthermore, Lufthansa Group employees can get in touch with their manager, Human Resources management or the co-determination bodies. The works agreement on internal procedures for grievances already in place for all Lufthansa Group employees in Germany is used for many different kinds of complaints, and can also be used for complaints regarding human rights violations.

The German Corporate Due Diligence in Supply Chains Act, which establishes obligations for some Lufthansa Group companies, entered into force on 1 January 2023. These include the obligation to set up a grievance procedure for reporting human rights and environmental risks as well as violations of human rights or environmental due diligence arising through the Group's own activities or those of suppliers. In fulfilment of this obligation, the Lufthansa Group has enabled human rights and environmental reports to be submitted via its established internal and external reporting channels for reporting compliance violations. These are its electronic whistle-blower system and ombudsperson. In addition, the Lufthansa Group has defined and published rules of procedure for dealing with these reports. They are available on the Lufthansa Group website.

"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 this principle to be 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 senior executives 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, user suggestions incorporated and the established measures continued accordingly.

Organisational foundations and responsibilities

In preparation for the entry into force of the German Corporate Due Diligence in Supply Chains Act, the Lufthansa Group restructured the organisational foundations and responsibilities for respect for human rights within the Group. The Executive Board resolved to establish the position of a human rights officer who is based within the Labour Relations Ground department, in the Human Resources & Infrastructure function, and reports directly to the Executive Board member responsible for this function. In addition, a team was set up in the Labour Relations Ground department to coordinate the activities of the Lufthansa Group in relation to its human rights responsibility. Together with the purchasing function, this team will in particular be responsible for managing the implementation of the Lufthansa Group's obligations under the Corporate Due Diligence in Supply Chains Act. A committee will manage and assist with the key decisions relating to the Lufthansa Group's fulfilment of its obligations under the Corporate Due Diligence in Supply Chains Act. In addition, selected contacts will advise, support and follow up on the topic at the core companies in the Lufthansa Group. The Corporate Compliance Office reported regularly on developments to the Executive Board in accordance with the resolution on the annual declaration under the UK Modern Slavery Act 2015. After assuming responsibility for managing and coordinating the tasks associated with the Lufthansa Group's human rights responsibility, the Labour Regulations Ground department together with the purchasing function will report to the Executive Board on developments.

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, that is, in particular in the companies of the Lufthansa Group and their supply chains. 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. If any such risk is identified, it must be minimised or, if a violation is detected, it must be terminated and its effects moderated as far as possible.

Measures

Fulfilment of obligations under the German Corporate Due Diligence in Supply Chains Act has begun
The Labour Relations Ground department began to coordinate the fulfilment of the obligations under the German Corporate Due Diligence in Supply Chains Act in the reporting year. Among other measures, the economic affairs committee of the Group works council received advance notification of the implementation of this act in the Lufthansa Group. The risk analysis required under the Corporate Due Diligence in Supply Chains Act for its own, Group-wide activities was designed in the reporting year. It will be implemented in consultation with the other Group companies which are themselves subject to obligations under the Corporate Due Diligence in Supply Chains Act. Based on the findings from the risk analysis of its own activities as well as those of external suppliers conducted by the Procurement Lufthansa Group department, a human rights strategy will be drafted and incorporated into its policy statement in 2023 (↗ **Responsible supply chain management, p. 141ff.**). The risk management approach prescribed by the Corporate Due Diligence in Supply Chains Act for the identification, minimisation and termination of human rights and environmental risks and violations will be designed and implemented in close cooperation with the Corporate Responsibility, Procurement Lufthansa Group and Labour Relations Ground central functions as well as the Corporate Compliance Office.

Performance indicator

The Lufthansa Group will analyse and implement suitable indicators in line with its targets.

RESPONSIBLE POLITICAL ENGAGEMENT

Concept

Lufthansa Group is active in the political environment independently and via industry associations
The Lufthansa Group discusses its legitimate interests also at the political level with representatives of the various national and international authorities and institutions and provides 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 political 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 International Air Transport Association (IATA), Airlines for Europe (A4E) and the German Aviation Association (BDL) as well as other bodies such as the Federation of German Industries (BDI), the Confederation of German Employers' Associations (BDA) and the Forum for Sustainable Development of German Business (econsense).

Organisational foundations and responsibilities

The Corporate International Relations and Government Affairs department, which reports directly to the Chairman of the Executive Board, is responsible for representing the political interests of the Lufthansa Group. It has offices spanning the three federal levels in Brussels, Berlin and – for representation vis-à-vis the German federal states – Frankfurt as well as liaison offices in Washington, Moscow, Singapore and Beijing. In addition, a sub-department is responsible for air traffic rights at Deutsche Lufthansa AG. Moreover, the main foreign subsidiaries of the Lufthansa Group are themselves responsible for national political issues and air traffic matters, while acting in consultation with the 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. It participates in consultation processes relating to national and European legislation as well as international financial accounting standards such as the International Financial Reporting Standards (IFRS) – either directly or via the above-mentioned associations – and assists with the operational and technical aspects of implementation by virtue of its industry expertise. 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 is 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 levels as well as with representatives of the various EU institutions. This includes supplying facts and figures and working through issues, some of which are complex. Furthermore, the Lufthansa Group contributes to legislative processes to protect the Company's interests, such as in relation to the European Commission's "Fit for 55" legislative package.

The Lufthansa Group attaches great importance to transparency in its political engagement, and has been listed in the EU Transparency Register since 2008 under the number 0714344663-32. Moreover, the Company has been registered in the lobbying register of the German Bundestag (lower house of parliament) under the registration number R001474 since February 2022. 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 also accessible to the general public) and the Lufthansa Group Airmail Policy. 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 is firmly established in the Company

Taking sustainability aspects in the supply chain into account is an important aspect of acting responsibly. In addition to economic aspects, impacts on the environment and society are also taken into consideration during the procurement process. To meet the standards the Lufthansa Group sets for the sustainability of its own products and services, 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.

Group procurement policy includes 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 these employees and is mandatory for persons in management positions. Among other considerations, it requires that the following obligations be included in contracts with suppliers:

- compliance with the ten principles of the UN Global Compact,
- compliance with the four basic principles of the International Labour Organization (ILO),
- the right to consent to announced and unannounced audits by companies of the Lufthansa Group,
- the right to terminate 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.

Supplier Code of Conduct expresses the Lufthansa Group's expectations

The expectations that the Lufthansa Group has of its suppliers in terms of social, environmental and ethical responsibility are summarised in the Supplier Code of Conduct which is aimed at the suppliers of the Lufthansa Group and can also be found on the Lufthansa Group website.

Established risk management is expanded

In 2022, the annual purchasing volume involving external suppliers amounted to around EUR 18bn. The Lufthansa Group works with suppliers in almost 170 countries worldwide. The goods and services which it purchases are spread across 329 product groups.

These product groups undergo an annual risk assessment in order to identify the nature and intensity of product group risks. Human rights, compliance and environmental risks are taken into account in this process. The risk assessment is included in the result of Group risk management.

In order to identify these risks and financial risks before a contract is awarded and to ensure compliance with the Group's standards, the Lufthansa Group has established a supplier review process. If the initial assessment indicates that a supplier falls within a risk category (e.g. due to the country or product group), an in-depth review will be carried out, including external sources, if necessary. The review process is designed to help identify potential risks, determine what risk reduction measures are required or, in exceptional cases, prohibit cooperation with the supplier in question.

In the reporting year, the risk management strategy was expanded to include a risk analysis for all existing suppliers in the context of the preparations for the German Corporate Due Diligence in Supply Chains Act. Key product group risks were taken into consideration here, alongside human rights and environmental risks. The Lufthansa Group aims to perform this analysis regularly with IT support as part of its risk management system. The aim is to support a continuous management approach in order to prevent, minimise or terminate potential and existing risks.

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 November 2022, the Lufthansa Group's commitment was reconfirmed for a further year when it received "Silver Status". Its procurement processes are also more highly rated than those of similar companies in the ecovadis rating.

Organisational foundations and responsibilities

The purchasing units in the Lufthansa Group are organised into a single reporting line. They report to the Executive Board member for Fleet & Technology. In some cases they are centralised, especially for airline-specific services such as purchasing aircraft or kerosene, and in others, they are decentralised throughout the Group companies (for specific product types). Reporting lines are based on responsibilities for different product groups and Group companies. Defining product groups optimises their function by pooling know-how.

The three central departments Purchasing Systems, Strategy and Governance report to the Lufthansa Group's purchasing management function. These departments bundle and deal purchasing-specific issues on behalf of the Group as a whole. In response to the growing significance of the topic of sustainability all three departments have, since 2022, been concerned with environmental, social and governance sustainability issues which were previously handled by the Governance department.

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 to improve the enforcement of sustainability standards.

Targets

Suppliers of Lufthansa Group are obliged to comply with ethical principles and statutory provisions
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. In this way, the Lufthansa Group seeks to fulfil its due diligence obligations and to avoid, at the outset, entering into business relationships with persons or companies that do not act in an ethically sound manner and in compliance with the law. Various measures are designed to identify risky business partners in order to detect, minimise and prevent potential and existing risks in the upstream supply chain.

Measures

ESG standards requirements are integrated into supplier contracts
The inclusion of the obligation to assume social and environmental responsibility in supplier contracts forms part of the target agreement for the product group managers and the purchasing managers in the Group companies. A monitoring process was established in the reporting year in order to review the implementation of this measure. The findings of this monitoring process are due to be analysed in 2023.

Risk management system is refined in response to German Corporate Due Diligence in Supply Chains Act
The following measures were implemented in the reporting year within the scope of the project already initiated in 2021 in order to comply with the requirements of the German Corporate Due Diligence in Supply Chains Act (LkSG), which entered into force in 2023:

An IT-based application was selected which takes into consideration all the legal positions protected under the German Corporate Due Diligence in Supply Chains Act in relation to human rights and environmental risks. Since 2023, this application has assisted with regular automated risk analysis, such as through country- and industry-specific risk assessments as well as data-based evaluation and analysis. Purchasing will also use this system to manage the allocation and follow-up of preventive and remedial actions in relation to direct suppliers and for due diligence in relation to indirect suppliers. This application is based on artificial intelligence technologies.

In addition, an expenditure, country and product group-based risk analysis was performed for all direct suppliers. Potential higher-risk suppliers were identified based on the country analysis implemented by the advisory company Verisk Maplecroft and the risk assessment by the product group managers. As a next step, measures were then designed in order to minimise and prevent human rights risks and related environmental risks.

Dialogue and information events were initiated in the reporting year in order to promote awareness of the importance of social and environmental responsibility. These events are designed for internal stakeholders such as Purchasing and the departments, among other participants. In addition, industry dialogues and discussions with the business community are used for the exchange of knowledge and experience. Moreover, the Group's purchasing processes were reviewed in the reporting year. Building on this, sustainability issues will be further integrated into the core processes. Implementation of measures already identified – such as the adaptation of the Supplier Code of Conduct – has begun and is set to continue.

Group of participants for mandatory purchasing guidelines training is expanded
The purchasing guidelines training is intended to develop and preserve employees' knowledge and skills in relation to sustainable procurement. This training is mandatory for management personnel with 95% of participants having successfully completed this training to date. They are automatically required to repeat it every two years. The target group was expanded in the reporting year and Purchasing employees were thus obliged to undergo this training.

Performance indicator

The Lufthansa Group will analyse and implement suitable indicators in line with its targets.

Applicability of the EU Taxonomy Regulation (EU) 2020/852

The EU Taxonomy Regulation is a standardised classification system for green economic activities within the scope of the EU action plan on "financing sustainable growth" and defines activities for the EU's six environmental objectives:

1. Climate change mitigation
2. Climate change adaptation
3. The sustainable use and protection of water and marine resources
4. The transition to a circular economy
5. Pollution prevention and control
6. The protection and restoration of biodiversity and ecosystems

According to the definitions provided in the EU Taxonomy, economic activities are "environmentally sustainable" if they

— "contribute substantially" to the achievement of one or more of the six above-mentioned environmental objectives,

— "do no significant harm" to the achievement of the EU's five other environmental objectives, and

— comply with the "minimum safeguards" for occupational safety and human rights.

Technical screening criteria are applied for the analysis of whether an economic activity contributes substantially to one of the objectives and does no significant harm to the achievement of the other five objectives. Currently, screening criteria are only available for the first two environmental objectives – information is only required in relation to these two objectives for the 2022 financial year.

Economic activities are "taxonomy-eligible" if they can be allocated to the screening criteria (irrespective of whether the criteria are met), while they are "taxonomy-aligned" if they also meet the screening criteria.

In the context of the EU Taxonomy Regulation, the Lufthansa Group reports below on the proportion of its revenue, capital expenditure (CapEx) and operating expenditure (OpEx) resulting from its taxonomy-eligible, taxonomy-aligned or non-taxonomy-eligible or non-taxonomy-aligned economic activities and provides additional qualitative information.

Lufthansa Group's implementation of the EU Taxonomy Regulation

The Lufthansa Group has established a project for the implementation of the EU Taxonomy Regulation in relation to the following EU environmental objectives: 1. "Climate change mitigation" and 2. "Climate change adaptation". The project team consists of experts from the Corporate Responsibility, Strategy and Accounting departments. Other relevant departments have been brought on board for validation purposes, depending on the issue in question. The approach pursued and interim findings have been reported to the Executive Board and the Audit Committee has been informed on a regular basis.

The economic activities of the Lufthansa Group were initially allocated to the relevant taxonomy activities and those activities identified which are taxonomy-eligible according to the descriptions provided in the EU Taxonomy. The Lufthansa Group's taxonomy-eligible economic activities can be allocated in full to the EU's first environmental objective "Climate change mitigation".

Economic activities in the aviation sector and so the Lufthansa Group's core business activities (the air transport of passengers and freight) have not yet been included in the EU Taxonomy Regulation in the reporting year.

On the basis of the allocation of activities to the taxonomy, interviews and workshops were held with the relevant contacts and experts in the departments and the main Group companies. The purpose of these discussions was to identify and analyse their taxonomy-eligible economic activities.

In this context and in line with German Accounting Standard (DRS) 20.32, the following activity is the Lufthansa Group's only relevant taxonomy-eligible economic activity which has been identified:

— 7.7 Acquisition and ownership of buildings

All of the land and buildings owned by the Lufthansa Group were considered and assessed in terms of whether the technical screening criteria are actually met ("alignment review"). It was determined that the Lufthansa Group did not have significant taxonomy-aligned economic activities in the reporting year.

The share of revenue, CapEx and OpEx accounted for by the identified economic activities in relation to the overall activities of the Group was determined in accordance with the requirements of the EU Taxonomy.

Revenue is defined as net sales in accordance with IFRS (International Financial Reporting Standards), as shown in the consolidated statement of profit or loss, and therefore only relates to fully consolidated subsidiaries. Accordingly, companies accounted for using the equity method and other equity investments have not been included. Further information on revenue can be found in the ↗ **Notes to the consolidated financial statements, Notes to the consolidated income statement, p. 185ff.**, of the annual report.

The Lufthansa Group has not reported any taxonomy-aligned revenue in the reporting year.

CapEx is calculated on a gross basis, i.e. without including revaluations or depreciation, amortisation or impairment. CapEx comprises investments in non-current intangible or tangible assets, including goods purchased through asset or share deals, as presented in the consolidated statement of financial position. Taxonomy-eligible CapEx has been calculated while taking the underlying accounts into consideration and in combination with the asset classes. All of the types of land covered by section 7.7 (Acquisition and ownership of buildings) and all non-current asset additions were included in the calculation of the taxonomy-eligible CapEx. The proportion of recognised taxonomy-eligible CapEx came to 7% in the reporting year.

OpEx includes non-capitalisable expenses recognised in the consolidated statement of profit or loss, such as research and development, building renovation work, short-term leasing, maintenance and repairs and all other direct expenses resulting from the maintenance of property, plant and equipment to ensure the operational readiness of the taxonomy-eligible assets. In the reporting year, the share of OpEx attributable to designated taxonomy-eligible activities was 8%.

The EU Taxonomy Regulation and the delegated legal acts enacted for the purpose of this regulation include phrases and terms whose interpretation remains subject to considerable uncertainty. Clarifications have not yet been published in every instance.

T047 EU TAXONOMY – PROPORTION OF REVENUES FROM PRODUCTS OR SERVICES ASSOCIATED WITH TAXONOMY-ALIGNED ECONOMIC ACTIVITIES

				Substantial contribution criteria						DSNH criteria ("Does Not Significantly Harm")						MS				
Economic activities	Code(s)	Absolute revenue	Proportion of revenue	Climate change mitigation	Climate change adaptation	Water & marine resources	Circular economy	Pollution	Biodiversity & ecosystems	Climate change mitigation	Climate change adaption	Water & marine resources	Circular economy	Pollution	Biodiversity & ecosystems	Minimum safeguards	Taxonomy-aligned proportion of revenue, 2022	Taxonomy-aligned proportion of revenue, 2021	Category (enabling activity)	Category (transi-tional activity)
		€m	in %	in %	in %	in %	in %	in %	in %	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	in %	in %	E	T
A. Taxonomy-eligible economic activities																				
A.1 Taxonomy-aligned economic activities																				
n/a		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Revenues (A.1)		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
A.2 Taxonomy-eligible but not taxonomy-aligned economic activities																				
n/a		–	–																	
Revenues (A.2)		–	–																	
Total (A.1 + A.2)		**–**	**–**																	
B. Taxonomy-non-eligible economic activities																				
Revenues of taxonomy-non-eligible economic activities (B)		32,770	100																	
Total (A + B)		**32,770**	**100**																	

T048 EU TAXONOMY – PROPORTION OF CAPEX FROM PRODUCTS OR SERVICES ASSOCIATED WITH TAXONOMY-ALIGNED ECONOMIC ACTIVITIES

				Substantial contribution criteria						DSNH criteria ("Does Not Significantly Harm")						MS				
Economic activities	Code(s)	Absolute CapEx	Proportion of CapEx	Climate change mitigation	Climate change adaptation	Water & marine resources	Circular economy	Pollution	Biodiversity & ecosystems	Climate change mitigation	Climate change adaption	Water & marine resources	Circular economy	Pollution	Biodiversity & ecosystems	Minimum safeguards	Taxonomy-aligned proportion of CapEx, 2022	Taxonomy-aligned proportion of CapEx, 2021	Category (enabling activity)	Category (transi-tional activity)
		€m	in %	in %	in %	in %	in %	in %	in %	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	in %	in %	E	T
A. Taxonomy-eligible economic activities																				
A.1 Taxonomy-aligned economic activities																				
n/a		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CapEx (A.1)		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
A.2 Taxonomy-eligible but not taxonomy-aligned economic activities																				
Acquisition and ownership of buildings	7.7	219	7																	
CapEx (A.2)			7																	
Total (A.1 + A.2)		**219**	**7**																	
B. Taxonomy-non-eligible economic activities																				
CapEx of taxonomy-non-eligible economic activities (B)		2,817	93																	
Total (A + B)		**3,036**	**100**																	

T049 EU TAXONOMY – PROPORTION OF OPEX FROM PRODUCTS OR SERVICES ASSOCIATED WITH TAXONOMY-ALIGNED ECONOMIC ACTIVITIES

				Substantial contribution criteria						DSNH criteria ("Does Not Significantly Harm")						MS				
Economic activities	Code(s)	Absolute OpEx	Proportion of OpEx	Climate change mitigation	Climate change adaptation	Water & marine resources	Circular economy	Pollution	Biodiversity & ecosystems	Climate change mitigation	Climate change adaption	Water & marine resources	Circular economy	Pollution	Biodiversity & ecosystems	Minimum safeguards	Taxonomy-aligned proportion of OpEx, 2022	Taxonomy-aligned proportion of OpEx, 2021	Category (enabling activity)	Category (transi-tional activity)
		€m	in %	in %	in %	in %	in %	in %	in %	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	in %	in %	E	T
A. Taxonomy-eligible economic activities																				
A.1 Taxonomy-aligned economic activities																				
n/a		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
OpEx (A.1)		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
A.2 Taxonomy-eligible but not taxonomy-aligned economic activities																				
Acquisition and ownership of buildings	7.7	163	8																	
OpEx (A.2)			8																	
Total (A.1 + A.2)		**163**	**8**																	
B. Taxonomy-non-eligible economic activities																				
OpEx of taxonomy-non-eligible economic activities (B)		1,758	92																	
Total (A + B)		**1,921**	**100**																	

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 2022 financial year, despite the pressures imposed by the impact of the coronavirus measures and restrictions and the effects of the war in Ukraine, the Lufthansa Group initiated and pursued a large number of measures and applied concepts to strengthen the positive effects of its business activities in a challenging environment 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 reports with reference to the GRI Standards. The information in this declaration are cited in the GRI index with reference to the GRI Standards, ↗ T201, p. 307ff. The Lufthansa Group's contributions to the United Nations global agenda are summarised in the content index Sustainable Development Goals (SDG), ↗ T202, p. 313ff.

Forecast

Lufthansa Group anticipates a further increase in demand in 2023. | Capacity should increase to 85% to 90% of its pre-crisis level. | Significant increases 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.

Only slight economic growth expected in 2023

According to data from Global Insight, global economic growth of 1.9% is expected for 2023, compared with growth of 3.0% the year before. The European economy is only predicted to grow by 0.2% (previous year: 3.6%). The expected growth rate for Germany of 0.3% is only slightly higher (previous year: 1.9%). Economic performance will be particularly affected by the success of central banks worldwide in the fight against inflation and the further development of the war in Ukraine.

T050 GPD DEVELOPMENT[1)]
Forecast 2022 to 2026 compared with the previous year

in %	2022	2023	2024	2025	2026
World	3.0	1.9	3.0	3.0	2.8
Europe	3.6	0.2	1.5	2.0	1.7
Germany	1.9	0.3	1.5	2.0	1.5
North America	2.2	0.5	1.7	2.0	1.7
South America[2)]	3.7	1.6	2.5	2.9	3.0
Asia/Pacific	3.2	4.0	4.8	4.3	4.3
China	2.8	5.0	5.8	5.0	4.9
Middle East	6.8	2.9	2.9	2.6	2.3
Africa	3.8	3.4	3.9	4.0	3.9

Source: Global Insight World Overview as of 17 Jan 2023.
[1)] Forecast.
[2)] Excluding Venezuela.

Central banks fight high inflation

Currency movements in the euro area are primarily driven by the war in Ukraine and ongoing supply shortages. High inflation due to the sharp rise in energy prices has also put pressure on the euro. Since the feared shortfalls in energy supply have largely been averted in the euro area, analysts expect the euro to strengthen slightly against the US dollar on average in 2023, and to move sideways against the other major currencies.

In view of the ongoing high inflation rates, the European Central Bank adjusted its monetary policy at the start of 2022 and took a more restrictive path. In the course of this process, net bond purchasing programmes were terminated and the interest rate was increased in several stages. Further interest rate increases are expected for 2023. The US Federal Reserve is also expected to raise interest rates again until it reaches its inflation target.

Slight decline in oil price expected

The war in Ukraine led to high price volatility on the oil market in the course of 2022. The spot price on 15 February 2023 was US 85.38/barrel, which was nevertheless similar to the start of 2022. Prices are expected to fall again slightly on the futures market. As of 15 February 2023, futures contracts for delivery in December 2023 were trading at USD 81.70/barrel, and for delivery in December 2024 at USD 77.12/barrel. However, market participants still expect volatility to remain high due to the war in Ukraine and macroeconomic uncertainty.

SECTOR OUTLOOK

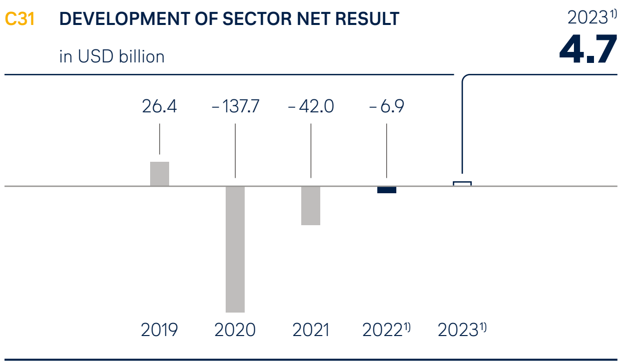
Global recovery in passenger traffic expected to continue
The International Air Transport Association (IATA) predicts that global passenger traffic – measured by global revenue passenger-kilometres – will grow year-on-year by 21% in 2023. This would bring passenger traffic up to 85% of its pre-crisis level.

In its forecast for 2023, IATA expects significant regional differences in terms of revenue passenger-kilometres. The Middle East is forecast to experience the fastest recovery, with demand at 98% of its pre-crisis level (previous year: 79%), followed by North America at 97% (previous year: 91%), Latin America at 96% (previous year: 87%), Europe at 89% (previous year: 81%), Africa at 86% (previous year: 68%) and Asia/Pacific at 71% (previous year: 44%).

European short-haul traffic almost returned to its pre-crisis level in the reporting year, and financial analysts specialised in the industry are forecasting that long-haul traffic too will almost return to its pre-crisis level in 2023. In addition to ongoing strong demand for leisure travel, business travel is expected to continue its recovery in the 2023 financial year. In addition to the continuation of positive developments on routes to North America, the reopening of the Chinese market is expected to have a particularly positive effect on passenger traffic. The assumption is still that greater use of digital communications tools will result in a structural decline in business travel compared with the pre-crisis level. As in the previous year, infrastructure bottlenecks are again expected in 2023, above all in Europe. Ongoing staff shortages, especially in ground handling and air traffic control, are again forecast to restrict capacity, especially in short-haul traffic.

In terms of yields, IATA is expecting a year-on-year decline of 1.7% in 2023 (previous year: increase of 8.4%). The industry is expected to report a net profit of USD 4.7bn (previous year: loss of EUR 6.9bn).

C31 **DEVELOPMENT OF SECTOR NET RESULT**
in USD billion



[1] Forecast.
Source: IATA Industry Statistics (12/2022).

Slight decline in airfreight traffic expected in 2023
Global airfreight traffic reached record highs in 2020 and 2021 due to global supply chain problems and a shortage of maritime transport capacities. The market situation started to return to normal in 2022 and demand for airfreight, as measured in revenue cargo tonne-kilometres worldwide, fell year-on-year by 8%. This normalisation process is expected to continue in 2023, with a forecast decline of 4% in revenue cargo tonne-kilometres.

Yields in the cargo business are forecast to decline by 22.6% in 2023 (previous year: increase of 7.2%). This, however, still means that yields are around 57% higher than before the crisis.

Further recovery expected for Aviation Services
As air traffic recovers, demand is also expected to recover for aircraft maintenance, repair and overhaul services (MRO). The consultancy firm ICF predicts average global MRO growth of 13% in 2023 compared with the previous year. It is notable that the APAC region (Asia-Pacific) – where the recovery was previously held back by the rigid coronavirus rules – is expected to see significant growth of 18% in MRO demand. According to the forecast, the EMEA region (Europe, Middle East and Africa) will improve year-on-year by 14% in 2023, whereas growth in the Americas region will be more moderate than the strong recovery in the previous year at around 8%. However, the positive performance does depend largely on how geopolitical crises, such as the war in Ukraine, impact the industry, particularly in the EMEA region.

Developments for the airline catering business are expected to remain positive in the current financial year, based on the assumption that demand for flights will continue to rise. The lifting of travel restrictions and precautions due to the pandemic provides hope for a rapid recovery in the Asian market. At the same time, rising material and staff costs, along with persistent staff shortages, are leading to operational challenges and economic uncertainty. Airlines are increasing their investment in technologies to open up additional sources of income, save costs and make the passenger experience more individual. This also offers new business opportunities and revenue growth in the onboard retail market and in pre-order/pre-select.

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 2023 financial year will remain on 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 addition, the organisation's effectiveness and responsiveness are to be strengthened by means of a stronger focus on projects and cross-functional, agile working methods.

As part of the Lufthansa Group's strategic orientation as an airline group, and following the sale of LSG group's European business in 2020, the disposal of the LSG group's remaining 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.

Preparations for the disposal of a minority share in Lufthansa Technik were completed on schedule, and talks with selected potential buyers are to take place in the first half of 2023. Another shareholder alongside the majority shareholder Deutsche Lufthansa AG is intended to support the strategic development of its core business and projects in future fields such as digitalisation and sustainability in order to exploit the full potential of Lufthansa Technik and to safeguard and expand its leading market position over the long term. Alternatively, a partial flotation is being considered. ↗ **Group strategy, p. 18ff.**

OUTLOOK LUFTHANSA GROUP

Lufthansa Group assumes that the recovery will continue in 2023

On the basis of the forecasts shown for the performance of the overall economy and the sectors in which the Group operates, the Lufthansa Group assumes that the positive course of business in the reporting year will continue in the 2023 financial year. This expectation is based in particular on the ongoing strong demand, which is reflected at the start of 2023 in the form of continued positive developments in new bookings in the passenger business.

Outlook subject to material uncertainties

In view of the booking cycles in the passenger business, which are still shorter than before the crisis, the fact that freight business is driven mainly by the spot market, and uncertainties in the macroeconomic and geopolitical environment, the financial outlook for the Lufthansa Group is subject to a high degree of uncertainty. The operating and financial performance is also subject to the further developments in the war in Ukraine and its impact, especially on fuel costs. Uncertainty in the macroeconomic outlook, particularly the uncertain effects on the economy of the current interest rate rises by the major central banks worldwide, may potentially have a material influence on customer demand, above all by business travellers. Persistently high inflation could also result in higher cost increases than expected.

Further capacity expansion planned

Notwithstanding these uncertainties, the Lufthansa Group assumes that demand will continue to rise over the course of the year. In addition to the private travel segment, where demand is forecast to be almost as high as before the crisis, a contribution will come from the further recovery in demand in the business travel segment.

Flight capacity will therefore be expanded continuously over the course of 2023. In the first few months of the year, the increase relative to the same period in the previous year is expected to be particularly rapid because capacity last year was still severely depleted by the coronavirus pandemic. Further capacity is also to be added for tourist traffic in the summer. On long-haul routes the capacity increase will primarily be driven by expanding connections to Asia, particularly due to the re-opening of large markets like China and Japan.

Overall, the Lufthansa Group anticipates that available capacity for the passenger airlines in 2023 will be between 85% and 90% of its pre-crisis level. Capacity will therefore be around 20% higher than last year. The Group assumes that the European air traffic system will be stable enough to support the planned increase in traffic.

Lufthansa Group revenue expected to rise significantly

A significant year-on-year increase in revenue is forecast for the Lufthansa Group in 2023. This will principally be driven by a further recovery at the passenger airlines.

Lufthansa Group expects a significant increase in Adjusted EBIT in 2023

In the 2023 financial year, the Lufthansa Group expects Adjusted EBIT to improve significantly year-on-year, above all thanks to the positive performance forecast for the airlines, the continued strong result in the Logistics segment compared with pre-crisis levels, and a further positive performance in the MRO segment. The earnings performance will depend in particular on revenue development at the passenger airlines and in the Logistics segment. Due to the short booking cycles in both segments, the forecast uncertainty in this area is high, especially for developments in the second half of the year.

The performance of Adjusted ROCE will depend above all on the extent of the improvement in Adjusted EBIT. The Lufthansa Group also expects a significant improvement on the previous year in this regard.

Positive outlook for the operating segments; Logistics to decline but remain at a high level

For the Passenger Airlines segment, the Lufthansa Group is expecting the recovery to continue and forecasts an increase in revenue, based on strong demand and consistently high yields. This means that higher costs can probably be passed on to customers. Despite a year-on-year price and volume-related increase in fuel expenses, significantly positive Adjusted EBIT is therefore expected for the Passenger Airlines segment in 2023, reflecting a significant improvement on the prior year.

As the global market returns to normal after the coronavirus pandemic, the Lufthansa Group is expecting freight rates to fall and therefore a significant decline in revenue in the Logistics segment. Freight rates are nonetheless forecast to remain significantly higher than before the crisis. In view of the expected decline in revenue, the Lufthansa Group anticipates that Adjusted EBIT will be significantly lower than the previous year.

A significant increase in revenue and Adjusted EBIT at the same level as the previous year is expected for the MRO segment. This reflects the ongoing recovery of the MRO market and simultaneous cost increases due to inflation.

For the Catering segment, in the context of the continuing recovery of the market, in Asia especially, the Lufthansa Group forecasts a significant increase in revenue. Adjusted EBIT is also expected to increase significantly year-on-year.

Adjusted free cash flow expected to be significantly positive

Net capital expenditure by the Lufthansa Group in 2023 is expected to be higher than the previous year. This will mainly be for capital expenditure in aircraft. Cash inflows from aircraft disposals and sale-and-lease-back agreements will partly offset higher gross capital expenditure. Including the forecast earnings improvement and other improvements in working capital management, Adjusted free cash flow for the Group is therefore projected to be significantly positive, but below the previous year's figure in 2023.

Decline in net indebtedness forecast for year-end 2023

Net indebtedness at the end of the 2023 financial year is expected to be below the figure at the end of the 2022 financial year. The positive change in Adjusted free cash flow is likely to be offset by the effects of capitalising operating leases, which tend to increase the amount of net indebtedness.

No material financing activities planned

Liabilities that mature in 2023 are largely to be repaid from available liquidity. Financing activities are therefore only planned for a minor amount and will be carried out opportunistically. The basic aim is to ensure that liquidity of EUR 8bn to EUR 10bn is available.

Resumption of dividend payments planned

For the 2023 financial year, the Group intends to return to its original dividend policy, provided that the economic recovery continues as forecast in this report. The Lufthansa Group's dividend policy is to distribute to its shareholders 20% to 40% of net profit, adjusted for non-recurring gains and losses.

Slight reduction expected in CO_2 emissions per passenger-kilometre

The Lufthansa Group aims to continue its progress in reducing its environmental impact in 2023. A higher passenger load factor and effects from the ongoing modernisation of the fleet are expected to have a positive impact on specific CO_2 emissions per passenger-kilometre. The Lufthansa Group therefore expects specific carbon emissions to decline slightly year-on-year.

Aiming for an Adjusted EBIT margin of at least 8% and Adjusted ROCE of at least 10% in 2024

In addition to its forecast for 2023, the Lufthansa Group's medium-term targets include an Adjusted EBIT margin of at least 8% from 2024 onwards. The Adjusted ROCE should also be at least 10% from 2024.

T051 FORECAST FOR SIGNIFICANT KPIS

		Result 2022	Forecast for 2023
Revenue	€m	32.8	significant increase
Adjusted EBIT	€m	1.5	significant increase
Net capital expenditure	€m	2.3	above previous year
Adjusted free cash flow	€m	2.5	significantly positive, but below previous year
Net indebtedness	€m	6.9	below previous year
Adjusted ROCE	%	7.3	significant increase
Specific CO_2 emissions	grammes	90.0	slight decline

OVERALL STATEMENT BY THE EXECUTIVE BOARD ON THE EXPECTED DEVELOPMENT OF THE LUFTHANSA GROUP

The market environment for the Lufthansa Group will remain challenging in 2023. Global economic growth is expected to slow. Inflation will remain high.

Despite this, people still have a great desire to travel. We are therefore expecting a further increase in demand for flights in the course of the year, which will support our operating and financial performance.

We have adapted well to the structural changes in the market environment. We have cut our structural costs and strengthened our balance sheet. This has prepared us well to continue the positive performance of 2022 in 2023, in a market environment that will remain challenging. We are therefore expecting significant improvements in Adjusted EBIT and in turn a significantly positive Adjusted free cash flow.

The outlook for the Company nonetheless remains subject to uncertainty. The war in Ukraine and its political and economic consequences are a risk for the Lufthansa Group's business. Measures taken by central banks worldwide also entail a risk that fighting inflation has a detrimental impact on short-term economic growth.

Building on the progress expected for 2023, the Executive Board confirms the medium-term targets set for 2024. It is convinced that the Company's liquidity at year-end 2022 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.

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 representative[1]
Deputy Chairwoman

Alexander Behrens
Flight attendant
Employee representative[1]

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
Labour Relations executive
Employee representative

Michael Kerkloh
Former Chairman
of the Executive Board
Flughafen München GmbH

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
President and CEO
InterAction, USA

Ilja Schulz
Former Flight captain
and member of the
Cockpit pilots' union
Employee representative[1]

Britta Seeger
Member of the Executive Board
Mercedes-Benz Group AG

Birgit Spineux
Purserin/Employee representative
on leave in absence
Employee representative

Astrid Stange
CEO/Chairwoman of the
ELEMENT Insurance AG

Olivia Stelz
Purserin/Employee representative
on leave in absence
Employee representative

Angela Titzrath
Chairwoman of the
Executive Board
Hamburger Hafen
und Logistik AG

Klaus Winkler
Engine mechanic
Employee representative

Honory Chairman

Dipl.-Ing. Jürgen Weber
Former Chairman of the
Supervisory Board
Deutsche Lufthansa AG

Executive Board
(Structure since 1 July 2022)

Carsten Spohr
Chairman of the Executive Board
Chief Executive Officer

Christina Foerster
Member of the Executive Board
Brand & Sustainability

Harry Hohmeister
Member of the Executive Board
Global Markets & Network

Detlef Kayser
Member of the Executive Board
Fleet & Technology

Michael Niggemann
Member of the Executive Board
Human Resources & Infrastructure
Labor Director

Remco Steenbergen
Member of the Executive Board
Finance

[1] Trade union representative in accordance with Section 7 Paragraph 2 Co-determination Act (MitbestG).

MANDATES

Other mandates of the Supervisory Board members of Deutsche Lufthansa AG

(As of 31 December 2022)

Karl-Ludwig Kley
a) E.ON SE [3] (Chairman)

Christine Behle
a) BREMER LAGERHAUS GESELLSCHAFT – Aktiengesellschaft von 1877 – [3] (Deputy Chairwoman)
b) Autobahngesellschaft des Bundes mbH

Jörg Cebulla
a) Sparda-Bank Hessen eG
b) Albatros Versicherungsdienste GmbH

Erich Clementi
a) E.ON SE [3] (Deputy Chairman)

Thomas Enders
a) Knorr Bremse [3] (until 24 May 2022)
b) Lilium NV [3], Netherlands (Chairman)
Linde plc [3], Republic of Ireland

Jürgen Jennerke
a) Lufthansa Cargo AG (Deputy Chairman)

Harald Krüger
a) Deutsche Telekom AG [3]

Miriam Sapiro
b) Project HOPE, USA (until 31 October 2022)

Britta Seeger
a) Mercedes-AMG GmbH [1]
Mercedes-Benz Mobility AG [1]
b) Beijing Mercedes-Benz Sales Service Co., Ltd., China
Mercedes-Benz (China) Ltd. [2], China (Deputy Chairwoman)
Mercedes-Benz Formula E Ltd. [2], United Kingdom
Mercedes-Benz South Africa Ltd. [2], South Africa
smart Automobile Co. Ltd. [2], China

Astrid Stange
b) Atos SE [3], France (since 1 May 2022)

Angela Titzrath
a) Evonik Industries AG [3]
Talanx AG [3]
HDI V.a.G.
b) Metrans a.s. [2], Czech Republic

Mandates of the Executive Board members of Deutsche Lufthansa AG

(As of 31 December 2022)

Carsten Spohr
a) Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft [3]

Christina Foerster
b) Austrian Airlines AG [2], Austria (Chairwoman)
Kulinary Holding AG, Switzerland
SN Airholding SA/NV [2], Belgium (Chairwoman)
Swiss International Air Lines AG [2], Switzerland

Harry Hohmeister
a) Eurowings GmbH [1]
b) Günes Ekspres Havacilik A.S. (SunExpress), Turkey

Detlef Kayser
a) Lufthansa Technik AG [1] (Chairman)
LSG Lufthansa Service Holding AG [1] (Chairman)

Michael Niggemann
a) Lufthansa Cargo AG [1]

Remco Steenbergen
a) Lufthansa AirPlus Servicekarten GmbH [1]
b) Swiss International Air Lines AG [2], Switzerland

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 2022 financial year. 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 2022, foreign shareholders held 25.2% of the shares in the shareholders' register of the Company. No steps were taken in 2022 to limit the percentage of foreign shareholders. Detailed information on the German Aviation Compliance Documentation Act (LuftNaSiG) and the quarterly update on the shareholder structure can be found at **www.lufthansagroup.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 2022, the Company had received the following notification of direct or indirect shareholdings with more than 10% of voting rights:

— Kühne Aviation GmbH: 15.01% (notified on 6 July 2022)

Holders of shares with special controlling rights

The Company has no shares that confer special controlling rights.

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 2022, Deutsche Lufthansa AG had Authorised Capital A amounting to EUR 1,000,000,000.00 and Authorised Capital B amounting to EUR 22,362,168.32.

A resolution passed at the Annual General Meeting on 10 May 2022 authorised the Executive Board until 9 May 2025, subject to approval by the Supervisory Board, to increase the Company's issued capital by up to EUR 1,000,000,000.00 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. Outside the reporting period, the Company used EUR 7,637,831.68 of this authorised amount to issue 2,983,528 new shares. The Company made no use of this authorisation in the reporting period. As of 31 December 2022 there is therefore still EUR 22,362,168.32 of Authorised Capital B available. Existing shareholders' subscription rights are excluded.

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 bearers 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.

At the same time, the Annual General Meeting determined on 10 May 2022 to authorise the Executive Board, subject to approval by the Supervisory Board and until 9 May 2027, 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 1,750,000,000 and to grant conversion and/or option rights to new registered Company shares to the holders or creditors of the bonds mentioned above with a pro-rata amount of issued capital of up to EUR 306,044,326.40. The company's contingent capital has been increased by up to EUR 306,044,326.40 by issuing up to 119,548,565 new registered shares.

The contingent capital increase serves to provide shares to the holders or creditors of conversion and/or option rights from convertible bonds that are issued by the Company or its Group companies until 9 May 2027. New shares will be issued at the conversion or option price to be determined in each case. The contingent capital increase is only to be carried out to the extent that conversion rights or options are exercised or holders or creditors of bonds with a conversion obligation meet their conversion obligation, or to the extent that the Company exercises an option, to settle all or part of the amount due in Company shares instead of in cash, and to the extent that a cash compensation is not paid or the Company's treasury shares are not used for settling the obligation.

To the extent that they are issued following the timely exercise of rights by the beginning of the Company's Annual General Meeting, the new shares are entitled to share in profits from the beginning of the previous financial year, otherwise from the beginning of the financial 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.

Further information on authorised capital, contingent capital and share buy-backs ↗ **Consolidated financial statements, note 33, p. 207f.**

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 600m bond maturing on 16 November 2023
— EUR 500m bond maturing on 14 July 2024
— EUR 500m bond maturing on 6 September 2024
— EUR 750m bond maturing on 11 February 2025
— EUR 1,000m bond maturing on 29 May 2026
— EUR 900m bond maturing on 16 May 2027
— EUR 850m bond maturing on 11 February 2028
— EUR 500m bond maturing on 14 July 2029

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 signed a loan agreement for EUR 2bn and issued other borrower's note loans that include similar change-of-control clauses. As of 31 December 2022, a total of EUR 1,264m 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 100% of the contractually agreed cap on severance pay of two years' remuneration. ↗ **Remuneration report, p. 280ff.**

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 increases to EUR 13bn due to recovery of Lufthansa German Airlines. | Result from operating activities of EUR –1.3bn due to impact of pandemic on Lufthansa German Airlines in first six months of the year in particular. | Net loss of EUR –2.7bn significantly influenced by the valuation of pension fund investments as well as a non-recurring effect relating to a write-down on the company value of LSG. | Total assets increase to EUR 37.3bn.

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 will be made public in the Company Register. The financial statements are permanently available online at **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 expenses incurred by 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. However, accounting disparities have resulted in a significant difference between the net result for the year of Deutsche Lufthansa AG and the net profit for the period. This is mainly due to the different treatment in accounting terms of fair value changes for retirement benefit-related plan assets. ↗ **Macroeconomic situation, p. 34f.; Sector developments, p. 35f.; Course of business, p. 37ff.**

EARNINGS POSITION

Deutsche Lufthansa AG reported a net loss for the 2022 financial year of EUR 2,664m (previous year: loss of EUR 2,310m). The significantly better loss from operating activities was almost completely neutralised by a financial result which was much weaker than in the previous year. Key factors for the operating performance were a significant increase in revenue, and for the financial result a significant decline in the market value of the plan assets held to settle retirement benefit obligations, as well as a write-down on the carrying amount of the subsidiary LSG Lufthansa Service Holding AG.

Revenue and income

50 million passengers transported
Deutsche Lufthansa AG carried 50 million passengers in 2022, which was 118% more than in the previous year (previous year: 23 million). This is around 75% of the pre-crisis figure. Capacity rose by 80% and sales increased by 138%. The passenger load factor rose by 19.6 percentage points to 80.0%. Traffic revenue went up by 162% to EUR 11,720m (previous year: EUR 4,480m).

T052 **TRENDS IN TRAFFIC REGIONS OF DEUTSCHE LUFTHANSA AG**

	Traffic revenue		Number of passengers		Available seat-kilometres		Revenue seat-kilometres		Passenger load factor	
	2022 in €m	Change in %	**2022** in thousands	Change in %	**2022** in millions	Change in %	**2022** in millions	Change in %	**2022** in %	Change in pts
Europe	4,648	120	37,823	108	44,078	70	34,599	93	78.5	9.3
America	4,403	204	7,073	166	66,988	86	54,498	165	81.4	24.2
Asia/Pacific	1,476	233	1,962	226	18,650	112	14,904	244	79.9	30.6
Middle East/Africa	1,193	149	3,369	113	18,370	58	14,524	110	79.1	19.7
Total	**11,720**	**162**	**50,227**	**118**	**148,086**	**80**	**118,525**	**138**	**80.0**	**19.6**

Operating income up by 137%

Revenue went up by 148% to EUR 12,827m in 2022 (previous year: EUR 5,164m). This marked increase was due to the significant recovery in flight operations. Other operating income increased by 69% to EUR 1,483m (previous year: EUR 875m), mainly as a result of a significant increase in exchange rate gains from foreign currency translation. Overall, operating income climbed by 137% to EUR 14,310m (previous year: EUR 6,039m).

Expenses

Operating expenses up by 67%

Operating expenses came to EUR 15,588m in the reporting year and were therefore 67% higher than in the previous year (previous year: EUR 9,362m).

The main driver for the change in operating expenses is the significant increase in the cost of materials and services, as well as other expenses directly related to the operating business, as flight operations recovered gradually from the second quarter of 2022. Staff costs and other operating expenses were also higher than the previous year.

The cost of materials and services rose year-on-year by 96% to EUR 9,346m (previous year: EUR 4,776m). The main driver was fuel expenses, which went up by 229% to EUR 3,792m due to prices and volumes (previous year: EUR 1,153m). Without fuel hedging, the expenses for fuel would have been EUR 471m higher.

The costs of purchased services rose by 53% to EUR 5,474m (previous year: EUR 3,589m) This change is also due to significantly higher operating activity than in the previous year. An increase in maintenance inspections meant that expenses for external MRO services rose by 52% to EUR 1,401m (previous year: EUR 923m). The increases were even steeper in expenses for fees and charges, which were up by 75% at EUR 1,530m (previous year: EUR 874m) and for passenger care, which rose by 449% to EUR 480m (previous year: EUR 87m). The significant increase in expenses for passenger care stemmed from the substantial compensation payments to passengers as a result of various flight irregularities, particularly in the summer months. Whereas expenses for operating leases fell year-on-year by 5% to EUR 702m (previous year: EUR 737m), charter expenses rose year-on-year by 14% to EUR 418m (previous year: EUR 367m).

Staff costs were up by 28% at EUR 3,075m (previous year: EUR 2,408m), which is mainly due to higher expenses for basic pay (EUR +485m) and variable remuneration components (EUR +194m), plus the applicable social security contributions.

Reimbursement claims for short-time working pay and the related social security contributions came to EUR 41m (previous year: EUR 419m), since an application for short-term work was only made until the end of the first quarter of the reporting year.

Depreciation and amortisation was stable year-on-year at EUR 401m (previous year: EUR 398m).

Other operating expenses of EUR 2,766m were 55% up on the year (previous year: EUR 1,780m). This is largely due to a significant increase in expenses for foreign exchange losses, which rose to EUR 981m (previous year: EUR 407m). Expenses indirectly related to the operating business also went up as flight operations successively recovered. They particularly include expenses for agency sales commissions, computerised distribution systems, credit card commissions and travel expenses for crews.

Earnings performance

Result from operating activities of EUR –1,278m

The result from operating activities came to EUR –1,278m in the 2022 financial year (previous year: EUR –3,323m). Despite a gradual recovery from the second quarter onwards, the pandemic continued to have a very significant impact on flight operations in the first months of the year. Over the course of the year, Deutsche Lufthansa AG thus once again realised a loss from operating activities, even if this represented a significant improvement on the previous year.

Financial result down to EUR –1,578m

The financial result amounted to EUR –1,578m in the reporting year (previous year: EUR 351m). It was made up of the result from equity investments of EUR 754m (previous year: EUR 1,008m), net interest of EUR –1,797m (previous year: EUR –634m) and other financial items of EUR –535m (previous year: EUR –23m).

The result from equity investments includes profit and loss transfers of EUR 484m (previous year: EUR 673m) and other income from investments of EUR 270m (previous year: EUR 335m).

The year-on-year decline in the result from equity investments is due primarily to the higher loss of EUR −374m incurred by LSG Lufthansa Service Holding AG (previous year: EUR −94m) and the lower earnings achieved by Lufthansa CityLine GmbH, whose result from equity investments decreased to EUR −75m (previous year: EUR 5m). The result of Eurowings GmbH was EUR −368m (previous year: EUR −352m) and the result of Delvag AG was EUR 14m (previous year: EUR 16m). This was offset by positive earnings at Lufthansa Cargo AG, with a profit contribution of EUR 1,317m (previous year: EUR 1,284m) and Miles & More GmbH of EUR 83m (previous year: EUR 55m), as well as lower losses at Lufthansa Technik AG, up from EUR −97m the previous year to EUR −25m in the reporting year, and at Lufthansa Commercial Holding GmbH, from EUR −144m the previous year to EUR −88m in the reporting year. Other income from investments included the dividends from Austrian leasing companies of EUR 270m (previous year: EUR 334m).

Net interest amounted to EUR −1,797m in the 2022 financial year (previous year: EUR −634m). The significant decline year-on-year in the fair value measurement of the pension fund assets used for the fulfilment of retirement benefit obligations, in the amount of EUR −1,598m (previous year: EUR 724m), was a significant factor. Net interest was also burdened by a discounting expense of EUR 90m. This is mainly attributable to a reduction in the discount rate used to measure pension provisions of 1.8% (previous year: 1.9%).

Impairment losses of EUR 535m on investments and current securities recognised in the financial result were significantly higher than in the previous year (EUR 23m). The carrying amount for LSG accounted for EUR 474m of the total. It was impaired by the strategic decision to dispose of the catering activities in the short to medium term and could no longer be fully justified by the sales prices anticipated on the basis of the ongoing bidding process. The remainder of EUR 60m results from the measurement of current securities as of the reporting date. Of this amount, EUR 57m is attributable to the valuation of the HSBC INKA fund, which is held for strategic liquidity purposes.

Loss for the year comes to EUR −2,664m

The operating result and financial result add up to EUR −2,856m (previous year: EUR −2,972m). In the reporting year, expenses for income taxes for previous years of EUR 23m were more than offset by deferred tax income of EUR 242m. Expenses of EUR 27m (previous year: EUR −31m) were incurred in the financial year for other taxes. The total net loss for 2022 therefore came to EUR −2,664m (previous year: EUR −2,310m). The net loss for the 2022 financial year in the amount of EUR −2,664m and the previous year's loss have been fully offset by the transfers from the capital reserve, the legal reserve and other retained earnings. As of 31 December 2022, the net result is thus EUR 0m.

T053 INCOME STATEMENT FOR DEUTSCHE LUFTHANSA AG IN ACCORDANCE WITH HGB

in €m	**2022**	2021
Traffic revenue	11,720	4,480
Other revenue	1,107	684
Total revenue	**12,827**	**5,164**
Other operating income	1,483	875
Cost of materials and services	−9,346	−4,776
Staff costs	−3,075	−2,408
Depreciation, amortisation and impairment	−401	−398
Other operating expenses	−2,766	−1,780
Result from operating activities	**−1,278**	**−3,323**
Result from other equity investments	754	1,008
Net interest	−1,797	−634
Impairment on investments and current securities	−535	−23
Financial result	**−1,578**	**351**
Current income taxes	−23	−8
Deferred income taxes	242	701
Earnings after taxes	**−2,637**	**−2,279**
Other taxes	−27	−31
Net profit/loss for the year	**−2,664**	**−2,310**
Loss carried forward from the previous year	**−3,090**	**−780**
Transfers from the capital reserve	704	–
Transfers from the statutory reserve	26	–
Transfers from retained earnings	5,024	–
Balance sheet result	**–**	**−3,090**

FINANCIAL POSITION

Cash flow

Liquidity of EUR 3,929m

The significant improvement in operating cash flow of EUR 2,380m to EUR 625m (previous year: EUR −1,755m) is principally due to the increase in the level of demand. Cash flow from investing activities came to EUR −2,204m as of the reporting date (previous year: EUR −323m). The result from equity investments (EUR 754m) and loan and capital repayments by affiliated companies (EUR 1,176m) was offset by investments in various securities (EUR 1,156m) and in physical and long-term financial assets (EUR 2,931m). Cash flow from financing activities came to EUR 191m in the reporting year (previous year: EUR 2,729m) and resulted mainly from additional loans from affiliated companies (EUR −983m). These were offset by the repayment of several borrower's note loans and the repayment of aircraft lease liabilities (EUR 967m). Total cash and cash equivalents therefore came to EUR −2,371m (previous year: EUR −983m). Current securities rose by EUR 1,216m to EUR 6,300m (previous year: EUR 5,084m). Liquidity thereby fell overall by EUR 172m to EUR 3,929m (previous year: EUR 4,101m).

NET ASSETS

Total assets up by EUR 2,539m

Total assets as of 31 December 2022 climbed by EUR 2,539m to EUR 37,319m (31 December 2021: EUR 34,780m). Non-current assets accounted for 62% of total assets at year-end (31 December 2021: 64%).

Assets

Non-current assets up by EUR 872m

Non-current assets rose by EUR 872m to EUR 23,229m (31 December 2021: EUR 22,357m). Aircraft were up by EUR 533m compared with the previous year's level mainly due to investing activities which exceeded the amount of depreciation. Non-current financial assets fell compared with 31 December 2021 by EUR 314m. New and increased loans to affiliated companies (EUR 1,575m) were offset in the financial year 2022 by repayments of EUR 952m. Changes in shares in affiliated company had the opposite effect, since they were reduced in total by EUR 298m, particularly due to the write-down on the carrying amount for LSG.

Current assets up by EUR 1,417m

Non-current assets rose by EUR 1,417m to EUR 9,848m (31 December 2021: EUR 8,431m). The increase stems mainly from significantly larger securities positions than in the previous year.

T054 BALANCE SHEET FOR DEUTSCHE LUFTHANSA AG IN ACCORDANCE WITH HGB

in €m	31 Dec 2022	31 Dec 2021
Assets		
Intangible assets	348	348
Aircraft	6,425	5,892
Property, plant and other equipment	80	55
Financial investments	16,376	16,062
Non-current assets	**23,229**	**22,357**
Inventories	157	114
Trade receivables	423	229
Other receivables	1,896	1,525
Securities	6,300	5,084
Cash and cash equivalents	1,072	1,479
Current assets	**9,848**	**8,431**
Prepaid expenses	**91**	**84**
Deferred tax assets	**4,151**	**3,908**
Excess of plan assets over provisions for pensions	**–**	**–**
Total assets	**37,319**	**34,780**
Shareholders' equity and liabilities		
Issued capital	3,060	3,060
Capital reserve	306	1,010
Retained earnings	1,448	6,498
Balance sheet result	–	-3,090
Shareholders' equity	**4,814**	**7,478**
Provisions	**8,582**	**8,485**
Bonds	6,817	6,804
Liabilities to banks	1,432	1,813
Advance payments received for flight documents	2,814	–
Payables to affiliated companies	7,126	4,641
Other liabilities	5,716	5,542
Liabilities and provisions	**23,905**	**18,800**
Deferred income	**18**	**17**
Total shareholders' equity and liabilities	**37,319**	**34,780**

Deferred tax assets up by EUR 243m
Deferred tax assets went up in the reporting year by EUR 243m to EUR 4,151m (31 December 2021: EUR 3,908m). The increase was mainly due to the deferred tax assets of EUR 231m recognised in the reporting year on tax loss carry-forwards.

Shareholders' equity and liabilities

Shareholders' equity down by EUR 2,664m
The loss of EUR –2,664m meant that shareholders' equity fell by 36% compared with 31 December 2021 and came to EUR 4,814m as of the reporting date (31 December 2021: EUR 7,478m). Since total assets also increased, the equity ratio declined by 8.6 percentage points to 12.9% (31 December 2021: 21.5%). The information required according to Section 160 Paragraph 1 No. 2 AktG on the portfolio development of treasury shares is provided in the Notes ↗ **Notes to the consolidated financial statements, Note 33, p. 207f.**

Non-current liabilities increase by EUR 767m
The Company's non-current liabilities rose by 5% in the 2022 financial year to EUR 15,851m (31 December 2021: EUR 15,084m). This was mainly due to an increase in pension provisions. It was offset by a change in the maturity classification of a bond (EUR 600m).

Although non-current liabilities and total assets increased, long-term funding (equity and non-current liabilities) fell as a proportion of total assets to 55% due to the decline in equity (31 December 2021: 65%). Non-current funds covered 89% of non-current assets as of the reporting date (31 December 2021: 101%).

Current liabilities up by EUR 4,436m
At EUR 16,654m, current liabilities were 36% higher than last year's figure (31 December 2021: EUR 12,218m). This is due to higher liabilities towards affiliated companies (EUR 2,191m), trade payables (EUR 531m), advance payments for flight documents (EUR 818m), higher other provisions (EUR 416m) and changes in the maturity classification of bonds and aircraft leasing rates.

Net debt down by EUR 1,547m
Net balance sheet debt fell by 25% to EUR 4,664m (31 December 2021: EUR 6,211m), mainly due to the repayment of borrower's note loans and repayments of aircraft lease liabilities (EUR 902m). The securities portfolio also increased compared with 31 December 2021 by EUR 809m.

OTHER DISCLOSURES

Risk report

Business at Deutsche Lufthansa AG is subject to essentially the same risks and opportunities as business at the Passenger Airline 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. ↗ **Passenger Airlines segment, p. 52ff.**

Supplementary report

The main events taking place after the reporting date are those described in the consolidated financial statements pertaining to the Passenger Airlines 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 ↗ **Forecast, p. 149ff.**

CONSOLIDATED FINANCIAL STATEMENTS

Consolidated income statement
for the financial year 2022

XLS

T055 CONSOLIDATED INCOME STATEMENT

in €m	Notes	2022	2021
Traffic revenue	4	25,846	11,876
Other revenue	5	6,924	4,935
Total revenue		**32,770**	**16,811**
Changes in inventories and work performed by entity and capitalised	6	354	109
Other operating income[1]	7	2,193	1,602
Cost of materials and services	8	-18,676	-8,946
Staff costs	9	-8,108	-6,328
Depreciation, amortisation and impairment[2]	10	-2,478	-2,351
Other operating expenses[3]	11	-4,823	-3,215
Profit/loss from operating activities		**1,232**	**-2,318**
Result of equity investments accounted for using the equity method	12	-42	-22
Result of other equity investments	12	41	24
Interest income	13	69	-6
Interest expenses	13	-488	-435
Other financial items	14	238	151
Financial result		**-182**	**-288**
Profit/loss before income taxes		**1,050**	**-2,606**
Income taxes	15	-246	413
Profit/loss after income taxes		**804**	**-2,193**
Profit/loss attributable to non-controlling interests		13	-2
Net profit/loss attributable to shareholders of Deutsche Lufthansa AG		**791**	**-2,191**
Basic/diluted earnings per share in €	16	**0.66**	**-2.99**

[1] This includes EUR 55m (previous year: EUR 117m) from write-backs on non-current receivables and the reversal of write-downs on current receivables.
[2] This includes EUR 2m (previous year: EUR 9m) for the recognition of write-downs on non-current receivables.
[3] This includes EUR 77m (previous year: EUR 73m) for the recognition of loss allowances on current receivables.

Statement of comprehensive income
for the financial year 2022

T056 STATEMENT OF COMPREHENSIVE INCOME

in €m	2022	2021
Profit/loss after income taxes	**804**	**-2,193**
Other comprehensive income		
Other comprehensive income with subsequent reclassification to the income statement		
Differences from currency translation	150	193
Subsequent measurement of financial assets and liabilities at fair value without effect on profit and loss	-108	-27
Subsequent measurement of hedges – cash flow hedge reserve	1,331	1,009
Subsequent measurement of hedges – costs of hedging	-56	96
Other comprehensive income from investments accounted for using the equity method	-11	7
Other expenses and income recognised directly in equity	-1	-1
Income taxes on items in other comprehensive income	-261	-244
	1,044	**1,033**
Other comprehensive income without subsequent reclassification to the income statement		
Revaluation of defined-benefit pension plans	4,648	2,933
Other comprehensive income from investments accounted for using the equity method	–	–
Subsequent measurement of financial assets at fair value	–	2
Other expenses and income recognised directly in equity	42	–
Income taxes on items in other comprehensive income	-1,620	-566
	3,070	**2,369**
Other comprehensive income after income taxes	**4,114**	**3,402**
Total comprehensive income	**4,918**	**1,209**
of which comprehensive income attributable to non-controlling interests	19	1
of which comprehensive income attributable to shareholders of Deutsche Lufthansa AG	**4,899**	**1,208**

Further details on the statement of comprehensive income can be found in ↗ **Note 34, p. 208f.**

Consolidated statement of financial position
as of 31 December 2022

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T057 CONSOLIDATED STATEMENT OF FINANCIAL POSITION – ASSETS

in €m	Notes	31 Dec 2022	31 Dec 2021
Intangible assets with an indefinite useful life[1]	17	1,055	1,189
Other intangible assets	18	373	419
Aircraft and reserve engines	19 22	15,890	15,318
Repairable spare parts for aircraft	20	2,034	1,847
Property, plant and other equipment[2]	21 22	3,331	3,354
Investments accounted for using the equity method	23	392	434
Other equity investments	24 45	236	245
Non-current securities	24 45	37	38
Loans and receivables	25 45	532	525
Derivative financial instruments	45	1,120	894
Deferred charges and prepaid expenses	29	88	74
Effective income tax receivables		64	65
Deferred tax assets	15	2,928	4,661
Non-current assets		**28,080**	**29,063**
Inventories	26	812	675
Contract assets	27	342	179
Trade receivables and other receivables	28 45	4,102	3,686
Derivative financial instruments	45	861	542
Deferred charges and prepaid expenses	29	287	208
Effective income tax receivables		231	249
Securities	30 45	6,511	5,359
Cash and cash equivalents	31 45	1,790	2,307
Assets held for sale	32	319	270
Current assets		**15,255**	**13,475**
Total assets		**43,335**	**42,538**

[1] Including Goodwill.
[2] This includes investment properties valued at EUR 30m (as of 31 December 2021: EUR 30m).

T058 CONSOLIDATED STATEMENT OF FINANCIAL POSITION – SHAREHOLDERS' EQUITY AND LIABILITIES

in €m	Notes	31 Dec 2022	31 Dec 2021
Issued capital	33	3,060	3,060
Capital reserve	34	252	956
Retained earnings	34	2,068	491
Other neutral reserves	34	2,234	2,134
Net profit/loss		791	-2,191
Equity attributable to shareholders of Deutsche Lufthansa AG		**8,405**	**4,450**
Non-controlling interests		69	40
Shareholders' equity		**8,474**	**4,490**
Pension provisions	35	2,069	6,676
Other provisions	36	757	703
Borrowings	37 45	13,270	15,041
Contract liabilities	38	30	30
Other financial liabilities		72	67
Advance payments received, deferred income and other non-financial liabilities	39	44	30
Derivative financial instruments	45	394	290
Deferred tax liabilities	15	517	529
Non-current provisions and liabilities		**17,153**	**23,366**
Other provisions	36	872	1,255
Borrowings	37 45	1,881	1,629
Trade payables and other financial liabilities	41 45	5,660	4,186
Liabilities from unused flight documents	40	4,898	3,340
Other contract liabilities	40	2,682	2,609
Advance payments received, deferred income and other non-financial liabilities	42	681	648
Derivative financial instruments	45	489	247
Effective income tax obligations		545	705
Liabilities in connection with assets held for sale	32	–	63
Current provisions and liabilities		**17,708**	**14,682**
Total shareholders' equity and liabilities		**43,335**	**42,538**

Consolidated statement of changes in shareholders' equity
as of 31 December 2022

T059 CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

in €m	Issued capital	Capital reserve	Silent Partici-pation I	Fair value measurement of financial instruments	Currency differences	Revaluation reserve (due to business combi-nations)	Other neutral reserves	**Total other neutral reserves**	Retained earnings	Net profit/loss	**Equity attributable to share-holders of Deutsche Lufthansa AG**	Minority interests	**Total shareholders' equity**
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	1,328	498	282	–	–	–	–	–	–	–	1,826	–	1,826
Reclassifications[1]	202	80	-282	–	–	–	–	–	-6,744	6,744	282	–	282
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**
Capital increases/reductions	–	–	–	–	–	–	–	–	–	–	–	–	–
Reclassifications	–	-704	–	–	–	–	–	–	-1,487	2,191	–	–	–
Dividends to Lufthansa shareholders/minorities	–	–	–	–	–	–	–	–	–	–	–	-7	-7
Transactions with minority interests	–	–	–	–	–	–	-5	-5	–	–	-5	17	12
Group/minority net result	–	–	–	–	–	–	–	–	–	791	791	13	804
Other expenses and income recognised directly in equity	–	–	–	906	150	–	-12	1,044	3,064	–	4,108	6	4,114
Hedging results reclassified from non-financial assets to acquisition costs	–	–	–	-939	–	–	–	-939	–	–	-939	–	-939
As of 31 Dec 2022	**3,060**	**252**	**–**	**913**	**739**	**236**	**346**	**2,234**	**2,068**	**791**	**8,405**	**69**	**8,474**

[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 2022

XLS

T060 CONSOLIDATED CASH FLOW STATEMENT

in €m	Notes	2022	2021
Cash and cash equivalents 1 Jan		**2,305**	**1,804**
Net profit/loss before income taxes		1,050	-2,606
Depreciation, amortisation and impairment losses on non-current assets (net of reversals)		2,472	2,288
Depreciation, amortisation and impairment losses on current assets (net of reversals)		-28	-33
Net proceeds on disposal of non-current assets	7 11	-30	30
Result of equity investments	12	1	-2
Net interest	13	419	441
Income tax payments/reimbursements		-288	-101
Significant non-cash-relevant expenses/income		-524	-484
Change in trade working capital		1,694	1,347
Change in other assets/shareholders' equity and liabilities[1]		402	-481
Net cash from/used in operating activities		**5,168**	**399**
Capital expenditure for property, plant and equipment and intangible assets	17 18 19 21 22	-2,365	-1,318
Capital expenditure for financial investments	24 25	-14	-11
Additions/loss to repairable spare parts for aircraft	20	-143	21
Proceeds from disposal of non-consolidated equity investments		25	–
Proceeds from disposal of consolidated equity investments	49	-4	2
Cash outflows for acquisitions/capital increases of/at non-consolidated equity investments	23 24 45	-46	-27
Cash outflows for acquisitions of consolidated equity investments	49	–	–
Proceeds from disposal of intangible assets, property, plant and equipment and other financial investments		154	190
Interest income		37	-3
Dividends received		70	27
Net cash from/used in investing activities		**-2,286**	**-1,119**
Purchase of securities/fund investments		-6,808	-9,367
Disposal of securities/fund investments[1]		5,653	7,681
Net cash from/used in investing and cash management activities		**-3,441**	**-2,805**
Capital increase/equity contributions	33 34	–	3,309
Capital reduction/equity repayments		–	-1,218
Transactions by non-controlling interests		-1	–
Non-current borrowing		786	6,144
Repayment of non-current borrowing		-2,664	-5,070
Dividends paid		-8	-19
Interest paid		-379	-272
Net cash from/used in financing activities		**-2,266**	**2,874**
Net increase/decrease in cash and cash equivalents		**-539**	**468**
Changes due to currency translation differences		18	33
Cash and cash equivalents as of 31 Dec[2]	31	**1,784**	**2,305**
Securities	30	6,511	5,359
Liquidity		**8,295**	**7,664**
Net increase/decrease in liquidity		631	2,206

[1] Previous year's figure adjusted (all payments in connection with pensions are recognised in operating cash flow).
[2] The difference between the bank balances and cash-in-hand shown in the statement of financial position comes from fixed-term deposits of EUR 6m with terms of four to twelve months (previous year: EUR 2m).

Further details can be found in the section ↗ **Notes to the consolidated cash flow statement, p. 232ff.**

Notes to the consolidated financial statements
Deutsche Lufthansa AG 2022

GENERAL DISCLOSURES

1 Company information

The Lufthansa Group is a global aviation group whose subsidiaries and equity investments were organised into four operating segments in the 2022 financial year: Passenger Airlines, 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 method of estimation was only modified for determining the interest rate to be used to measure the retirement benefit obligations of entities preparing their financial statements in euros. The effects of this change in the estimation method are described in more detail in the section on retirement benefit obligations (↗ **Note 35, p. 209ff.**). The first-time application from 1 January 2022 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.

The Executive Board of Deutsche Lufthansa AG prepared and approved the 2022 consolidated financial statements for publication on 23 February 2023.

2 Going concern

At the start of financial year 2022, the business of the companies in the Lufthansa Group was still significantly impacted by the effects of the coronavirus pandemic, particularly the spread of the omicron variant. Over the course of the year, however, demand for flights rose significantly as a result of higher immunity levels, milder symptoms and a subsequent easing of the restrictions imposed to curb the spread of the coronavirus. Against the background of these developments, revenue increased significantly compared with the prior-year period. At the same time, costs increased significantly. This was attributable in particular to the strong rise in fuel prices due to the war in Ukraine. High inflation rates were also reflected in collective bargaining agreements, resulting in increases in staff costs.

All segments improved their Adjusted EBIT, apart from the Catering segment. The cargo business, which again reported record earnings, and the MRO segment were the major contributors to Adjusted EBIT of EUR 1.5bn. Adjusted EBIT in the passenger business was still negative due to the losses in the first half of the year, although it improved significantly compared with the previous year. The previous year's figure in the Catering segment was affected by the state subsidies granted through the US CARES Act.

The strong increase in the volume of business resulted in a significantly positive operating cash flow figure in the reporting period, particularly due to higher earnings and increased cash flows from ticket sales.

The stabilisation measures agreed in Germany, Switzerland, Austria, Belgium and the USA in 2020 were brought to an end in the reporting period.

Germany's Economic Stabilisation Fund (ESF) sold its remaining shares in Deutsche Lufthansa AG to various investors in the third quarter via accelerated bookbuilding. ESF most recently held around 6.2% of the Company's share capital (74.4 million shares). ESF acquired the original shareholding of 20% in the share capital of Deutsche Lufthansa AG in the summer of 2020 for EUR 306m. The sale also marked the end of all remaining covenants under the ESF stabilisation measures.

The state-guaranteed loans in Belgium, Austria, Switzerland and the USA were repaid in full and terminated in the 2022 financial year. This meant that the other restrictions in Belgium, Austria and Switzerland, in particular the ring-fencing conditions that were linked to the state subsidies, also ceased to apply.

As of 31 December 2022, Deutsche Lufthansa AG had centrally available liquidity of EUR 7.1bn. Decentralised bank and cash balances came to a further EUR 1.2bn. New revolving free credit lines of EUR 2.1bn agreed in 2022 are still available as of the reporting date. Altogether, the Lufthansa Group's available liquidity therefore comes to EUR 10.4bn.

The uncertainties resulting from the war in Ukraine, such as impending energy supply restrictions and possible other impacts on international economic relations, represent a risk for the further business development. The earnings performance in the 2023 financial year and beyond will continue to depend significantly on the extent of the economic impact of the war in Ukraine and the further course of global travel restrictions due to the coronavirus pandemic. The Lufthansa Group is inevitably directly affected by the significantly higher prices for energy, especially crude oil and kerosene. Management of operational problems due to staff shortages in the airline industry and the potential impact of inflationary price increases and supply chain problems on economic development are further material risk factors.

Further progress was made internally with the restructuring measures. Voluntary redundancy programmes were carried out for cockpit, cabin and ground staff at Deutsche Lufthansa AG, and loss-making businesses in the MRO segment were closed, sold and downsized.

Current corporate planning forecasts a significant increase in Adjusted EBIT for 2023. The potential impact of the conflict between Russia and Ukraine, pricing developments on both sales and purchasing markets, and customers' future travel patterns when all travel restrictions have been lifted, but especially those in the business travel market, remain factors of uncertainty for ongoing earnings performance, but do not call the going-concern basis of accounting into question. Company management confirms the medium-term targets for return on capital and expects profitable growth again.

Taking into account the corporate planning – which assumes an average available capacity between 85% and 90% or almost 100% of the 2019 level in 2023 and 2024 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 material accounting policies

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

T061 IFRS-PRONOUNCEMENT (APPLICABLE FROM FINANCIAL YEAR 2022)
Amendments to IFRS 3, Reference to the conceptual framework
Amendments to IAS 16, Generation of revenue before an asset's intended use
Amendments to IAS 37, Onerous Contracts – Cost of Fulfilling a Contract
Annual improvement process (2018 – 2020), Amendments to IFRS 1, IFRS 9 and IAS 41

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 are therefore not regarded as costs of fulfilling a contract, unless the contract specifically provides for them to be charged on to the customer.

The first-time application from 1 January 2022 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.

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 2022:

T062 IFRS-PRONOUNCEMENT (ADOPTED 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
IFRS 17, Insurance Contracts	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 of IAS 12.22A. The amendment applies to financial years beginning on or after 1 January 2023, with early application being allowed. The Lufthansa Group does not expect these amendments to have any material effects.

The Lufthansa Group also does not expect the remaining endorsed but not yet effective amendments to have any material impact on its consolidated financial statements.

The IASB has adopted the following amendments to standards, which are not yet mandatory for financial year 2022:

T063 IFRS-PRONOUNCEMENT (NOT YET ENDORSED BY THE EU)

	Mandatory application for financial years beginning on or after
Amendments to IFRS 16, Lease Liability in a Sale and Leaseback Transaction	1 Jan 2024
Amendments to IAS 1, Classification of Liabilities as Current or Non-current	1 Jan 2024

Amendments to IFRS 16, Lease Liability in a Sale and Leaseback Transaction. The IASB published amendments to IFRS 16 in September 2022. The amendment means that the seller/lessee recognises a lease liability from a leaseback under IFRS 16 on the sale date, even if all the lease payments are variable and do not depend on an index or rate. No gain or loss is recognised on subsequent measurement of the right-of-use asset retained by the seller/lessee. Subsequent measurement of the right-of-use asset under the leaseback is carried out according to the general rules of IFRS 16.29-35. The amendments are applicable retrospectively for financial years beginning on or after 1 January 2024.

Amendments to IAS 1, Classification of Liabilities as Current or Non-current. In October 2022, 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 liabilities are to be classified as non-current if, as of the reporting date, the reporting entity has the right to defer settlement of the liability for at least twelve months. The assessment of this right depends on the circumstances at the end of the reporting period. Covenants to be met in future are not considered. The amendments are applicable retrospectively for financial years beginning on or after 1 January 2024.

Currently, the new or amended IFRS pronouncements listed in the table are not considered to have any or any 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 these standards by the EU.

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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 balance sheet items.

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. Above all, the war in Ukraine and its political and economic consequences represent a material risk for the performance of the world economy, the continued recovery of the entire aviation industry and the Lufthansa Group. Of material importance is the duration of the Russia-Ukraine conflict and its effects on the economy as a whole and the costs of energy, especially kerosene. Further uncertainties exist in connection with the coronavirus pandemic. The main assumptions and estimates were therefore based on the Group's liquidity and profit forecasts (↗ **Note 2, p. 169f.**). Critical accounting areas that may be affected most severely by the ongoing uncertainty about the crises mentioned above are:

- Carrying amounts of goodwill (↗ **Note 17, p. 194ff.**) and equity investments (↗ **Note 23, p. 202ff.**), which depend to a large degree on achieving the planned earnings.
- The carrying amounts for the aircraft (↗ **Note 19, p. 197f.**), which particularly depend on profitable fleet operations.
- Repairable spare parts (↗ **Note 20, p. 198**) and inventories (↗ **Note 26, p. 204f.**) require measurement assumptions about the extent to which future overcapacities will result from reducing particular fleet models or from a potential decline in business in the MRO segment, despite the recovery in the current year.
- In view of the crisis-related uncertainties described above, measurement of the carrying amount for deferred tax assets (↗ **Note 15, p. 191ff.**), particularly on the tax loss carry-forwards, took the longer-term opportunities for using them into account.

- Trade receivables (↗ **Note 28, p. 205f.**) remained subject to greater uncertainty about default risk due to the particular situation caused by the pandemic and the worse economic conditions resulting from the Russia-Ukraine war. 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. 226f.**) was subject to greater uncertainty about how customers would redeem miles or use tickets, which will also depend on when 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 particular, 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 CO_2 emissions. The Lufthansa Group is planning to cut its net CO_2 emissions by half compared with 2019 by 2030 and to be net carbon neutral by 2050. Corporate planning has factored in the additional costs for emissions trading and sustainable aviation fuel, amongst other things, which were thus included when applying IAS 36 and in the impairment considerations for deferred tax assets. Other core elements of the drive to reduce carbon emissions are the planned modernisation of the fleet and opportunities to buy carbon offsets when booking tickets. The Lufthansa Group does not currently see any climate-related indications for material changes in the expected useful lives of aircraft and reserve engines. However, 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 explicit assumptions have been made in the corporate planning for want of reliable indicators. 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 2035; as of December 2022), however, but only included the effects of inflation.

The measurement method in the consolidated financial statements is based on historical cost. 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 rules, which allocate the total price payable to individual flight segments using what is known as a prorate calculation. The amounts determined in this way correspond to the relative standalone selling price within the meaning of IFRS 15. The standalone selling prices for ancillary services not included in the fare are directly observable prices within the meaning of IFRS 15. It takes 2.2 months on average for a flight coupon to be realised. Additional cancellation and rebooking options were introduced in connection with the flight 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 segment(s). 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 contracting party receives the benefit of the transport service with each transport segment that is completed by the airline. In this case, the customer takes control of the Company's output while the carrier provides its service. The corresponding cargo revenue is therefore recognised at the prorated 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 contracting party 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 historical 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. 185f.**

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 purchase 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 (purchase price allocation). 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 for the capital costs of the business unit. Tests are performed at the level of the cash-generating unit (CGU). For the individual assumptions on which impairment tests were based in financial year 2022, ↗ **Note 17, p. 194ff.**

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:

T064 EXCHANGE RATES

	2022		2021	
	Balance sheet exchange rate	Income statement average rate	Balance sheet exchange rate	Income statement average rate
AUD	0.63473	0.66173	0.64092	0.63492
CAD	0.69098	0.73282	0.69143	0.67397
CHF	1.01454	0.99708	0.96657	0.92129
CNY	0.13442	0.14131	0.13867	0.13066
GBP	1.12979	1.17302	1.19191	1.16459
HKD	0.12005	0.12161	0.11331	0.10855
INR	0.01130	0.01213	0.01187	0.01145
JPY	0.00704	0.00727	0.00767	0.00769
KRW	0.00074	0.00073	0.00074	0.00074
NOK	0.09495	0.09915	0.10035	0.09823
PLN	0.21378	0.21324	0.21789	0.21818
SEK	0.08973	0.09404	0.09759	0.09854
USD	0.93611	0.95271	0.88378	0.84368

The provisions of IAS 29, Financial Accounting in Hyperinflationary 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 inspections. 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 overheads.

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 their acquisition or production 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 overheads. 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:

T065 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 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 recoverable amount of an asset to which independent cash flows can be attributed 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 acquisition or production cost.

Repairable spare parts for aircraft

Initial fitting 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. The Lufthansa Group assesses whether the contract contains a lease at the start of the contract in accordance with IFRS 16. 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 remeasurement 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. Judgement is used when determining the reasonable probability that the option to renew or terminate the lease will be exercised. When determining lease terms, all the facts and circumstances that offer an economic incentive to exercise renewal options or not to exercise termination options are taken into account. 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. 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 closing 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 the effective and the market interest rate at the measurement 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. 235ff.

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. 235ff.**) only to 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

CO_2 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 CO_2 emissions in international air traffic using climate protection projects from 2021 onwards. In June 2020, ICAO adopted a resolution confirming that 85% of carbon emissions in 2019 will be 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

Inventories comprise 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 related advance payments. They are measured at cost, determined on the basis of average prices, or at production costs. 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 acquisition/production cost and net realisable value. Net realisable value is defined as the estimated selling price less the estimated cost until 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. 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 the current service cost.

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 and bonds from sovereign borrowers in the euro zone, in the same currency and with a similar maturity. The discount rate for the euro zone is determined by reference to 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. Bonds from public sector issuers in the euro zone were included for the first time this year to improve the estimation method, particularly for long maturities. The effects of the change are shown in ↗ **Note 45, p. 235ff.**

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 immediately 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 created 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 created 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 the closing rate.

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 closing 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. 222ff.**

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 past 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.

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 in respect of tax authorities that are uncertain with regard to their probability of occurrence and/or 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. 191ff.**

Current income taxes
The Lufthansa Group is liable for income tax 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 the findings of expected future tax audits 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 the final tax determination is made.

NOTES TO THE CONSOLIDATED INCOME STATEMENT

4 Traffic revenue

In the consolidated income statement, the Lufthansa Group attributes revenue to the segments Passenger Airlines, Logistics, MRO, Catering, and Additional Businesses and Group Functions.

Table T066 provides a breakdown of traffic revenue according to the different business models.

The increase in traffic revenue was due to the significant recovery in business, in connection with improved average revenue for certain routes.

Traffic revenue of EUR 25,846m (previous year: EUR 11,876m) includes freight and mail revenue of EUR 5,159m (previous year: EUR 4,254m). The Logistics segment accounted for EUR 4,430m (previous year: EUR 3,644m) of this amount. Other freight and mail revenue of EUR 729m (previous year: EUR 610m) stems mainly from marketing belly capacities on passenger flights by SWISS and Eurowings.

T066 TRAFFIC REVENUE BY SECTOR

in €m	**2022**							2021						
	Total	Europe[1]	North America[1]	Central and South America[1]	Asia/Pazific[1]	Middle East[1]	Africa[1]	Total	Europe[1]	North America[1]	Central and South America[1]	Asia/Pazific[1]	Middle East[1]	Africa[1]
Passenger Airlines[2] [3]	21,416	14,765	4,091	487	1,214	447	412	8,232	5,869	1,277	156	538	191	201
Lufthansa German Airlines	11,961							4,241						
SWISS[2]	4,681							1,994						
Austrian Airlines	1,777							669						
Brussels Airlines	1,140							503						
Eurowings[2]	1,857							825						
Logistics	4,430	2,363	484	152	1,299	51	81	3,644	1,823	359	121	1,236	40	65
Total	**25,846**							**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.
[3] Previous year's figures adjusted.

5 Other revenue

Table T067 provides a breakdown of other revenue by category (type of service) and geographical distribution.

T067 OTHER OPERATING REVENUE BY AREA OF OPERATIONS

	2022							2021						
in €m	**Total**	Europe[1]	North America[1]	Central and South America[1]	Asia/Pazific[1]	Middle East[1]	Africa[1]	Total	Europe[1]	North America[1]	Central and South America[1]	Asia/Pazific[1]	Middle East[1]	Africa[1]
MRO	4,004	1,458	1,420	127	719	210	70	3,117	1,307	971	87	536	156	70
MRO services	3,608							2,676						
Other operating revenue	396							441						
Catering	1,903	265	1,299	119	146	36	38	1,085	101	791	65	75	21	38
Catering services	1,577							911						
Revenue from in-flight sales	207							98						
Other services	119							76						
Passenger Airlines	457	382	35	3	25	6	6	296	260	13	1	13	4	6
Logistics	152	84	61	–	1	6	–	124	76	46	–	-3	4	–
Additional Businesses and Group Functions	408	285	38	16	46	16	7	313	198	32	9	52	16	7
IT services	157							158						
Travel management	188							92						
Other	63							63						
Total	**6,924**							**4,935**						

[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 other own work capitalised

T068 CHANGES IN INVENTORIES AND WORK PERFORMED BY ENTITY AND CAPITALISED

in €m	2022	2021
Increase/decrease in finished goods and work in progress	6	-10
Other internally produced and capitalised assets	348	119
	354	**109**

Other own work capitalised relates almost exclusively to aircraft and engine overhauls. The increase stems from a significant increase in the number of maintenance inspections since the fleet was used more as air traffic recovered.

7 Other operating income

T069 OTHER OPERATING INCOME

in €m	2022	2021
Foreign exchange gains	1,154	396
Income from the reversal of provisions and accruals	351	210
Reversal of write-downs on receivables	53	108
Income from the disposal of non-current available-for-sale financial assets	38	3
Rental income	35	32
Services provided by the Group	34	32
Compensation received for damages	24	39
Income from the disposal of non-current assets	21	27
Income from staff secondment	16	18
Subsidies	14	241
Commission income	12	9
Income from the reversal of impairment losses on fixed assets	4	70
Miscellaneous other operating income	437	417
	2,193	**1,602**

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 rate. Income from exchange rate hedging is also recognised here. Foreign exchange losses from these transactions are reported under other operating expenses. ↗ **Note 11, p. 190.** The foreign currency effects of borrowings are recognised in other financial items, in the context of the net results of exchange rate hedging relationships for borrowing.

The items reversal of provisions, deferrals and accruals include EUR 98m from the reversal of provisions for restructuring measures that are no longer needed. Other reversals relate to a number of provisions, deferrals and accruals recognised in previous years that have not been fully used. In contrast, expenses from insufficient provisions recognised in prior years are recognised together with the primary expense type to which they relate.

Income from the reversal of valuation allowances on receivables mainly related to the MRO and Passenger Airlines segments. In contrast to earlier expectations, receivables from customers for which defaults were considered to be highly probable as of the last reporting date did turn out to be recoverable.

Income from the disposal of non-current financial assets consisted mainly of the disposal proceeds from the sale of Lufthansa Technik Shannon Ltd. and Beijing Lufthansa Center Co. Ltd.

The Lufthansa Group recognised rental and lease income of EUR 35m in 2022 (previous year: EUR 32m).

Table T070 shows the contractual lease payments.

T070 CONTRACTUAL LEASE PAYMENTS (LESSOR)

in €m	31 Dec 2022	31 Dec 2021
to 1 year	20	18
more than 1 year to 2 years	14	14
more than 2 years to 3 years	10	11
more than 3 years to 4 years	7	9
more than 4 years to 5 years	6	6
more than 5 years	53	56

Income from the disposal of property, plant and equipment also includes EUR 7m from aircraft sold (previous year: EUR 18m).

The decline in income from subsidies stems from the expiry of government support measures to mitigate the effects of the coronavirus pandemic. In the previous year, this item particularly included the government grants received in the USA.

Other operating income includes items not attributable to any of the aforementioned categories.

8 Cost of materials and services

T071 COST OF MATERIALS AND SERVICES

in €m	2022	2021
Aircraft fuel and lubricants	7,601	2,409
Other raw materials, consumables and supplies	2,663	1,615
Purchased goods	208	139
Total cost of raw materials, consumables and supplies and of purchased goods	**10,472**	**4,163**
Fees and charges	3,730	2,155
External MRO services	1,756	1,181
Charter expenses	855	409
In-flight services	702	390
External IT services	387	305
Flight irregularities	224	51
Other services	550	292
Total cost of purchased services	**8,204**	**4,783**
	18,676	**8,946**

The increase in the cost of materials and services is due to the significant rise in business volume and to price increases, especially for kerosene.

Depreciation and valuation allowances on repairable spare parts are also reported within expenses for other raw materials, consumables and supplies. In the 2022 financial year, impairment losses and valuation allowances totalling EUR 78m were incurred (previous year: EUR 48m). An amount of EUR 42m of this total (previous year: EUR 0m) relates to inventories in Russia to which the Group currently no longer has access.

Expenses for flight irregularities includes accommodation and meals in the case of delays, for instance, or payments for damaged luggage. Direct compensation payments to customers are recognised as a reduction in traffic revenue in accordance with IFRS 15.

Other purchased services also include costs for lounge operations and costs in connection with the miles programme.

9 Staff costs

T072 STAFF COSTS

in €m	2022	2021
Wages and salaries	6,596	5,175
Social security contributions	912	698
Expenses for pension plans and other employee benefits	600	455
	8,108	**6,328**

The increase in staff costs of EUR 724m results from lower reimbursements in connection with short-time work. In 2022, income of EUR 141m was received in reimbursement of wage-replacement benefits and social security contributions paid in the context of short-time work in Germany, Austria and Switzerland (previous year: EUR 865m). This includes EUR 39m (previous year: EUR 340m) in subsidies for social security contributions and wage-replacement benefits that qualify as support payments. Higher expenses for basic pay, the end of crisis wage agreements and variable remuneration components were also responsible for the increase in staff costs. They were offset by lower severance expenses (2022: EUR 35m; previous year: EUR 581m) and the slightly smaller average number of employees for the year.

Expenses for retirement benefits principally consist of additions to pension provisions ↗ Note 35, p. 209ff.

T073 EMPLOYEES

	Average for the year 2022	Average for the year 2021	**As of 31 Dec 2022**	As of 31 Dec 2021
Ground staff	65,919	65,157	68,016	63,612
Flight staff	39,905	41,355	40,248	40,632
Staff	**105,824**	**106,512**	**108,264**	**104,244**
Trainees	1,065	1,131	1,245	1,046
	106,889	**107,643**	**109,509**	**105,290**

The annual average is calculated pro rata temporis from the time companies are consolidated or deconsolidated for the first time.

10 Depreciation, amortisation and impairment

Total depreciation, amortisation and impairment came to EUR 2,478m (previous year: EUR 2,351m).

T074 DEPRECIATION, AMORTISATION AND IMPAIRMENT

in €m	**2022**	2021
Amortisation of other intangible assets	101	101
Depreciation of aircraft	1,708	1,691
Depreciation of other tangible assets	467	467
Total amortisation/depreciation	**2,276**	**2,259**
Impairment of goodwill		
Impairment of other intangible assets	156	–
Impairment of aircraft and reserve engines	21	17
Impairment of other tangible assets	18	7
Impairment of right-of-use assets	2	36
Impairment of financial assets	3	23
Total impairment	**2**	**9**
	202	**92**
Total depreciation, amortisation and impairment	**2,478**	**2,351**

Depreciation and amortisation only changed slightly year-on-year.

Impairment losses of EUR 202m were recognised in financial year 2022. Of this, EUR 158m relates to the Catering segment, EUR 11m to Passenger Airlines, EUR 15m to MRO, and EUR 18m to Additional Businesses and Group Functions and adjustments at Group level.

Impairment losses in the Catering segment were recognised on goodwill, which was impaired by the strategic decision to dispose of the catering activities in the short to medium term and could no longer be fully justified by the sales prices anticipated on the basis of the ongoing bidding process (↗ **Note 17, p. 194ff.**). Impairment losses on intangible assets related to marketed software applications developed internally by the IT Services segment, whose carrying amounts are not covered by the revenue they are expected to generate in the future. The item impairment of aircraft and engines includes impairment losses of EUR 13m in the MRO segment for engines or right-of-use engines that are not at the Group's disposal and write-downs resulting from purchase price adjustments of EUR 7m relating to the six Airbus A380s sold on credit.

Other operating expenses include a further EUR 14m in impairment losses (previous year: EUR 8m). These impairments relate to the Airbus A380s already reclassified as assets held for sale and also stem from changes to purchase prices. Impairment losses of EUR 17m (previous year: EUR 0m) were also recognised on investments accounted for using the equity method within the financial result and relate to the Russian joint venture, AO Aeromar, in the Catering segment.

Impairment losses in the previous year came to EUR 92m largely related to assets of the held-for-sale entities Lufthansa Technik Shannon Co. Ltd. and Lufthansa Technik Maintenance International GmbH (EUR 28m), rights-of-use to aircraft returned early (EUR 18m), discontinued IT projects and internally developed software (EUR 17m), and other financial investments and the assets of Sky Chefs Chile SpA. (EUR 9m each).

11 Other operating expenses

T075 OTHER OPERATING EXPENSES

in €m	2022	2021
Foreign exchange losses	1,041	463
Staff-related expenses	778	479
Rental and maintenance expenses	648	531
Expenses for computerised distribution systems	302	156
Sales commission paid to agencies	292	96
Auditing, consulting and legal expenses	276	306
Commissions for credit cards	242	92
Advertising and sales promotions	232	136
Other services	183	146
Other taxes	78	57
Write-downs on receivables	77	73
Insurance premiums for flight operations	65	51
Communications costs	53	53
Losses on disposal of non-current assets	28	56
Miscellaneous other operating expenses	528	520
	4,823	**3,215**

Foreign exchange losses (excluding borrowings) 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 closing date. ↗ Note 7, p. 187f. 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.

Staff-related expenses also include travel and training costs for Group employees and the costs of outside staff. The increase is due especially to the higher volume of business compared with the previous year.

Rental expenses include property maintenance expenses of EUR 163m (previous year: EUR 141m).

The valuation allowances on receivables at EUR 72m (previous year: EUR 68m) mainly related to customer receivables at direct risk of default. Write-downs of EUR 5m (previous year: EUR 5m) were also recognised for general default risks under application of the expected credit loss model defined in IFRS 9. Expenses for valuation allowances on receivables of EUR 20m (previous year: EUR 0m) relate to extraordinary default risks in connection with the war in Ukraine.

Of advisory and legal expenses, a total of EUR 42m (previous year: EUR 103m) relates to extraordinary legal expenses and costs in connection with company transactions. In terms of miscellaneous other expenses, EUR 18m (previous year: EUR 0m) consist of extraordinary expenses in the MRO segment for risks resulting from the war in Ukraine.

12 Result from equity investments

T076 RESULT FROM EQUITY INVESTMENTS

in €m	2022	2021
Result of joint ventures accounted for using the equity method	20	-2
Result of associated companies accounted for using the equity method	-62	-20
Result of equity investments accounted for using the equity method	**-42**	**-22**
Dividends from other joint ventures	12	-
Dividends from other associated companies	2	-
Income from profit transfer agreements	33	29
Expenses from loss transfer agreements	-34	-22
Dividends from other equity investments	28	17
Result of other equity investments	**41**	**24**
	-1	**2**

Higher negative results from companies accounted for using the equity method were offset by an increase in other earnings from equity investments. The main reason for the lower net income from financial investments accounted for using the equity method was the loss of EUR 42m by Aircraft Maintenance and Engineering Corporation in China, and the write-down of the carrying amount for AO Aeromar of EUR 17m as a result of the conflict between Russia and Ukraine. Both entities are associated companies.

Income and expenses from profit and loss transfer agreements include apportionments of taxes.

13 Net interest

T077 NET INTEREST

in €m	**2022**	2021
Income from other securities and non-current financial loans	3	2
Other interest and similar income	66	-8
Interest income	**69**	**-6**
Interest expenses on pensions obligations	-83	-78
Interest expenses on other provisions	-7	-1
Interest and other similar expenses	-398	-356
Interest expenses	**-488**	**-435**
	-419	**-441**

Net interest comprises interest income and interest 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 improved year-on-year by EUR 22m. This is largely due to EUR 75m higher income from cash investments, which was offset by an increase of EUR 42m in interest expenses for capital market borrowing, and EUR 11m higher expenses for accrued interest on provisions due to the general increase in interest rates.

14 Other financial items

T078 OTHER FINANCIAL ITEMS

in €m	**2022**	2021
Result of fair value hedges – change in time value of hedged transactions	274	-30
Result of fair value hedges – change in time value of hedging instruments	-234	31
Ineffective portion of derivatives used as cash flow hedges	35	39
Result of derivatives classified as “at fair value through profit or loss”	104	27
Result of measuring securities classified as “at fair value through profit or loss”	84	95
Exchange rates effects from financial liabilities	-25	-11
	238	**151**

The increase in other financial items stems mainly from income from strategic interest rate hedging (EUR 107m; previous year: EUR 11m) in the item “derivatives classified as at fair value through profit or loss” and from the measurement of the strategic liquidity reserve (EUR 39m; previous year: EUR 2m) in the item “securities classified as at fair value through profit or loss”. It was offset by income in the latter item from the market measurement of the convertible bond (EUR 46m; previous year: EUR 93m).

15 Income taxes

Tax expenses of EUR 246m (previous year: tax income of EUR 413m) were incurred in the 2022 financial year and are made up as follows:

T079 INCOME TAXES

in €m	**2022**	2021
Current income taxes	143	112
Deferred income taxes	103	-525
	246	**-413**

Current income taxes for 2022 include corporation tax, the solidarity surcharge, trade tax and other income taxes payable outside Germany totalling EUR 200m (previous year: EUR 123m). Other tax income of EUR 55m related to prior years (previous year: tax income of EUR 11m). The tax rates used to calculate deferred taxes abroad in the 2022 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 from temporary differences of EUR 277m (previous year: expense of EUR 424m).

Table T080 shows the reconciliation from the expected to the effective, recognised tax expense. The 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 foreign air transport operations is deducted when calculating the trade tax rate, particularly in the case of the Group parent company with its head office in Germany.

T080 TAX RECONCILIATION

in €m	**2022** Basis of assessment	**2022** Tax expenses	2021 Basis of assessment	2021 Tax expenses
Expected income tax expenses	1,050	263	-2,606	-652
Tax free gains/losses	-62	16	-10	3
Non-deductible costs	282	71	245	61
Non-taxable income	164	-41	95	-24
Non-taxable income from equity investments	44	-11	-10	3
Difference between local taxes and the deferred tax rates of the parent company as well as effects of changes in tax rates	–	-29	–	51
Taxes from other periods [1]	–	-29	–	-7
Effects from use or deferred tax assets not recognised	–	6	–	152
Recognised income tax expenses	**–**	**246**	**–**	**-413**

[1] Deferred tax expenses of EUR 26m for other periods (previous year: tax expenses of EUR 4m) and effective tax income of EUR 55m for other periods (previous year: tax income of EUR 11m).

Deferred tax liabilities of EUR 158m (previous year: EUR 108m) 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 2022 and 2021 were allocable to the following items:

T081 DEFERRED TAX ASSETS AND LIABILITIES

in €m	**31 Dec 2022** Assets	**31 Dec 2022** Liabilities	31 Dec 2021 Assets	31 Dec 2021 Liabilities
Tax loss carry-forwards and tax credits	2,464	–	2,290	–
Pension provisions	1,160	–	2,908	–
Intangible assets, property, plant and equipment	–	1,147	–	1,276
Non-current financial assets	–	14	–	5
Fair value measurement of financial instruments	–	276	–	163
Provisions for contingent losses	53	–	58	–
Receivables/liabilities/other provisions	–	173	–	27
Inventories	349	–	359	–
Assets held for sale	–	5	–	12
Other	–	–	–	–
Offset amounts	-1,098	-1,098	-954	-954
	2,928	**517**	**4,661**	**529**

In addition to a deferred tax asset on temporary differences of EUR 375m (previous year: EUR 2,335m), a deferred tax asset on losses of EUR 2,463m (previous year: EUR 2,327m) 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 strong probability.

Of the recognised loss carry-forwards, EUR 1,847m (previous year: EUR 1,642m) relates to the Deutsche Lufthansa AG tax group. The loss carry-forward for the financial year was recognised in full. 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 loss was due to 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 2024 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 150m (previous year: EUR 192m) 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 3,910m (previous year: EUR 3,845m) for which no deferred tax assets could be recognised exist at companies 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:

T082 LIMITS ON THE USE OF NON-CAPITALISED LOSS CARRY-FORWARDS

in €m	Non-capitalised loss carry-forwards	Deferred taxes
Usable		
until 2026	253	52
until 2027	73	11
until 2028	51	10
until 2029	53	10
until 2030	41	9
until 2031	44	9
2032 and beyond	3,395	758
Total	**3,910**	**859**

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. When determining the average number of shares, the shares bought back and reissued for the employee share programmes are included in the calculation on a pro rata basis.

The convertible bond issued in 2020 has not yet had any effect on earnings per share, since the strike price for the options were higher than the average price of shares in Deutsche Lufthansa AG in the reporting period. In the previous year, 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.

T083 EARNINGS PER SHARE

		2022	2021
Basic/diluted earnings per share	**€**	**0.66**	**-2.99**
Consolidated net profit/loss	€m	791	-2,191
Weighted average number of shares		1,195,485,644	738,580,857

As the parent company of the Group, Deutsche Lufthansa AG reported a distributable profit of EUR 0m for the 2022 financial year in its financial statements prepared under the German Commercial Code (Handelsgesetzbuch: HGB). It is made up of the net loss for the previous year of EUR 2,664m, a loss carry-forward of EUR 3,090m and transfers from the capital reserve of EUR 704m, from the statutory reserve of EUR 26m and from retained earnings of EUR 5,024m.

NOTES TO THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

Assets

17 Goodwill and intangible assets with an indefinite useful life

T084 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 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 1 Jan 2022	1,037	682	1,719
Accumulated impairment losses	-526	-4	-530
Carrying amount 1 Jan 2022	**511**	**678**	**1,189**
Currency translation differences	1	20	21
Additions due to changes in consolidation	–	–	–
Additions	–	1	1
Reclassifications	–	–	–
Disposals due to changes in consolidation	–	–	–
Disposals	–	–	–
Reclassifications to assets held for sale	–	–	–
Impairment losses	-156	–	-156
Reversal of impairment losses	–	–	–
Carrying amount 31 Dec 2022	**356**	**699**	**1,055**
Cost as of 31 Dec 2022	1,039	702	1,741
Accumulated impairment losses	-683	-3	-686

All goodwill and intangible assets with an indefinite useful life were subjected to a regular impairment test in the 2022 financial year as required by IAS 36. Furthermore, there is the obligation to perform an impairment test if there is an indication of impairment.

The tests were performed at the level of the smallest cash-generating unit (CGU) on the basis of fair value less costs to sell. In view of management's strategic decision to dispose of all catering activities in the medium term, the expected net cash flows are very largely determined by future disposal proceeds for all the net assets. In contrast to prior years, no impairment testing was therefore carried out in the reporting year for catering units that were previously considered individually. Instead, all the goodwill affected was considered collectively.

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 6% (previous year: 18%, due to greater uncertainty relating to the restructuring activities that were still taking place at the time) of the Adjusted EBIT 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 2024. By the end of 2024, the expectation is that available seat-kilometres will return to roughly the same level as before the crisis and that markets will continue to grow until the end of the detailed planning period, but some customer segments, particularly the business travel market, will initially remain below their historic capacities, whereas others, such as leisure travel, will perform better. The duration of the recovery phase and further pricing developments, both in sales and purchasing markets, are considered to be key risk factors. The margins used are based on past experience or were developed on the basis of cost-cutting measures taken after the conclusion of the restructuring programme. Long-term investment rates are based on past experience and take account of the replacement of production resources envisaged during the planning period as well as the 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.

In view of the short to medium-term disposal plans, the impairment testing of goodwill for the catering companies overall used knowledge of potential selling prices from the current bidding process as the basis for measuring fair value less costs to sell. Calculating the value in use under the same assumption of a short to medium-term disposal does not lead to any materially different result. Impairment testing resulted in the recognition of an impairment loss of EUR 156m on the goodwill concerned. As of the reporting date it was not sufficiently clear to what extent the ongoing process can be brought to a successful conclusion. The other impairment tests to be performed as of the end of the year were carried out at the level of the cash-generating units based on the assumptions described in table ↗ T085 **Impairment tests, p. 196.**

Intangible assets with indefinite useful lives consist of slots purchased as part of company acquisitions (insofar as they are tradeable) and brand names acquired. Acquired slots have an indefinite useful life due to their lasting legal and economic significance. The slots were included in the impairment test for the smallest cash-generating unit (CGU) to which the respective slots are allocated. The carrying amounts of the acquired brands were no longer tested separately for impairment in 2022, but rather included in the impairment testing for goodwill. 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 and/or brands, of the respective units.

Even if the assumptions for revenue growth are reduced by one percentage point compared with the figures in table ↗ T085 **Impairment tests, p. 196,** the recoverable amounts for the units are still higher than the carrying amounts. Worsening the scenarios by one percentage point in each case, in terms of planned EBITDA margins or the discount rates used for the impairment tests, would also not reduce the recoverable amounts below the respective carrying amounts for these CGUs. The sensitivity analysis takes into account changes in one assumption at a time, with the other assumptions from the original calculation remaining unchanged.

Table T085 summarises the carrying amounts and the assumptions for the tests described above.

T085 IMPAIRMENT TESTS 2022

Name of the CGU	Lufthansa German Airlines	SWISS	Austrian Airlines	Brussels Airlines	Eurowings	LSG Group[1]	Other	Total
Segment	Passenger Airlines	Passenger Airlines	Passenger Airlines	Passenger Airlines	Passenger Airlines	Catering		
Carrying amount of goodwill (31 Dec)	€ 253m	–	–	€ 45m	–	€ 58m	–	€ 356m
Impairment losses	–	–	–	–	–	€ 156m	–	€ 156m
Carrying amount for slots (31 Dec)	€ 76m	€ 151m	€ 23m	–	€ 36m	–	–	€ 286m
Impairment losses	–	–	–	–	–	–	–	–
Carrying amount for brand (31 Dec)	–	€ 263m	€ 107m	€ 37m	–	€ 2m	€ 5m	€ 414m
Impairment losses	–	–	–	–	–	–	–	–
Duration of planning period	4 years	4 years	4 years	4 years	4 years	4 years	4 years	
Revenue growth p.a. after end of planning period	1.5%	1.5%	1.5%	1.5%	1.5%	not effective	1.5%	
Discount rate (after taxes)	7.7%	7.9%	7.8%	7.8%	7.7%	not effective	7.7% to 7.9%	

[1] Measurement is based on existing offers for a disposal within the next four years.

T085 IMPAIRMENT TESTS 2021

Name of the CGU	Lufthansa German Airlines	SWISS	Austrian Airlines	Brussels Airlines	Eurowings	LSG Group[1]	Other	Total
Segment	Passenger Airlines	Passenger Airlines	Passenger Airlines	Passenger Airlines	Passenger Airlines	Catering		
Carrying amount of goodwill (31 Dec)	€ 253m	–	–	€ 45m	–	€ 177m	€ 36m	€ 511m
Impairment losses	–	–	–	–	–	–	–	–
Carrying amount for slots (31 Dec)	€ 76m	€ 135m	€ 23m	–	€ 36m	–	–	€ 270m
Impairment losses	–	–	–	–	–	–	–	–
Carrying amount for brand (31 Dec)	–	€ 239m	€ 107m	€ 37m	–	–	€ 7m	€ 390m
Impairment losses	–	–	–	–	–	–	–	–
Duration of planning period	4 years	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%	1.0%	1.0%	2.1%	1.0% to 3.4%	
Discount rate (after taxes)	6.0%	6.1%	6.0%	6.0%	6.0%	6.7%	6.0% to 9.3%	

18 Other intangible assets

T086 OTHER INTANGIBLE ASSETS

in €m	Concessions, industrial property rights and similar rights and licences to such rights and assets	Internally developed software	Advance payments and plant under construction	Total
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 1 Jan 2022	1,488	188	116	1,792
Accumulated amortisation	-1,192	-161	-20	-1,373
Carrying amount as of 1 Jan 2022	**296**	**27**	**96**	**419**
Currency translation differences	5	–	–	5
Additions due to changes in consolidation	1	–	–	1
Additions	18	–	62	80
Reclassifications	33	21	-52	2
Disposals due to changes in consolidation	–	–	–	–
Disposals	-10	-2	–	-12
Reclassifications to assets held for sale	–	–	–	–
Amortisation	-92	-30	–	-122
Reversal of impairment losses	–	–	–	–
Carrying amount as of 31 Dec 2022	**251**	**16**	**106**	**373**
Cost as of 31 Dec 2022	1,522	212	123	1,857
Accumulated amortisation	-1,271	-196	-17	-1,484

Non-capitalised research and development costs for intangible assets of EUR 25m (previous year: EUR 23m) were incurred in the period. Firm orders have been placed for intangible assets worth EUR 2m (previous year: EUR 1m), but they are not yet at the Lufthansa Group's economic disposal.

19 Aircraft and reserve engines including right-of-use assets

T087 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 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 1 Jan 2022	32,036	2,122	34,158
Accumulated amortisation	-18,836	-4	-18,840
Carrying amount as of 1 Jan 2022	**13,200**	**2,118**	**15,318**
Currency translation differences	146	6	152
Additions due to changes in consolidation	–	–	–
Additions	1,577	882	2,459
Reclassifications	179	-176	3
Disposals due to changes in consolidation	–	–	–
Disposals	-136	-19	-155
Reclassifications to assets held for sale	-158	–	-158
Depreciation	-1,729	–	-1,729
Reversal of impairment losses	–	–	–
Carrying amount as of 31 Dec 2022	**13,079**	**2,811**	**15,890**
Cost as of 31 Dec 2022	32,791	2,815	35,606
Accumulated amortisation	-19,712	-4	-19,716

The item includes 101 aircraft with a carrying amount of EUR 2,977m (previous year: 94 aircraft with a carrying amount of EUR 2,988m), which have mostly been sold to and leased back from foreign leasing companies 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 359m (previous year: EUR 386m) were pledged as collateral under loan agreements.

In the reporting period, borrowing costs of EUR 42m (previous year: EUR 28m) were capitalised. The financing rate used was 1.7% (previous year: 1.5%).

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 349m (previous year: EUR 81m).

Order commitments for aircraft and reserve engines amount to EUR 15.8bn (previous year: EUR 14.3bn). Please also refer to the comments in the management report (↗ **Fleet and route network, p. 26ff.**).

20 Repairable spare parts for aircraft

T088 NOTES ON REPAIRABLE SPARE PARTS FOR AIRCRAFT

	2022			2021		
in €m	**Gross acquisition cost**	**Accumulated depreciation**	**Net carrying amount**	Gross acquisition cost	Accumulated depreciation	Net carrying amount
Pool material	2,181	827	1,354	2,198	907	1,291
Non-pool material	1,236	556	680	1,141	585	556
Total	**3,417**	**1,383**	**2,034**	**3,339**	**1,492**	**1,847**

The additions for the year (netted against disposals) accordingly amounted to EUR –17m (previous year: EUR –85m) for pool material and EUR 95m (previous year: EUR 86m) for non-pool material in the financial year; the net change in depreciation recognised in profit and loss was EUR –80m (previous year: EUR –65m) and EUR –29m (previous year: EUR 42m). Of the depreciation and amortisation expense for the financial year, EUR 78m (previous year: EUR 48m) related to impairments in connection with materials that are expected to become obsolete, and in connection with materials in Russia to which the Group no longer has access.

21 Property, plant and equipment including right-of-use assets

T089 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 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 1 Jan 2022	4,667	1,274	1,404	126	7,471
Accumulated depreciation	-2,113	-971	-1,030	-3	-4,117
Carrying amount as of 1 Jan 2022	**2,554**	**303**	**374**	**123**	**3,354**
Currency translation differences	35	6	5	1	47
Additions due to changes in consolidation	13	9	–	–	22
Additions	287	32	108	71	498
Reclassifications	40	22	6	-72	-4
Disposals due to changes in consolidation	–	–	-3	–	-3
Disposals	-87	-10	-21	-1	-119
Reclassifications to assets held for sale	–	–	–	–	–
Depreciation	-302	-59	-103	–	-464
Reversal of impairment losses	–	–	–	–	–
Carrying amount as of 31 Dec 2022	**2,540**	**303**	**366**	**122**	**3,331**
Cost as of 31 Dec 2022	4,814	1,305	1,395	125	7,639
Accumulated depreciation	-2,274	-1,002	-1,029	-3	-4,308

Land at Frankfurt Airport with a carrying amount at amortised cost of EUR 30m 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 167m (previous year: EUR 171m).

Other property, plant and equipment owned by the Group that did not consist of right-of-use assets was not used as collateral for existing financing arrangements, as in the previous year.

The following items of property, plant and equipment have been ordered, but are not yet at the Lufthansa Group's economic disposal:

T090 ORDERS OF PROPERTY, PLANT AND EQUIPMENT AS OF THE REPORTING DATE

in €m	**31 Dec 2022**	31 Dec 2021
Land and buildings	57	60
Technical equipment and vehicles	26	29
Operating and office equipment	63	33
	146	**122**

22 Leases

Table T091 shows the carrying amounts of the recognised right-of-use assets and the changes during the reporting period.

T091 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 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 1 Jan 2022	1,562	2,273	28	3,863
Accumulated depreciation	-842	-701	-16	-1,559
Carrying amount as of 1 Jan 2022	**720**	**1,572**	**12**	**2,304**
Currency translation differences	5	22	–	27
Additions due to changes in consolidation	–	8	–	8
Additions	349	274	7	630
Reclassifications	–	–	–	–
Disposals due to changes in consolidation	–	–	–	–
Disposals	-119	-84	–	-203
Reclassifications to assets held for sale	–	–	–	–
Depreciation	-192	-227	-8	-427
Reversal of impairment losses	–	–	–	–
Carrying amount as of 31 Dec 2022	**763**	**1,565**	**11**	**2,339**
Cost as of 31 Dec 2022	1,567	2,345	30	3,942
Accumulated depreciation	-804	-780	-19	-1,603

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 relate particularly to property. There is a remaining lease term of up to 33 years for land and buildings (previous year: up to 34 years) as of the reporting date. The average remaining term of building leases as of 31 December 2022 was four years (previous year: four years).

The average remaining term of aircraft leases as of 31 December 2022 was three years (previous year: two years). The additions to right-of-use assets for aircraft in 2022 relate to nine aircraft, including wet leases.

In the reporting period, the amounts shown in the income statement were as follows:

T092 LEASE EXPENSES RECOGNISED IN PROFIT OR LOSS

in €m	**2022**	2021
Amortisation of right-of-use assets	427	467
Interest expenses for lease liabilities	84	70
Expenses for short-term leases	72	20
Expenses for low-value leases	100	119
Variable lease payments	72	83

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 table T093.

T093 DISCLOSURES ON RENEWAL OPTIONS AND VARIABLE LEASE PAYMENTS

in €m	Recognised lease liability (discounted) 31 Dec 2022	Potential future lease payments not included in lease liabilities (undiscounted payments) Payable 2023 – 2027	Payable after 2027	Total	Recognised lease liability (discounted) 31 Dec 2021	Potential future lease payments not included in lease liabilities (undiscounted payments) Payable 2022 – 2026	Payable after 2026	Total
Aircraft	829	183	71	254	755	255	71	326
Property/operating and office equipment	1,614	107	498	605	1,615	73	477	550
Total	**2,443**	**290**	**569**	**859**	**2,370**	**328**	**548**	**876**

Where termination options were in place for individual leases, their exercise was considered unlikely, with the result that additional lease payments were already taken into account in the corresponding lease liability.

Amounts included in the cash flow statement are shown in table T094.

T094 CASH OUTFLOWS FOR LEASES

in €m	2022	2021
Lease expenses from short-term and low-value leases and variable lease payments not included in the measurement of lease liabilities	244	222
Repayment of the redemption portion of the lease liability	451	424
Interest payments	84	70
Total	**779**	**716**

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 operating cash flow.

The maturity analysis of lease liabilities is shown under borrowings, ↗ **Note 37, p. 221.**

Information about operating leases in which the Lufthansa Group is the lessor can be found in ↗ **Note 7, p. 187f.**

23 Equity investments accounted for using the equity method

T095 EQUITY INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

in €m	Investments in joint ventures	Investments in associated companies	Total
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	24	–	24
Changes with and without an effect on profit and loss	3	-20	-17
Disposals	-1	-1	-2
Dividends paid	–	-2	-2
Carrying amount as of 31 Dec 2021	**272**	**162**	**434**
Cost as of 1 Jan 2022	377	166	543
Accumulated impairment losses	-105	-4	-109
Carrying amount as of 1 Jan 2022	**272**	**162**	**434**
Currency translation differences	5	2	7
Additions	37	–	37
Changes with and without an effect on profit and loss	9	-46	-37
Reclassifications	-2	2	–
Disposals	–	-2	-2
Dividends paid	-30	–	-30
Impairment losses	–	-17	-17
Carrying amount as of 31 Dec 2022	**291**	**101**	**392**
Cost as of 31 Dec 2022	396	123	519
Accumulated impairment losses	-105	-22	-127

Impairment losses in financial year 2022 mainly related to the shares in AO Aeromar in Russia, which no longer have any value due to the economic restrictions in connection with the Russia-Ukraine conflict.

Individual interests in companies accounted for using the equity method

The tables T096 – T099 contain summarised aggregated data from the income statement and balance sheet data for the individual material joint ventures accounted for using the equity method.

T096 BALANCE SHEET DATA GÜNES EKSPRES HAVACILIK ANONIM SIRKETI (SUNEXPRESS), ANTALYA, TURKEY

in €m	31 Dec 2022	31 Dec 2021
Current assets	561	688
of which cash and cash equivalents	319	504
Non-current assets	1,060	937
Current liabilities	664	699
Non-current liabilities	758	772
Current financial liabilities (except trade and other payables and provisions)	302	462
Non-current financial liabilities (except trade and other payables and provisions)	615	655
Shareholders' equity	**199**	**154**
Share of equity	100	77
Other	25	26
Carrying amount	**125**	**103**

T097 INCOME STATEMENT DATA GÜNES EKSPRES HAVACILIK ANONIM SIRKETI (SUNEXPRESS), ANTALYA, TURKEY

in €m	2022	2021
Revenue	1,369	747
Depreciation and amortisation	121	92
Interest income	14	4
Interest expenses	24	22
Income tax expense or income	-10	-12
Profit or loss from continuing operations	**66**	**48**
Profit or loss after tax from discontinued operations	–	–
Other comprehensive income	-22	–
Total comprehensive income	**44**	**48**
Share of profit or loss from continuing operations	33	24
Share of comprehensive income	22	24
Dividends received	–	–

The item "Other" in the reconciliation with the carrying amount for SunExpress primarily includes the difference from the first-time consolidation of the company.

T098 BALANCE SHEET DATA TERMINAL 2 GESELLSCHAFT MBH & CO OHG, MUNICH AIRPORT, GERMANY

in €m	31 Dec 2022	31 Dec 2021
Current assets	44	48
of which cash and cash equivalents	–	–
Non-current assets	1,123	1,201
Current liabilities	151	199
Non-current liabilities	1,041	1,088
Current financial liabilities (except trade and other payables and provisions)	104	153
Non-current financial liabilities (except trade and other payables and provisions)	1,016	1,060
Shareholders' equity	**-25**	**-38**
Share of equity	-10	-15
Other	–	–
Carrying amount	**–**	**–**

T099 INCOME STATEMENT DATA TERMINAL 2 GESELLSCHAFT MBH & CO OHG, MUNICH AIRPORT, GERMANY

in €m	2022	2021
Revenue	253	123
Depreciation and amortisation	83	82
Interest income	–	–
Interest expenses	12	24
Income tax expense or income	3	–
Profit or loss from continuing operations	**12**	**-92**
Profit or loss after tax from discontinued operations	–	–
Other comprehensive income	1	10
Total comprehensive income	**13**	**-82**
Share of profit or loss from continuing operations	5	-37
Share of comprehensive income	5	-33
Dividends received	–	–

An amount of EUR 5m (previous year: EUR 15m) of the result of Terminal 2 Gesellschaft mbH & CO. OHG was not recognised in profit or loss in the financial year because the carrying amount was not sufficient. The losses not previously recognised in the carrying amount came to EUR 10m as of 31 December 2022 (previous year: EUR 15m).

Table T100 contains summarised aggregated data from the income statement and the carrying amounts for the individual immaterial joint ventures accounted for using the equity method.

T100 INCOME STATEMENTS DATA AND CARRYING AMOUNTS OF JOINT VENTURES ACCOUNTED FOR USING THE EQUITY METHOD

in €m	2022	2021
Profit or loss from continuing operations	-13	-6
Profit or loss after tax from discontinued operations	–	–
Other comprehensive income	–	–
Total comprehensive income	**-13**	**-6**
Depreciation and amortisation	–	–
Carrying amount	**165**	**169**

Cumulative losses of EUR 24m (previous year: EUR 10m) at the immaterial joint ventures were not recognised through profit or loss previously, as the carrying amounts of the equity interests were too low. The entities concerned did not generate any profits in 2022 to reduce the cumulative losses.

Table T101 contains summarised aggregated data from the income statement and the carrying amounts for the individual immaterial associated companies accounted for using the equity method.

T101 INCOME STATEMENTS DATA AND CARRYING AMOUNTS OF ASSOCIATED COMPANIES ACCOUNTED FOR USING THE EQUITY METHOD

in €m	2022	2021
Profit or loss from continuing operations	-44	-20
Profit or loss after tax from discontinued operations	–	–
Other comprehensive income	-1	–
Total comprehensive income	**-45**	**-20**
Depreciation and amortisation	-17	–
Carrying amount	**102**	**162**

24 Other equity investments and non-current securities

T102 OTHER EQUITY INVESTMENTS AND NON-CURRENT SECURITIES

in €m	31 Dec 2022	31 Dec 2021
Investments in affiliated companies	208	221
Investments	28	24
Other investments	**236**	**245**
Non-current securities	37	38

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. Disclosures on the equity investments and long-term securities can be found in ↗ **Note 45, p. 235ff.**

25 Non-current loans and receivables

T103 NON-CURRENT LOANS AND RECEIVABLES

in €m	31 Dec 2022	31 Dec 2021
Loans to and receivables from affiliated companies	58	72
Loans to and receivables from other equity investments	–	–
Other loans and receivables	197	247
Emissions certificates	277	206
	532	**525**

Non-current loans and receivables are carried at amortised cost.

No CO_2 emissions certificates (previous year: EUR 172m) were sold and simultaneously repurchased on the market on a forward basis in what are known as repo agreements as of the reporting date. For the impairment test for emissions certificates, please refer to the disclosures on the cash-generating units (CGU) in ↗ **Note 17, p. 194ff.**

Other receivables include expected reimbursements for obligations for which provisions have been made amounting to EUR 2m (previous year: EUR 2m). As in the previous year, no non-current receivables were used as collateral for liabilities.

26 Inventories

T104 INVENTORIES

in €m	31 Dec 2022	31 Dec 2021
Raw materials, consumables and supplies	724	618
Finished goods and work in progress	80	54
Advance payments	8	3
	812	**675**

No inventories have been pledged as collateral for loans. In inventories, EUR 623m (previous year: EUR 525m) comprise non-repairable spare parts for aircraft.

The gross value of written-down inventories as of 31 December 2022 was EUR 1,077m (previous year: EUR 862m). Inventories with a carrying amount of EUR 614m (previous year: EUR 498m) are held at their net realisable value. Write-downs to net realisable value of EUR 471m were made at the beginning of the financial year (previous year: EUR 402m). In the reporting period new valuation allowances were carried out for EUR 15m (previous year: EUR 21m), mostly related to the MRO segment. Valuation allowances of EUR 22m from previous years were reversed (previous year: EUR 58m).

27 Contract assets

The Lufthansa Group recognised the following contract assets in 2022:

T105 **CONTRACT ASSETS**

in €m	31 Dec 2022	31 Dec 2021
Contract assets from MRO and IT services	345	183
Impairment of contract assets	-3	-4
Total contract assets	**342**	**179**

28 Trade receivables and other receivables

T106 **TRADE RECEIVABLES AND OTHER RECEIVABLES**

in €m	31 Dec 2022	31 Dec 2021
Trade receivables		
Trade receivables from affiliated companies	33	52
Trade receivables from other equity investments	3	1
Trade receivables from third parties	2,955	2,347
	2,991	**2,400**
Other receivables		
Receivables from affiliated companies	140	97
Receivables from other equity investments	–	–
Other receivables	843	1,175
Emissions certificates	128	14
	1,111	**1,286**
Total	**4,102**	**3,686**

The increase in trade receivables resulted from the significant increase in business volume and mainly relates to the Passenger Airlines segment and to Lufthansa AirPlus Servicekarten GmbH.

Receivables of EUR 191m act as collateral for a loan of EUR 120m structured as an asset-backed security.

A factoring agreement was signed for some of the trade receivables for the first time in the financial year. Since the risk of late payment and default was almost completely transferred to the factor, the EUR 61m in assets transferred were fully derecognised, apart from a residual amount of EUR 1m.

For the impairment test for emissions certificates, please refer to the disclosures on the cash-generating units (CGU) in ↗ **Note 17, p. 194ff.**

As in the previous year, there is no collateral for trade receivables and no reimbursements are expected for obligations for which provisions have been recognised.

For disclosures on impairment losses, credit risks and term structures, we refer to ↗ **Note 45, p. 235ff.**

Other receivables include claims of EUR 28m (previous year: EUR 137m) 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 26m for outstanding obligations relating to this accident (previous year: EUR 130m). The change stems from a revaluation of the outstanding obligations by the insurer.

Other receivables of EUR 70m (previous year: EUR 0m) 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 operating activities.

31 Cash and cash equivalents

This item includes EUR 6m in fixed-term deposits (previous year: EUR 2m) with terms of four to twelve months. Bank balances in foreign currencies are translated at the exchange rate on the balance sheet date.

32 Assets held for sale

T107 ASSETS HELD FOR SALE AND ADDITIONAL LIABILITIES

in €m	31 Dec 2022	31 Dec 2021
Assets		
Aircraft and reserve engines	315	216
Land and buildings	2	9
Financial assets	–	11
Other assets	2	34
Total	**319**	**270**
Shareholders' equity and liabilities		
Pension provisions	–	6
Other provisions	–	21
Borrowings	–	1
Other liabilities	–	35
Total	**–**	**63**

Aircraft and reserve engines held for sale consist of six Airbus A380s. All the aircraft held for sale were allocated to the Passenger Airlines segment.

In the previous year, this item comprised 13 aircraft (three Airbus A380s, seven A320/321s and three Bombardier CRJ9s). Other assets and liabilities relate to Lufthansa Technik Shannon Ltd. and Lufthansa Technik Maintenance International GmbH, which were available for sale as of 31 December 2021.

The projects to sell the divisions AirPlus credit card business and Catering were not so far advanced at year-end that a disposal within the next twelve months could be assumed with sufficient probability, or that there would only be immaterial changes to the disposal plans.

Contracts signed for the sale of aircraft are expected to generate cash inflows of EUR 315m (previous year: EUR 182m).

Shareholders' equity and liabilities

33 Issued capital

SHARE CAPITAL

Deutsche Lufthansa AG's issued capital totals EUR 3,060,443,248.64. It is divided into 1,195,485,644 registered shares with transfer restrictions, with each share representing EUR 2.56 of issued capital.

AUTHORISED CAPITAL

A resolution passed at the Annual General Meeting on 10 May 2022 authorised the Executive Board until 9 May 2025, subject to approval by the Supervisory Board, to increase the Company's issued capital by up to EUR 1,000,000,000 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 2022, 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.

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

On 10 May 2022, the Annual General Meeting increased the Company's contingent capital by up to EUR 306,044,326.40. 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 9 May 2027. In certain cases, the shareholders' subscription rights can be excluded with the approval of the Supervisory Board.

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.

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 the 2022 financial year. No treasury shares were held as of the balance sheet date.

CAPITAL MANAGEMENT

The aim of capital management is to cover future funding requirements at low cost and to ensure that financial debt can be repaid, by ensuring good access to the capital markets. To achieve this, gearing, measured by the ratio of Adjusted net debt to Adjusted EBITDA, should be limited to a figure of less than 3.5. The figure was 2.3 as of 31 December 2022 (previous year: 25.8) and, together with Adjusted net debt, takes into account both net indebtedness (including the financial obligations arising from lease agreements, primarily for property and aircraft) and net pension obligations.

The balance sheet ratios for equity and debt were as follows as of 31 December 2022 and 2021:

T108 EQUITY AND LIABILITIES

	31 Dec 2022		31 Dec 2021	
	in €m	**in % of total assets**	in €m	in % of total assets
Shareholders' equity	8,474	19.6	4,490	10.6
Liabilities	34,861	80.4	38,048	89.4
Total capital	**43,335**	**100.0**	**42,538**	**100.0**

In the 2022 financial year, the equity ratio went up by 9.0 percentage points to 19.6%, particularly due to interest rate-related measurement effects on pension provisions and positive consolidated net income.

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. An amount of EUR 704m from the capital reserve was used in the financial year to neutralise the loss incurred in the HGB accounts. The statutory reserve of EUR 26m from Deutsche Lufthansa AG, which is included in retained earnings, was also fully reversed for this purpose. No reserves were reversed in the previous year. Otherwise they consist of other retained earnings.

The following table shows changes in other neutral reserves in the 2022 financial year:

T109 NOTES ON OTHER COMPREHENSIVE INCOME

in €m	**2022**	2021
Currency translation differences		
Profit/loss for the period	150	193
Reclassification adjustments recognised in profit or loss	–	–
Subsequent measurement of financial assets at fair value (with recycling)	-108	-27
Subsequent measurement of financial assets at fair value (without recycling)	–	2
Profit/loss for the period	–	–
Reclassification adjustments recognised in profit or loss	–	–
Subsequent measurement of hedges – cash flow hedge reserve	1,331	1,009
Subsequent measurement of hedges – costs of hedging	-56	96
Profit/loss for the period	1,436	1,095
Reclassification adjustments recognised in profit or loss	-161	10
Other comprehensive income from investments accounted for using the equity method		
Profit/loss for the period – reclassifiable	-11	7
Profit/loss for the period – non-reclassifiable	–	–
Revaluation of defined-benefit pension plans	4,648	2,933
Other expenses and income recognised directly in equity (with recycling)	-1	-1
Other expenses and income recognised directly in equity (without recycling)	42	–
Income taxes on items in other comprehensive income	-1,881	-810
Other comprehensive income after income taxes	**4,114**	**3,402**

T110 NOTE ON INCOME TAXES RECOGNISED FOR OTHER COMPREHENSIVE INCOME

	2022			2021		
in €m	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	150	–	150	193	–	193
Subsequent measurement of financial assets and liabilities at fair value (with recycling)	-108	32	-76	-27	7	-20
Subsequent measurement of financial assets at fair value (without recycling)	–	–	–	2	–	2
Subsequent measurement of hedges – cash flow hedge reserve	1,331	-285	1,046	1,009	-234	775
Subsequent measurement of hedges – costs of hedging	-56	-8	-64	96	-17	79
Other comprehensive income from investments accounted for using the equity method – reclassifiable	-11	–	-11	7	–	7
Revaluation of defined-benefit pension plans	4,648	-1,620	3,028	2,933	-566	2,367
Other expenses and income recognised directly in equity (with recycling)	-1	–	-1	-1	–	-1
Other expenses and income recognised directly in equity (without recycling)	42	–	42	–	–	–
Other comprehensive income	**5,995**	**-1,881**	**4,114**	**4,212**	**-810**	**3,402**

The overall change in equity is shown in table ↗ T059 **Consolidated statement of changes in shareholders' equity, p. 167.**

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, Lufthansa Technik group and 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 0.25% 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. Since 2021, the collective retirement age for pilots is 60.

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, after the wage agreement "Crisis Contribution and Safeguard Cabin Staff LHA" was terminated early. This reduction applied until 31 October 2022 for cabin staff and was 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 2004 financial year, 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. Ongoing contributions to defined contribution plans in Germany were suspended from the second quarter of 2020 due to the crisis and resumed in the reporting period. Outstanding contributions were made good with one-off payments. In addition, reimbursements totalling EUR 325m (previous year: EUR 328m) 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.

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 disability and surviving 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; 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.

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, occupational disability and surviving 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. 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 balance sheet for defined benefit commitments are made up as follows:

T111 DEFINED-BENEFIT RETIREMENT COMMITMENTS

	31 Dec 2022				31 Dec 2021			
in €m	**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	11,957	-11,264	–	693	18,191	-13,166	–	5,025
Transitional benefits Germany	1,251	-134	–	1,117	1,568	-266	–	1,302
Switzerland	3,307	-3,865	560	2	3,968	-4,119	121	-30
Austria	283	-141	–	142	385	-176	–	209
USA	273	-271	–	2	339	-345	–	-6
Other countries	319	-282	–	37	484	-438	–	46
Carrying amounts	**17,390**	**-15,957**	**560**	**1,993**	**24,935**	**-18,510**	**121**	**6,546**
of which pension provisions	–	–	–	2,069	–	–	–	6,682
of which other assets	–	–	–	76	–	–	–	136
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:

T112 ALLOCATION OF DEFINED-BENEFIT COMMITMENTS

in €m	**2022**	2021
Active employees	9,767	15,806
Vested employees who have left the company	1,705	2,189
Retired employees	5,918	6,940
	17,390	**24,935**

The weighted duration of pension obligations was 15 years as of 31 December 2022 (previous year: 20 years).

The changes between the opening balance and the closing balance of the pension obligation, the plan assets and the pension provision are as follows:

T113 PERFORMANCE OBLIGATIONS TO EMPLOYEES

	2022					2021				
in €m	**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
Opening balance as of 1 Jan	**24,935**	**18,510**	**6,425**	**121**	**6,546**	**26,528**	**17,037**	**9,491**	**–**	**9,491**
Current service costs	497	–	497	–	497	508	–	508	–	508
Past service cost/effects of curtailments	19	–	19	–	19	-89	–	-89	–	-89
Interest expenses/interest income	293	210	83	–	83	201	119	82	–	82
Total amount recognised in profit and loss	**809**	**210**	**599**	**–**	**599**	**620**	**119**	**501**	**–**	**501**
Actuarial gains/losses from changes in financial assumptions	-7,759	–	-7,759	–	-7,759	-1,978	–	-1,978	–	-1,978
Actuarial gains/losses from changes in demographic assumptions	-1	–	-1	–	-1	-150	–	-150	–	-150
Gains/losses from experience adjustments	-98	–	-98	–	-98	209	–	209	–	209
Performance of plan assets, without amounts included in interest	–	-2,784	2,784	–	2,784	–	1,132	-1,132	–	-1,132
Effect from asset ceiling	–	–	–	426	426	–	–	–	121	121
Total amount recognised in other comprehensive income	**-7,858**	**-2,784**	**-5,074**	**426**	**-4,648**	**-1,919**	**1,132**	**-3,051**	**121**	**-2,930**
Plan contributions – employees	84	81	3	–	3	83	81	2	–	2
Plan contributions – employers	–	397	-397	–	-397	–	486	-486	–	-486
Pension payments	-746	-678	-68	–	-68	-630	-598	-32	–	-32
Settlement payments	-12	-12	–	–	–	-6	-7	1	–	1
Total amount recognised in the Group cash flow statement	**-674**	**-212**	**-462**	**–**	**-462**	**-553**	**-38**	**-515**	**–**	**-515**
Currency translation differences	194	209	-15	13	-2	231	239	-8	–	-8
Changes in the group of consolidated companies	-12	-6	-6	–	-6	–	–	–	–	–
Other/reclassifications	-4	30	-34	–	-34	28	21	7	–	7
Closing balance as of 31 Dec	**17,390**	**15,957**	**1,433**	**560**	**1,993**	**24,935**	**18,510**	**6,425**	**121**	**6,546**
of which pension obligations	–	–	–	–	2,069	–	–	–	–	6,682
of which present value of non-funded pension obligations	–	–	–	–	230	–	–	–	–	539
of which surpluses of plan assets over pension obligations	–	–	–	–	76	–	–	–	–	136
of which shown under liabilities for disposal	–	–	–	–	–	–	–	–	–	6

Interest expenses on pension provisions and interest income on plan assets are shown in the financial result. The current service cost and past service cost are recognised in staff costs.

The past service cost incurred in the reporting year is mainly due to a reverse effect in connection with transitional benefits for cockpit staff, which were not reduced as had been planned the previous year.

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 realised a loss of EUR 2,574m in the 2022 financial year (previous year: gain of EUR 1,251m). This amount is made up of the interest income recognised in the income statement and the revaluation component for plan assets.

The outflows of plan assets due to pension payments of EUR 678m include the financing of pensions in Germany from CTA assets in the amount of EUR 325m.

Information on tax assets related to pension obligations can be found in table ↗ T081 **Deferred tax assets and liabilities, p. 192.**

The main actuarial assumptions used to calculate pension obligations and the corresponding plan assets are shown below:

T114 MAIN ACTUARIAL ASSUMPTIONS FOR GERMAN COMPANIES

in %	**31 Dec 2022**	31 Dec 2021
Interest rate		
Retirement benefits	4.2	1.3
Transitional benefits	4.2	1.3
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 procedure for measuring the discount rate for pension obligations in the euro zone was adjusted as of 31 December 2022. Essentially, the adjusted procedure now also takes into account public sector bonds rated AA within the scope of the extrapolation. The adjustment was made because of the limited number of long-term rates of return from first-rate industry bonds, which is why the previous calculation method was particularly influenced by the change in these few long-term returns. The discount rate calculated in this way was 4.2% as of 31 December 2022. Had the previous calculation method been used, the discount rate would have been 0.3 percentage points lower as of the same reporting date. This deviation results in a EUR 500m lower present value for the pension obligations. In 2023, this adjustment will lead to a lower service cost of around EUR 5m, which will be offset by the higher interest expense.

The Heubeck Actuarial Tables 2018 G were used in the biometric calculations for the German companies in the Group.

T115 MAIN ACTUARIAL ASSUMPTIONS FOR FOREIGN COMPANIES

in %	31 Dec 2022	31 Dec 2021
Interest rate		
Austria	4.2	1.3
Switzerland	2.4	0.3
USA	5.0	2.7
Salary increase		
Austria	1.8	1.6
Switzerland	2.1	1.5
USA	–	–
Pension increase		
Austria	1.8	1.8
Switzerland	–	–
USA	–	–

The BVG 2020 generation tables are used for the biometric calculations for Switzerland.

The following table shows how the present value of the defined benefit obligations would have been affected by changes in the relevant actuarial assumptions for the main pension plans described above.

T116 CHANGE IN ACTUARIAL ASSUMPTIONS

	2022		2021	
	Effect on the defined-benefit contribution as of 31 Dec 2022 in €m	Change in %	Effect on the defined-benefit contribution as of 31 Dec 2021 in €m	Change in %
Present value of the obligation[1]	17,390	–	24,937	–
Interest rate				
Increase by 0.5 percentage points	16,423	-5.6	22,797	-8.6
Decrease by 0.5 percentage points	18,455	+ 6.1	26,950	+8.1
Salary trend				
Increase by 0.5 percentage points	17,474	+ 0.5	24,975	+0.2
Decrease by 0.5 percentage points	17,318	-0.4	24,901	-0.1
Pension trend				
Increase by 0.5 percentage points	17,573	+ 1.0	25,201	+1.1
Decrease by 0.5 percentage points	17,367	-0.1	24,907	-0.1

[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 rates would therefore increase the present value of the main benefit obligations in Germany and Switzerland by EUR 56m as of 31 December 2022 (previous year: EUR 323m).

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.

The plan assets are made up as follows:

T117 COMPOSITION OF PLAN ASSETS

	31 Dec 2022				31 Dec 2021			
	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			**5,359**	**33.6**			6,579	35.5
Europe	2,084	–			2,745	–		
Other	3,275	–			3,834	–		
Fixed-income securities			**5,084**	**31.9**			6,933	37.4
Government bonds	2,340	–			3,482	–		
Corporate bonds	2,744	–			3,451	–		
Share funds	166	–	**166**	**1.0**	173	–	173	0.9
Fixed-income funds	135	–	**135**	**0.8**	643	–	643	3.5
Mixed funds[1]	64	–	**64**	**0.4**	114	–	114	0.6
Money market investments	1,572	–	**1,572**	**9.9**	810	–	810	4.4
Property			**1,476**	**9.2**			1,348	7.3
Direct investments	–	11			–	9		
Indirect investments	1,034	431			957	382		
Insurance contracts	–	104	**104**	**0.7**	–	140	140	0.8
Bank balances	207	390	**597**	**3.7**	238	–	238	1.3
Other investments[2]	184	1,216	**1,400**	**8.8**	232	1,300	1,532	8.3
Total	**13,805**	**2,152**	**15,957**	**100.0**	**16,679**	**1,831**	**18,510**	**100.0**

[1] Mixed funds include equities and interest-bearing securities.
[2] Other investments include, in particular, alternative investments such as hedge funds, commodities and private equity funds.

The 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 cover 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, an estimated EUR 481m is expected to be transferred to pension plans in the 2023 financial year (previous year: EUR 365m). In Germany, they only relate to capital market-oriented schemes. The transfers are made up of planned allocations and benefit payments which 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:

T118 FORECAST MATURITIES OF UNDISCOUNTED PENSION PAYMENTS

in €m	**Forecast pension payments 31 Dec 2022**	Forecast pension payments 31 Dec 2021
2023 (previous year: 2022)	661	636
2024 (previous year: 2023)	671	641
2025 (previous year: 2024)	687	655
2026 (previous year: 2025)	721	666
2027 (previous year: 2026)	744	700
2028 – 2032 (previous year: 2027 – 2031)	4,048	3,873

The projected maturities for pension payments do not include possible allocations 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 385m in 2022 (previous year: EUR 298m). These mainly relate to contributions to statutory pension schemes, but also include collective bargaining contributions or voluntary contributions to other pension schemes. The increase stemmed mainly from higher statutory pension contributions, particularly due to less short-time work and higher salaries.

36 Other provisions

Other provisions disclosed in the statement of financial position as non-current and current other provisions are made up as follows:

T119 NON-CURRENT AND CURRENT OTHER PROVISIONS

	31 Dec 2022			31 Dec 2021		
in €m	Total	Non-current	Current	Total	Non-current	Current
Obligations under partial retirement contracts	103	82	21	50	48	2
Other staff costs	196	157	39	197	160	37
Obligation to return emissions certificates	125	–	125	20	–	20
Onerous contracts	161	104	57	169	109	60
Environmental restoration	39	29	10	31	28	3
Legal proceedings	243	28	215	247	56	191
Restructuring/severance payments	125	55	70	487	54	433
Maintenance of lease aircraft	310	212	98	342	165	177
Warranties	81	–	81	65	–	65
Other provisions	246	90	156	350	83	267
Total	**1,629**	**757**	**872**	**1,958**	**703**	**1,255**

The obligations from partial retirement agreements result from collective bargaining agreements in Germany. In 2022, the obligations were measured using an interest rate of 3.16% (previous year: 0.00%). The addition to this item comes mainly from the amount needed to settle the obligation, which increases over time, as the majority of employees choose the block model, in which they first work full time for less pay, and then no longer have to work while continuing to receive reduced pay. The interest effects shown in table ↗ T121, p. 219, on the development of other provisions resulted from the changes in the fair value of the plan assets.

To protect outstanding obligations under partial retirement agreements in the event of insolvency, funds were transferred to an external trust and reinsurance policies were taken out. These assets, which fulfil the requirements for plan assets and therefore reduce the gross amount of obligations accordingly, are measured at fair value on the balance sheet date.

The funding status for provisions for obligations to employees under partial retirement agreements is as follows:

T120 FUNDING STATUS

in €m	2022	2021
Present value of funded obligations under partial retirement agreements	240	183
External plan assets	-139	-137
	101	**46**
of which other provisions	103	50
of which other assets	2	2
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 CO_2 emissions certificates to the relevant authorities is recognised for an amount equivalent to the carrying amount of the capitalised CO_2 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 provisions for expected losses from onerous contracts relate in particular to maintenance contracts at Lufthansa Technik AG, where agreed revenues 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. ↗ **Note 11, p. 190.**

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 reversals particularly relate to voluntary severance programmes set up in 2021 at Deutsche Lufthansa AG, where the take-up rate was lower than expected, meaning that the provisions created had to be reversed once the deadlines for acceptance expired in 2022.

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 26m (previous year: EUR 130m) 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. In the reporting year, the insurers updated their estimate of the payments still expected, which resulted in the reversal of the provision of EUR 109m and a corresponding reduction in the compensation claim.

Changes in individual provisions in 2022 were as follows:

T121 CHANGES IN OTHER PROVISIONS 2022

in €m	Obligations under partial retirement contracts	Other staff costs	Obligation to return emissions certificates	Expected losses from onerous contracts	Environmental restoration	Legal proceedings	Restructuring/ severance payments	Maintenance of lease aircraft	Warranties	Other provisions	**Total**
As of 1 Jan 2022	50	197	20	169	31	247	487	342	65	350	**1,958**
Changes in the group of consolidated companies	–	1	–	–	–	–	–	–	2	–	**3**
Currency translation differences	–	1	–	–	–	1	–	8	–	–	**10**
Utilisation	-64	-29	-12	-39	-1	-31	-294	-167	-12	-66	**-715**
Increase/addition	120	26	120	44	9	48	21	146	32	93	**659**
Interest added back	5	2	–	–	–	–	–	–	–	–	**7**
Reversal	–	-14	-6	-13	–	-23	-99	-25	-6	-140	**-326**
Transfers	-8	12	3	–	–	1	10	6	–	9	**33**
As of 31 Dec 2022	**103**	**196**	**125**	**161**	**39**	**243**	**125**	**310**	**81**	**246**	**1,629**

Changes in individual provisions in the previous year were as follows:

T121 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	Restructuring/ severance payments	Maintenance of lease aircraft	Warranties	Other provisions	Total
As of 1 Jan 2021	32	209	50	88	31	65	221	323	47	323	1,389
Changes in the group of consolidated companies	–	–	–	–	–	–	–	–	–	–	–
Currency translation differences	–	1	-4	-2	–	-1	2	3	1	2	2
Utilisation	-49	-32	-39	-12	-1	-6	-137	-39	-10	-56	-381
Increase/addition	80	24	18	111	1	199	427	61	30	85	1,036
Interest added back	1	–	–	–	–	–	–	–	–	–	1
Reversal	–	-5	–	-16	–	-10	-10	-4	-3	-14	-62
Transfers	-14	–	-5	–	–	–	-16	-2	–	10	-27
As of 31 Dec 2021	**50**	**197**	**20**	**169**	**31**	**247**	**487**	**342**	**65**	**350**	**1,958**

The following cash outflows are estimated for the non-current portion of the other groups of provisions:

T122 CASH OUTFLOWS FOR NON-CURRENT PROVISIONS

	2022				2021			
in €m	2024	2025	2026	2027 and thereafter	2023	2024	2025	2026 and thereafter
Expected losses from onerous contracts	23	21	16	52	20	14	13	61
Environmental restoration	3	3	3	20	3	3	3	19
Restructuring/severance payments	49	4	2	1	23	28	3	–
Maintenance of aircraft on leases	42	39	79	55	74	29	18	45
Other provisions	37	24	16	35	61	27	13	42

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. Table T123 shows the total amount of borrowings.

T123 FINANCIAL LIABILITIES

in €m	31 Dec 2022			31 Dec 2021		
	Total	Non-current	Current	Total	Non-current	Current
Bonds	**6,659**	6,060	599	6,697	6,697	–
Liabilities to banks	**1,558**	1,268	290	2,461	1,680	781
Leasing liabilities	**2,444**	2,041	403	2,370	1,962	408
Other loans	**4,490**	3,901	589	5,142	4,702	440
	15,151	**13,270**	**1,881**	**16,670**	**15,041**	**1,629**

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 bonds with fixed redemption amounts issued under the Euro Medium Term Notes programme. 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. The programme enables bonds to be issued up to a total volume of EUR 10bn. 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 at a conversion price of EUR 9.23. 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 interest payments on this bond were suspended in line with the conditions of the ESF stabilisation package, and were settled once the stabilisation measure ended in the 2022 financial year.

Of the liabilities to banks, borrower's note loans account for EUR 1,242m. One borrower's note loan with a book value of EUR 64m was secured by an aircraft. This item also includes liabilities of EUR 120m from an asset-backed security issued this year by Lufthansa AirPlus Servicekarten GmbH, which is backed by receivables of EUR 191m.

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. 200f.**

The Lufthansa Group's lease liabilities have the following term structure: The disclosures are based on contractual, undiscounted payments.

T124 MATURITY ANALYSIS OF LEASE LIABILITIES

in €m	**31 Dec 2022**	31 Dec 2021
1st quarter	120	126
Up to 1 year[1]	333	334
1 – 5 years	1,239	1,161
Later	1,310	1,168

[1] Without payments in 1st quarter.

Under other loans, EUR 4,407m (previous year: EUR 4,464m) was attributable to structured leasing companies and other aircraft financing models (↗ **Note 19, p. 197f.**). This amount was secured by the respectively financed aircraft. A total of nine additional aircraft financing arrangements were concluded in 2022.

A subsidy of EUR 3m was calculated for 2022 for the below-market interest rate on the secured loan granted as part of the stabilisation measures in Belgium, which was repaid as of year-end.

In both the 2022 financial year and the 2021 financial year, all payment obligations and requirements from the loan agreements described have been fulfilled.

38 Non-current contract liabilities

T125 NON-CURRENT CONTRACT LIABILITIES

in €m	31 Dec 2022	31 Dec 2021
Non-current contract liabilities	30	30
	30	**30**

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

T126 NON-CURRENT ADVANCE PAYMENTS RECEIVED, DEFERRED INCOME AND OTHER NON-FINANCIAL LIABILITIES

in €m	31 Dec 2022	31 Dec 2021
Advance payments received	2	7
Deferred income	12	14
Other non-financial liabilities	30	9
	44	**30**

Deferred income includes EUR 4m (previous year: EUR 6m) for government grants and subsidies for capital expenditure, 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, senior executives 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 senior executives and non-payscale employees.

The option packages granted in 2019, 2020 and 2021 include an outperformance option and a performance option. At the end of the programme, participants receive a cash payment if the conditions are met. The Group programme for non-payscale employees was last offered in 2019. The 2021 programme was set up retroactively for senior executives in the 2022 financial year.

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 out-performance, 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; both a hurdle rate and a cap apply.

The programmes are scheduled to run for four years. By contrast, the duration of the 2021 programme for senior executives was reduced slightly to three-and-a-half 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.

As a result of the regulations in the stabilisation agreement with the ESF, the 2020 and 2021 programmes for senior executives was only offered with a contribution of shares. The discount of 50% only applies to some of the potential tranches in the 2020 programme for senior executives. The discounts were paid to employees at year-end 2022 after the ESF-sharehold-ing had come to an end.

T127 OUTPERFORMANCE OPTION – OVERVIEW

	€ per outperformance level	Maximum per tranche in €
Managers	400 per percentage point from 1%	8,000
Non-payscale staff	200 per 5 percentage points from 1%	1,000

T128 PERFORMANCE OPTION – PERFORMANCE TARGETS

Performance option per year	Hurdle rate	Cap
2019	22%	33%
2020	20%	35%
2021	20%	35%

T129 PERFORMANCE OPTION – PAYMENT AMOUNTS

	€ per performance level	Maximum per tranche in €
Managers	4,000 + 500 per performance unit	8,000
Non-payscale staff	500 + 100 per performance unit	1,000

A modified 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. The target achievement and corresponding payments for the 2019 programme depend on the percentile reached by Deutsche Lufthansa AG. The target achievement is adjusted on a linear basis for a position between the 25th and 50th percentile, and between the 50th and 75th percentile.

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) or Adjusted EBIT 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 lower weighted average cost of capital (WACC). The sustainability parameters are set by the Supervisory Board for each performance period. The TSR performance target was replaced by the target “Repayment of stabilisation measures” in 2021. For the performance targets not dependent on the market, an expected target achievement of 0% for the adjusted ROCE and 130% for the sustainability parameter was assumed within the framework of the measurement for 2020; for 2021 an expected target achievement of 200% was assumed for the repayment of stabilisation measures, of 200% for adjusted EBIT and of 138.8% for the sustainability parameter, and for 2022 an expected target achievement of 200% for adjusted ROCE and 0% for the sustainability parameter. 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.

During financial years 2022 and 2021, the number of options changed as follows:

T130 CHANGE IN NUMBER OF OPTIONS AND VIRTUAL SHARES

	2022			2021		
	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	14,736	571,106	–	19,582	571,106	–
Issued	1,905	2,041,412	–	–	–	–
Expired or unused	616	–	–	4,846	–	–
Exercised	5,229	–	2,618	–	–	–
Outstanding on 31 Dec	10,796	2,612,518	–	14,736	571,106	–

The outperformance option of the 2018 share programme, which has now expired, resulted in a payment of EUR 2.6m (previous year: 2017 share programme, no payment). For the 2021 share programme, which was only offered to senior executives, a retroactive discount of 50% was granted in the financial year. This gave rise to staff costs of EUR 4.5m in the financial year. Participants in the programme therefore hold 2,873,092 shares as of the reporting date (previous year: 2,610,934 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 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:

T131 FAIR VALUE OF OPTION RIGHTS AND VIRTUAL SHARES AS OF 31 DEC 2022

	Number of options/ virtual shares	Fair value per option/ virtual share in €	Proportional vested benefit	Total fair value in €
Board member				
Virtual shares 2020	571,106	2.52	0.90	1,300,135
Virtual shares 2021	957,126	11.00	1.00	10,528,386
Virtual shares 2022	1,084,286	7.99	1.00	8,663,445
Managers				
Options 2019	2,836	6,688	0.79	15,015,675
Options 2020	2,279	5,295	0.52	6,285,055
Options 2021	1,880	6,030	0.23	2,636,372
Non-payscale staff				
Options 2019	3,801	830	0.79	2,497,574
Options 2020	–	–	–	–
Options 2021	–	–	–	–
Total options and virtual shares	**2,623,314**			**46,926,642**
of which options	10,796			
of which virtual shares	2,612,518			

T131 FAIR VALUE OF OPTION RIGHTS AND VIRTUAL SHARES 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	–	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			

Staff turnover of 7.41% is again assumed when accounting for the liability resulting from the valuation of option rights, with the result that the recognised liability is less than the calculated time value. The measurement of option rights therefore results in a provision of EUR 44.2m as of the reporting date (previous year: EUR 9.9m), of which EUR 28.8m (previous year: EUR 9.8m) is shown under non-current liabilities. The payment of EUR 2.6m made in the financial year for expired option rights and the payment to employees of discounts amounting to EUR 4.5m increased staff costs, which went up overall in the financial year by EUR 45.2m as a result of the changes in the option rights.

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 Deutsche Lufthansa AG shares 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 programmes 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 historical TSR data. The share prices for the past four years were used to calculate historical volatility. The measurement for the 2020 programme took into account a remaining term of 13 months and a risk-free interest rate of 2.00%, for the 2021 programme a remaining term of 25 months and a risk-free interest rate of 2.08%, and for the 2022 programme a remaining term of 37 months and a risk-free interest rate of 2.01%.

The parameters used by the external service provider for the notional airline peer group index are shown in the following table:

T132 REFERENCE PRICE

		Options 2019	Options 2020	Options 2021
Lufthansa	EUR	14.84	8.53	6.99
Air France-KLM	EUR	9.90	3.68	4.10
IAG	GBP	480.37	122.08	157.32
Ryanair	EUR	11.00	13.54	16.40
easyJet	GBP	1,131.63	623.82	625.16
Norwegian	NOK	37.49	–	–
WIZZair	GBP	3,667.66	3,781.00	4,237.54
Turkish Airlines	TRY	–	10.84	26.47

T133 PROJECTED VOLATILITIES

in % for:	Options 2019 as of 31 Dec 2022	Options 2019 as of 31 Dec 2021	Options 2020 as of 31 Dec 2022	Options 2020 as of 31 Dec 2021	Options 2021 as of 31 Dec 2022	Options 2021 as of 31 Dec 2021
Lufthansa	43.82	53.54	42.20	47.04	50.50	–
Air France-KLM	54.31	55.44	46.70	50.68	55.03	–
IAG	49.22	71.87	50.22	61.35	65.12	–
Ryanair	42.25	48.32	40.43	44.38	46.34	–
easyJet	50.02	70.00	49.34	61.44	63.94	–
Norwegian	51.31	142.19	–	–	–	–
WIZZair	67.75	55.38	43.05	48.16	59.81	–
Turkish Airlines	–	–	55.60	38.80	43.60	–
Risk-free interest rate	Options 2019: 2.00% for euro zone (previous year: –0.81%) 3.28% for UK (previous year: 0.23%) 3.27% for Norway (previous year: 0.78%) Options 2020: 2.08% for euro zone (previous year: –0.82%) 3.28% for UK (previous year: 0.43%) 9.00% for Norway (previous year: 1.06%)				Options 2021: 2.02% for euro zone (previous year: –0.79%) 3.26% for UK (previous year: 0.50%) 9.00% for Turkey (previous year: 15.00%)	
Fluctuation	7.41% (previous year: 6.08%)				7.41% (previous year: 6.08%)	

40 Current contract liabilities

The Lufthansa Group recognised the following contract liabilities:

T134 **CONTRACT LIABILITIES**

in €m	31 Dec 2022	31 Dec 2021
Contract liabilities from unused flight documents	**4,898**	**3,340**
Liabilities from customer loyalty programmes	2,087	2,131
Liabilities from MRO and IT services	261	319
Miscellaneous contract liabilities	334	159
Other contract liabilities	**2,682**	**2,609**
Liabilities from contracts with customers	**7,580**	**5,949**
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	2,512	1,253
Revenue from customer loyalty programmes	358	292
Revenue from MRO and IT services	191	235
Other	128	418
Total	**3,189**	**2,198**

The increase in contract liabilities for unused flight documents results from higher ticket sales for future air travel in the reporting year. Of the contract liabilities as of 31 December 2021, EUR 298m (previous year: EUR 569m) could not be realised and was refunded to customers. Ticket refunds totalling EUR 2,045m (previous year: EUR 1,614m) were made in connection with flight cancellations in 2022. Only a partial expiry is currently assumed with regard to potentially unused tickets relating to flights during the crisis period; revenue is thus recognised for this “breakage”, as it is known.

Liabilities under customer loyalty programmes as of 31 December 2022 included 227 billion miles from bonus miles programmes (previous year: 225 billion miles). 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 total redemptions in the financial year, which remained low due to the still 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. In the reporting year this lead to overcompensation for the effect recognised in profit or loss of the accrued performance obligation for the current year.

The remaining performance obligation under existing long-term service contracts came to EUR 8.2bn in total, assuming that the services are performed as agreed, of which EUR 1.5bn relate to the next twelve months. These essentially consist of maintenance contracts in the MRO segment for the long-term maintenance and overhaul of airline sub-fleets. To calculate the outstanding performance obligations, the number of maintenance inspections 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 70% of performance obligations beyond twelve months are expected to have been fulfilled by 2028.

As in the previous year, no revenue was recognised in 2022 for performance obligations fulfilled in prior financial years.

In line with the simplification rules of IFRS 15, disclosures are not made on performance obligations as of 31 December 2022 or 31 December 2021 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 simplification rule 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 simplification rule 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

T135 TRADE PAYABLES AND OTHER CURRENT FINANCIAL LIABILITIES

in €m	31 Dec 2022	31 Dec 2021
Trade payables		
Trade payables to affiliated companies	118	49
Trade payables to other equity investments	–	1
Trade payables to third parties	3,923	2,831
	4,041	**2,881**
Other liabilities		
Liabilities to banks	21	19
Other liabilities to affiliated companies	327	292
Other liabilities to equity investments	–	–
Liabilities from equity investments	531	82
Other financial liabilities	740	912
	1,619	**1,305**
Total	**5,660**	**4,186**

The carrying amount of these liabilities corresponds to their fair value. Other liabilities of EUR 9m (previous year: EUR 135m) serve as collateral for positive fair 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 eight participating banks. As of 31 December 2022, the SCF programme was used by the Group companies Deutsche Lufthansa AG, Lufthansa Cargo AG and Lufthansa Technik AG. As of the reporting date, thirteen suppliers with an outstanding trade payables volume of EUR 316m (previous year: EUR 50m) participated. 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

T136 CURRENT ADVANCE PAYMENTS RECEIVED, DEFERRED INCOME AND OTHER NON-FINANCIAL LIABILITIES

in €m	31 Dec 2022	31 Dec 2021
Advance payments received	25	27
Deferred income	52	57
Other non-financial liabilities	604	564
	681	**648**

Other non-financial liabilities also include the current portion of obligations under share-based remuneration agreements measured at fair value (↗ **Note 39, p. 222ff.**). In addition, EUR 230m (previous year: EUR 194m) relates to deferred amounts for outstanding holiday allowance and overtime.

NOTES TO THE SEGMENT REPORTING

43 Notes to the reporting segments and segment data

NOTES TO THE REPORTING SEGMENTS

As of 31 December 2022, the Lufthansa Group operates in four reporting segments, which constitute its Group activities. The segments are defined in line with the internal reporting and management structure. The Eurowings business segment no longer reports separately, in contrast to the previous year, but as part of the Passenger Airlines segment. This is due to the alignment of the business models whereby all Passenger Airlines are now managed centrally by the Executive Board of the Lufthansa Group. 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 Passenger Airlines segment comprises Lufthansa German Airlines, SWISS, Austrian Airlines, Brussels Airlines and Eurowings, including the equity interest in SunExpress. The previous year's figures in the segment reporting have been adjusted to reflect this change. Further information about the individual airlines can be found in the Group management report ↗ starting on p. 52.

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 reporting segment are presented in table ↗ T137, p. 229f., in the "Additional Businesses and Group Functions" column along with the income and expenses of central 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 reporting segments are the same as those described in ↗ Note 3, p. 170ff.

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. The definition of the performance indicator Adjusted EBIT was changed in the reporting year. In addition to the existing reconciliation items from EBIT to Adjusted EBIT (impairment losses/write-ups, results from disposals, effects of changes to pension plans), expenses for staff-related restructuring activities, material extraordinary legal expenses not incurred in the normal course of business, material costs in connection with company transactions, and material other expenses due to extraordinary external events are now not included in the performance indicator of operating profit. This change was made to ensure greater comparability with the reporting of other companies in the industry and to increase the transparency of non-recurring items. In the current financial year, the expenses for valuation allowances, depreciation and amortisation and impending compensation payments that were directly caused by the war in Ukraine were treated as key issues that were excluded from the Adjusted EBIT calculation. The comparable figures for the previous year were adjusted accordingly (relevant in 2021: restructuring costs).

Sales and revenue between reporting segments are based on arm's length prices. Administrative services are charged as cost allocations.

For information on external traffic revenue ↗ Note 4, p. 185.

Capital employed largely comprises segment assets, adjusted for derivative financial instruments, and deferred tax items less non-interest-bearing debt. Cash and cash equivalents are no longer included as of the reporting year. The figures shown for the previous year have been adjusted accordingly.

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.

T137 SEGMENT INFORMATION FOR THE 2022 REPORTING SEGMENTS

in €m	Passenger Airlines	Logistics	MRO	Catering	Total reportable operating segments	Additional Businesses and Group Functions	Reconciliation		Group
							Not allocated	Consolidation	
External revenue	21,873	4,582	4,004	1,903	32,362	408	–	–	32,770
of which traffic revenue	20,687	4,430	–	–	25,117	–	729	–	25,846
Inter-segment revenue	887	45	1,546	57	2,535	243	–	-2,778	–
Total revenue	**22,760**	**4,627**	**5,550**	**1,960**	**34,897**	**651**	**–**	**-2,778**	**32,770**
Other operating income	1,025	106	401	51	1,583	2,117	–	-1,315	2,385
Total operating income	**23,785**	**4,733**	**5,951**	**2,011**	**36,480**	**2,768**	**–**	**-4,093**	**35,155**
Operating expenses	**24,100**	**3,171**	**5,384**	**2,015**	**34,670**	**3,050**	**–**	**-4,058**	**33,662**
of which cost of materials and services	14,492	2,295	3,066	784	20,637	298	–	-2,301	18,634
of which staff costs	4,584	425	1,379	833	7,221	835	–	-3	8,053
of which depreciation and amortisation	1,766	170	178	77	2,191	117	–	-31	2,277
of which other operating expenses	3,258	281	761	321	4,621	1,800	–	-1,723	4,698
Results of equity investments [1]	**15**	**38**	**-56**	**-7**	**-10**	**27**	**–**	**-1**	**16**
of which result of investments accounted for using the equity method	33	8	-56	-9	-24	–	–	-1	-25
Adjusted EBIT [2]	**-300**	**1,600**	**511**	**-11**	**1,800**	**-255**	**–**	**-36**	**1,509**
Reconciliation items	**21**	**-25**	**-55**	**-171**	**-230**	**-46**	**–**	**-2**	**-278**
Impairment losses/gains	-29	–	-14	-174	-217	-15	–	4	-228
Effects from pension provisions and restructuring	51	-20	19	-1	49	-7	–	1	43
Results of disposal of assets	2	-1	11	6	18	20	–	-7	31
Other reconciliation items	-3	-4	-71	-2	-80	-44	–	–	-124
EBIT	**-279**	**1,575**	**456**	**-182**	**1,570**	**-301**	**–**	**-38**	**1,231**
Other financial result									-181
Profit/loss before income taxes									1,050
Capital employed [3]	7,230	2,172	3,855	436	13,693	1,381	–	-139	14,935
of which from investments accounted for using the equity method	125	44	161	41	371	21	–	–	392
Segment capital expenditure [4]	2,032	254	99	40	2,425	45	–	-45	2,425
of which from investments accounted for using the equity method	–	–	37	–	37	–	–	–	37
Number of employees at end of period	56,762	4,085	20,411	20,218	101,476	8,033	–	–	109,509
Average number of employees	56,054	4,088	20,116	18,709	98,967	7,922	–	–	106,889

[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 ↗ T021, 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), and as of the reporting year, less cash and cash equivalents.
[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.

T137 SEGMENT INFORMATION FOR THE 2021 REPORTING SEGMENTS

in €m	Passenger Airlines[1]	Logistics	MRO	Catering	Total reportable operating segments	Additional Businesses and Group Functions	Reconciliation		**Group**
							Not allocated	Consolidation	
External revenue	8,528	3,768	3,117	1,085	16,498	313	–	–	16,811
of which traffic revenue	7,622	3,644	–	–	11,266	–	610	–	11,876
Inter-segment revenue	666	32	886	28	1,612	153	–	–1,765	–
Total revenue	**9,194**	**3,800**	**4,003**	**1,113**	**18,110**	**466**	**–**	**–1,765**	**16,811**
Other operating income	591	65	405	239	1,300	1,266	–	–955	1,611
Total operating income	**9,785**	**3,865**	**4,408**	**1,352**	**19,410**	**1,732**	**–**	**–2,720**	**18,422**
Operating expenses	**13,114**	**2,394**	**4,021**	**1,299**	**20,828**	**2,060**	**–**	**–2,798**	**20,090**
of which cost of materials and services	6,240	1,665	2,075	416	10,396	180	–	–1,630	8,946
of which staff costs[1]	3,154	367	1,082	615	5,218	620	–	–2	5,836
of which depreciation and amortisation	1,770	149	174	81	2,174	120	–	–35	2,259
of which other operating expenses[1]	1,950	213	690	187	3,040	1,140	–	–1,131	3,049
Results of equity investments[2]	**5**	**24**	**–25**	**–22**	**–18**	**19**	**–**	**1**	**2**
of which result of investments accounted for using the equity method	5	13	–18	–22	–22	–	–	–	–22
Adjusted EBIT[3]	**–3,324**	**1,495**	**362**	**31**	**–1,436**	**–309**	**–**	**79**	**–1,666**
Reconciliation items[1]	**–274**	**2**	**–199**	**–55**	**–526**	**–125**	**–**	**1**	**–650**
Impairment losses/gains	12	–	–36	–9	–33	2	–	2	–29
Effects from pension provisions and restructuring[1]	–248	–3	–157	–4	–412	–79	–	–1	–492
Results of disposal of assets	14	5	–6	–42	–29	3	–	–	–26
Other reconciliation items[1]	–52	–	–	–	–52	–51	–	–	–103
EBIT	**–3,598**	**1,497**	**163**	**–24**	**–1,962**	**–434**	**–**	**80**	**–2,316**
Other financial result									–290
Profit/loss before income taxes									–2,606
Capital employed[1][4]	8,745	2,260	3,505	659	15,169	1,148	–	–105	16,212
of which from investments accounted for using the equity method	103	67	195	68	433	–	–	1	434
Segment capital expenditure[5]	1,049	164	95	23	1,600	49	–	–293	1,356
of which from investments accounted for using the equity method	–	–	24	–	24	–	–	–	24
Number of employees at end of period	56,858	4,162	20,569	15,626	97,215	8,075	–	–	105,290
Average number of employees	58,208	4,210	21,328	15,546	99,292	8,351	–	–	107,643

[1] Figures adjusted.
[2] The result from equity investments does not include any impairment losses on investments accounted for using the equity method.
[3] For reconciliation from Adjusted EBIT to EBIT ↗ T021, p. 43, in the Group management report.
[4] 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), and as of the reporting year, less cash and cash equivalents.
[5] 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.

Eliminated segment revenue generated with other consolidated segments is shown in the reconciliation column for revenue.

The amounts in the reconciliation column for Group EBIT include the effects of consolidation activities on profit or loss in which income and expense do not figure for two companies at the same amount, or in the same period.

NOTES ON GEOGRAPHICAL REGIONS IN 2022

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 Passenger Airlines 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:

T138 EXTERNAL REVENUE AND NON-CURRENT ASSETS BY REGION

	2022							2021						
in €m	Europe	North America	Central and South America	Asia / Pacific	Middle East	Africa	Group	Europe	North America	Central and South America	Asia / Pacific	Middle East	Africa	Group
Traffic revenue[1]	17,128	4,575	639	2,513	498	493	25,846	7,692	1,636	277	1,774	231	266	11,876
Other revenue	2,474	2,853	265	937	274	121	6,924	1,942	1,853	162	673	201	104	4,935
Non-current assets[2][3][4]	19,919	460	51	208	2	8	20,648	19,554	488	27	198	2	11	20,280
Capital expenditure on non-current assets[3]	2,367	31	3	7	–	1	2,409	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:

T139 EXTERNAL REVENUE AND NON-CURRENT ASSETS BY COUNTRIES

	2022		2021	
in €m	Germany	USA	Germany	USA
Traffic revenue[1]	7,673	4,080	3,555	1,491
Other revenue	985	2,546	764	1,655
Non-current assets[2][3]	14,271	382	13,730	440
Capital expenditure on non-current assets[3]	1,877	25	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.

In the 2022 financial year 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 6m (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

Operating cash flow

Operating cash flow 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.

All payments in connection with pension commitments are recognised in operating cash flow as of 2022. Contributions to and reimbursements from plan assets were previously shown in cash flow from investing activities, whereas pension payments were presented in operating cash flow. This was intended to avoid the reduction of operating cash flow by contributions to plan assets for pension commitments made in the past. Since regular withdrawals from plan assets are planned for pension payments made in the future, the resulting effects will be aggregated under operating cash flow. The cash flow statement for the previous year was adjusted accordingly. This adjustment resulted in a decrease of operating cash flow by EUR 219m in the previous year, whereas cash flow from investing and cash management activities increased by the same amount.

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 455m (previous year: EUR 413m) on operating cash flow, of which EUR 381m (previous year: 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:

T140 SIGNIFICANT NON-CASH INCOME AND EXPENSES

in €m	**2022**	2021
Result of miscellaneous financial items	-238	-151
Write-down on receivables	98	73
Reversal of write-downs on receivables	-53	-108
Income from the reversal of provisions and accruals	-350	-209
Adjustments to retirement and transitional benefit systems	19	-89
Total	**-524**	**-484**

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 taken to strengthen Group liquidity in the previous year: net cash outflows of EUR 172m (previous year: outflow of EUR 103m) from the expiry of repo transactions with emissions certificates. The payment of deferred taxes and charges (mainly import VAT and air traffic tax) in Germany and Austria resulted in net outflows of EUR 810m in the previous year. There were no further effects from this in the reporting 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.

Cash flow from financing activities
Cash flow from financing activities now also includes capital repayments and interest payments on lease liabilities.

Borrowings and the instruments used to hedge them changed as follows in the financial year:

T141 FINANCIAL LIABILITIES 2022

in €m	31 Dec 2021	Cash effective	Non-cash effective						31 Dec 2022
			Addition due to changes in consolidation	Addition due to lease liabilities	Currency translation differences	Accrued interest	Reclassification/ Reclassification in held for sale	Changes in fair value	
Non-current borrowings	15,041	638	2	448	191	36	-2,733	-353	13,270
Current borrowings	1,629	-2,517	32	–	9	2	2,733	-7	1,881
Other borrowings[1]	19	1	–	–	1	–	–	–	21
Total financial liabilities	**16,689**	**-1,878**	**34**	**448**	**201**	**38**	**–**	**-360**	**15,172**
Interest rate swaps and currency futures used for hedging – assets	-181	70	–	–	–	–	–	-44	-155
Interest rate swaps and currency futures used for hedging – liabilities	27	–	–	–	–	–	–	191	218

[1] Mainly relate to bank overdrafts.

Changes in borrowings in the previous year were as follows:

T141 FINANCIAL LIABILITIES 2021

in €m	31 Dec 2020	Cash effective	Non-cash effective						31 Dec 2021
			Addition due to changes in consolidation	Addition due to lease liabilities	Currency translation differences	Accrued interest	Reclassification/ Reclassification in held for sale	Changes in fair value	
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.

OTHER DISCLOSURES

45 Additional disclosures on financial instruments

FINANCIAL ASSETS BY MEASUREMENT CATEGORY

As of the current reporting date, financial assets can be broken down into measurement categories with the following carrying amounts:

T142 FINANCIAL ASSETS IN THE BALANCE SHEET

	31 Dec 2022						31 Dec 2021					
in €m	Amortised cost	At fair value through profit or loss	At fair value through other com-prehensive income with recycling	At fair value through other com-prehensive income without recycling	Derivative financial instruments which are an effective part of a hedging relationship	**Total**	Amortised cost	At fair value through profit or loss	At fair value through other com-prehensive income with recycling	At fair value through other com-prehensive income without recycling	Derivative financial instruments which are an effective part of a hedging relationship	Total
Other equity investments	–	28	–	–	–	28	–	24	–	–	–	24
Non-current securities	12	–	–	25	–	37	13	–	–	25	–	38
of which equity instruments	–	–	–	25	–	25	–	–	–	25	–	25
of which debt instruments	12	–	–	–	–	12	13	–	–	–	–	13
Loans	72	–	–	–	–	72	81	–	–	–	–	81
Non-current receivables	460	–	–	–	–	460	443	–	–	–	–	443
Non-current derivative financial instruments	–	86	–	–	1,034	1,120	–	4	–	–	890	894
Trade receivables and other current receivables	3,974	–	–	–	–	3,974	3,672	–	–	–	–	3,672
Current derivative financial instruments	–	15	–	–	846	861	–	8	–	–	534	542
Current securities	–	5,415	1,096	–	–	6,511	–	4,201	1,158	–	–	5,359
of which equity instruments	–	5,415	–	–	–	5,415	–	4,201	–	–	–	4,201
of which debt instruments	–	–	1,096	–	–	1,096	–	–	1,158	–	–	1,158
Cash and cash equivalents	1,790	–	–	–	–	1,790	2,307	–	–	–	–	2,307
Total	**6,308**	**5,544**	**1,096**	**25**	**1,880**	**14,853**	**6,516**	**4,237**	**1,158**	**25**	**1,424**	**13,360**

The category "At fair value through other comprehensive income" includes derivatives that do not meet the requirements for applying hedge accounting and are therefore 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 fair value through profit or loss. The position includes shares in VISA, Inc. (fair value: EUR 25m, dividend payments: EUR 0.2m in the 2022 financial year) whose market valuation reserve increased by EUR 0.1m in 2022 (cumulative EUR 16m). The debt instruments designated as at fair value with recycling without effect on profit and loss relate to the establishment of bond positions as part of the investment of liquidity.

FINANCIAL LIABILITIES BY MEASUREMENT CATEGORY

Financial liabilities can be divided into measurement categories with the following carrying amounts, with the category "At fair value through profit or loss" including derivatives that do not meet the requirements for applying hedge accounting and are therefore 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 621m. The total change of EUR –26m in the market value of the convertible bond was therefore split into a credit risk-induced share of EUR 20m, which is recognised as an expense in other comprehensive income, and a price-induced share of EUR –46m, which is recognised as income in the trading result.

T143 FINANCIAL LIABILITIES IN THE BALANCE SHEET

	31 Dec 2022				31 Dec 2021			
in €m	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**	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
Borrowings (without IFRS 16 lease liabilities)	621	–	12,087	12,708	647	–	13,653	14,300
Derivative financial instruments	1	882	–	883	29	508	–	537
Trade payables	–	–	4,041	4,041	–	–	2,881	2,881
Other financial liabilities	–	–	1,691	1,691	–	–	1,372	1,372
Total	**622**	**882**	**17,819**	**19,323**	**676**	**508**	**17,906**	**19,090**

The net result of the various categories of financial assets and liabilities is made up as shown in table T144.

T144 NET RESULT FOR FINANCIAL ASSETS AND LIABILITIES BY MEASUREMENT CATEGORY

	2022						2021					
in €m	Interest expenses	Interest income	Depreciation	Result from valuation and sale	Currency result	**Net result**	Interest expenses	Interest income	Depreciation	Result from valuation and sale	Currency result	Net result
Assets at amortised cost	–	3	-24	–	-7	-28	–	2	36	–	9	47
At fair value through other comprehensive income (with recycling)	-8	13	–	-87	1	-81	-2	2	–	-5	–	-5
At fair value through other comprehensive income (without recycling)	–	–	–	–	–	–	–	–	–	2	–	2
Assets at fair value through profit or loss[1]	–	-1	–	119	–	118	–	-25	–	-3	–	-28
Liabilities at amortised cost	-409	–	–	–	-41	-450	-367	–	–	–	-34	-401
Liabilities at fair value through profit or loss	-12	–	–	69	–	57	-10	–	–	125	–	115
Total	**-429**	**15**	**-24**	**101**	**-47**	**-384**	**-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.

Table T145 shows the carrying amounts and fair values of the individual classes of financial debt. The stated fair values of bonds reflect their stock market listings (Level 1 of the fair value hierarchy). The fair values for other types of borrowings 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.

T145 FINANCIAL LIABILITIES

	31 Dec 2022		31 Dec 2021	
in €m	**Carrying amount**	**Market value**	Carrying amount	Market value
Bonds	6,659	6,168	6,697	6,719
Commercial Paper to banks	120	120	–	–
Borrower's note loans	1,242	1,162	1,626	1,803
Credit lines	–	–	–	–
State-guaranteed loans	–	–	1,082	1,072
Aircraft financing	4,407	4,539	4,464	4,586
Other borrowings	280	271	431	521
Total	**12,708**	**12,260**	**14,300**	**14,701**
Leasing liabilities	2,443	–	2,370	–
Total	**15,151**		**16,670**	

FINANCIAL ASSETS HELD AT FAIR VALUE BY LEVEL OF FAIR VALUE HIERARCHY

The tables T146 and T147 show 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 of which are used unchanged for measurement.

Level 2: Measurement is based on valuation methods with parameters derived directly or indirectly from observable market data.

Level 3: Measurement is based on valuation methods with parameters not based exclusively on observable market data.

In financial years 2022 and 2021, the fair value hierarchy for financial assets and liabilities held at fair value was as follows:

T146 FAIR VALUE HIERARCHY OF ASSETS

	31 Dec 2022				31 Dec 2021			
in €m	Level 1	Level 2	Level 3	**Total**	Level 1	Level 2	Level 3	Total
Financial assets at fair value through profit and loss	**5,415**	**101**	**28**	**5,544**	**4,201**	**12**	**24**	**4,237**
Financial derivatives classified as held for trading	–	101	–	101	–	12	–	12
Securities	5,415	–	–	5,415	4,201	–	–	4,201
Investments	–	–	28	28	–	–	24	24
Derivative financial instruments which are an effective part of a hedging relationship	**–**	**1,880**	**–**	**1,880**	**–**	**1,424**	**–**	**1,424**
Financial assets at fair value through other comprehensive income	**18**	**1,103**	**–**	**1,121**	**13**	**1,170**	**–**	**1,183**
Equity instruments	18	7	–	25	13	12	–	25
Debt instruments	–	1,096	–	1,096	–	1,158	–	1,158
Total assets	**5,433**	**3,084**	**28**	**8,545**	**4,214**	**2,606**	**24**	**6,844**

T147 FAIR VALUE HIERARCHY OF LIABILITIES

	31 Dec 2022				31 Dec 2021			
in €m	Level 1	Level 2	Level 3	**Total**	Level 1	Level 2	Level 3	Total
Financial liabilities at fair value through profit or loss	–	-621	–	-621	–	-647	–	-647
Derivative financial instruments at fair value through profit or loss	–	-1	–	-1	–	-29	–	-29
Derivative financial instruments which are an effective part of a hedging relationship	–	-882	–	-882	–	-508	–	-508
Total liabilities	**–**	**-1,504**	**–**	**-1,504**	**–**	**-1,184**	**–**	**-1,184**

Level 3 investments held at fair value through profit or loss include a total of 35 individual investments as of the reporting date (previous year: 36), the acquisition costs of which are the best estimate of fair value for reasons of materiality.

NETTING OF FINANCIAL ASSETS AND LIABILITIES

The following financial assets and liabilities are subject to global netting agreements and other agreements.

T148 NETTING OF FINANCIAL ASSETS

	31 Dec 2022						31 Dec 2021					
in €m	Gross amount	Netted amounts	Reported net amount	Amounts not netted	Cash collateral	Net amount	Gross amount	Netted amounts	Reported net amount	Amounts not netted	Cash collateral	Net amount
Trade receivables and other current receivables	4,089	115	3,974	–	70	3,904	3,764	92	3,672	–	–	3,672
Derivative financial instruments – assets	1,981	–	1,981	46	79	1,856	1,436	–	1,436	-52	134	1,354
Cash and cash equivalents	1,821	31	1,790	–	–	1,790	2,329	22	2,307	–	–	2,307
Total assets	**7,891**	**146**	**7,745**	**46**	**149**	**7,550**	**7,529**	**114**	**7,415**	**-52**	**134**	**7,333**

T149 NETTING OF FINANCIAL LIABILITIES

	31 Dec 2022						31 Dec 2021					
in €m	Gross amount	Netted amounts	Reported net amount	Amounts not netted	Cash collateral	Net amount	Gross amount	Netted amounts	Reported net amount	Amounts not netted	Cash collateral	Net amount
Trade payables and other financial liabilities	4,187	146	4,041	–	79	3,962	2,995	114	2,881	–	134	2,881
Derivative financial instruments – liabilities	883	–	883	46	70	767	537	–	537	-52	–	589
Total liabilities	**5,070**	**146**	**4,924**	**46**	**149**	**4,729**	**3,532**	**114**	**3,418**	**-52**	**134**	**3,470**

PRINCIPLES OF THE 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. The 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 2022 financial year, the exposure from operations for the next 24 months was as shown in table T150.

T150 CURRENCY EXPOSURE, AS OF 2022

in millions	USD	CNY	JPY	GBP	INR
Exposure (currency)	-10,333	7,699	99,112	1,118	66,575
Exposure (EUR at spot rate)	-9,688	1,046	705	1,261	775
Hedges (currency)	3,095	-2,730	-43,588	-333	-10,084
Hedging level	30%	35%	44%	30%	15%
Hedging rate	1.18	7.33	137.86	0.87	86.92

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 lifetime of the contract, the exchange rate moves 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 2022 was as shown in table T151 broken down by the hedged currency:

T151 USD INVESTMENT EXPOSURE, HEDGED IN EUR

in millions	2023	2024	2025	2026	2027	2028	2029	2030	2031
Exposure from net capital expenditure (USD)	-3,104	-2,930	-2,953	-2,462	-1,737	-921	-361	-140	–
Exposure from net capital expenditure (EUR at spot rate)	-2,906	-2,743	-2,764	-2,305	-1,626	-862	-338	-131	–
Hedges (USD)	2,710	2,138	1,938	1,658	1,069	461	180	70	–
Hedging level	87%	73%	66%	67%	62%	50%	50%	50%	0%
Hedging rate EUR/USD	1.15	1.21	1.27	1.26	1.27	1.24	1.25	1.18	–

The sensitivity analysis in table T152 shows how net profit and equity would have changed had the currencies identified as price risk variables been different from those at the reporting date.

T152 SENSITIVITY ANALYSIS BY CURRENCY

	Effects on earnings after taxes[1]		Effects on equity[1]	
in €m	Difference of +10%	Difference of -10%	Difference of +10%	Difference of -10%
USD	-352	339	973	-796
JPY	-35	28	-25	21
CHF	8	-21	-1	1
GBP	3	-13	-30	25
CNY	6	-2	-30	24
INR	-5	-7	-9	8

[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 EUR. Cross-currency interest rate swaps may be used to hedge financial liabilities denominated in foreign currencies.

The tables T153 and T154 describe the floating/fixed ratio for non-current borrowing as of financial year-end 2022 after taking into consideration interest rate hedging, as well as the distribution of the nominal volume of interest rate hedges. The remaining floating interest rate exposure for non-current borrowing is less than the exposure for floating rate investments. The medium-term aim is for the net exposure, i.e. total exposure less cash invested at floating rates, to be at fixed rates.

T153 INTEREST RATE EXPOSURE AFTER HEDGING

in €m	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Fix	7,599	6,916	5,971	4,430	2,758	1,635	717	202	148	134	5
Variable	5,175	4,534	3,147	2,647	2,168	1,853	1,515	980	567	150	41
Float/Fix-Ratio	41%	40%	35%	37%	44%	53%	68%	83%	79%	53%	89%

T154 NOMINAL VOLUME OF INTEREST RATE HEDGES

in €m	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Fix	-3,393	-2,997	-1,673	-1,112	-909	-679	-427	-228	-148	-95	–
Variable	3,259	2,892	1,593	1,080	881	662	411	213	145	103	–

The sensitivity analysis in table T155 below shows how net profit and equity would have changed had the interest rate identified as a price risk variable been different from the perspective of the reporting date. A symmetric sensitivity of 100 basis points is used given the current interest rate volatility. Stand-alone interest rate derivatives and interest rate derivatives in cash flow hedge accounting have been included. The reason for this is that, in fair value hedge accounting, interest rate derivatives offset the movements in the underlying hedged items.

T155 SENSITIVITY ANALYSIS BY INTEREST RATE

in €m	Effects on earnings after taxes[1]	Effects on equity[1]
Interest rate +100 basis points	9	-20
Interest rate -100 basis points	-10	21

[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 2022, the Lufthansa Group held EUR 6.1bn (previous year: EUR 6.9bn) in outstanding financial transactions, floating rate liabilities and hedging instruments based on variable interest rates. The overview in table T156 shows the absolute nominal volume of the transactions as of the reporting date.

T156 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	3,828	972
USD – LIBOR	628	629
CHF – LIBOR	–	–
Total	**4,456**	**1,601**

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, and another reference interest rate will therefore have to be used from this point at the latest. In agreement with the respective commercial partners, a decision will be taken regarding which alternative interest rate is to be used instead, such as the USD SOFR. 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 outstanding changes to the benchmarks will not have any impact on the floating rate 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 were added where necessary. Systematic adjustments will also be made to the extent required.

Fuel price risk

In the 2022 financial year, fuel costs accounted for 22.6% of the Lufthansa Group's operating expenses (previous year: 11.6%). Significant changes in fuel prices can therefore have a considerable 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 the exposure is hedged monthly for up to 24 months by spread options and other combinations of hedges. At the same time, forward hedges were concluded for the price difference between kerosene and crude oil, and between gas oil and crude oil. 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 as of 31 December 2022 is up to 75%.

Table T157 shows the fuel exposure at financial year-end.

T157 FUEL EXPOSURE

		2023	2024
Fuel requirement	in 1,000 tonnes	8,955	9,963
Hedges	in 1,000 tonnes	5,542	2,034
Hedging level	%	62	20
Hedging rate	USD/bbl	88.83	89.06

The sensitivity analysis in table T158 shows how equity would have been affected by changes in the market value of hedging instruments held as of the reporting date had the identified risk variable, namely the fuel price, 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.

T158 SENSITIVITY ANALYSIS BY FUEL PRICE

in €m	Effects on earnings after taxes[1]	Effects on equity[1]
Fuel price		
+10%	–	227
-10%	–	-210

[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 designated in hedging relationships are used to hedge exchange rate, interest rate and fuel price risks as of the reporting date. In the financial year, they changed as shown in table T159.

T159 DERIVATIVE FINANCIAL INSTRUMENTS USED FOR HEDGING AS OF 31 DEC 2022

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	70	-210	-234	–	274	–	–	40	–
Cash flow hedge									
Fuel hedging – options	256	-79	-111	-141	–	-112	-131	1	-10
Exchange rate hedging – forward transactions	1,469	-586	372	54	–	310	79	62	-25
Interest rate hedges – interest rate swaps	85	-8	25	–	–	25	–	–	–
Total	**1,880**	**-883**	**52**	**-87**	**274**	**223**	**-52**	**103**	**-35**
of which current	846	-489							

T159 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	0
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	0
Total	**1,424**	**-507**	**991**	**22**	**-30**	**853**	**90**	**107**	**-68**
of which current	535	-247							

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 2022, the quarterly rebalancing factors for adjusting the hedged item were as follows: 1.011 (Q1), 1.010 (Q2), 1.010 (Q3) and 1.010 (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. 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 in 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 is presented as part of the financial result, below the other financial items ↗ **Note 14, p. 191.**

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.

T160 DESIGNATED HEDGED ITEMS IN HEDGING RELATIONSHIPS

	2022				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	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	-4,717	274	–	194	-4,875	-30	–	-228
Cash flow hedge								
Fuel hedging – options	–	112	131	–	–	-144	-156	–
Exchange rate hedging – forward transactions	–	-346	-81	–	–	-735	60	–
Interest rate hedges – interest rate swaps	–	-27	–	–	–	-25	–	–
Total	**-4,717**	**13**	**50**	**194**	**-4,875**	**-934**	**-96**	**-228**

T161 STATEMENT OF EQUITY RECONCILIATION FOR CASH FLOW HEDGES 2022

in €m	As of 1 Jan 2022	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 2022
OCI – cash flow hedge reserve	**711**	**1,493**	**161**	**1,025**	**165**	**853**
Fuel hedging – options	123	913	–	1,025	–	11
Exchange rate hedging – futures	591	575	161	–	165	840
Interest rate hedges – interest rate swaps	-3	5	–	–	–	2
OCI – cost of hedging	**564**	**-55**	**–**	**–**	**–**	**509**
Fuel hedging – options	94	-135	–	–	–	-41
Exchange rate hedging – futures	470	80	–	–	–	550
Total	**1,275**	**1,438**	**161**	**1,025**	**165**	**1,362**

T161 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**

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 exclusively calculated 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. 191**).

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 2022 totalling EUR 2,060m (previous year: EUR 735m).

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 exogenous developments. They include the implementation of monitoring on the basis of detailed, rolling short-term cash plans in order to manage liquidity effectively, and the holding of sufficient funds to cover the current financing requirement. 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 financial liabilities and derivative financial instruments based on undiscounted gross cash flows including the related interest payments shows the following projected cash inflows and outflows considered from the reporting date of 31 December 2022. As a result of the hedges used there are generally direct connections between the cash inflows and outflows for the derivative financial instruments shown.

T162 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	10	-1,859	2,011	162
Up to 1 year[1]	69	-3,236	3,577	410
1-5 years	-	-3,128	3,542	414
Later	-	-1,367	1,432	65

[1] Without payments in 1st quarter.

T163 MATURITY ANALYSIS OF LIABILITIES FROM NON-DERIVATIVE FINANCIAL INSTRUMENTS

in €m	**Outflows**
1st quarter	-4,555
Up to 1 year[1]	-2,974
1-5 years	-9,359
Later	-3,708

[1] Without payments in 1st quarter.

Credit risk

Passenger travel and freight documents are mostly sold via agencies. These agencies are predominantly 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. To further reduce credit risk exposure to the agencies, the Lufthansa Group tracks their payment histories and tries to agree on shorter payment deadlines whenever possible, and with the support of the International Air Transport Association (IATA).

Receivables and liabilities between airlines are offset through bilateral arrangements or via an IATA clearing house, insofar as the contracts underlying the 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 limits 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.

Besides 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 table T164 Levels 1 and 2 describe expected credit losses, whereas Level 3 shows individual impairment losses on the basis of actual default events.

T164 STATEMENT OF RISK PROVISIONS 2022

in €m	Opening balance risk provision as of 1 Jan 2022	Additions through profit or loss	Reversals through profit or loss	Utilisation	Closing balance risk provision as of 31 Dec 2022	Opening balance gross carrying amount as of 1 Jan 2022	Closing balance gross carrying amount as of 31 Dec 2022
Trade receivables and other receivables (simplified approach)	505	66	-45	-96	430	1,951	1,888
of which from expected losses	51	9	-18	0	42	1,453	1,530
of which from individual loss allowances	454	57	-27	-96	388	498	358
Trade receivables and other receivables (credit card receivables)	8	4	0	-2	10	458	741
of which Level 1	6	1	0	0	7	450	734
of which Level 2	0	0	0	0	0	0	1
of which Level 3	2	3	0	-2	3	8	6
Total	**513**	**70**	**-45**	**-98**	**440**	**2,409**	**2,629**

T164 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**

Successful credit risk management and management of accounts receivable in the current financial year 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 default rates shown in table T165 for each past due category in the impairment matrix for the simplified approach of the impairment model.

T165 IMPAIRMENT MATRIX FOR TRADE RECEIVABLES

		2022						2021					
		Not overdue	1 - 30 days overdue	31 - 60 days overdue	61 - 90 days overdue	More than 90 days overdue	**Total**	Not overdue	1 - 30 days overdue	31 - 60 days overdue	61 - 90 days overdue	More than 90 days overdue	Total
Default rate	%	2.1	2.1	5.0	5.3	12.4	**–**	2.8	3.2	6.3	6.3	12.0	–
Carrying amounts for trade receivables	Mio. €	1,167	235	20	19	89	**1,530**	1,142	188	32	16	75	1,453
Expected loss	Mio. €	24	5	1	1	11	**42**	33	6	2	1	9	51

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 available limit. The following overview T166 shows the risk data for the credit card portfolio. Expected losses are calculated at the level of the individual credit card. The variables average default probability and average loss thus relate to the individual credit card.

T166 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%	0.4%	8	730	–	–
Medium risk	> 2.0% until ≤ 6.5%	3.3%	63	4	–	–
High risk	> 6.5%	80.7%	2,280	–	–	6
Total				**734**	**–**	**6**
Off-balance sheet exposure						
Low risk	≤ 2%	0.4%	21	8,509	–	–
Medium risk	> 2.0% until ≤ 6.5%	3.3%	79	31	–	–
High risk	> 6.5%	88.7%	1	–	–	–
Total				**8,540**	**–**	**–**

Securities representing debt are rated as shown in table T167 (Standard & Poor's).

T167 SECURITIES RATINGS – DEBT INSTRUMENTS

in €m	
AAA	193
AA+	36
AA	40
AA–	52
A+	66
A	97
A–	275
BBB+	121
BBB	126
Below BBB or unrated	103
Total	**1,109**

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

T168 CONTINGENT LIABILITIES

in €m	31 Dec 2022	31 Dec 2021
From guarantees, bills of exchange and cheque guarantees	1,446	1,102
From warranty contracts	249	224
From providing collateral for third-party liabilities	19	6
	1,714	**1,332**

An amount of EUR 3m (previous year: EUR 3m) within guarantees relates to collateral furnished for joint ventures. Warranty agreements included EUR 178m (previous year: EUR 146m) in contingent liabilities towards creditors of joint ventures. Liabilities under collateral agreements included contingent liabilities of EUR 3m (previous year: EUR 4m) towards creditors of joint ventures. A total of EUR 1,467m (previous year: EUR 1,145m) relates to joint and several guarantees and warranties. This amount is offset by compensatory claims against the co-debtors for EUR 1,422m (previous year: EUR 1,112m). Insofar as annual financial statements have yet to be published, these figures are preliminary.

Otherwise, several provisions for other risks could not be made because an outflow of resources was not sufficiently probable. The potential financial effect of these provisions on the result would have been EUR 65m (previous year: EUR 76m).

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 material, lasting effects on the net assets, financial and earnings position, beyond those for which provisions for litigation risks have been created (↗ Note 36, p. 218ff.).

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 the Company.

Due to the existing uncertainties and 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 annulment of this 2010 decision by means of judgements 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. The objections have since been overruled and the companies have appealed to the European Court of Justice, with the result that 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 freight forwarders) or whether they were passed on to the claimants (in the case of end 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.

Legal action by Ryanair against the European Commission's decision on state aid
Ryanair DAC and others have appealed to the General Court (of 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 AG 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 actions are successful, however, the decisions by the European Commission would be declared null and void. However, the loans granted and equity positions taken in this context have since been repaid in full and the stabilisation measures have been brought to an end.

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, which has since been terminated, provided 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. In this context, provisions of EUR 55m have been recognised in the 2022 consolidated financial statements, in particular for distributions by equity investments to external shareholders. As things stand, the Lufthansa Group 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. Based on the Group's line of argument and the assessment of 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. 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, the aforementioned provision has been recognised for the probable payment obligation.

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 financial years 2001 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, the acquisition of a foreign subsidiary, and 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 from the tax authorities have been recognised in accordance with IFRIC 23. An oral comment by the tax authorities in the course of the current tax audit queried the taxation of certain foreign income in accordance with the Foreign Tax Act (Außensteuergesetz: AStG), raising additional tax risks in the reporting year, although the Company continues to assume that the previous tax treatment is correct. Appropriate provisions have been created for other potentially disputed aspects to the extent that a claim is likely to be made. No provisions have been created 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 450m in total (previous year: EUR 200m). The assessment of the amount is subject to uncertainty.

EVENTS AFTER THE REPORTING PERIOD

On 18 January 2023, Deutsche Lufthansa AG submitted to Italy's Ministry of Economy and Finance an offer (in the form of a letter of intent) to acquire an equity interest in the country's national airline ITA Airways. The letter of intent was signed on 27 January 2023 by the Italian Economics and Finance Ministry and ITA Airways. Exclusive negotiations are now taking place.

The intention is that Deutsche Lufthansa AG should initially acquire a minority interest. Options are also to be agreed to purchase the remaining interests at a later date. If an agreement is signed, the transaction would require approval from the relevant authorities. ↗ **Forecast report, p. 149ff.**

47 Other financial obligations

As of 31 December 2022, there were order commitments of EUR 16.2bn (previous year: EUR 14.6bn) for capital expenditure on property, plant and equipment, including repairable spare parts, and for intangible assets. There were also capital and shareholder loan commitments of EUR 170m towards equity investments (previous year: EUR 216m).

In addition, as of 31 December 2022, payment obligations under lease agreements for which the leased items had not yet been received are as follows:

T169 PAYMENT OBLIGATIONS FOR RIGHT-OF-USE ASSETS NOT YET RECEIVED

in €m	**31 Dec 2022**	31 Dec 2021
Lease payments 2023 (previous year: 2022)	13	22
Lease payments 2024 to 2027 (previous year: 2023 to 2026)	57	115
Lease payments after 2027 (previous year: 2026)	16	35
Total	**86**	**172**

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:

T170 AUDITORS’ FEES

in €m	2022	2021
Annual audit	4.7	4.6
Other assurance services	0.7	1.6
Tax advisory services	–	0.1
Other services	2.5	–
Total	**7.9**	**6.3**

The audit services mainly consist of fees for auditing the annual and consolidated financial statements of Deutsche Lufthansa AG and those of its consolidated subsidiaries, as well as fees for the review of the half-yearly financial statements. The expenses for other assurance services related mainly to the internal control system and fundraising activities. Other services consisted in particular of advisory services in connection with planned company transactions.

The following fees paid to the global EY group, especially abroad, were additionally recognised as expenses:

T171 ADDITIONAL AUDITORS’ FEES

in €m	2022	2021
Annual audit	2.7	2.4
Other assurance services	–	0.1
Tax advisory services	–	0.3
Other services	–	–
Total	**2.7**	**2.8**

The auditor at Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft responsible for the Lufthansa Group is Siegfried Keller. He held this position for the third time in financial year 2022.

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 result 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 significant 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 the tables ↗ T178 – T181, p. 260 – 265, and the list of shareholdings in table ↗ T182, p. 266 – 268.

In addition to Deutsche Lufthansa AG as the parent company, the group of consolidated companies includes 52 domestic and 266 foreign companies, including structured entities (previous year: 48 domestic and 253 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.

The changes in the group of consolidated companies during the 2022 financial year are shown in table T172.

T172 CHANGES IN THE GROUP OF CONSOLIDATED COMPANIES FROM 1 JAN 2022 TO 31 DEC 2022

Name, registered office	Additions	Disposals	Reasons
Passenger Airlines business segment			
Lilium Leasing Co., Ltd., Tokyo, Japan	27 Jan 2022		Established
Orchid Leasing Co., Ltd., Tokyo, Japan	27 Jan 2022		Established
TLC Lavender Ltd., Tokyo, Japan	27 Jan 2022		Established
TLC Sweetpea Ltd., Tokyo, Japan	27 Jan 2022		Established
Group Engine Management GmbH, Frankfurt/Main, Germany	1 Mar 2022		Established
NBB-9046 Lease Partnership, Tokyo, Japan	25 Mar 2022		Established
City Airlines GmbH, Munich, Germany	6 Apr 2022		Established
Cockpitpersonal GmbH, Frankfurt/Main, Germany	14 Apr 2022		Established
Eurowings Europe Limited, Swieqi, Malta	4 May 2022		Established
Evelyn Leasing Co., Ltd., Tokyo, Japan	27 Sep 2022		Established
Miyah Leasing Co., Ltd., Tokyo, Japan	27 Sep 2022		Established
Tancho Leasing Co., Ltd., Tokyo, Japan	27 Sep 2022		Established
NTL12 Ltd., Tokyo, Japan	26 Oct 2022		Established
JPA No. 237 Co., Ltd., Tokyo, Japan	27 Oct 2022		Established
JPA No. 238 Co., Ltd., Tokyo, Japan	27 Oct 2022		Established
Global Brand Management AG, Basel, Switzerland		1 Jul 2022	Fusion
MRO business segment			
Lufthansa Technik Shenzhen Co. Ltd., Shenzhen, China	1 Jan 2022		Expansion of business activity
Lufthansa Industry Solutions Verwaltungs GmbH, Norderstedt, Deutschland	13 Dec 2022		Established
Lufthansa Technik Shannon Limited, Claire, Ireland		31 Mar 2022	Sale
Lufthansa Technik Maintenance International GmbH, Frankfurt/Main, Germany		31 May 2022	Sale
Additional Businesses and Group Functions			
Lufthansa Group Digital Hangar GmbH, Raunheim, Germany	14 Sep 2022		Established

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 2022.

T173 USE OF EXEMPTION PROVISIONS

Company name	Registered office
City Airlines GmbH	Munich
Cockpitpersonal GmbH	Frankfurt/Main
Eurowings Aviation GmbH	Cologne
Eurowings Digital GmbH	Cologne
Eurowings GmbH	Düsseldorf
Eurowings Technik GmbH	Cologne
EW Discover GmbH	Frankfurt/Main
Germanwings GmbH	Cologne
Group Engine Management GmbH	Frankfurt/Main
Hamburger Gesellschaft für Flughafenanlagen mbH	Hamburg
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	Munich
Lufthansa Cargo Aktiengesellschaft	Frankfurt/Main
Lufthansa CityLine GmbH	Munich Airport
Lufthansa Commercial Holding GmbH	Frankfurt/Main
Lufthansa Global Business Services GmbH	Frankfurt/Main
Lufthansa Group Digital Hangar GmbH	Raunheim
Lufthansa Industry Solutions AS GmbH	Norderstedt
Lufthansa Industry Solutions BS GmbH	Raunheim
Lufthansa Industry Solutions GmbH & Co. KG	Norderstedt
Lufthansa Industry Solutions Verwaltungs GmbH	Norderstedt

T173 USE OF EXEMPTION PROVISIONS (continued)

Company name	Registered office
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 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 investments in 28 joint ventures and 34 associated companies (previous year: 28 joint ventures and 34 associated companies), of which nine joint ventures (previous year: nine) and 14 associated companies (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

The Federal Republic of Germany, indirectly via its Economic Stabilisation Fund (ESF), sold its remaining shares in Deutsche Lufthansa AG to various investors in the third quarter via accelerated bookbuilding. The sale also marked the end of all remaining conditions under the ESF stabilisation measures. The ESF is therefore no longer a related party of Deutsche Lufthansa AG.

Kühne Aviation GmbH, for Klaus-Michael Kühne, notified the Executive Board of Deutsche Lufthansa AG that on 5 July 2022 its share of voting rights in Deutsche Lufthansa AG had exceeded the threshold of 15% and amounted to 15.01% on this date. A significant influence is only assumed when the share of voting rights exceeds 20%.

On the basis of the above assumption, 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. 259.**

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 on arm's length terms.

Due to geographical proximity in many cases, a large number of subletting contracts is in place 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.

Table T174 shows the volume of significant services provided to or by related parties.

T174 VOLUME OF SIGNIFICANT SERVICES PROVIDED TO OR BY RELATED PARTIES

	Volume of services rendered		Volume of services received	
in €m	**2022**	2021	**2022**	2021
Non-consolidated subsidiaries				
Albatros Versicherungsdienste GmbH, Germany	0	1	55	40
Austrian Airlines Technik-Bratislava, s.r.o., Slovakia	1	1	13	14
Aviation Services Network GmbH, Germany	0	0	9	5
Cargo Future Communications (CFC) GmbH, Germany	0	0	11	10
Delvag Versicherungs-AG, Germany	8	6	1	2
DLH Fuel Company mbH, Germany	4	0	733	201
Global Load Control (PTY) LTD, South Africa	0	0	5	4
handling counts GmbH, Germany	1	1	8	7
LGSP Lufthansa Ground Service Portugal, Unipessoal Lda., Portugal	1	0	9	7
Lufthansa Aviation Training Austria GmbH, Austria	1	2	8	6
Lufthansa Aviation Training Operations Germany GmbH, Germany	1	1	5	11
Lufthansa Aviation Training Pilot Academy GmbH, Germany	1	1	7	3
Lufthansa Aviation Training USA Inc., USA	1	3	9	3
Lufthansa Consulting GmbH, Germany	1	1	7	3
Lufthansa Engineering and Operational Services GmbH, Germany	3	3	30	20
Lufthansa Global Business Services S.A. de C.V., Mexico	0	0	5	4
Lufthansa Global Business Services Sp. z o.o., Poland	1	1	32	26
Lufthansa Global Tele Sales GmbH, Germany	1	6	61	48
Lufthansa Group Business Services New York LLC, USA	0	0	6	5
Lufthansa Group Security Operations GmbH, Germany	2	1	30	20
Lufthansa Industry Solutions SHPK, Albania	1	0	12	7
Lufthansa Industry Solutions TS GmbH, Germany	1	2	15	13
Lufthansa Innovation Hub GmbH, Germany	0	0	19	11
Lufthansa Systems FlightNav AG, Switzerland	0	0	25	21

T174 AN VOLUME OF SIGNIFICANT SERVICES PROVIDED TO OR BY RELATED PARTIES (continued)

	Volume of services rendered		Volume of services received	
in €m	**2022**	2021	**2022**	2021
Lufthansa Systems Hungaria Kft, Hungary	0	0	33	25
Lufthansa Systems Poland Sp. z o.o., Poland	2	1	42	37
Lufthansa Technical Training GmbH, Germany	6	4	18	14
Lufthansa Technik Component Services Asia Pacific Limited, China	0	0	5	2
Lufthansa Technik Middle East FZE, United Arab Emirates	2	1	6	5
Lufthansa Technik Services India Private Limited, India	2	1	5	4
Lufthansa Technik Turbine Shannon Limited, Ireland	2	1	13	9
LUFTHANSA GROUP TASTE & MORE GmbH, Germany	2	2	12	9
time:matters (Shanghai) International Freight Forwarding Ltd., China	21	25	4	5
time:matters Americas, Inc., USA	19	13	0	1
time:matters Courier Terminals GmbH, Germany	6	4	15	11
time:matters Netherlands B.V., Netherlands	7	7	1	1
Wings Handling Palma S.L., Spain	0	0	10	5
ZeroG GmbH, Germany	1	1	7	4
Joint ventures				
EME Aero Sp. z o.o., Poland	1	0	279	149
LG-LHT Aircraft Solutions GmbH, Germany	2	6	0	0
Shanghai Pudong International Airport Cargo Terminal Co. Ltd., China	0	0	6	5
Spairliners GmbH, Germany	28	20	9	8
Star Alliance Services GmbH, Germany	1	0	5	3
Terminal 2 Gesellschaft mbH & Co oHG, Germany	0	1	11	8
Terminal One Group Association, L.P., USA	3	0	10	9
Associated companies				
AFS Aviation Fuel Services GmbH, Germany	0	0	7	6
Aircraft Maintenance and Engineering Corporation, China	7	9	2	0
Airmail Center Frankfurt GmbH, Germany	0	0	11	13
HEICO Aerospace Holdings Corp., USA	1	0	9	5
Other affiliated companies				
Shanghai Pudong International Airport Public Cargo Terminal Co. Ltd. (West), Shanghai, China	0	0	27	10

The tables T175 and T176 show receivables owed by and liabilities to related parties.

T175 RECEIVABLES FROM AFFILIATED COMPANIES

in €m	**2022**	2021
Trade receivables from non-consolidated subsidiaries	19	40
Trade receivables from joint ventures	8	4
Trade receivables from associated companies	6	6
Trade receivables from other affiliated companies	–	2
Total trade receivables	**33**	**52**
Other receivables from non-consolidated subsidiaries	107	68
Other receivables from joint ventures	23	18
Other receivables from associated companies	10	11
Other receivables from other affiliated companies	–	–
Total other receivables	**140**	**97**
Loans to non-consolidated subsidiaries	55	68
Loans to joint ventures	3	4
Loans to associated companies	–	–
Total non-current receivables	**58**	**72**

T176 LIABILITIES TO AFFILIATED COMPANIES

in €m	**2022**	2021
Trade payables to non-consolidated subsidiaries	85	35
Trade payables to joint ventures	29	11
Trade payables to associated companies	3	2
Trade payables to other affiliated companies	1	1
Total trade payables	**118**	**49**
Other liabilities to non-consolidated subsidiaries	322	286
Other liabilities to joint ventures	5	6
Other liabilities to associated companies	0	0
Other liabilities to other affiliated companies	0	0
Total other liabilities	**327**	**292**

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. 154ff.**

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 2022, ↗ **p. 280ff.**

Total Executive Board remuneration under IFRS was EUR 38.5m (previous year: EUR 10.3m), 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:

T177 EXECUTIVE BOARD REMUNERATION (IFRS)

in thousands €	**2022**	2021
Basic salary	5,934	5,934
Other[1]	1,193	1,241
One-year variable remuneration	7,912	–
Total short-term remuneration	**15,039**	**7,175**
Share-based remuneration incl. long-term variable remuneration[2]	20,282	-61
Current service cost for retirement benefits	3,174	3,159
Total long-term remuneration	**23,456**	**3,098**
Total	**38,495**	**10,273**

[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. 222ff.**) and concessionary travel in accordance with the relevant IATA regulations. This item also includes a compensation payment to Remco Steenbergen for the forfeiture of benefits with his previous employer totalling EUR 975k (previous year: EUR 975k).
[2] Expenses recognised in the reporting year for long-term variable remuneration for the financial years 2019, 2020, 2021 and 2022.

Pension provisions for Executive Board members active in the 2022 financial year came to EUR 18.5m (previous year: EUR 18.3m).

Provisions of EUR 7,912k (previous year: EUR 0k) were recognised in 2022 for the one-year variable remuneration.

An increase of EUR 20,140k (previous year: increase of EUR 236k) was recognised for provisions for the future payment of long-term variable remuneration for Executive Board members active in financial year 2022. Since the entitlement to the long-term variable remuneration is granted in one-year tranches for each financial year and only the target achievement over the four-year performance period is to be determined, the entitlement is not recognised pro rata temporis over the four-year performance period, as in the previous year, but in full for the respective financial year, taking the expected target achievement into account. In addition, provisions of EUR 8k for the future payment of long-term, share-based remuneration were recognised in the previous year. The payment made in 2022 resulted in additional expenses of EUR 142k.

Total remuneration (HGB) paid to the Executive Board of Deutsche Lufthansa AG in financial year 2022 came to EUR 28,456k (previous year: EUR 7,147k).

Current payments and other benefits for former members of the Executive Board and their surviving dependants amounted to EUR 5.7m (EUR 5.4m). This includes payments by subsidiaries as well as benefits in kind and concessionary travel.

Pension obligations toward former Executive Board members and their surviving dependants amount to EUR 51.3m (previous year: EUR 67.2m). They are included in pension provisions, ↗ **Note 35, p. 209ff.**

Expenses for the fixed remuneration of Supervisory Board members came to EUR 2,170k in the 2022 financial year (previous year: EUR 2,170k). Other remuneration, mainly attendance fees, amounted to EUR 62k (previous year: EUR 29k). Furthermore, the Supervisory Board members of Deutsche Lufthansa AG were paid EUR 21k (previous year: EUR 26k) for their work on supervisory boards of Group companies.

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 financial year 2022 (previous year: EUR 1.0m).

Major subsidiaries

T178 MAJOR SUBSIDIARIES AS OF 31 DEC 2022

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
Passenger 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	0 [1]	
Auslese Leasing Co., Ltd., Tokyo, Japan	0	0 [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	0 [1]	
Bremen Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Brussels Airlines SA/NV, Brussels, Belgium	100.00	100.00	
CASTOR Ltd., Tokyo, Japan	0	0 [1]	
Celine Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
City Airlines GmbH, Munich	100.00	100.00	
Cockpitpersonal GmbH, Frankfurt/Main	100.00	100.00	
CRANE LTD., Tokyo, Japan	0	0 [1]	
Dia Adler Ltd., Tokyo, Japan	0	0 [1]	
Dia Bach Ltd., Tokyo, Japan	0	0 [1]	
Dia Falke Ltd., Tokyo, Japan	0	0 [1]	
Dia Flamingo Ltd., Tokyo, Japan	0	0 [1]	
Dia Hausen Ltd., Tokyo, Japan	0	0 [1]	
Dia Himmel Ltd., Tokyo, Japan	0	0 [1]	
Dia Ibis Ltd., Tokyo, Japan	0	0 [1]	
Dia Orff Ltd., Tokyo, Japan	0	0 [1]	
Dia Vogel Ltd., Tokyo, Japan	0	0 [1]	
Dia Wagner Ltd., Tokyo, Japan	0	0 [1]	
Doppeladler Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Dunkel Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Edelweiss Air AG, Zurich, Switzerland	100.00	100.00	
Eifel Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Ellen Finance 2010 S.N.C., Puteaux, France	0	0 [1]	
Empyrée S.A.S., Paris-Cedex, France	0	0 [1]	
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 Europe Limited, SWIEQI, Malta	100.00	100.00	
Eurowings GmbH, Dusseldorf	100.00	100.00	
Eurowings Technik GmbH, Cologne	100.00	100.00	
Evans Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Evelyn Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
EW Discover GmbH, Frankfurt/Main	100.00	100.00	
FG Honest Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
FG Unity Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
FG Vision Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
FK Yocasta Leasing Ltd., Tokyo, Japan	0	0 [1]	
FL Falcon Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
FL Uranus Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Gabriela Finance 2012 Limited, Dublin, Ireland	0	0 [1]	
Germanwings GmbH, Cologne	100.00	100.00	
Group Engine Management GmbH, Frankfurt/Main	100.00	100.00	
Helles Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Ingrid Finance 2010 S.N.C., Puteaux, France	0	0 [1]	
JPA No. 237 Co., Ltd., Tokyo, Japan	0	0 [1]	
JPA No. 238 Co., Ltd., Tokyo, Japan	0	0 [1]	
Lahm Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
LHBD Holding Limited, London, UK	100.00	100.00 [2]	
Lilium Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
LS-Aviation No. 26 Co., Ltd., Tokyo, Japan	0	0 [1]	
LS-Aviation No. 35 Co., Ltd., Tokyo, Japan	0	0 [1]	
LS-Aviation No. 36 Co., Ltd., Tokyo, Japan	0	0 [1]	

T178 MAJOR SUBSIDIARIES AS OF 31 DEC 2022 (continued)

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
LS-Aviation No. 37 Co., Ltd., Tokyo, Japan	0	0 [1]	
LS-Aviation No. 38 Co., Ltd., Tokyo, Japan	0	0 [1]	
Lufthansa CityLine GmbH, Munich Airport	100.00	100.00	
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. 19, 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. 31, 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. 40, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 41, 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	
Miyah Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Muller Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
NBB Dresden Lease Co., Ltd., Tokyo, Japan	0	0 [1]	
NBB Goshawk Co., Ltd., Tokyo, Japan	0	0 [1]	
NBB Harz Lease Co., Ltd., Tokyo, Japan	0	0 [1]	
NBB Koblenz Lease Co., Ltd., Tokyo, Japan	0	0 [1]	
NBB Rhine Valley Lease LLC, Tokyo, Japan	0	0 [1]	
NBB Rothenburg Lease Co., Ltd., Tokyo, Japan	0	0 [1]	
NBB Saxon Lease Co., Ltd., Tokyo, Japan	0	0 [1]	
NBB-8761 Lease Partnership, Tokyo, Japan	0	0 [1]	
NBB-8783 Lease Partnership, Tokyo, Japan	0	0 [1]	
NBB-8958 Lease Partnership, Tokyo, Japan	0	0 [1]	
NBB-9046 Lease Partnership, Tokyo, Japan	0	0 [1]	
NT LH Aircraft Leasing Kumiai, Tokyo, Japan	0	0 [1]	
NTL12 Ltd., Tokyo, Japan	0	0 [1]	
NTL8 Ltd., Tokyo, Japan	0	0 [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	0 [4]	
Orchid Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Oriental Leasing 24 Company Limited, Dublin, Ireland	0	0 [1]	
Oriental Leasing 37 Company Limited, Dublin, Ireland	0	0 [1]	
ORIX Aquila Corporation, Tokyo, Japan	0	0 [1]	
ORIX Himalia Corporation, Tokyo, Japan	0	0 [1]	

T178 MAJOR SUBSIDIARIES AS OF 31 DEC 2022 (continued)

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
ORIX Lysithea Corporation, Tokyo, Japan	0	0 [1]	
ORIX Miranda Corporation, Tokyo, Japan	0	0 [1]	
ORIX Telesto Corporation, Tokyo, Japan	0	0 [1]	
Raft Co., Ltd., Tokyo, Japan	0	0 [1]	
Schloss Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
SL Aurora Ltd., Tokyo, Japan	0	0 [1]	
SL Prairie Ltd., Tokyo, Japan	0	0 [1]	
SL Victoria Ltd., Tokyo, Japan	0	0 [1]	
SMFL Y Lease Nin-i-Kumiai, Tokyo, Japan	0	0 [1]	
SMFL Y Lease Nin-i-Kumiai Two, Tokyo, Japan	0	0 [1]	
SN Airholding SA/NV, Brussels, Belgium	100.00	100.00	
Swiss International Air Lines AG, Basel, Switzerland	100.00	100.00	
Sylvaner Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Tancho Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
TI DC Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
TI DD Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
TimBenNico Finance 2011 S.N.C., Puteaux, France	0	0 [1]	
TLC Amaryllis Ltd., Tokyo, Japan	0	0 [1]	
TLC Lavender Ltd., Tokyo, Japan	0	0 [1]	
TLC Petunia Ltd., Tokyo, Japan	0	0 [1]	
TLC Salvia Ltd., Tokyo, Japan	0	0 [1]	
TLC Sweetpea Ltd., Tokyo, Japan	0	0 [1]	
Tusker Leasing Co., Ltd., Tokyo, Japan	0	0 [1]	
Yamasa Aircraft LH9 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH10 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH11 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH12 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH13 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH14 Kumiai, Okoyama, Japan	0	0 [1]	
Yamasa Aircraft LH15 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH16 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH17 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH18 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH19 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH20 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH21 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH22 Kumiai, Okayama, Japan	0	0 [1]	
Yamasa Aircraft LH23 Kumiai, Okayama, Japan	0	0 [1]	
Logistics business segment			
Flip No. 250 Co., Ltd., Tokyo, Japan	0	0 [1]	
Flip No. 251 Co., Ltd., Tokyo, Japan	0	0 [1]	
Flip No. 252 Co., Ltd, Tokyo, Japan	0	0 [1]	
FLIP No. 267 Co., Ltd., Tokyo, Japan	0	0 [1]	
FLIP No. 268 Co., Ltd., Tokyo, Japan	0	0 [1]	
FLIP No. 269 Co., Ltd., Tokyo, Japan	0	0 [1]	
Flip No. 275 Co., Ltd., Tokyo, Japan	0	0 [1]	
Flip No. 276 Co., Ltd., Tokyo, Japan	0	0 [1]	
Flip No. 277 Co., Ltd., Tokyo, Japan	0	0 [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	
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 Industry Solutions Verwaltungs GmbH, 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	

T178 MAJOR SUBSIDIARIES AS OF 31 DEC 2022 (continued)

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
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 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 Shenzhen Co. Ltd., Shenzhen, China	80.00	80.00	
Lufthansa Technik Sofia OOD, Sofia, Bulgaria	75.10	75.10	
Swiss Aviation Software AG, Allschwil, Switzerland	100.00	100.00	
Catering business segment			
Aerococina S.A. de C.V., Mérida, 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	
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., Torreon, 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, Tansania	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, Northern Mariana Islands	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, Northern Mariana Islands	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 [6]	
LSG Sky Chefs Kenya Limited, Nairobi, Kenia	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	

T178 MAJOR SUBSIDIARIES AS OF 31 DEC 2022 (continued)

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
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, Delaware, 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	
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., Mexiko 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 Finance S.à.r.l., Luxembourg, Luxembourg	0	0 [1]	
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	
JASEN Grundstücksgesellschaft mbH & Co. oHG, Grünwald	100.00	50.00 [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 Group Digital Hangar GmbH, Raunheim	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, 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.

T179 MAJOR JOINT VENTURES AS OF 31 DEC 2022[1]

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
Passenger Airlines business segment			
Terminal 2 Gesellschaft mbH & Co oHG, Munich Airport[3]	40.00	40.00	
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	

T180 JOINT OPERATIONS AS OF 31 DEC 2022[2]

Aerologic GmbH, Leipzig	50.00	50.00	

T181 MAJOR ASSOCIATED COMPANIES AS OF 31 DEC 2022[1]

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
MRO business segment			
HEICO Aerospace Holdings Corp., Florida, USA	20.00	20.00	October
Catering business segment			
AO Aeromar, Moscow region, Russian Federation	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	
Hongkong Beijing Air Catering Ltd., Hong Kong, China	45.00	40.00	
Hongkong 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	
Additional Businesses			
Aircraft Maintenance and Engineering Corporation, Beijing, China	25.00	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

T182 MISCELLANEOUS EQUITY INVESTMENTS AS OF 31 DEC 2022

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
amplimind GmbH, Hallbergmoos, Germany	51.00	51.00
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
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
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 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 Logisticos 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 Ldta., 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., Kraków, Poland	100.00	100.00
Lufthansa Global Tele Sales GmbH, Berlin	100.00	100.00

T182 MISCELLANEOUS EQUITY INVESTMENTS AS OF 31 DEC 2022 (continued)

Name, registered office	Equity stake in %	Voting share in %
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 GROUP TASTE & MORE GmbH, Hamburg	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/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 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 Services India Private Limited, Neu-Delhi, India	100.00	100.00
Lufthansa Technik Turbine Shannon Limited, Shannon, Ireland	100.00	100.00
Lufthansa Technik Vostok Services OOO, Moscow, Russian Federation	100.00	100.00
Lufthansa UK Pension Trustee Limited, West Drayton, Middlesex, UK	100.00	100.00
Malta Pension Investments, St. Julians, Malta	0.00	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., Neu-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, Neu-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
Berlin Fuelling Services GbR, Berlin	12.50	12.50
Cargo One GmbH, Berlin	14.35	14.35
Charlotte Fuel Facilities LLC, Charlotte, USA	10.00	10.00
Chelyabinsk Catering Service OOO, Chelyabinsk, Russian Federation	26.00	26.00
Denver Fuel Company, LLC, Newark, USA	5.88	5.88
Düsseldorf Fuelling Services (DFS) GbR, Dusseldorf	33.33	33.33

T182 MISCELLANEOUS EQUITY INVESTMENTS AS OF 31 DEC 2022 (continued)

Name, registered office	Equity stake in %	Voting share in %
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., Rom, Italy	100.00	100.00
Flight Training Alliance GmbH, Frankfurt/Main	50.00	50.00
Flughafen München Baugesellschaft mbH, Munich Airport	40.00	40.00
FraAlliance GmbH, Frankfurt/Main	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
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	50.00
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	14.60	14.60
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 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, presents a fair view of the course of business, including the business result, and the situation of the Group, and suitably presents the material opportunities and risks to its future development.

Frankfurt, 23 February 2023
The Executive Board

Carsten Spohr
Chairman of the Executive Board

Christina Foerster
Member of the Executive Board
Brand & Sustainability

Harry Hohmeister
Member of the Executive Board
Global Markets & Network

Detlef Kayser
Member of the Executive Board
Fleet & Technology

Michael Niggemann
Member of the ExecutiveBoard
Human Resources & Infrastructure,
Labor Director

Remco Steenbergen
Member of the Executive Board
Finance

The following Auditor's Report also includes a "Report on the audit of the electronic reproductions of the consolidated financial statements and the combined 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 2022, and the consolidated statement of financial position as at 31 December 2022, consolidated statement of changes in shareholders' equity and consolidated cash flow statement for the fiscal year from 1 January to 31 December 2022, 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 2022. 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, the Group non-financial declaration included in the "Combined non-financial declaration" section of the combined management report and the information on the key features of the entire internal control system (disclosures in accordance with recommendation A.5 of the German Corporate Governance Code (DCGK 2022)) contained in the Opportunities and risk report section of the combined management report under the heading "Internal control system." 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 2018, 2019 and 2020). Disclosures extraneous to the combined management reports are such disclosures that are not required pursuant to Secs. 315, 315a or Secs. 315b to 315d HGB ["Handelsgesetzbuch": German Commercial Code] or German Accounting Standard No. 20 (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 2022 and of its earnings position for the fiscal year from 1 January to 31 December 2022, 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. We do not express an opinion on the content of aforementioned Group corporate governance declaration, the content of the aforementioned Group non-financial declaration, the aforementioned description of the entire internal control system (disclosures in accordance with recommendation A.5 DCGK 2022) or the aforementioned multi-year comparisons of 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 2022. 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. Recognition of traffic revenue, including accounting for liabilities from unused flight documents and customer loyalty programs

Reasons why the matter was determined to be a key audit matter
Passenger flights account for the largest share of the Group's business operations. The related flight documents are paid by the customer before the flight takes place. Prepayments by customers for flight documents are accounted for as contract liabilities from unused flight documents until the flight documents are used. The respective companies recognize flight documents as revenue in profit or loss when the aircraft lands.

Any flight documents that have not been used during the fiscal year, are still valid at year-end and continue to be recognized as contract liabilities from unused flight documents are examined at year-end to determine their age and validity. In addition, historical data is used to estimate how many flight documents will no longer be used. The flight documents with a high probability of no longer being used are recognized as breakage under revenue in profit or loss.

In addition, Deutsche Lufthansa Aktiengesellschaft recognizes contract liabilities from customer loyalty programs in its consolidated financial statements that relate to bonus miles granted to participants in the Miles & More program. Until the bonus miles are redeemed, these contract liabilities are determined on the basis of the relative stand-alone selling price per bonus mile. If participants collect bonus miles with external partners, these are recognized as liabilities until redemption at the prices the external partners paid to Lufthansa. Bonus miles with a high probability of not being redeemed are recognized as revenue over a period of three years based on historical estimates.

From our perspective, the recognition of traffic revenue, including the recognition of contract liabilities from unused flight documents and customer loyalty programs, entails a significant risk of material misstatement and is therefore a key audit matter in our audit, since the estimates of the executive directors have a significant effect on the recognition and valuation of these items, which are specific to the business model and significant in terms of the amount. The estimates and assumptions of the executive directors regarding the passengers' flight document usage and bonus mile redemption patterns are based on complex calculation procedures which are subject to judgment. This relates in particular to revenue from the release of contract liabilities from unused flight documents (breakage revenue) and customer loyalty programs.

Auditor's response
During our audit procedures, we obtained an understanding of the processes implemented by the executive directors of Deutsche Lufthansa Aktiengesellschaft for recognizing traffic revenue and the correct timing of revenue recognition related to breakage and customer loyalty programs by reference to individual transactions from the purchase of the flight documents through to recognition in the consolidated financial statements and tested the controls in place for the respective processes. In addition, with the aid of internal IT specialists, we assessed the design and operating effectiveness of the internal control system established by the Group with regard to the IT systems relevant for the recognition of traffic revenue. In so doing, we assessed in particular the mapping and processing of business processes, the possibilities for IT administrators to make changes and the access rights of individual employees. With regard to services related to IT systems and processes outsourced to third parties, we assessed, with the aid of internal IT specialists, the design and operating effectiveness of the internal control system regarding those IT systems and/or processes relevant for the recognition of traffic revenue, using an assurance report (ISAE 3402 Type 2) on the design and operating effectiveness of the internal control system at the service organization.

Using substantive analytical procedures, we examined whether the revenue generated in fiscal year 2022 correlates with the corresponding contract liabilities from unused flight documents and whether revenue from customer loyalty programs correlates with the corresponding payments received to identify any irregularities in the accounting treatment. We examined the plausibility of and reasons for any deviations and/or irregularities in the correlation. In addition, we used data analytics to identify any irregularities in the posting data compared to relevant document types and system users, among other things. To detect any irregularities in the development of revenue, we checked whether the development of revenue is consistent with the Group's key performance indicators reported internally and overall industry performance. Moreover, we reconciled individual payments received with the corresponding supporting documents for proof of payments received (e.g., account statements) on a sample basis and checked that they resulted in the derecognition of a receivable from the sale of flight documents.

In particular, we assessed the client's accounting approach with regard to the requirements for revenue recognition pursuant to IFRS 15. In doing so, we focused on whether Deutsche Lufthansa Aktiengesellschaft and its subsidiaries identified separate performance obligations within a contract, determined a transaction price and allocated it to the separate performance obligations and timed the recognition of revenue in accordance with the provisions of IFRS 15.

During our audit, we reviewed, with regard to breakage revenue recognized upon the derecognition of contract liabilities from unused flight documents (release), outstanding valid flight documents and their valuation with regard to their sales year and validity. Moreover, we assessed the consistency of the calculation methods used to determine flight prices, fees, taxes and other charges allocable to flight documents that are no longer expected to be used. We tested the plausibility of future expected usage rates for unused flight documents that are used to calculate breakage revenue based on past usage rates and the information on the passengers' expected future flight patterns provided to us by the executive directors.

In particular, we obtained an understanding of the manual accrual postings made in this respect on the basis of the supporting documents. As such manual accrual postings are always made at year-end, we also assessed the accuracy of the accounting cut-off (regarding both breakage revenue and revenue from customer loyalty programs) as part of our assessment of the design and operating effectiveness of the Group's internal control system. We discussed with our client factors and unique features of the industry as well as the transport conditions of Deutsche Lufthansa Aktiengesellschaft and its subsidiaries that influence the usage ratios and assessed their completeness and plausibility. We tested the plausibility of the effects and described implications of these factors by comparing the usage ratios to periods in which these factors did not apply. To assess the reliability of the forecasts and estimates used, we compared the number of expired tickets to the amount of breakage revenue recognized in the past.

During our audit, we also evaluated the recognition of revenue from customer loyalty programs for participants in the Miles & More program. With regard to contract liabilities from customer loyalty programs, we assessed the adequacy of the calculation methods applied consistently to determine the release ratios. We examined the determination of fair value depending on how the respective bonus mile is used (e.g., used for flights with a Lufthansa Group company or a partner airline or used in the form of a bonus in kind) and the underlying assumptions to assess the adequacy of the contract liabilities. We also checked the mathematical accuracy of the calculation of the liabilities from customer loyalty programs.

Our audit procedures did not give rise to any objections regarding the recognition of traffic revenue, including the accounting for contract liabilities from unused flight documents and customer loyalty programs.

Reference to related disclosures
With regard to the accounting policies used for revenue recognition and contract liabilities, and the related use of judgment, we refer to the disclosures under "3 New international accounting standards in accordance with IFRS and interpretations and summary of the significant accounting policies and valuation methods," "4 Traffic revenue" and "40 Current contract liabilities" in the notes to the consolidated financial statements.

2. Valuation 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 fiscal year 2020 relating to their abandonment, deep storage or sale, were assessed individually and not on the basis of the CGU as these aircraft are no longer part of a CGU.

From our perspective, in light of the continuing COVID-19 pandemic, the war between Russia and Ukraine and the related uncertainty surrounding the future development of air travel, the recoverability of aircraft was a key audit matter in our audit as the measurement of these items, which are significant in amount, is based to a large extent on the estimates and assumptions of the executive directors, particularly in terms of the GOP underlying measurement of the CGU.

Auditor's response
We firstly scrutinized the internal control system established by the executive directors for the valuation of own and leased aircraft by testing the design of the processes and assessing the risk of material misstatement.

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. 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 Company 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, 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 fiscal year 2020 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 valuation of 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."

3. 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 an asset of Deutsche Lufthansa Aktiengesellschaft and its subsidiaries which is significant in amount. 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. The Executive Board has prepared a Group operational planning for fiscal years 2023 to 2026, and, based thereon, forecast taxable profit for the taxable Group companies.

From our perspective, the assessment of the recoverability of this item which is 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 war between Russia and Ukraine and the related uncertainty surrounding the 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 aid of our valuation 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 made by the Executive Board in financial reporting 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, the aforementioned description of the entire internal control system (disclosures in accordance with recommendation A.5 DCGK 2022) 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 (i.e., fraudulent financial reporting and misappropriation of assets) 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 the risk of not detecting a material misstatement 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 „DLH-2022-12-31-de.zip") 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 2022 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) (06.2022) 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 assurance work. 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 10 May 2022. We were engaged by the Supervisory Board on 11 May 2022. 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 to Group companies the following services that are not disclosed in the consolidated financial statements or in the Group management report or have been engaged to provide them:

— 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
- Various agreed-upon procedures and assurance services that result from contractual obligations (especially under leases, loan agreements and retirement benefit agreements) and subsidies granted for short-time work
- Review of the financial information of Swiss International Air Lines AG prepared for a special purpose
- 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 2022
- Review of the remuneration report pursuant to Sec. 162 (3) AktG
- Voluntary audits of financial statements as of 31 December 2022
- Project-based assurance engagement involving a migration of IT-based accounting-related systems pursuant to IDW AsS 850 for Lufthansa AirPlus Servicekarten GmbH, Neu-Isenburg
- Project-based review in connection with IT general controls in accounting-related systems for Lufthansa Cargo AG, Frankfurt am Main, and Miles & More GmbH, Frankfurt am Main
- Project-based assurance engagement in connection with the requirements under the "Supervisory Requirements for IT at Payment Services Providers" (Zahlungsdiensteaufsichtliche Anforderungen an die IT: ZAIT)
- 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 Financial Investment Brokerage Ordinance]

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 Unternehmensregister [German Company Register] – 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 Jörg Bösser.

Eschborn/Frankfurt am Main, 1 March 2023

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Jörg Bösser Wirtschaftsprüfer [German Public Auditor]	Siegfried Keller Wirtschaftsprüfer [German Public Auditor]

REMUNERATION REPORT

The remuneration report provides detailed, individualised information about the remuneration awarded and due to active and former members of the Executive Board and Supervisory Board of Deutsche Lufthansa AG in the 2022 financial year, as well as the target remuneration granted for the 2022 financial year. The report complies with the requirements of Section 162 AktG and the relevant financial reporting standards (HGB, IFRS). An overview of the remuneration system for the Executive Board in the 2022 financial year can be found in table ↗ T183, p. 283. 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 **investor-relations.lufthansagroup.com/en/events/annual-general-meeting/annual-general-meeting-2020.html.**

Remuneration of Executive Board members

The remuneration system for 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 thereby creating an incentive for successful and sustainable management. 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 for 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 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.

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 Paragraph 1 AktG with a majority of 88.2%.

Remuneration year 2022

FROM AN ECONOMIC POINT OF VIEW, THE LUFTHANSA GROUP HAS NOW PUT THE CORONAVIRUS CRISIS BEHIND IT

In January 2022, the 2022 financial year was still subject to numerous sources of uncertainty. In the context of the coronavirus pandemic, the Omicron variant and the risk of further highly contagious virus variants meant that the prospects for the recovery of the aviation sector remained unclear. Moreover, in February there was also uncertainty over the effects of the war in Ukraine and the consequences for the global economy.

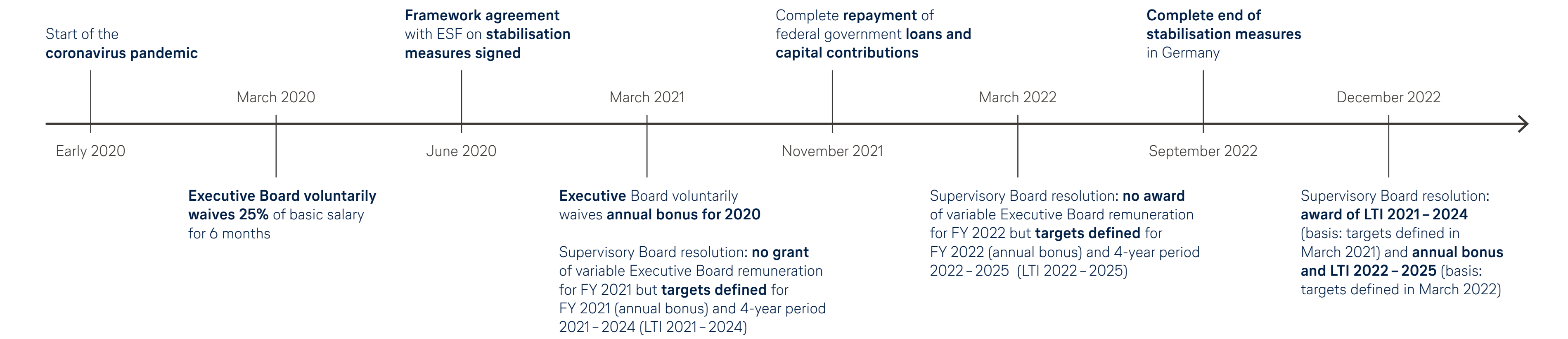
However, from an economic point of view, the Lufthansa Group's 2022 financial year was ultimately shaped above all by the recovery in demand for flights which materialised considerably faster than had been expected. For this reason, the passenger airlines' result significantly improved over the course of the year. At the same time, the Logistics and MRO segments achieved record results in 2022. In this context, the forecast was successively adjusted upwards in the financial year.

ESF STABILISATION MEASURES FULLY BROUGHT TO A CLOSE

Following the early repayment of the KfW loan of EUR 1bn and the repayment or termination of all of the Silent Participations held by the Federal Republic of Germany, all of the loans and deposits provided by the German government had already been repaid at the end of the 2021 financial year. The stabilisation measures implemented in support of Deutsche Lufthansa AG were successfully brought to a close following the full sale of the remaining shares held by the Economic Stabilisation Fund of the Federal Republic of Germany (ESF) in September 2022.

Now that these stabilisation measures have been fully brought to a close, the restrictions under the framework agreement concluded between Deutsche Lufthansa AG and the ESF (including the ban on the payment of bonuses to the members of the Executive Board of Deutsche Lufthansa AG) no longer apply.

C32 **OVERVIEW OF MATERIAL EVENTS CONCERNING EXECUTIVE BOARD REMUNERATION 2020 – 2022**



VARIABLE REMUNERATION COMMITMENT FOR THE 2021 AND 2022 FINANCIAL YEARS

In particular against the background of the equity interest still held at this time and the remuneration restrictions thus applicable under the framework agreement with the ESF, at its meetings in March 2021 and March 2022 the Supervisory Board initially resolved to suspend the commitment of one-year and long-term variable remuneration for the members of the Executive Board for the 2021 and 2022 financial years. At the same time, against the background of corporate management, the Supervisory Board set specific targets for the Executive Board members, both for the financial year in question (2021 and 2022) and for the current four-year period (2021 – 2024 or 2022 – 2025), i.e. matching the terms of the suspended variable remuneration elements.

In view of the stabilisation of the Company's economic situation, with the stabilisation measures having been fully brought to a close, at its meeting held in December 2022 the Supervisory Board decided to return to the Executive Board remuneration system approved by the Annual General Meeting and to once again provide economic incentives for the Executive Board via the achievement of financial and non-financial targets. In this context, the Supervisory Board has granted the members of the Executive Board the long-term variable remuneration for the period of the financial years 2021 to 2024 (LTI 2021 – 2024) as well as the one-year and long-term variable remuneration for the 2022 financial year and the period of the financial years 2022 to 2025 (annual bonus and LTI 2022 – 2025, see ↗ **p. 286** for further details). This commitment was made on the basis of the target remuneration which had been contractually agreed before the crisis. Furthermore, the performance criteria and targets already specified by the Supervisory Board during the stabilisation period at the start of the respective performance periods apply. This reflects the steering philosophy firmly established in the remuneration system in support of the Company's strategy and its efforts to retain personnel.

DEVIATION FROM REMUNERATION SYSTEM IN THE 2021 AND 2022 FINANCIAL YEARS

In the context of the changed requirements as a result of the coronavirus pandemic, the Supervisory Board has selected performance criteria which deviate from the remuneration system for the long-term variable remuneration for the 2021 financial year (LTI 2021 – 2024) and for the one-year variable remuneration for the 2022 financial year (annual bonus 2022). The selection of indicators reflects, above all, the focus on overcoming the crisis in the short and long term, restructuring the Company, bringing the government stabilisation measures to a close and returning to profitability.

For the LTI with performance period 2021 – 2024, the key area of focus is repayment of the stabilisation measures which entailed high costs as well as restrictions and to return to profitability, measured by the cumulative Adjusted EBIT for the period from 2022 to 2024 (instead of the Adjusted ROCE and the relative total shareholder return) (for more on the LTI 2021 – 2024, ↗ **p. 293**).

For the 2022 financial year, with operating cash flow and net debt (instead of the Adjusted EBIT margin and the Adjusted ROCE), the Supervisory Board also specified performance criteria which deviate from the remuneration system for the annual bonus. It has thus responded to the need to reduce the level of debt, which had significantly increased during the pandemic, and to maintain and reinforce the Company's investment capability (for details on the annual bonus 2022, see ↗ p. 286).

This means that in the 2021 financial year there is a deviation from the remuneration structure, as a one-year variable component was not granted for the 2021 financial year. In view of the economic situation, the government stabilisation measures and the restrictions associated with these stabilisation measures, this was in the interests of the Company's long-term prosperity.

C33 DEVIATIONS FROM THE REMUNERATION SYSTEM IN 2021 AND 2022

	One-year variable remuneration (Annual bonus)	Long-term variable remuneration (LTI)
Remuneration system as approved by the Annual General Meeting 2020	Financial performance criteria: – Adjusted EBIT margin (42.5%) – Adjusted ROCE (42.5%)	Financial performance criteria: – TSR in relation to the DAX (42.5%) – Adjusted ROCE over 4 years (42.5%)
Financial year 2021	No award	Financial performance criteria: – Repayment of stabilisation measures by 31 December 2024 (42.5%) – Cumulative Adjusted EBIT 2022 – 2024 (42.5%); Condition: Adjusted EBIT 2021 > Adjusted EBIT 2020
Financial year 2022	Financial performance criteria: – Operating cash flow (42.5%) – Net debt without pensions (42.5%)	Financial performance criteria: – TSR in relation to the DAX (42.5%) – Adjusted ROCE over 4 years (42.5%)

The underlying performance criteria for the long-term (LTI 2021 – 2024) and the one-year (annual bonus 2022) variable remuneration for the 2021 and 2022 financial years also differed from the remuneration system approved by the Annual General Meeting 2020. These deviations are consistent with the changes in focus as a result of the coronavirus crisis in terms of the corporate and financial strategy and are thus in the interests of the Company's long-term prosperity.

VOTE ON THE REMUNERATION REPORT FOR THE 2021 FINANCIAL YEAR AT THE ANNUAL GENERAL MEETING 2022

The remuneration report prepared pursuant to Section 162 AktG for the remuneration awarded and due to each individual member of the Executive Board and the Supervisory Board of Deutsche Lufthansa for the 2021 financial year was presented to the Annual General Meeting on 10 May 2022 in order for a resolution to be passed. The Annual General Meeting approved this report with a majority of 89.2%.

Generally speaking, the Lufthansa Group received very positive responses from investors regarding the structure and transparency of the remuneration report for the 2021 financial year. Any suggested improvements were taken into consideration in this remuneration report for the 2022 financial year. In particular, this report has adjusted its interpretation of the term "awarded" pursuant to Section 162 AktG in line with evolving interpretation of the law and the resulting reporting practices (see ↗ p. 296). This improves the level of transparency and understandability of the remuneration reporting, so that the level of performance in a reporting year matches the level of remuneration. In addition, in this remuneration report absolute figures have been added to the details of the relative changes in Executive Board and Supervisory Board remuneration, the remuneration of the rest of the workforce and Company profitability (from ↗ p. 303).

CHANGES TO THE REMUNERATION SYSTEM FOR THE EXECUTIVE BOARD FROM THE 2023 FINANCIAL YEAR ONWARDS

Within the scope of its decisions regarding the return to the remuneration system for the Executive Board, the Supervisory Board has undertaken a comprehensive review of the Executive Board remuneration system. In December 2022, the Supervisory Board therefore adopted changes to the remuneration system in place since 2020, which take effect from the 2023 financial year.

The revised remuneration system will be presented to the Annual General Meeting on 9 May 2023 for approval. A summary of the key changes can be found from ↗ p. 299 in this report and online in the invitation to the Annual General Meeting 2023.

Overview of the remuneration system

The following table provides an overview of the components of the remuneration system for Executive Board members for 2022, the structure of the individual remuneration components and the targets on which these are based.

T183 EXECUTIVE BOARD REMUNERATION SYSTEM 2022

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	– 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		– 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	– 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		

One-year variable remuneration (annual bonus)	As steps are still necessary to overcome the crisis, this is particularly intended to support the maintenance of sufficient available capital and the reduction of debt, taking the collective responsibility of the Executive Board and the individual performance of its members into account	– Operating cash flow target (42.5%)
		– Net debt (without pensions)[2] against 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)	Intended to promote a sustainable absolute and relative increase in enterprise value, while aligning the interests of the Executive Board members with those of shareholders	– Allocation of virtual Lufthansa shares with a four-year duration
		– Final number of virtual shares dependent on:
		  – 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		
Einvernehmliche Beendigung **Not used in the 2022 financial year**	Shall avoid unreasonably high severance payments	– Severance payment limited to remainder of service contract or two times annual remuneration (cap)
Post-contractual non-compete clause **Not used in the 2022 financial year**	Protects the Company's interests	– 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 **Not used in the 2022 financial year**	Shall ensure independence in takeover situations	– Severance payment corresponding to the remuneration owed for the remainder of the service contract, up to 100% of the cap on severance pay
Other compensation rules		

Share Ownership Guidelines	Shall strengthen the equity culture and align interests of Executive Board members and shareholders	– Obligation to invest in Lufthansa shares over a period of four years
		  – 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 **Not used in the 2022 financial year**	Shall ensure sustainable Company development	– 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	– Reduction in variable remuneration if maximum for a financial year is exceeded:
		  – Chairman of the Executive Board and CEO: EUR 9.5m
		  – Ordinary Executive Board members: EUR 5.0m

[1] Instead of the Adjusted EBIT margin provided for in the remuneration system approved by the Annual General Meeting 2020.
[2] Instead of the Adjusted ROCE provided for in the remuneration system approved by the Annual General Meeting 2020.

Target remuneration

The following table shows the remuneration granted to the members of the Executive Board for the 2022 and 2021 financial years, with a breakdown for the Chairman of the Executive Board and the other members of the Executive Board.

T184 TARGET REMUNERATION AND RELATIVE PROPORTION IN 2022 AND 2021

	Chairman of the Executive Board				Ordinary Executive Board members			
	2022 in € thousands	**2022 Proportion**	2021 in € thousands	2021 Proportion	**2022 in € thousands**	**2022 Proportion**	2021 in € thousands	2021 Proportion
Fixed remuneration								
Basic salary	1,634	33.6%	1,634	43.9%	860	33.6%	860	43.9%
Variable remuneration								
One-year variable remuneration[1]	1,140	23.4%	–	–	600	23.4%	–	–
Long-term variable remuneration[2] LTI 2022 – 2025 (LTI 2021 – 2024)	2,090	43.0%	2,090	56.1%	1,100	43.0%	1,100	56.1%
Target remuneration	**4,864**	**100%**	**3,724**	**100%**	**2,560**	**100%**	**1,960**	**100%**

[1] No award of one-year variable remuneration to Executive Board members for the 2021 financial year.
[2] Award of LTI 2021–2024 to Executive Board members as voted by the Supervisory Board in December 2022.

Maximum remuneration

In addition to the caps on the one-year and long-term variable remuneration, in accordance with Section 87a Paragraph 1 Sentence 2 No. 1 AktG the Supervisory Board has capped the total amount of remuneration received by each Executive Board member in a given financial year. This maximum remuneration is EUR 9.5m for the Chairman of the Executive Board and CEO and EUR 5m for an ordinary Executive Board member and relates to the actual expense or the actual payment of remuneration granted for a financial year (including ancillary benefits and retirement benefit commitments). If remuneration for a financial year exceeds this cap, the variable remuneration is reduced accordingly.

Since the amount paid out for the long-term variable remuneration in 2022 will only be known on 31 December 2025 due to the four-year performance period, definitive information about compliance with the remuneration cap for the remuneration granted in the 2022 financial year can only be provided in the remuneration report for the 2025 financial year.

COMPLIANCE WITH THE MAXIMUM REMUNERATION LIMIT FOR THE 2019 FINANCIAL YEAR

For the 2019 financial year, the Supervisory Board had already specified a maximum amount for the overall remuneration granted for each member of the Executive Board for a given financial year. Following the end of the performance period for the long-term variable remuneration 2019 – 2022 on 31 December 2022, it is clear that none of the Executive Board members active in the 2019 financial year achieved this maximum amount. The following table ↗ T185, p. 285, provides a detailed overview of the amounts of remuneration granted for the individual Executive Board members for the 2019 financial year, including the respective maximum amounts.

T185 MAXIMUM REMUNERATION FOR FINANCIAL YEAR 2019

	Carsten Spohr, Chairman of the Executive Board Chairman since 1 May 2014; Member of the Executive Board since 1 Jan 2011		Harry Hohmeister Member of the Executive Board since 1 Jan 2013		Detlef Kayser Member of the Executive Board since 1 Jan 2019		Ulrik Svensson Member of the Executive Board until 30 Apr 2020		Thorsten Dirks Member of the Executive Board until 30 Jun 2020		Bettina Volkens Member of the Executive Board until 31 Dec 2019	
in € thousands	2022	2019 (max)	2022	2019 (max)	2022	2019 (max)	2022	2019 (max)	2022	2019 (max)	2022	2019 (max)
Fixed remuneration												
Basic salary	1,634	1,634	860	860	860	860	860	860	860	860	860	860
Ancillary benefits	28	28	18	18	12	12	15	15	15	15	22	22
Total	**1,662**	**1,662**	**878**	**878**	**872**	**872**	**875**	**875**	**875**	**875**	**882**	**882**
Variable remuneration												
One-year variable remuneration 2019	576	2,280	303	1,200	303	1,200	303	1,200	303	1,200	303	1,200
Long-term variable remuneration (LTI 2019 – 2022)	199	4,180	104	2,200	104	2,200	104	2,200	104	2,200	104	2,200
Total	**775**	**6,460**	**407**	**3,400**	**407**	**3,400**	**407**	**3,400**	**407**	**3,400**	**407**	**3,400**
Service cost	920	920	486	486	450	450	471	471	486	486	478	478
Total remuneration	**3,357**	**9,042**	**1,771**	**4,764**	**1,729**	**4,722**	**1,753**	**4,746**	**1,768**	**4,761**	**1,767**	**4,760**
Maximum remuneration as defined in Section 87a Paragraph 1 Sentence 2 No. 1 AktG		**9,500**		**5,000**		**5,000**		**5,000**		**5,000**		**5,000**

Review of the appropriateness of Executive Board remuneration

In the 2022 financial year, in particular given the Company's current position, the Supervisory Board once again reviewed the appropriateness of the Executive Board's remuneration with regard to its amount and structure.

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 relationship between the remuneration for the Executive Board and for senior managers and the workforce as a whole, also over time (↗ T200, p. 304f.).

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 companies listed on the DAX and MDAX, since they are 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.

Variable remuneration in the 2022 financial year

The performance criteria for the one-year and long-term variable remuneration are derived from the Company's strategic targets and operational management. For the 2022 financial year, in the context of the continuing need for short- and long-term crisis management they are intended, above all, to ensure that sufficient capital is available and to reduce the Company's debts, while also giving consideration to environmental sustainability. Taking into account the interests of shareholders and other stakeholders, this is intended to ensure the sustainability of the business and reflect the Lufthansa Group's social and ecological responsibilities.

In this context, the Supervisory Board has specified operating cash flow and net debt (instead of the Adjusted EBIT margin and the Adjusted ROCE, as envisaged in the remuneration system approved by the Annual General Meeting) as the relevant performance criteria for the annual bonus 2022. The performance criteria stipulated in the remuneration system, Adjusted ROCE and relative total shareholder return by comparison with the DAX companies, will continue to apply for the long-term variable remuneration for 2022.

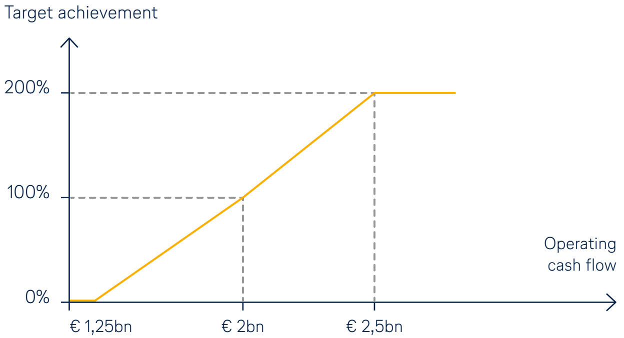
On the basis of the remuneration system and the performance criteria which differ in relation to the annual bonus, the Supervisory Board determined the targets and minimum and maximum amounts – for financial targets as well as the focus topics for the non-financial targets – for the variable remuneration for the 2022 financial year. The Supervisory Board ensured that the targets were demanding and ambitious.

For both the annual bonus and long-term variable remuneration, the possible range of the target achievement for the individual financial and non-financial targets is between 0% and 200%.

ONE-YEAR VARIABLE REMUNERATION (ANNUAL BONUS 2022)

85% of the one-year variable remuneration for 2022 is based on financial targets and 15% on overall and individual business and sustainability targets. The Supervisory Board specifies focus topics for the latter in each year.

C34 ANNUAL BONUS 2022: TARGET AND TARGET ACHIEVEMENT OPERATING CASH FLOW

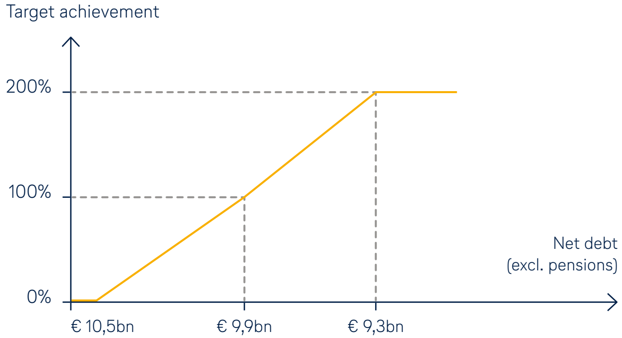


Operating cash flow 2022: EUR 5.17bn | Target achievement: 200%

For the purpose of the annual bonus 2022, operating cash flow and net debt (excluding pensions) each accounted for 42.5% of the financial targets. For the 2022 financial year, the Supervisory Board defined “Customers” and “Employees” as focus topics for the business and sustainability targets in the one-year variable remuneration and thus took the key stakeholders’ interests into consideration.

The financial targets are set by the Supervisory Board on the basis of the medium-term Group budget for the upcoming financial year. The target for operating cash flow in the 2022 financial year was EUR 2bn. For the net debt (excluding pensions), the target was EUR 9.9bn. The performance curves are linear in relation to the defined targets.

C35 ANNUAL BONUS 2022: TARGET AND TARGET ACHIEVEMENT NET DEBT

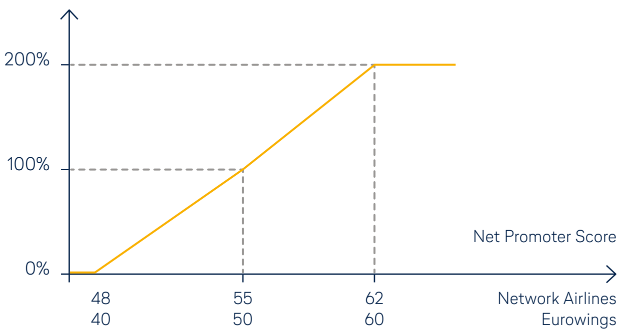


Net debt (excl. pensions) 2022: EUR 6.87bn | Target achievement: 200%

Overall, the level of target achievement for the financial targets for the one-year variable remuneration for the 2022 financial year is 200%.

For the sustainability parameter "Customers", the Net Promoter Score[1] (↗ **Combined non-financial declaration, p. 93ff.**), i.e. the proportion of customers recommending the Company, is used. The corresponding results are taken from the Network Airlines (Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines) and from Eurowings, with three quarters weighted for the Network Airlines and one quarter for Eurowings. The performance curve is linear.

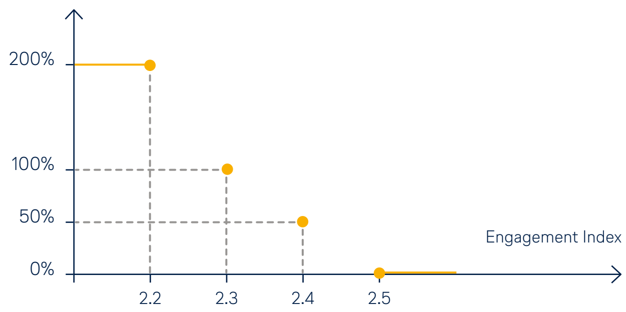
C36 ANNUAL BONUS 2022: SUSTAINABILITY TARGET "CUSTOMER"



Network Airlines: 35, Eurowings: 37 | Target achievement: 0%

The "Engagement Index" is used for the parameter "Employees" (↗ **Combined non-financial declaration, p. 93ff.**). It 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.

C37 ANNUAL BONUS 2022: SUSTAINABILITY TARGET "EMPLOYEE"



Engagement Index: 2.4 | Target achievement: 50%

The "Customers" and "Employees" targets each account for 7.5% of the annual bonus. The following table shows the target achievement for the business and sustainability targets for the 2022 financial year.

T186 ANNUAL BONUS 2022: TARGET ACHIEVEMENT BUSINESS AND SUSTAINABILITY TARGETS

	Weighting	100% target	Actual value	Target achievement
Customer (NPS)	7.5%			0.0%
Network Airlines (3/4)		55	35	0.0%
Eurowings (1/4)		50	37	0.0%
Employee (Engagement Index)	7.5%	2.3	2.4	50.0%
Total	**15.0%**			**25.0%**

[1] The Net Promoter Score is a registered service mark of Bain & Company, Inc., Fred Reichheld and Satmetrix Systems, Inc.

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. In addition to the targets for the individual Executive Board members, these comprise over-arching targets for the entire Executive Board to reflect the collective responsibility of its members as a decision-making body. At the end of the financial year, these are reviewed by the Steering Committee and the Supervisory Board. The following table summarises the topics included in the individual performance targets agreed for the reporting year.

T187 INDIVIDUEL TARGETS 2022

Executive Board	Topics for individual targets
Carsten Spohr	– Implementation of long-term Group strategy – Restructuring of the Lufthansa Group – Cross-functional, project-based organisational structure – Political and regulatory activities – Promote entrepreneurial and customer-centric conduct
Christina Foerster	– Improve product and service quality – Continued development of customer experience – Implement ESG strategy – Drive the digitalisation of the Lufthansa Group – Modernise and harmonise the IT architecture
Harry Hohmeister	– Drive the market focus of offer/revenue management units – Strengthen the competitiveness of digital and global distribution – Further development of the multi-traffic system – Actively drive the consolidation of the airline industry – Expand the leisure travel segment
Detlef Kayser	– Improve operating performance – Drive systematic fleet modernisation – Harmonise and digitise operations processes – Develop and execute new cooperation models with system partners
Michael Niggemann	– Continue to develop collective bargaining partnerships – Make working hours and employment models more flexible – Drive the cultural transformation – Attract and retain talent – Diversity, with a focus on gender diversity
Remco Steenbergen	– Financial strategy with a focus on medium-term goals – Refinancing and debt reduction plan – Safeguard investment capability – Optimise portfolio by means of M&A projects

The following table provides an overview of the joint targets set for the entire Executive Board by the Supervisory Board for the reporting year.

T188 OVER-ARCHING TARGETS FOR THE ENTIRE EXECUTIVE BOARD 2022

Topic	Targets
Flexibilisation	– Ensure flexible processes and structures for effective responses to the still volatile market environment
Put corporate strategy into operation and drive transformation of the Lufthansa Group	– ESG measures – Customer focus: shape a premium digital travel experience – Digitisation: exploit cross-functional potential for innovation and digitisation – Value-based management: achieve a solid balance sheet structure and efficient capital allocation – Modernise the leadership and corporate culture – Retain talent: staff loyalty and diversity

The Steering Committee and Supervisory Board assessed performance against the individual targets at the end of the 2022 financial year. 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.

The following table shows the overall level of target achievement and the resulting amount paid for the annual bonus 2022 for each individual member of the Executive Board.

T189 OVERALL TARGET ACHIEVEMENT AND PAYMENT AMOUNTS ANNUAL BONUS 2022

Executive Board	Target amount	Overall target achievement	Payment amount
Carsten Spohr	1,140,000 €	200%[1]	2,280,000 €
Christina Foerster	600,000 €	174%	1,042,500 €
Harry Hohmeister	600,000 €	200%[1]	1,200,000 €
Detlef Kayser	600,000 €	174%	1,042,500 €
Michael Niggemann	600,000 €	191%	1,146,750 €
Remco Steenbergen	600,000 €	200%[1]	1,200,000 €

[1] Including the cap of 200% of the target amount for payment of the annual bonus 2022.

LONG-TERM VARIABLE REMUNERATION (LTI)

To promote the long-term, sustainable development of the Company, the long-term variable remuneration, and therefore the majority of variable remuneration, depends on the achievement of long-term targets. Taking the absolute and relative share performance into account aligns the interests of Executive Board members closely with those of shareholders.

The current long-term variable remuneration includes still ongoing programmes from several financial years, which are partly based on remuneration systems in effect before 1 January 2020. This includes, on the one hand, the long-term variable remuneration granted in the 2019 financial year (LTI 2019 – 2022). Until 2018, the Executive Board members also participated in share programmes for Lufthansa Executive Board members and managers (LH-Performance).

Long-term variable remuneration commitment 2022 (LTI 2022 – 2025)

Since financial year 2020, the long-term variable remuneration commitment for Executive Board members is share-based. At the beginning of the performance period, the Executive Board members receive a number of virtual shares corresponding to the value of the contractually granted target amount. The number of virtual shares is determined by reference to the average price of the Lufthansa share in the first 60 trading days after the four-year performance period begins. The average price for the LTI 2022 – 2025 is EUR 7.00. The following table shows the number of conditionally committed virtual shares to the individual Executive Board members as LTI in the reporting year.

T190 CONDITIONALLY COMMITTED VIRTUAL SHARES LTI 2022 – 2025 – ALLOCATION PRICE: EUR 7.00

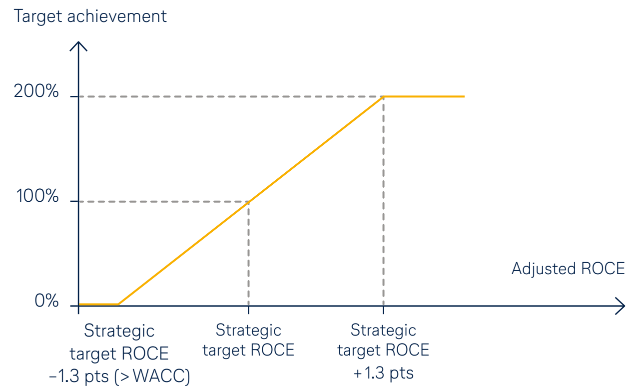
Executive Board	Target amount	Number of conditionally committed virtual shares
Carsten Spohr	€ 2,090,000	298,571
Christina Foerster	€ 1,100,000	157,143
Harry Hohmeister	€ 1,100,000	157,143
Detlef Kayser	€ 1,100,000	157,143
Michael Niggemann	€ 1,100,000	157,143
Remco Steenbergen	€ 1,100,000	157,143

The final number of virtual shares depends on the achievement of the financial performance targets Adjusted ROCE (42.5%) and relative total shareholder return (42.5%), as well as the non-financial strategic and sustainability targets (15%).

The Supervisory Board has specified the “Environment” parameter as a focus topic for the strategic and sustainability targets in the LTI 2022 – 2025. This provides a long-term incentive for the environmental target of reducing CO_2 emissions.

Performance against the target of Adjusted ROCE is measured by comparing average Adjusted ROCE over the four-year performance period with a strategic target set by the Supervisory Board at the beginning of the four year performance period. The Supervisory Board refers to the Group’s four-year operational planning for the purpose of this measurement. The lower limit may not fall below what is required to cover the cost of capital employed (“weighted average cost of capital”). This is in accordance with the strategic objective of earning a return on capital employed that is higher than the cost of capital.

C38 LTI 2022 – 2025: TARGET ADJUSTED ROCE

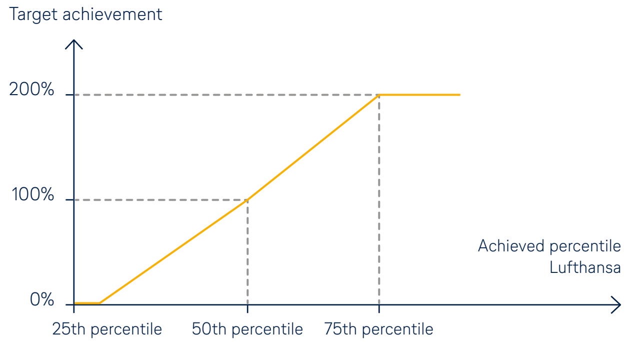


For the LTI 2022 – 2025, the strategic target Adjusted ROCE is 6.3%. The actual average Adjusted ROCE reached and the resulting level of target achievement are published in the remuneration report for the financial year at the end of the respective performance period.

TSR performance for the LTI 2022 – 2025 is calculated at the end of the four-year performance period. This involves comparing the average share price for the last 60 trading days before the start of the performance period with the average share price for the last 60 trading days before the end of the performance period. Dividends are taken into account as notionally reinvested. The companies in the DAX are used as the peer group for the relative TSR, both those in the index at the beginning and at the end of the performance period. The TSR performance of all companies is ranked and the relative performance of Deutsche Lufthansa AG determined by its percentile position. Target achievement is 100% if the TSR of Deutsche Lufthansa AG corresponds to the median (50th percentile) for the peer group. If performance is on or below the 25th percentile, the level of target achievement is 0%. The maximum score of 200% is achieved in the event of a TSR performance on or above the 75th percentile. Interim figures are linearly interpolated.

C39 LTI 2022 – 2025: TARGET RELATIVE TOTAL SHAREHOLDER RETURN

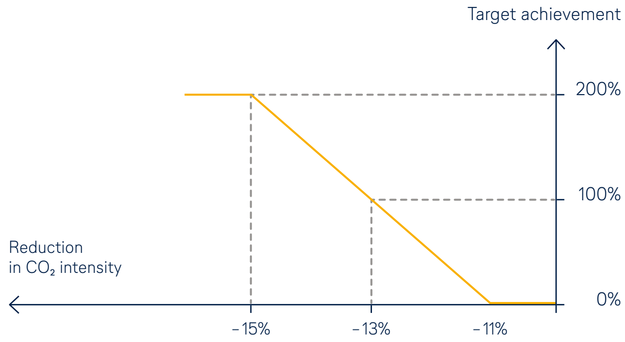
Total Shareholder Return of the Lufthansa share compared with the DAX



The “Environment” sustainability target is based on the Lufthansa Group’s long-term strategy. Since 2022, the Lufthansa Group’s targets for reducing its CO_2 emissions have been aligned with the “Science Based Targets” (SBT) which are recognised internationally and in multiple industries and are based on the achievement of the targets defined in the Paris Climate Agreement. The Lufthansa Group thus undertakes to achieve a scientifically based intensity target relating to its specific CO_2 emissions, measured in terms of grams per sold tonne-kilometre. The reduction target for the LTI 2022 – 2025 is based on the long-term target of a 30.6% reduction in specific CO_2 emissions by 2030 (↗ **Combined non-financial declaration, p. 93 ff.**) by comparison with the 2019 base year. The target is a 13 percentage point reduction by the end of the performance period on 31 December 2025. The end points of the range are defined by a deviation of +/– 2 percentage points from the target. Interim figures are linearly interpolated.

C40 LTI 2022 – 2025: SUSTAINABILITY TARGET “ENVIRONMENT”

Reduction in CO_2 intensity compared to the base year 2019



To calculate performance, the level of target achievement in terms of the reduction of specific CO_2 emissions is determined at the end of the four-year performance period. This is then counted towards the overall level of target achievement for the LTI 2022 – 2025 at the end of the performance period with a weighting of 15%.

At the end of the performance period, the number of virtual shares granted conditionally is multiplied by the total target achievement, which is made up of the financial and non-financial target achievement, in order to obtain the final number of virtual shares. To calculate the payment amount, the final number of virtual shares is multiplied by the average price of the Lufthansa share over the last 60 trading days of the performance period, plus dividends paid during the performance period. Payment is generally in cash.

Long-term variable remuneration 2019 (LTI 2019 – 2022)

The main difference between the LTI 2019 – 2022 and the LTI 2022 – 2025 is that, for the 2019 financial year, the commitment was not based on virtual shares. All the other parameters, particularly the underlying performance criteria, are the same as in the LTI 2022 – 2025. Please see the detailed comments in the remuneration report 2019 (**Annual Report 2019, p. 119ff.**).

The relative total shareholder return (TSR) by comparison with the DAX companies and the Adjusted Return on Capital Employed (Adjusted ROCE) each account for 42.5% of the LTI 2019 – 2022, while the “Environment” sustainability parameter specified by the Supervisory Board accounts for 15%.

Performance against the target of Adjusted ROCE is measured by comparing the average Adjusted ROCE over the four-year performance period with a strategic target set by the Supervisory Board at the beginning of the performance period. This was derived from the Group’s operational planning and amounted to 7% for the LTI 2019 – 2022. The end points of the range were defined by a deviation of +/– 3 percentage points from the target. Interim figures are linearly interpolated.

As a rule, TSR performance is calculated analogously to the procedure for the LTI 2022 – 2025. However, the average share price over the last 30 trading days (instead of 60 as for the LTI 2022 – 2025) is referred to at both the start and the end of the performance period for the purpose of the LTI 2019 – 2022. Target achievement is 100% if the TSR of Deutsche Lufthansa AG corresponds to the median (50th percentile) for the peer group. If performance is on or below the 25th percentile, the level of target achievement is 0%. The maximum score of 200% is achieved in the event of a TSR performance on or above the 75th percentile. Interim figures are linearly interpolated.

T191 LTI 2019 – 2022: FINANCIAL TARGETS – TARGET AND TARGET ACHIEVEMENT

	Target			**Target achievement**	
	0%	100%	200%		in %
Adjusted ROCE	4%	7%	10%	– 2.88%	0%
Relative TSR compared with the DAX	25th percentile	50th percentile	75th percentile	5th percentile	0%
Total					**0%**

The Supervisory Board specified the “Environment” parameter as a core sustainability target for the LTI 2019 – 2022. In this context the IATA targets for fuel efficiency were used, i.e. the average kerosene consumption to carry a passenger 100 kilometres (**Combined non-financial declaration, p. 93ff.**), which provide for an improvement of 1.5% p.a. in specific fuel consumption and thus an improvement in specific CO_2 emissions. A target of 100% was therefore defined as an annual improvement of 1.5% in specific fuel consumption. The end points of the range are defined by a deviation of +/– 1.5 percentage points from the annual target. Interim figures are linearly interpolated.

Since the average specific kerosene consumption figures for a given financial year were only available in the middle of the following financial year until the 2018 financial year, the Supervisory Board decided to compare the previous year’s fuel efficiency figures with those for the year before that when setting the targets for the LTI 2019 – 2022. For the 2022 financial year, the environmental target is therefore measured on the basis of a comparison between the specific CO_2 emissions in the 2021 and 2020 financial years.

To calculate performance, the achievement of the environmental target is determined by the Supervisory Board annually over the four-year performance period. These annual target achievement figures then account for one quarter of the total performance against the sustainability target at the end of the performance period.

The levels of target achievement for the “Environment” parameter for the LTI 2019 – 2022 are presented in the following table. On this basis, the overall level of target achievement for the “Environment” parameter is 63.33%.

T192 TARGET ACHIEVEMENT FOR SUSTAINABILITY TARGET IN LTI 2019 – 2022

Annual reduction in CO_2 emissions	Reference years	Target achievement	Weighting
Year of performance period			
2019	2018 to 2017	53.33%	1/4
2020	2019 to 2018	0%	1/4
2021	2020 to 2019	0%	1/4
2022	2021 to 2020	200%	1/4
Total		**63.33%**	

Overall, the level of target achievement for the long-term variable remuneration for the 2019 financial year is thus 9.5%. The amounts paid for the individual Executive Board members active in the 2019 financial year are presented in table ↗ T197, p. 297f.

Payment of share-based remuneration – LH-Performance 2018

Up to and including the 2018 financial year, the Executive Board members were obliged to take part in the share programmes for Lufthansa Executive Board members. The shares were awarded in November of the financial year in question, with a performance period of four years.

Participation in the LH-Performance programme for Executive Board members required an investment in Lufthansa shares in tranches of EUR 4k. The Chairman of the Executive Board and CEO was obliged to participate via Lufthansa shares valued at EUR 180k and an ordinary Executive Board member to participate via Lufthansa shares valued at EUR 120k in each year. The Lufthansa Group granted a 50% discount. 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 2018 results in a cash payment if the share price goes up by more than 22%. The option is capped at a performance of more than 33%.

For the outperformance option, 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 is EUR 20k per tranche for both the performance and the outperformance options. The LH-Performance 2018 programme ended on 30 October 2022. Further information about the ongoing LH-Performance programmes can be found in ↗ Notes to the consolidated financial statements, Note 39, p. 222ff.

T193 LH-PERFORMANCE 2018: TARGET ACHIEVEMENT

	Hurdle rate	Cap	Actual value	Payment per tranche
Performance Lufthansa share	22%	33%	-57.68%	€ 0
Outperformance compared with peer group	+1 pts	+20 pts	+2.87 pts	€ 2k

Payments are only made to Executive Board members under the options if they were 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 their 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. Information about the LH-Performance 2018 payments made in the 2022 financial year for the Executive Board members can be found in table ↗ T197, p. 297f.

Malus and clawback clause

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 the one-year 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 2022.

Current LTI programmes

The following tables provide an overview of the current LTI programmes for the members of the Executive Board, including the performance criteria specified by the Supervisory Board and the development in the 2022 financial year of the portfolio of conditionally committed virtual shares to the members of the Executive Board active in the financial year within the scope of these programmes.

C41 CURRENT LTI PROGRAMMES AS OF 31 DECEMBER 2022

Performance period

Financial year		2020	2021	2022	2023	2024	2025
LTI 2020 – 2023							
Performance criteria (0% – 200% target achievement)	— TSR in relation to the DAX (42.5%) — Adjusted ROCE (Ø 4 years, 42.5%) — Reduction in specific CO_2 emissions per passenger-kilometre flown (15%)	1 January 2020			31 December 2023		
LTI 2021 – 2024							
Performance criteria (0% – 200% target achievement)	— End stabilisation measures[1] (42.5%) — Cumulative Adjusted EBIT 2022 – 2024[1] (42.5%) Condition: Adjusted EBIT 2021 > Adjusted EBIT 2020 — Reduction in specific CO_2 emissions per passenger-kilometre flown (15%)		1 January 2021			31 December 2024	
LTI 2022 – 2025							
Performance criteria (0% – 200% target achievement)	— TSR in relation to the DAX (42.5%) — Adjusted ROCE (Ø 4 years, 42.5%) — Reduction in CO_2 intensity in grammes of CO_2 per revenue-tonne kilometre (15%)			1 January 2022			31 December 2025

[1] Performance criteria differing from those in the remuneration system approved by the Annual General Meeting 2020.

T194 CHANGE IN NUMBER OF CONDITIONALLY COMMITTED VIRTUAL SHARES IN FINANCIAL YEAR 2022

Executive Board	Number at start of 2022	Allocation LTI 2021 – 2024 (price: € 7.93)	Allocation LTI 2022 – 2025 (price: € 7.00)	Number at end of 2022
Carsten Spohr	157,261	263,556	298,571	719,389
Christina Foerster	82,769	138,714	157,143	378,626
Harry Hohmeister	82,769	138,714	157,143	378,626
Detlef Kayser	82,769	138,714	157,143	378,626
Michael Niggemann	82,769	138,714	157,143	378,626
Remco Steenbergen	–	138,714	157,143	295,857

T195 SHAREHOLDINGS OF CURRENT EXECUTIVE BOARD MEMBERS

Executive Board	Number of Lufthansa shares according to SOG	Shareholdings as of 31 Dec 2022
Carsten Spohr	155,969	309,950
Christina Foerster	56,126	18,408
Harry Hohmeister	41,044	152,096
Detlef Kayser	41,044	44,640
Michael Niggemann	56,126	100,000
Remco Steenbergen	99,113	100,000

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 Chairman of the Executive Board and 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, starting on 21 June 2020. After the stabilisation measures were fully brought to a close on 13 September 2022, this period has now resumed and will be extended accordingly.

The shares acquired 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.

Retirement benefits

The members of the Executive Board receive retirement benefit commitments based on a defined contribution plan. Since the 2019 financial year, for the duration of their employment, every Executive Board member has received a fixed annual amount. This amounts to EUR 855k for the Chairman of the Executive Board and CEO and EUR 450k for an ordinary Executive Board member and is credited to their personal pension account.

The investment guidelines are based on the investment concept for the Lufthansa Pension Trust, which also applies to employees 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 into 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 their surviving dependants, a payment as a lump sum or in fewer than ten instalments may also be made, subject to approval by the Company. The pension credits received until 31 December 2018 by Carsten Spohr and Harry Hohmeister 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 reaches the age of 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 financial year 2022

The total amount of pension entitlements earned by active Executive Board members in the 2022 financial year was EUR 3.0m (previous year: EUR 3.0m) according to HGB and EUR 3.2m (previous year: EUR 3.2m) according to IFRS and was recognised in staff costs (current service cost). The individual service cost and present values of pension entitlements are as follows:

T196 PENSION ENTITLEMENTS ACCORDING TO HGB AND IFRS

	HGB		HGB		IFRS		IFRS	
	Current service costs		Settlement amount of pension obligations		Current service costs		Defined-benefit obligations (DBO)	
in € thousands	**2022**	2021	**31 Dec 2022**	31 Dec 2021	**2022**	2021	**31 Dec 2022**	31 Dec 2021
Carsten Spohr	810	810	8,730	9,413	865	871	8,728	9,415
Christina Foerster	427	428	1,411	1,114	459	461	1,398	1,118
Harry Hohmeister	435	431	4,018	4,265	451	453	4,017	4,265
Detlef Kayser	431	430	1,983	1,828	453	457	1,982	1,828
Michael Niggemann	433	435	1,457	1,154	464	467	1,438	1,159
Remco Steenbergen	450	513	909	513	482	450	907	514
Total	**2,986**	**3,047**	**18,508**	**18,287**	**3,174**	**3,159**	**18,470**	**18,299**

Remuneration awarded and due in 2022 pursuant to Section 162 AktG
Pursuant to Section 162 AktG, the remuneration report must disclose the remuneration awarded and due to each current or former member of the Executive Board or the Supervisory Board in the past financial year.

Remuneration will be considered to have been awarded if it has fallen due in the reporting period and the individual Executive Board member has actually received it ("payment-based perspective"). According to the emerging legal understanding regarding the interpretation of the term "awarded" in Section 162 AktG, remuneration components may, as an alternative, already be presented in the remuneration report for the reporting year in which the one-year or long-term activity constituting the basis for this remuneration has been performed in full ("vesting-based perspective"). In this context, the payment-oriented perspective which applied for the 2021 remuneration report has been changed over to a vesting-based perspective as regards the term "awarded" under Section 162 AktG for the present report.

Accordingly, the amounts paid out for the annual bonus are already indicated for the reporting year, even though they will only be paid out after the end of the reporting year in question. Analogously, the amounts paid out for the long-term variable remuneration components are indicated in the reporting year in which the performance period ends, even though here too the payment will only be made in the following year. This perspective enables transparent reporting that is easy to understand, with the level of performance in the respective reporting year matching the level of remuneration.

Since the Supervisory Board did not grant any annual bonus for the members of the Executive Board in the 2021 financial year due to the coronavirus pandemic, from the vesting-based perspective too no variable remuneration is either awarded or due for the 2021 reporting year. The figures for the 2021 financial year are thus identical to the amounts reported in the 2021 remuneration report.

The following section shows the remuneration awarded and due to each individual active and former Executive Board member in 2022, in accordance with Section 162 Paragraph 1 Sentence 1 AktG.

As well as the annual bonus for the 2022 financial year, the variable remuneration components awarded in this sense in the financial year include the payments under the LTI 2019 – 2022 and the option programme, LH-Performance 2018.

EXECUTIVE BOARD MEMBERS ACTIVE IN THE FINANCIAL YEAR

Table T197 shows the remuneration awarded and due to Executive Board members active in 2022 as defined in Section 162 Paragraph 1 Sentence 1 AktG, as well as the relative proportions of individual fixed and variable remuneration components. Although the expenses for retirement benefit commitments are not classified as awarded 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.

T197 REMUNERATION AWARDED AND DUE IN ACCORDANCE WITH SECTION 162 PARAGRAPH 1 SENTENCE 1 AKTG – EXECUTIVE BOARD MEMBERS ACTIVE IN 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				Harry Hohmeister Member of the Executive Board since 1 Jan 2013			
in € thousands	2022	2022[1]	2021	2021[1]	2022	2022[1]	2021	2021[1]	2022	2022[1]	2021	2021[1]
Fixed remuneration												
Basic salary	1,634	38.5%	1,634	97.5%	860	44.6%	860	95.1%	860	38.1%	860	95.4%
Ancillary benefits	38	0.9%	42	2.5%	27	1.4%	44	9.4%	34	1.5%	41	4.6%
Total	**1,672**	**39.4%**	**1,676**	**100.0%**	**887**	**46.0%**	**904**	**100.0%**	**894**	**39.6%**	**901**	**100.0%**
Variable remuneration												
One-year variable remuneration 2022 (2021)[2]	2,280	53.8%	–	0.0%	1,042	54.0%	–	–	1,200	53.1%	–	0.0%
Long-term variable remuneration[3]												
LTI 2019 – 2022	199	4.7%	–	0.0%	–	–	–	–	104	4.6%	–	0.0%
Payment option programmes LH-Performance 2018 (LH-Performance 2017)	90	2.1%	–	0.0%	–	–	–	–	60	2.7%	–	0.0%
Total	**2,569**	**60.6%**	**0**	**0.0%**	**1,042**	**54.0%**	**0**	**0.0%**	**1,364**	**60.4%**	**0**	**0.0%**
Total remuneration as defined in Section 162 AktG	**4,241**	**100.0%**	**1,676**	**100.0%**	**1,929**	**100.0%**	**904**	**100.0%**	**2,258**	**100.0%**	**901**	**100.0%**
Service cost	865	–	871	–	459	–	461	–	451	–	453	–
Total remuneration	**5,106**	**–**	**2,547**	**–**	**2,388**	**–**	**1,365**	**–**	**2,709**	**–**	**1,354**	**–**

[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] The Supervisory Board did not award any one-year variable remuneration to Executive Board members for financial year 2021.
[3] The performance period for the last long-term component of the remuneration system in effect before 1 January 2019 (Deferral 2018, see the comments in the Remuneration Report 2020, p. 259) came to an end on 31 December 2020. In response to the crisis, Carsten Spohr, Harry Hohmeister, Thorsten Dirks and Bettina Volkens decided in March 2021 to defer the payment until further notice. After the government stabilisation measures had been repaid in full, their claims under the Deferral 2018 were settled in September 2022.

T197 REMUNERATION AWARDED AND DUE IN ACCORDANCE WITH SECTION 162 PARAGRAPH 1 SENTENCE 1 AKTG – EXECUTIVE BOARD MEMBERS ACTIVE IN 2021 (continued)

	Detlef Kayser Member of the Executive Board since 1 Jan 2019				Michael Niggemann Member of the Executive Board since 1 Jan 2020				Remco Steenbergen Member of the Executive Board since 1 Jan 2021			
in € thousands	**2022**	**2022[1]**	2021	2021[1]	**2022**	**2022[1]**	2021	2021[1]	**2022**	**2022[1]**	2021	2021[1]
Fixed remuneration												
Basic salary	860	42.3%	860	96.3%	860	42.2%	860	95.3%	860	27.8%	860	45.3%
Ancillary benefits	26	1.3%	33	3.7%	32	1.6%	42	4.7%	61	2.0%	63	3.3%
Total	**886**	**43.6%**	**893**	**100.0%**	**892**	**43.7%**	**902**	**100.0%**	**921**	**29.7%**	**923**	**48.6%**
Variable remuneration												
One-year variable remuneration 2022 (2021)[2]	1,042	51.3%	–	0.0%	1,147	56.3%	–	–	1,200	38.8%	–	–
Long-term variable remuneration[3]												
LTI 2019 – 2022	104	5.1%	–	–	–	–	–	–	–	–	–	–
Payment option programmes LH-Performance 2018 (LH-Performance 2017)	–	–	–	–	–	–	–	–	–	–	–	–
Total	**1,146**	**56.4%**	**–**	**0.0%**	**1,147**	**56.3%**	**0**	**0.0%**	**1,200**	**38.8%**	**–**	**–**
Other[4]	–	–	–	–	–	–	–	–	975	31.5%	975	51.4%
Total remuneration as defined in Section 162 AktG	**2,032**	**100.0%**	**893**	**100.0%**	**2,039**	**100.0%**	**902**	**100.0%**	**3,096**	**100.0%**	**1,898**	**100.0%**
Service cost	453	–	457	–	464	–	467	–	482	–	450	–
Total remuneration	**2,485**	**–**	**1,350**	**–**	**2,503**	**–**	**1,369**	**–**	**3,578**	**–**	**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] The Supervisory Board did not award any one-year variable remuneration to Executive Board members for financial year 2021.
[3] The performance period for the last long-term component of the remuneration system in effect before 1 January 2019 (Deferral 2018, see the comments in the Remuneration Report 2020, p. 259) came to an end on 31 December 2020. In response to the crisis, Carsten Spohr, Harry Hohmeister, Thorsten Dirks and Bettina Volkens decided in March 2021 to defer the payment until further notice. After the government stabilisation measures had been repaid in full, their claims under the Deferral 2018 were settled in September 2022.
[4] 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 was paid in three instalments of EUR 975k each in the years 2021, 2022 and 2023, and is not offset against the maximum remuneration for those years as defined in Section 87a Paragraph 1 Sentence 2 No. 1 AktG.

In 2022, 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

Table T198 shows the remuneration awarded and due to former Executive Board members in 2022 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 2012.

T198 REMUNERATION AWARDED AND DUE IN ACCORDANCE WITH SECTION 162 PARAGRAPH 1 SENTENCE 1 AKTG FOR FORMER EXECUTIVE BOARD MEMBERS

	Fixed and variable remuneration			Pensions		
in € thousands	Ancillary benefits	LH-Performance 2018	LTI 2019 – 2022	Annuity	Capital payment	**Total**
Thorsten Dirks Member of the Executive Board until 30 June 2020	–	60	–	–	–	60
Ulrik Svensson Member of the Executive Board until 30 April 2020	1	22	104	–	2,031	2,158
Bettina Volkens Member of the Executive Board until 31 December 2019	–	40	104	–	–	144
Karl Ulrich Garnadt Member of the Executive Board until 30 April 2017	1	–	–	–	129	130
Stefan Lauer Member of the Executive Board until 6 May 2012	2	–	–	377	–	379

Total current payments and other benefits to former Executive Board members (including the individual payments shown in Table T198) and their surviving dependants came to EUR 6.1m in the reporting year (previous year: EUR 5.6m). This also includes non-cash benefits and concessionary travel. Pension obligations toward former Executive Board members and their surviving dependants amount to EUR 51.3m (previous year: EUR 67.2m).

Further development of the remuneration system for the Executive Board members for financial years from 2023

The Supervisory Board has adopted changes to the remuneration system approved by the Annual General Meeting on 5 May 2020 which take effect from the 2023 financial year. The changes are based on a comprehensive review of the existing remuneration system by the Supervisory Board. In particular, they are intended to reflect the changes in the underlying conditions. The new remuneration system is to enter into force from 1 January 2023 for all current Executive Board members and will be applied to new appointments and contract renewals.

The revised remuneration system adopted by the Supervisory Board will be presented at the Annual General Meeting on 9 May 2023 for approval in accordance with Section 120a Paragraph 1 AktG. The key changes to the remuneration system for the members of the Executive Board are shown below. Shareholders are referred to the invitation to the Annual General Meeting for a complete description of the system being put to the vote.

C42 CHANGES TO THE REMUNERATION SYSTEM 2023

Remuneration system until financial year 2022	Aspect	Remuneration system from financial year 2023	
Performance targets: – 42.5% Adjusted EBIT margin – 42.5% Adjusted ROCE – 15% Collective and individual commercial and sustainability targets	One-year variable remuneration (Annual bonus)	**Performance targets:** – 40% Adjusted EBIT – 40% Adjusted free cash flow – 20% Strategic and sustainability targets	– Sets growth incentive above absolute figure – Material amount in the context of Group management – Elimination of double-counting of Adjusted ROCE in STI and LTI – Reflects increasing importance of ESG topics
Performance targets: – 42.5% Relative total shareholder return compared with the DAX – 42.5% Adjusted ROCE – 15% Strategic and sustainability targets	Long-term variable remuneration (LTI)	**Performance targets:** – 30% Relative total shareholder return compared with the sector index – 50% Adjusted ROCE – 20% Strategic and sustainability targets	– Focus on actual competitors via sector index – Reflects increasing importance of ESG topics
Differentiation in the amount payable to the CEO (EUR 9.5m) and to ordinary Executive Board members (EUR 5m)	Maximum remuneration	Increase in maximum remuneration for the CEO (max. EUR 11m) and for an outstandingly qualified Executive Board member (max. EUR 6.5m)	Makes it possible to competitively remunerate Executive Board members of outstanding importance for the Company in the event of exceptional performance

INCREASED WEIGHTING OF NON-FINANCIAL TARGETS FOR THE ONE-YEAR AND LONG-TERM VARIABLE REMUNERATION

The increase in the weighting of the business and sustainability targets for the annual bonus and the strategic and sustainability targets for the LTI to 20% in each case (previously 15% in each case) is intended to reflect the growing importance of environmental, social & governance (ESG) topics.

CHANGE IN FINANCIAL TARGETS FOR THE ONE-YEAR VARIABLE REMUNERATION

In future, the financial performance targets for the annual bonus are to be based on the Adjusted EBIT (40%) and Adjusted free cash flow (40%) targets. The relative target of the Adjusted EBIT margin, which has been relevant for the annual bonus to date, has thus been replaced with an absolute value which corresponds to the key ratio applied for the purpose of the Group's management. At the same time, this establishes a growth incentive.

In addition, the previous duplication of Adjusted ROCE as a target for both one-year and long-term variable remuneration is to be removed and replaced by Adjusted free cash flow for the purpose of the annual bonus. This gives consideration to the importance of liquidity management (including investing activities) and the importance of achieving strong cash flows from a shareholder perspective.

CHANGE IN FINANCIAL TARGETS FOR THE LONG-TERM VARIABLE REMUNERATION

In future, 30% of the long-term variable remuneration is to be based on the relative total shareholder return (TSR) and 50% on the Adjusted ROCE.

With regard to the relative TSR, the intention is that a sector index should serve as a peer group instead of the DAX 40 companies in future. This removes the comparison with a broad national index and instead focuses on the actual competitors of the Lufthansa Group airlines. Specifically, the “NYSE Arca Global Airline Index” is to serve as the basis for comparison, since this includes key European and international airlines. At the same time, for the purpose of performance measurement, the previous ranking method is to be changed to outperformance measurement.

CHANGES TO THE MAXIMUM REMUNERATION

The maximum remuneration for the Chairman of the Executive Board and CEO is to be increased to EUR 11m. Moreover, the maximum remuneration for a prominent member of the Executive Board is to be raised to EUR 6.5m. The Supervisory Board determines the maximum remuneration when specifying the remuneration for the individual members of the Executive Board. The individual maximum remuneration limits specified by the Supervisory Board are reported in detail in the remuneration report.

Remuneration of Supervisory Board members

Structure of Supervisory Board remuneration

The rules for the remuneration of Supervisory Board members applicable in financial year 2022 are based on a resolution passed by the Annual General Meeting on 8 May 2012. Since financial year 2013, remuneration has consisted solely of fixed remuneration plus an attendance fee. It reflects the responsibility assumed by the members of the Supervisory Board and the scope of their work. Additional remuneration is an appropriate reflection of the higher time commitment by the Chairman and the Deputy Chairman of the Supervisory Board, and by the members and Chairman of the 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 confirmatory resolution on 4 May 2021 approving the remuneration system – which has not changed since 2013 – 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 14 Paragraph 1 of the Articles of Association. The Chairman receives EUR 240k and the Deputy Chairman EUR 120k. The Chairman of the Audit Committee receives an additional EUR 60k; 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 position on 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 financial year 2022. Supervisory Board remuneration was paid in January 2023.

Remuneration awarded and due in financial year 2022 pursuant to Section 162 AktG

The remuneration awarded and due to Supervisory Board members for the 2022 financial year (fixed remuneration, remuneration for committee work and attendance fees) amounted to EUR 2,229k (previous year: EUR 2,197k).

Table T199 shows the amounts for the individual Supervisory Board members. The revised interpretation of the term “awarded” has not resulted in any change to the reporting of the remuneration awarded and due to the members of the Supervisory Board. Attendance fees are already paid in the respective financial year. In contrast, the fixed remuneration and the remuneration for committee work is the remuneration due for the financial year in question, since this remuneration falls due at the close of that financial year.

T199 REMUNERATION AWARDED AND DUE IN ACCORDANCE WITH SECTION 162 PARAGRAPH 1 SENTENCE 1 AKTG – SUPERVISORY BOARD MEMBERS

	2022[1]							2021[2]						
	Fixed remuneration		Remuneration for committee work		Attendance fees		Total Supervisory Board remuneration	Fixed remuneration		Remuneration for committee work		Attendance fees		Total Supervisory Board remuneration
	in € thousands	in %	in € thousands	in %	in € thousands	in %	in € thousands	in € thousands	in %	in € thousands	in %	in € thousands	in %	in € thousands
Karl-Ludwig Kley	240	78.7	60	19.7	5.0	1.6	305	240	79.6	60	19.9	1.5	0.5	302
Christine Behle	120	84.2	20	14.0	2.5	1.8	143	120	85.1	20	14.2	1.0	0.7	141
Alexander Behrens	80	70.2	30	26.3	4.0	3.5	114	80	71.1	30	26.7	2.5	2.2	113
Jörg Cebulla	80	69.6	30	26.1	5.0	4.3	115	80	71.1	30	26.7	2.5	2.2	113
Erich Clementi	80	97.6	–	0.0	2.0	2.4	82	80	98.8	–	–	1.0	1.2	81
Thomas Enders	80	64.5	40	32.3	4.0	3.2	124	80	66.1	40	33.1	1.0	0.8	121
Jürgen Jennerke	80	97.0	–	0.0	2.5	3.0	83	80	98.8	–	–	1.0	1.2	81
Michael Kerkloh	80	70.2	30	26.3	4.0	3.5	114	80	71.7	30	26.9	1.5	1.3	112
Carsten Knobel	80	71.4	30	26.8	2.0	1.8	112	80	72.1	30	27.0	1.0	0.9	111
Holger Benjamin Koch	80	98.2	–	0.0	1.5	1.8	82	80	98.8	–	–	1.0	1.2	81
Harald Krüger	80	48.5	80	48.5	5.0	3.0	165	80	56.1	60	42.1	2.5	1.8	143
Birgit Rohleder	80	97.0	–	0.0	2.5	3.0	83	80	98.8	–	–	1.0	1.2	81
Miriam Sapiro	80	98.2	–	0.0	1.5	1.8	82	80	99.4	–	–	0.5	0.6	81
Ilja Schulz	80	76.9	20	19.2	4.0	3.8	104	80	78.8	20	19.7	1.5	1.5	102
Britta Seeger (since 4 May 2021)	80	99.4	–	0.0	0.5	0.6	81	53	98.1	–	–	1.0	1.9	54
Birgit Spineux	80	97.0	–	0.0	2.5	3.0	83	80	98.8	–	–	1.0	1.2	81
Astrid Stange	80	97.6	–	0.0	2.0	2.4	82	80	98.8	–	–	1.0	1.2	81
Olivia Stelz	80	97.0	–	0.0	2.5	3.0	83	80	98.8	–	–	1.0	1.2	81
Stephan Sturm (until 4 May 2021)	–	–	–	–	–	–	–	27	57.4	20	42.6	0.0	0.0	47
Angela Titzrath	80	98.2	–	0.0	1.5	1.8	82	80	99.4	–	–	0.5	0.6	81
Klaus Winkler	80	69.9	30	26.2	4.5	3.9	115	80	71.1	30	26.7	2.5	2.2	113
Total	**1,800**	**80.8**	**370**	**16.6**	**59.0**	**2.6**	**2,229**	**1,800**	**81.9**	**370**	**16.8**	**26.5**	**1.2**	**2,197**

[1] Remuneration for financial year 2022 due according to Section 162 AktG, paid in January 2023.
[2] Remuneration for financial year 2021 due according to Section 162 AktG, paid in January 2022.

The contributions made for the insurance premium for the members of the Supervisory Board within the scope of Deutsche Lufthansa AG's group accident insurance policy totalled EUR 3k (previous year: EUR 3k). Furthermore, the Supervisory Board members of Deutsche Lufthansa AG were paid EUR 21k (previous year: EUR 26k) for their work on supervisory boards of Group companies.

Disclosures on relative changes in Executive Board and Supervisory Board remuneration, the remuneration of the rest of the workforce and Company profitability

Table T200 shows the annual change in remuneration for members of the Executive Board and the Supervisory Board, the average remuneration of the remaining workforce and the annual change in this remuneration, as well as year-on-year changes in selected earnings indicators for the Lufthansa Group. The remuneration of Executive Board members and Supervisory Board members shown in tables ↗ T197, p. 297f., und T199, p. 302, represents the remuneration awarded and due in the financial year 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. The net profit for the year for Deutsche Lufthansa AG is also shown.

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 increase in the remuneration paid to the Company's employees by comparison with the 2021 financial year is mainly attributable to the renewed payment of variable remuneration components, the end of short-time work and other crisis measures as well as to wage increases.

T200 COMPARATIVE PRESENTATION OF CHANGES IN THE REMUNERATION OF THE EXECUTIVE BOARD, THE SUPERVISORY BOARD AND THE WORKFORCE, AS WELL AS THE DEVELOPMENT OF PROFITABILITY[1]

in € thousands	2019	2020	Change 2020/2019	2021	Change 2021/2020	2022	Change 2022/2021
I. Executive Board[2]							
Active Executive Board members							
Carsten Spohr	4,587	2,888	**–37.0%**	1,676.0	**–42.0%**	4,241	153.0%
Christina Foerster (since 1 January 2020)	–	775	**–**	904.0	**16.6%**	1,929	113.4%
Harry Hohmeister	2,711	1,700	**–37.3%**	901.0	**–47.0%**	2,258	150.6%
Detlef Kayser	1,175	780	**–33.6%**	893.0	**14.5%**	2,032	127.5%
Michael Niggemann (since 1 January 2020)	–	775	**–**	902.0	**16.4%**	2,039	126.1%
Remco Steenbergen (since 1 January 2021)	–	–	**–**	1,898.0	**–**	3,096	63.1%
Former Executive Board members							
Thorsten Dirks (until 30 June 2020)	1,538	709	**–53.9%**	–	**–100.0%**	60	–
Ulrik Svensson (until 30 April 2020)	1,718	639	**–62.8%**	–	**–100.0%**	2,158	–
Bettina Volkens (until 31 December 2019)	2,715	914	**–66.3%**	–	**–100.0%**	144	–
Karl-Ulrich Garnadt (until 30 April 2017)	254	–	**–100.0%**	1	**–**	130	12,900.0%
Stefan Lauer (until 6 May 2013)	364	370	**1.6%**	371	**0.3%**	379	2.2%
II. Workforce[2]							
Overall workforce in Germany	69,253	59,814	**–13.6%**	59,117	**–1.2%**	79,780	35.0%
Pay-scale staff in Germany	63,705	55,939	**–12.2%**	55,237	**–1.3%**	72,350	31.0%
III. Earnings indicators							
Net profit/loss for the year Deutsche Lufthansa AG	595	–780	**–231.1%**	–2,310	**–196.2%**	–2,664	–15.3%
Adjusted EBIT[3]	2,026	–5,451	**–369.1%**	–1,666	**69.4%**	1,509	190.6%
Revenue in €m	36,424	13,589	**–62.7%**	16,811	**23.7%**	32,770	94.9%

[1] Figures for Executive Board and Supervisory Board members and the workforce are based on remuneration awarded and due in 2022 within the meaning of Section 162 Paragraph 1 Sentence 1 AktG. Use is made of the transitional rules pursuant to Section 26 of the Introductory Act to the German Stock Corporation Act.
[2] Because of the changes to the definition of the term "awarded" in accordance with Section 162 AktG, the figures in this remuneration report differ from those in the remuneration report for 2021.
[3] Definition of performance indicators altered from 2022 Figures for the previous year adjusted accordingly.

T200 COMPARATIVE PRESENTATION OF CHANGES IN THE REMUNERATION OF THE EXECUTIVE BOARD, THE SUPERVISORY BOARD AND THE WORKFORCE, AS WELL AS THE DEVELOPMENT OF PROFITABILITY[1] (continued)

in € thousands	2019	2020	Change 2020/2019	2021	Change 2021/2020	2022	Change 2022/2021
IV. Remuneration Supervisory Board[4]							
Karl-Ludwig Kley	305	265	**-13.1%**	302	**13.8%**	305	1.2%
Christine Behle	143	124	**-13.3%**	141	**13.7%**	143	1.1%
Alexander Behrens	114	97	**-14.9%**	113	**16.0%**	114	1.3%
Jörg Cebulla	114	98	**-14.0%**	113	**14.8%**	115	2.2%
Erich Clementi (since 5 May 2020)	–	45	**–**	81	**80.0%**	82	1.2%
Thomas Enders (since 5 May 2020)	–	57	**–**	121	**112.3%**	124	2.5%
Jürgen Jennerke (since 8 December 2020)	–	5	**–**	81	**1,520.0%**	83	1.9%
Michael Kerkloh (since 2 September 2020)	–	33	**–**	112	**237.9%**	114	2.2%
Carsten Knobel	113	97	**-14.2%**	111	**14.4%**	112	0.9%
Holger Benjamin Koch	82	71	**-13.4%**	81	**14.1%**	82	0.6%
Harald Krüger (since 5 May 2020)	–	46	**–**	142	**209.1%**	165	16.0%
Birgit Rohleder	82	71	**-13.4%**	81	**14.1%**	83	1.9%
Miriam Sapiro	82	70	**-14.6%**	81	**15.0%**	82	1.2%
Ilja Schulz	104	90	**-13.5%**	102	**12.8%**	104	2.5%
Britta Seeger (since 4 May 2021)	–	–	**–**	54	**–**	81	49.3%
Birgit Spineux (since 1 January 2021)	–	–	**–**	81	**–**	83	1.9%
Astrid Stange (since 5 May 2020)	–	45	**–**	81	**80.0%**	82	1.2%
Olivia Stelz	82	71	**-13.4%**	81	**14.1%**	83	1.9%
Angela Titzrath (since 2 September 2020)	–	25	**–**	81	**222.0%**	82	1.2%
Klaus Winkler	82	70	**-14.6%**	113	**60.7%**	115	1.8%

[4] In contrast to the remuneration report for 2021, the remuneration of Supervisory Board members shown here also includes the attendance fees paid for the respective financial year.

For the Supervisory Board
Dr Karl-Ludwig Kley, Chairman

For the Executive Board
Carsten Spohr, Chairman

FURTHER INFORMATION

GRI Content Index

T201 GRI CONTENT INDEX

Statement of use	Deutsche Lufthansa AG has reported the information cited in this GRI content index for the period 1. January 2022 – 31. December 2022 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

GRI Standard	Disclosures		Location Annual Report including the combined non-financial declaration of the Lufthansa Group 2022 (unless stated otherwise)
GRI 2: General Disclosures 2021	2-1	Organizational details	Name: Deutsche Lufthansa AG Type of ownership and legal structure ↗ **p. 169** Location of company headquarters ↗ **p. 169** Countries ↗ **p. 260ff.**
	2-2	Entities included in the organization's sustainability reporting	List of entities ↗ **p. 260ff.** Composition of the Group/group of consolidated companies ↗ **p. 16** Disclosures on the business model ↗ **p. 16** In view of the different activities of the entities in the group of consolidated companies, only those entities are included in the measurement of individual performance indicators that make a material contribution to this performance indicator and are necessary for an understanding of it.
	2-3	Reporting period, frequency and contact point	Annual Report including combined non-financial declaration Reporting period: 1 January – 31. December 2022 Date of publication: 3 March 2023 Contact ↗ **p. 334**
	2-4	Restatements of information	Subsequent validation of performance indicator Accidents for 2021 ↗ **p. 131**
	2-5	External assurance	↗ **p. 270ff.**
	2-6	Activities, value chain and other business relationships	Principles of the Group/Business activities and Group structure ↗ **p. 16**
	2-7	Employees	Employees ↗ **p. 29** To the extent that the Lufthansa Group gathers additional data, the data for the reporting year is only available after the publication date and is published subsequently in the Lufthansa Group's "Sustainability Fact Sheet 2022" for the reporting year. Data for the previous year is published in the "Sustainability Fact Sheet 2021". **Sustainability Fact Sheet 2021, p. 27 – 31**
	2-9	Governance structure and composition	Principles of the Group/Business activities and Group structure ↗ **p. 16** Corporate Governance/Supervisory Board and Executive Board ↗ **p. 154**

T201 **GRI CONTENT INDEX** (continued)

GRI Standard	Disclosures		Location Annual Report including the combined non-financial declaration of the Lufthansa Group 2022 (unless stated otherwise)
	2-12	Role of the highest governance body in overseeing the management of impacts	↗ p. 96f.
	2-13	Delegation of responsibility for managing impacts	↗ p. 96f.
	2-14	Role of the highest governance body in sustainability reporting	Material aspects ↗ p. 95f.
	2-15	Conflicts of interest	Corporate Governance/Supervisory Board and Executive Board/Mandates ↗ p. 154
	2-17	Collective knowledge of the highest governance body	In the context of reporting on the EU Taxonomy, the Audit Committee of the Supervisory Board received training on applying the EU Taxonomy within the Lufthansa Group. ↗ p. 94 In the reporting year, a Strategic Roadmap Discussion (SRD) was held to examine environmentally relevant sustainability aspects in greater detail. ↗ p. 98
	2-19	Remuneration policies	Remuneration report ↗ p. 280ff.
	2-20	Process to determine remuneration	Remuneration report ↗ p. 280ff.
	2-22	Statement on sustainable development strategy	Group strategy ↗ p. 18
	2-23	Policy commitments	Values and guidelines ↗ p. 94 Code of conduct investor-relations.lufthansagroup.com Corporate Governance & Compliance investor-relations.lufthansagroup.com
	2-24	Embedding policy commitments	Values and guidelines ↗ p. 94f. Environmental concerns ↗ p. 98f. Business ethics and Compliance ↗ p. 134 Responsible supply chain management ↗ p. 141
	2-25	Processes to remediate negative impacts	responsibility.lufthansagroup.com
	2-26	Mechanisms for seeking advice and raising concerns	Advisory services are integral part of the Compliance Management Systems. ↗ p. 135 Whistle-blower channels for reporting compliance violations. ↗ p. 135f.
	2-28	Membership associations	↗ p. 98 responsibility.lufthansagroup.com
	2-29	Approach to stakeholder engagement	Material aspects ↗ p. 95f.
	2-30	Collective bargaining agreements	Labour union partners are firmly established at the Lufthansa Group. ↗ p. 123f.

T201 GRI CONTENT INDEX (continued)

GRI Standard	Disclosures		Location Annual Report including the combined non-financial declaration of the Lufthansa Group 2022 (unless stated otherwise)
GRI 3: Material Topics 2022	3-1	Process to determine material topics	Materiality analysis ↗ p. 95f.
	3-2	List of material topics	C27 ↗ p. 96
	3-3	Management of material topics	The reporting structure of the combined non-financial declaration reflects the material aspects identified. It includes a separate chapter for each material aspect. Each chapter reports on impact management by describing the conceptual approach, the organisational foundations and responsibilities, targets, measures and performance indicators. Table of contents ↗ p. 93
GRI 204: Procurement Practices 2015	3-3	Management of material topics	Responsible supply chain management ↗ p. 141ff.
GRI 205: Anti-corruption 2016	3-3	Management of material topics	Business ethics and compliance, including fighting corruption and bribery. ↗ p. 134ff.
	205-2	Communication and training about anti-corruption policies and procedures	Performance indicator ↗ p. 137
GRI 206: Anti-competitive Behavior 2016	3-3	Management of material topics	Business ethics and compliance, including fighting corruption and bribery. ↗ p. 134ff.
GRI 305: Emissions 2016	3-3	Management of material topics	Climate protection ↗ p. 99ff.
	305-1	Direct (Scope 1) GHG emissions	Performance indicator ↗ p. 107
	305-2	Energy indirect (Scope 2) GHG emissions	The data for the reporting year is only available after the publication date and is published subsequently in the Lufthansa Group's "Sustainability Fact Sheet 2022" for the reporting year. Data for the previous year is published in the "Sustainability Fact Sheet 2021". Sustainability Fact Sheet 2021, p. 21
	305-3	Other indirect (Scope 3) GHG emissions	The data for the reporting year is only available after the publication date and is published subsequently in the Lufthansa Group's "Sustainability Fact Sheet 2022" for the reporting year. Data for the previous year is published in the "Sustainability Fact Sheet 2021". Sustainability Fact Sheet 2021, p. 21
	305-4	GHG emissions intensity	Performance indicator ↗ p. 107
	305-5	Reduction of GHG emissions	The data for the reporting year is only available after the publication date and is published subsequently in the Lufthansa Group's "Sustainability Fact Sheet 2022" for the reporting year. Data for the previous year is published in the "Sustainability Fact Sheet 2021". Sustainability Fact Sheet 2021, p. 3ff.
	305-7	Nitrogen oxides (NO_X), sulfur oxides (SO_X), and other significant air emissions	The data for the reporting year is only available after the publication date and is published subsequently in the Lufthansa Group's "Sustainability Fact Sheet 2022" for the reporting year. Data for the previous year is published in the "Sustainability Fact Sheet 2021". Sustainability Fact Sheet 2021, p. 20

T201 GRI CONTENT INDEX (continued)

GRI Standard	Disclosures		Location Annual Report including the combined non-financial declaration of the Lufthansa Group 2022 (unless stated otherwise)
GRI 306: Waste 2020	3-3	Management of material topics	Waste management ↗ p. 110ff.
	306-1	Waste generation and significant waste-related impacts	↗ p. 110
	306-2	Management of significant waste-related impacts	↗ p. 111
GRI 308: Supplier Environmental Assessment 2016	3-3	Management of material topics	Responsible supply chain management ↗ p. 141ff.
	308-1	New suppliers that were screened using environmental criteria	Established risk management extended. ↗ p. 141 Risk management system refined in response to German Corporate Due Diligence in Supply Chains Act. ↗ p. 142f.
GRI 401: Employment 2017	3-3	Management of material topics	Employee concerns ↗ p. 121 Employer attractiveness ↗ p. 121ff. Health and safety at work ↗ p. 129ff.
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Offerings are structured differently for specific employee groups and entities. Health care ↗ p. 129ff. Other benefits ↗ p. 121ff. Key remuneration components and additional benefits are resumed. ↗ p. 123 To the extent that the Lufthansa Group gathers additional data, the data for the reporting year is only available after the publication date and is published subsequently in the Lufthansa Group's "Sustainability Fact Sheet 2022" for the reporting year. Data for the previous year is published in the "Sustainability Fact Sheet 2021". **Sustainability Fact Sheet 2021, p. 29**
	401-3	Parental leave	To the extent that data is gathered, the data for the reporting year is only available after the publication date and is published subsequently in the Lufthansa Group's "Sustainability Fact Sheet 2022" for the reporting year. Data for the previous year is published in the "Sustainability Fact Sheet 2021". Parents taking parental leave, by gender: **Sustainability Fact Sheet 2021, p. 29**

T201 GRI CONTENT INDEX (continued)

GRI Standard	Disclosures		Location Annual Report including the combined non-financial declaration of the Lufthansa Group 2022 (unless stated otherwise)
GRI 403: Occupational Health and Safety 2018	3-3	Management of material topics	Health and safety at work ↗ p. 129ff.
	403-1	Occupational health and safety management system	Medical Services improve structures following the pandemic. ↗ p. 129
	403-2	Hazard identification, risk assessment, and incident investigation	↗ p. 129f. Further development of occupational safety. ↗ p. 131
	403-3	Occupational health services	↗ p. 129f.
	403-4	Worker participation, consultation, and communication on occupational health and safety	↗ p. 129ff.
	403-5	Worker training on occupational health and safety	↗ p. 129f. Information and communication continuously adjusted in line with evolving requirements, as key to preventive measures. ↗ p. 130f.
	403-6	Promotion of worker health	↗ p. 129ff.
	403-9	Work-related injuries	Accident figures enable effectiveness audits ↗ p. 131
GRI 404: Training and Education 2016	3-3	Management of material topics	Transformation capability ↗ p. 126ff.
	404-2	Programs for upgrading employee skills and transition assistance programs	↗ p. 126ff.
GRI 405: Diversity and Equal Opportunity 2016	3-3	Management of material topics	Business ethics and compliance ↗ p. 134 Diversity and equal opportunities ↗ p. 124ff.
	405-1	Diversity of governance bodies and employees	To the extent that data is gathered, the data for the reporting year is only available after the publication date and is published subsequently in the Lufthansa Group's "Sustainability Fact Sheet 2022" for the reporting year. Data for the previous year is published in the "Sustainability Fact Sheet 2021".Frauenanteil im Aufsichtsrat: Sustainability Fact Sheet 2021, p. 30 Employees by professional group and gender: Sustainability Fact Sheet 2021, p. 27
GRI 406: Non-discrimination 2016	3-3	Management of material topics	Business ethics and compliance ↗ p. 134 Diversity and equal opportunities ↗ p. 124ff.
GRI 407: Freedom of Association and Collective Bargaining 2016	3-3	Management of material topics	Business ethics and compliance ↗ p. 134 Employer attractiveness ↗ p. 121ff. Responsible supply chain management ↗ p. 141ff.
GRI 408: Child Labor 2016	3-3	Management of material topics	Business ethics and compliance ↗ p. 134 Responsible supply chain management ↗ p. 141ff.

T201 **GRI CONTENT INDEX** (continued)

GRI Standard	Disclosures		Location Annual Report including the combined non-financial declaration of the Lufthansa Group 2022 (unless stated otherwise)
GRI 409: Forced or Compulsory Labor 2016	3-3	Management of material topics	Business ethics and compliance ↗ p. 134 Responsible supply chain management ↗ p. 141ff.
GRI 413: Local Communities 2016	3-3	Management of material topics	Active noise abatement ↗ p. 107ff. Social concerns ↗ p. 132f.
GRI 414: Supplier Social Assessment 2016	3-3	Management of material topics	Responsible supply chain management ↗ p. 141ff.
	414-1	New suppliers that were screened using social criteria	Established risk management extended. ↗ p. 141 Risk management system refined in response to German Corporate Due Diligence in Supply Chains Act. ↗ p. 142f.
GRI 415: Public Policy 2016	3-3	Management of material topics	Responsible political engagement ↗ p. 140
GRI 416: Customer Health and Safety 2016	3-3	Management of material topics	Customer concerns ↗ p. 115ff.
	416-1	Assessment of the health and safety impacts of product and service categories	High customer satisfaction is a key success factor for the Lufthansa Group. ↗ p. 115
GRI 418: Customer Privacy 2016	3-3	Management of material topics	Customer concerns ↗ p. 115
Additional information beyond GRI standards	3-3	Management of material topics	About this combined non-financial declaration ↗ p. 94ff.
	3-3	Management of material topics	Environmental concerns ↗ p. 98f.
	3-3	Management of material topics	Active noise abatement ↗ p. 107ff.
		Performance indicator	Percentage of aircraft that meet the strict minus 10 dB criterion of the ICAO Chapter 4 standard ↗ p. 110
	3-3	Management of material topics	Operational stability ↗ p. 116f.
		Performance indicator	Departure punctuality ↗ p. 117
	3-3	Management of material topics	Product and services ↗ p. 117ff.
		Performance indicator	Customer satisfaction/Net Promoter Score ↗ p. 120
	3-3	Management of material topics	Respect for human rights ↗ p. 137ff.

Sustainable Development Goals (SDG) Index

T202 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 GOOD HEALTH AND WELL-BEING	3.3	Employee concerns/ Health and safety at work	The coronavirus vaccination strategy is continued: Medical Services offered more than 9,000 individual vaccinations at their three sites in the winter of 2021/22, and more than 7,000 individual vaccinations in October 2022. In addition to the annual influenza vaccination campaign, they also offered vaccinations to boost personal immunity and protect against severe illness as a result of a coronavirus infection.	↗ p. 131
	3.4	Employee concerns/ Health and safety at work	Psychosocial counselling and occupational health management provide support for senior executives and employees.	↗ p. 131
	3.8	Employee concerns/ Health and safety at work	The Medical Centres in Hamburg, Frankfurt and Munich provide a holistic range of healthcare services spanning occupational and aviation medicine, infectious diseases, tropical medicine and travel medicine, outpatient and emergency care, and socio-medical counselling.	↗ p. 129
			Medical care for employees abroad improved: In October 2022 a new cutting-edge, digital system of medical care was established for employees on assignments abroad, especially cockpit and cabin crew. This now ensures improved standards of comprehensive medical care for employees. For example, they will now be able to choose from a wider range of doctors outside their home country.	↗ p. 131
			Every part of the Medical Services department, including Psychosocial Counselling and Passenger Medical Care, is certified according to the DIN ISO 9001:2015 quality management system.	↗ p. 129
			Health Index measured as key performance indicator for employee health: A Health Index was compiled again in the reporting year as part of the "involve me!" employee survey. The index figure was 2.4. 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.	↗ p. 131
			Accident figures enable effectiveness audits: 50% of Lufthansa Group employees worldwide and 93% of its employees in Germany were included. All events that resulted in downtime of at least one calendar day are included in this indicator. For every one million hours worked, the initial incidence of work-related injuries in the reporting year was 6.6. However, the figure calculated for 2022 is provisional since the data will be compared with the employers' liability insurance association at a date after the publication of this report. The reporting was expanded by comparison with 2021, and further companies are being gradually added.	↗ p. 131
4 QUALITY EDUCATION	4.5	Social concerns	The main objective of help alliance is to provide disadvantaged young people access to education and empower them to lead a self-sufficient life.	↗ p. 132
			Girls' refuge opened in India.	↗ p. 133
			help alliance supports people in Ukraine.	↗ p. 133
			Support for disadvantaged people: In 2022, help alliance was responsible for 55 aid projects in 24 countries with a project volume of EUR 3.3m. Of these funds, 74% was allocated to educational projects, 20% to work and income-related activities and 6% to emergency relief measures. In addition, Lufthansa Group employees at 24 locations participated in local volunteering communities.	↗ p. 133

T202 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 AFFORDABLE AND CLEAN ENERGY	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 aviation fuel.	↗ p. 100
			New partnerships are initiated and intensified with SAF producers worldwide. 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 on research into the direct use of sunlight for fuel synthesis. In the reporting year, SWISS thus made a financial investment in Synhelion, a manufacturer of solar fuels, with the aim of accelerating the market launch of the technology. This is the Lufthansa Group's first investment in a fuel manufacturer. SWISS will be the first airline in the world to use solar aviation fuel.	↗ p. 102
			Up to USD 250 million for the procurement of SAF has been released on the spot market through 2024 by decision of the Executive Board. Letters of intent were signed with fuel suppliers in the reporting year to provide up to 2.5 million tonnes of sustainable fuels for the Lufthansa Group's airlines between 2025 and 2030. The supplier portfolio was also significantly diversified, with the result that aircraft can now also be refuelled with SAF in Lyons and Bordeaux, as well as in Frankfurt and Vienna.	↗ p. 102
			Demand for SAF from private and corporate customers continued to rise in the reporting year. The key factors behind this demand included user-friendly integration into the booking platforms in the retail customer segment as well as the expansion of services offered in the business travel segment beyond airfreight.	↗ p. 102
			The Lufthansa Group has developed a 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 for this purpose. The Lufthansa Group is therefore able to offer all customers SAF together with the corresponding reportable Scope 3 emission reductions.	↗ p. 102
8 DECENT WORK AND ECONOMIC GROWTH	8.2	About this combined non-financial declaration	Value-based management is 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.	↗ p. 95
			The impact of the Company on non-financial aspects is taken into account in the Group risk management system of the Lufthansa Group.	↗ p. 94
		Employee concerns/ Transformation capability	New formats help employees to return to work and support their development.	↗ p. 127
			Mobility and flexibility are key building blocks for modern working environments. As of 31 December 2022, about 100,000 employees of the Lufthansa Group had access to cloud-based software. In addition to hardware, cloud-based software is an important basis for remote working and flexible working.	↗ p. 127
			The Lufthansa Group helps its employees to act sustainably in relation to environmental and social issues in their fields of work. The Corporate Responsibility department in cooperation with the Excellence University Mannheim developed and implemented the SustainABILITY programme for employees for this purpose in the reporting year. A total of 125 participants, made up of employees and managers at different levels from 22 Group companies, were selected following an application process.	↗ p. 128

T202 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
			The Service Management Professional training programme is being continued. A total of 324 employees successfully obtained this qualification in 2022. Since the start of the programme, 1,494 employees have successfully completed the training to become Service Management Professionals.	↗ p. 128
	8.5	Employee concerns/ Attractiveness as an employer	Uniform performance and potential assessment ensures that talent is retained.	↗ p. 122
			Key remuneration components and additional benefits are resumed.	↗ p. 123
			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 2022, the figure for the Engagement Index was 2.4.	↗ p. 123
	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. 137
			The German National Action Plan on Business and Human Rights (NAP) provides a framework for measures related to human rights.	↗ p. 137f.
			The Lufthansa Group is developing a management approach for addressing human trafficking.	↗ p. 138
			Senior executives and employees are given awareness training on specific target groups.	↗ p. 138
			Processes for reporting human rights violations implemented.	↗ p. 138
			The risk analysis required under the Corporate Due Diligence in Supply Chains Act for its own, Group-wide activities was designed in the reporting year.	↗ p. 139
	8.8	Responsible supply chain management/ Procurement practices	Group procurement policy includes obligation to assume social and environmental responsibility.	↗ p. 141
			Risk management system refined in response to German Corporate Due Diligence in Supply Chains Act: An IT-based application was selected which takes into consideration all the legal positions protected under the Corporate Due Diligence in Supply Chains Act in relation to human rights and environmental risks. Since 2023, this has assisted with regular automated risk analysis, such as through country- and industry-specific risk assessments as well as data-based evaluation and analysis. Purchasing will also use this system to manage the allocation and follow-up of preventive and remedial actions in relation to direct suppliers and for due diligence in relation to indirect suppliers. In addition, an expenditure, country and product group-based risk analysis was performed for all direct suppliers.	↗ p. 142f.
			Expanded group of participants for mandatory purchasing guidelines training: This training is mandatory for management personnel with 95% of participants having successfully completed this training to date. The target group was expanded in the reporting year and Purchasing employees were thus obliged to undergo this training.	↗ p. 143

T202 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
		Employee concerns/ Attractiveness as an employer	Unrestricted freedom of association is well established at the Lufthansa Group.	↗ p. 122
			Labour union partners are firmly established at the Lufthansa Group: Of 59,295 Lufthansa Group employees in Germany (as of 31 December 2022), some 78% benfit directly from collective bargaining arrangements. The remaining 22% are largely senior executives 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. In the Europe region, 98% of employees at Austrian Airlines and 89% of those at SWISS have an employment contract covered by collective agreements.	↗ p. 123f.
		Employee concerns/ Health and safety at work	See SDGs 3.3, 3.4 and 3.8	
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	9.4	Environmental concerns/ Climate protection/ Research and innovation	Fleet renewal is continuously driven forward: In 2022, a total of 24 aircraft went into service with the Lufthansa Group airlines, including Airbus A320neos, A321neos, A350-900s, Boeing 787-9s 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 27 older aircraft were removed from the Group fleet in exchange.	↗ p. 102
			Technical measures are being developed for the existing fleet: The AeroSHARK surface coating developed by Lufthansa Technik and BASF Coatings GmbH, which is named after the microscopic ribbing modelled on shark skin, reduces aircraft air resistance. In 2022, the AeroSHARK technology was further improved and approved for mass production, with the result that, in October 2022, SWISS conducted its first scheduled flight with a Boeing 777-300ER on which a 950 square metre area had been modified with AeroSHARK. Lufthansa Cargo operated the first flight of a modified Boeing 777F with around 800 square metres of AeroSHARK in February 2023. Lufthansa Cargo will fit all aircraft of these two types with AeroSHARK, which will save about 8,400 tonnes of fuel and about 26,600 tonnes of CO_2 annually.	↗ p. 102
	9.5	Environmental concerns/ Climate protection/ Research and innovation	Artificial intelligence methods to lay the foundation for future optimisation of arrivals and departures: Jointly with German air traffic control (Deutsche Flugsicherung, DFS), Lufthansa German Airlines conducts flight track analyses based on artificial intelligence methods as part of the EU-funded research and development project, ALBATROSS. This innovative concept was applied for the first time in 2022, starting with the Frankfurt airspace. Initial findings suggest potential for "greener flying", with the result that the project partners have begun to develop feasible measures on this basis.	↗ p. 104
			More efficient concepts for take-off and landing are being implemented and the digitalisation of approach technologies advanced: Lufthansa German Airlines realised additional fuel savings of about 90 tonnes in 2022 by optimising the planned flight paths for arrivals and departures in Munich. The Lufthansa Group and German air traffic control (DFS) embarked on a joint project in the reporting year with the goal of increasing the use of fuel-saving continuous descent arrival procedures on a number of approach routes to Frankfurt Airport.	↗ p. 103f.

T202 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
			The Lufthansa Group has been involved in various research projects studying the atmosphere and the climate since 1994. In particular as part of the European research infrastructure IAGOS (In-service Aircraft for a Global Observing System), the Lufthansa Group collaborates closely with its research partners from the Karlsruhe Institute of Technology and the Jülich Research Centre to equip selected passenger aircraft with measuring instruments that collect data about the condition of the atmosphere on scheduled flights. This data is freely accessible and is used by around 300 organisations worldwide. It helps scientists to acquire new knowledge about climate change and the atmosphere, and to detect long-term changes. Experts from Lufthansa German Airlines and Lufthansa Technik joined forces with the research partner in 2022 to fit the third long-haul jet with the IAGOS Core Measurement System. The new D-KULT research project on the feasibility of climate-optimised flight routes began in 2022. The project was developed in a collaboration between the Lufthansa Group, the German Aerospace Center (DLR), German air traffic control (DFS), the German Meteorological Service (DWD), Airbus and other partners and is funded by the German Federal Aviation Research Programme. SWISS is participating in a project that has applied to the EU for funding. From 2023 onwards, this project will focus on reducing non-CO_2 effects, such as those caused by condensation trail cirrus clouds.	p. 105
	9.4/9.5	Environmental concerns/ Active noise abatement/ Research and innovation	Since 2001, the Lufthansa Group has played an active and continuous role in research projects and noise abatement activities.	p. 107
			Investment in modern and quieter aircraft: The Lufthansa Group modernises its fleet continuously. Aircraft that went into service in 2022, including Airbus A320neos, A321neos, A350-900s, Boeing 787-9s and Boeing 777Fs, have modern engines and are much quieter than comparable older aircraft types.	p. 108
			Noise-reducing technologies are being deployed for the existing fleet.	p. 108
			Optimised flight procedures and flight routes are being developed in cooperation with system partners.	p. 109
			The Lufthansa Group engages in dialogue with residents near airports and other stakeholders.	p. 109
			99.4% of the operational Group fleet meets the standard for aircraft noise (10-decibel criterion of the ICAO Chapter 4 standard).	p. 110
10 REDUCED INEQUALITIES	10.2	Employee concerns/ Diversity and equal opportunities	New projects and initiatives aimed at increasing the proportion of women with management responsibility.	p. 125
			On 31 December 2022, women accounted for 9.4% of positions at the first management level in the Group and 15.4% at the second management level. Overall, the proportion of women in management roles in the Lufthansa Group at the end of 2022 was 20.4%.	p. 126
			Commitment to combat inequality, discrimination and harassment to be stepped up.	p. 126
			Expanded childcare opportunities.	p. 126
			Diversity and equal opportunities strengthened.	p. 125f.
			Lufthansa German Airlines demonstrates its clear commitment to openness and diversity with special livery. An Airbus A320neo with "Lovehansa" lettering has been flying to international destinations on a regular basis since summer 2022. Another aircraft was painted with the lettering "Diversity wins" for the 2022 football World Cup. This livery prominently underlines the Lufthansa Group's attitude towards diversity.	p. 125
			People from 177 countries work for the Group today.	p. 126

T202 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
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	12.2	Environmental concerns/ Climate protection/ Energy and fuel efficiency	Fuel efficiency (see SDG 13.1)	
	12.4	Environmental concerns/ Waste management	Passenger Airlines in the Lufthansa Group define long-term basis to systematically reduce waste on board and promote circular economy.	↗ p. 110
	12.5	Environmental concerns/ Waste management	Passenger airlines reduce in-flight waste in all categories.	↗ p. 111ff.
			Food waste at the passenger airlines in the Lufthansa Group was reduced on short-haul flights by 46% compared with 2019 in the reporting year. In 2022, Lufthansa Cargo achieved 92.5% of its target of increasing the share of waste returned for recycling at the hub in Frankfurt to 40% by 2025 .	↗ p. 114
	12.6	Responsible supply chain management/ Procurement practices	Sustainability in the supply chain is firmly established in the Company.	↗ p. 141
			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. 141
	12.8	Customer concerns/ Product and services	Intermodal services offer sustainable alternative forms of travel to and from the hubs of the Lufthansa Group. In the reporting year, around 450 intermodal connections were offered every day from and to the Lufthansa Group hubs.	↗ p. 119
			Voluntary carbon offset options allow customers to make a personal contribution.	↗ p. 119f.
13 CLIMATE ACTION	13.1	Environmental concerns/ Climate protection	Emission reduction targets are part of Executive Board remuneration.	↗ p. 101
			The Lufthansa Group also defines its own expanded emission reduction targets: The Lufthansa Group's CO_2 emissions reduction plan was validated by the Science Based Targets initiative (SBTi) in the summer of 2022. With its SBTi validation, the Lufthansa Group was the first airline group in Europe with a scientifically based CO_2 reduction target in line with the goals of the Paris Climate Agreement of 2015. It is one of the first three airlines worldwide whose reduction targets have been validated by the SBTi. Specifically, the Lufthansa Group has aligned its policies with SBTi criteria and committed to reducing its CO_2 intensity, i.e. its CO_2 emissions per transported tonne-kilometre (passenger and freight), by 30.6% from 2019 to 2030. This target may only be achieved by reducing fuel consumption or by substituting fossil fuel with SAF. Over and above the reduction required by the SBTi targets, the Lufthansa Group will achieve its self-imposed target of cutting net CO_2 emissions in half by 2030 compared with 2019 with voluntary offsets. The Lufthansa Group aims to be carbon neutral in 2050.	↗ p. 101
			The absolute CO_2 emissions resulting from the combustion of aviation fuel through Lufthansa Group aircraft in 2022 increased by 68.6% to 23.1 million tonnes (previous year: 13.7 million tonnes) due to the rise in demand and the expanded flight offers. CO_2 emissions per tonne-kilometre transported declined by 3.7% to 836.7 grammes (previous year: 869.2 grammes). Specific CO_2 emissions per passenger-kilometre were 11.4% lower than in the previous year at 90.0 grammes (previous year: 101.6 grammes) The status of the CO_2 intensity reduction target verified by the SBTi was 2.2% below that of the baseline year 2019.	↗ p. 107

T202 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
			The Lufthansa Group aims to switch to carbon-neutral mobility on the ground in its home markets by 2030.	↗ p. 106
			Sustainable aviation fuels to be used more widely (see SDG 7.2).	
			Further progress with fleet renewal (see SDG 9.4).	
			Technical measures being developed for the existing fleet (see SDG 9.4).	
			Artificial intelligence methods to lay the foundation for future optimisation of arrivals and departures (see SDG 9.5).	
			Numerous projects to save fuel reduce carbon emission significantly.	↗ p. 103
			More efficient concepts for take-off and landing are being implemented and the digitalisation of approach technologies advanced (see SDG 9.5).	
			OPS Sustainability Program implemented to help achieve the CO_2 reduction targets by 2030.	↗ p. 104
			Compensation offers for customers are being expanded.	↗ p. 105
			Mandatory offsets of CO_2 emissions (ICAO/CORSIA, EU-ETS, CH-EHS, UK ETS).	↗ p. 104
			Lufthansa Group voluntarily offsets its employees' business travel. 50,651 tonnes of CO_2 were offset by the climate action organisation, myclimate, in 2022.	↗ p. 105
	13.2	Environmental concerns/ Climate protection	Single European airspace should reduce emissions.	↗ p. 103
	13.3	About this combined non-financial declaration	Corporate responsibility is firmly established in the organisational structure: The highest monitoring body in the area of sustainable management is the Supervisory Board. Effective 1 January 2023, the Supervisory Board established an ESG Committee to advise the Supervisory Board, its committees, and the Executive Board on environmental, social, and good governance issues that are essential to the sustainable economic development of the Company.	↗ p. 96f.
			The ESG strategy is reviewed annually and discussed with the Executive Board as part of the Strategic Roadmap Discussions. The focus during the reporting year was on the CO_2 mitigation pathway and supporting measures.	↗ p. 96
			External ratings: Lufthansa Group's sustainability management is rated positively, above the industry average.	↗ p. 97
		Environmental concerns/ Climate protection	A Strategic Roadmap Discussion (SRD) was held in the reporting year to discuss sustainability aspects impacting the environment in greater detail. SRD is an established format in which relevant strategic topics are discussed with the Executive Board of the Lufthansa Group. The content focused on the areas of action "Low emissions in flight operations" and "Circular economy and waste on board". These presentations were also attended by the Lufthansa Group's top management tier, the Group Leadership Team (GLT).	↗ p. 98
			The "Make change fly" communications campaign was also designed in the reporting year and launched in May 2022. The goal of this campaign is to use different themes and bold examples to support the communication of the Lufthansa Group's sustainability activities worldwide and to illustrate the Lufthansa Group's sustainability measures.	↗ p. 98
	13.1 – 13.3	Environmental concerns/ Climate protection	The Lufthansa Group supports the climate protection targets of the aviation sector.	↗ p. 101
			Intermodal transport to Lufthansa Group hubs being expanded.	↗ p. 103
		EU Taxonomy	Report on the applicability of the EU Taxonomy Regulation (EU) 2020/852	↗ p. 143ff.

T202 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 PEACE, JUSTICE AND STRONG INSTITUTIONS	16.5	Business ethics and compliance/ Compliance management and fighting corruption and bribery	Code of Conduct provides framework for acting with integrity and responsibility.	↗ p. 134
			Fighting corruption and bribery is an integral part of the Compliance Management System. 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.	↗ p. 134
			Web-based compliance training increases risk awareness.	↗ p. 135
			Overall in 2022, a total of 30,935 employees in 157 Group companies took part in web-based compliance training. This is equivalent to a participation ratio of 94.7%. In addition, 34 on-site training courses were offered with a total of 2,126 participants.	↗ p. 137
			New risk evaluation concept enables monitoring of implementation of measures, as well as identification of compliance risks.	↗ p. 136f.
	16.10	About this combined non-financial declaration	For the 2022 financial year, Deutsche Lufthansa AG published a combined non-financial declaration in accordance with Sections 315b and 315c of the German Commercial Code (HGB) in conjunction with Sections 289b to 289e HGB.	↗ p. 94
			The results of the materiality analysis were approved by the management in the reporting year in accordance with Section 289c Paragraph 3 HGB and formed the basis for selecting the aspects and concerns to be covered in this combined non-financial declaration.	↗ p. 95
			The Lufthansa Group reports in accordance with the compulsory EU Taxonomy Regulation and voluntarily in accordance with TCFD and SASB and with reference to the GRI Standards.	↗ p. 94
		Business ethics and compliance/ Compliance management and fighting corruption and bribery	Whistle-blower channels for reporting compliance violations.	↗ p. 135f.
			The Lufthansa Group received a total of 46 hints in the reporting year via its various channels. Of these, 20 hints were compliance-related. Six hints were investigated in detail via the described procedure.	↗ p. 137
		Business ethics and compliance/ Responsible political engagement	The Lufthansa Group attaches great importance to transparency in its political engagement, and has been listed in the EU Transparency Register since 2008 under the number 0714344663-32. Moreover, the Company has been registered in the lobbying register of the German Bundestag (lower house of parliament) under the registration number R001474 since February 2022. 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 also accessible to the general public) and the Lufthansa Group Airmail Policy. Six issues of the Policy Brief were published in the reporting year and are available on the Lufthansa Group's website.	↗ p. 140
		Customer concerns/ Data protection and security	The Lufthansa Group has a data protection management system in the Group companies that meets the requirements of the European General Data Protection Regulation (EU GDPR). 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.	↗ p. 115

T202 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
17 PARTNERSHIPS FOR THE GOALS	17.16	About this combined non-financial declaration	Since 2002, the Lufthansa Group 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 Agenda 2030, as adopted by the UN member states in 2015.	↗ p. 94f.
		Environmental concerns	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), the German Aviation Association (BDL), the Federation of German Industries (BDI), the German Equities Institute (DAI) and econsense, the Forum for Sustainable Development of German Business, which the Lufthansa Group joined in 2004, the year the association was officially founded. A4E, for example, holds regular meetings 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.	↗ p. 98
			SWISS joined the Swiss business association swisscleantech in the reporting year. As a business association for a climate-ready economy, swisscleantech promotes ambitious energy and climate policies, offers its members access to knowledge, best practices, and decision-makers, and promotes the exchange of ideas between business, science, and politics.	↗ p. 98
			Other partnerships and cooperation agreements (see SDGs 9.4, 9.5 and 13.1 – 13.3)	

Independent auditor's report on a limited assurance engagement regarding the combined non-financial declaration

To Deutsche Lufthansa Aktiengesellschaft, Köln,

We have performed a limited assurance engagement on the non-financial statement of Deutsche Lufthansa Aktiengesellschaft (hereinafter the "Company") which is combined with the non-financial statement of 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 2022 to 31 December 2022 (hereinafter the "non-financial statement").

Not subject to our assurance engagement are other references to disclosures made outside the non-financial statement.

Responsibilities of the executive directors

The executive directors of the Company are responsible for the preparation of the non-financial statement 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 "applicability of the EU Taxonomy Regulation (EU) 2020/852" of the non-financial statement.

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 statement that is free from material misstatement, whether due to fraud (manipulation of the non-financial statement) 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 "applicability of the EU Taxonomy Regulation (EU) 2020/852" of the non-financial statement. 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 statement 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 statement 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 "applicability of the EU Taxonomy Regulation g (EU) 2020/852" of the non-financial statement. Not subject to our assurance engagement are other references to disclosures made outside the non-financial statement.

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 statement, 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 statement, 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 statement,

— Identification of likely risks of material misstatement in the non-financial statement,

— 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 statement at the level of the Company and the Group,

— Evaluation of the process to identify the taxonomy-eligible and taxonomy-aligned economic activities as well as the corresponding disclosures in the non-financial statement,

— Evaluation of the presentation of the non-financial statement.

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 statement of Deutsche Lufthansa Aktiengesellschaft and Deutsche Lufthansa Group for the period from 1 January 2022 to 31 December 2022 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 "applicability of the EU Taxonomy Regulation (EU) 2020/852" of the non-financial statement.

We do not express an assurance conclusion on the other references to disclosures made outside the non-financial statement.

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 2023

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Nicole Richter Wirtschaftsprüferin [German Public Auditor]	Yvonne Meyer Wirtschaftsprüferin [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 2022 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 2023

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Jörg Bösser Wirtschaftsprüfer [German Public Auditor]	Siegfried Keller Wirtschaftsprüfer [German Public Auditor]

Ten-year overview

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T203 TEN-YEAR OVERVIEW

		2022	2021[8]	2020	2019	2018[7]	2017[6]	2016	2015	2014[5]	2013[4]
Income statement Lufthansa Group											
Revenue	€m	32,770	16,811	13,589	36,424	35,542	35,579	31,660	32,056	30,011	30,027
Result											
Adjusted EBITDA	€m	3,786	593	-2,890	4,718	5,016	5,009	3,338			
Adjusted EBIT (since 2014); Operating result (until 2013)	€m	1,509	-1,666	-5,451	2,026	2,836	2,969	1,752	1,817	1,171	699
Adjusted EBIT margin (since 2014); Operating margin (until 2013)	%	4.6	-9.9	-40.1	5.6	8.0	8.3	5.5	5.7	3.9	2.3
EBIT	€m	1,231	-2,316	-7,353	1,857	2,974	3,297	2,275	1,676	1,000	936
Profit/loss before income taxes	€m	1,050	-2,606	-8,631	1,860	2,784	3,158	2,248	2,026	180	546
Income taxes	€m	-246	413	1,865	-615	-588	-784	-445	-304	-105	-220
Net profit/loss attributable to shareholders of Deutsche Lufthansa AG	€m	791	-2,191	-6,725	1,213	2,163	2,340	1,776	1,698	55	313
Main cost items											
Staff costs	€m	8,108	6,328	6,436	9,121	8,811	8,172	7,354	8,075	7,335	7,356
Fees and charges	€m	3,730	2,155	1,796	4,523	4,457	6,357	5,736	5,651	5,265	5,167
Fuel for aircraft	€m	7,601	2,409	1,875	6,715	6,087	5,232	4,885	5,784	6,751	7,115
Depreciation, amortisation and impairment	€m	2,478	2,351	4,389	2,776	2,205	2,383	1,769	1,715	1,528	1,767
Net interest	€m	-419	-441	-334	-315	-144	-195	-218	-170	-256	-346
Balance sheet Lufthansa Group											
Asset structure											
Non-current assets	€m	28,080	29,063	29,444	31,374	27,559	24,749	24,504	23,526	22,227	19,419
Current assets	€m	15,255	13,475	10,040	11,285	10,654	11,029	10,193	8,936	8,247	9,689
of which liquid assets	€m	8,301	7,666	5,460	3,385	3,235	3,948	3,937	3,093	2,738	4,698
Capital structure											
Shareholders' equity	€m	8,474	4,490	1,387	10,256	9,573	9,110	7,149	5,845	4,031	6,108
of which issued capital	€m	3,060	3,060	1,530	1,224	1,217	1,206	1,200	1,189	1,185	1,180
of which reserves	€m	4,554	3,581	6,542	7,710	6,083	5,461	4,084	2,881	2,728	4,563
Liabilities	€m	34,861	38,048	38,097	32,403	28,640	26,668	27,548	26,617	26,443	23,000
of which pension provisions	€m	2,069	6,676	9,531	6,659	5,865	5,116	8,364	6,626	7,231	4,718
of which borrowing	€m	15,151	16,670	15,368	10,030	6,685	6,814	6,575	6,370	5,958	6,337
Total assets	€m	43,335	42,538	39,484	42,659	38,213	35,778	34,697	32,462	30,474	29,108

T203 TEN-YEAR OVERVIEW (continued)

		2022	2021[8]	2020	2019	2018[7]	2017[6]	2016	2015	2014[5]	2013[4]
Other financial data Lufthansa Group											
Capital expenditure	€m	2,425	1,356	1,312	3,666	3,805	3,529	2,231	2,568	2,773	2,499
of which on tangible and intangible assets	€m	2,365	1,318	1,249	3,486	3,709	3,338	2,160	2,454	2,699	2,444
of which on financial investments	€m	60	38	63	180	96	191	71	114	74	55
Operating cash flow	€m	5,168	399	-2,328	4,030	4,109	5,368	3,246	3,393	1,977	3,290
(Adjusted) Free cash flow[1]	€m	2,526	-1,049	-3,669	203	288	2,117	1,138	834	-297	1,307
Indebtedness											
gross	€m	15,172	16,689	15,382	10,047	6,724	6,832	6,638	6,440	6,156	6,393
net	€m	6,871	9,023	9,922	6,662	3,489	2,884	2,701	3,347	3,418	1,695
Lufthansa share											
Share price[2]	€	7.77	6.18	7.72	11.71	14.06	21.92	8.76	10.39	9.87	11.0
Dividends proposed/paid	€m	–	–	–	–	380	377	234	232	–	207
Dividend per share proposed/paid	€	–	–	–	–	0.80	0.80	0.50	0.50	–	0.45
Operational ratios Lufthansa Group											
Return on sales (Profit/loss before income taxes/revenue)	%	3.2	-15.5	-63.5	5.1	7.8	8.9	7.1	6.3	0.6	1.8
Return on capital employed (Profit/loss before income taxes plus interest on liabilities/total assets)	%	3.5	-5.1	-20.8	5.3	7.8	9.9	7.3	7.3	2.0	3.6
Return on equity (Profit/loss after income taxes/shareholders' equity)	%	9.5	-48.8	-487.8	12.1	22.9	26.1	25.2	29.5	1.9	5.3
Return on equity (Profit/loss before income taxes/shareholders' equity)	%	12.4	-58.0	-622.3	18.1	29.1	34.7	31.4	34.7	4.5	8.9
Equity ratio (Shareholders' equity/total assets)	%	19.6	10.6	3.5	24.0	25.1	25.5	20.6	18.0	13.2	21.0
Gearing (Net indebtedness plus pension provisions/shareholders' equity)	%	105.5	349.6	1,402.5	129.9	97.7	87.8	154.8	170.6	264.2	105
Leverage (Net indebtedness/total assets)	%	15.9	21.2	25.1	15.6	9.1	8.1	7.8	10.3	11.2	5.8
Internal financing ratio (Cash flow/capital expenditure)	%	213.1	29.4	-177.4	109.9	108	152.1	145.5	132.1	71.3	131.7
Adjusted net debt/Adjusted EBITDA (since 2017); Debt repayment ratio (until 2016)	%	2.3	25.8	–	2.8	1.8	1.5	28.7	30.7	20.8	37
Revenue efficiency (Cash flow/revenue)	%	15.8	2.4	-17.1	11.1	11.6	15.1	10.3	10.6	6.6	11
Adjusted ROCE (Adjusted EBIT plus interest on liquidity less 25% taxes)/average capital employed[3]	%	7.3	-7.4	-16.7	6.6	10.6	11.9	7.0	8.3	5.4	
Net working capital (Current assets less current liabilities)	€bn	-2.5	-1.2	-4.6	-4.7	-5.6	1.6	-0.8	-3.5	-2.7	-1.3
Non-current asset ratio (Non-current assets/total assets)	%	64.8	68.3	74.6	73.5	72.1	69.2	70.6	72.5	72.9	66.7
Depreciation ratio for aircraft/reserve engines (Accumulated depreciation/accumulated acquisition costs)	%	60.1	58.8	55.9	50.7	51.7	52.5	49.7	51.6	51.4	52.6

T203 **TEN-YEAR OVERVIEW** (continued)

		2022	2021[8]	2020	2019	2018[7]	2017[6]	2016	2015	2014[5]	2013[4]
Staff ratios											
Average number of employees	number	106,889	107,643	125,207	137,784	134,330	128,856	123,287	119,559	118,973	117,414
Revenue/employee	€	306,580	156,174	108,532	264,356	264,587	276,114	256,799	268,119	252,251	255,736
Staff costs/revenue	%	24.7	37.6	47.4	25.0	24.8	23.0	23.2	25.2	24.4	24.5
Traffic figures Lufthansa Group											
Passengers	millions	101,774	46.9	36.4	145.3	141.9	129.3	109.7	107.7	106	104.6
Available seat-kilometres	millions	259,381	145,139	109,828	358,803	349,391	322,875	286,555	273,975	268,104	262,682
Revenue seat-kilometres	millions	207,035	89,397	69,462	296,217	284,639	261,149	226,639	220,396	214,643	209,649
Passenger load factor	%	79.8	61.6	63.2	82.6	81.5	80.9	79.1	80.4	80.1	79.8
Available cargo tonne-kilometres	millions	14,194	11,867	10,560	17,379	16,349	15,754	15,117	14,971	14,659	14,893
Revenue cargo tonne-kilometres	millions	8,562	8,477	7,373	10,664	10,896	10,819	10,071	9,930	10,249	10,285
Cargo load factor	%	60.3	71.4	69.8	61.4	66.6	68.7	66.6	66.3	69.9	69.1
Number of flights	number	826,379	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
Aircraft in service	number	710	713	757	763	763	728	617	600	615	622

[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] Determination until 2020: Adjusted ROCE (Adjusted EBITplus interest income on liquidity less 25% taxes)/average capital employed.
[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.
[8] The figures for the financial year 2021 were adjusted retrospectively due to amendments in the definition of the figures.

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 (earnings before interest and taxes) adjusted by non-recurring, non-operating effects.

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. 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 operating cash flow 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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Financial calendar 2023

3 May	Release of 1st Interim Report January – March 2023
9 May	Annual General Meeting 2023 (virtual)
3 Aug	Release of 2nd Interim Report January – June 2023
2 Nov	Release of 3rd Interim Report January – September 2023

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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