Rethinking chemistry

BASF Report 2023

BASF
We create chemistry

BASF Group

2023 at a glance

Our integrated reporting combines financial and sustainability reporting. We inform you how we are developing as a company and how we create value for our stakeholders.

Sales

€68.9 billion
(2022: €87.3 billion)

EBIT before special items

€3.8 billion
(2022: €6.9 billion)

EBITDA before special items

€7.7 billion
(2022: €10.8 billion)

ROCE

4.5%
(2022: 10.0%)

Free cash flow

€2.7 billion
(2022: €3.3 billion)

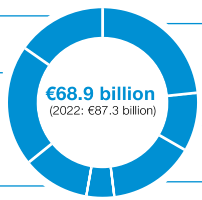
Sales by segment and Other

Chemicals
€10.4 billion
(2022: €14.9 billion)

Materials
€14.1 billion
(2022: €18.4 billion)

Industrial Solutions
€8.0 billion
(2022: €10.0 billion)

Other
€3.2 billion
(2022: €4.4 billion)



Surface Technologies
€16.2 billion
(2022: €21.3 billion)

Nutrition & Care
€6.9 billion
(2022: €8.1 billion)

Agricultural Solutions
€10.1 billion
(2022: €10.3 billion)

Sales and employees by region (by location of company)

EUROPE

27.6
Sales (billion €)

67,562
Employees

NORTH AMERICA

19.0
Sales (billion €)

16,060
Employees

ASIA PACIFIC

17.1
Sales (billion €)

21,193
Employees

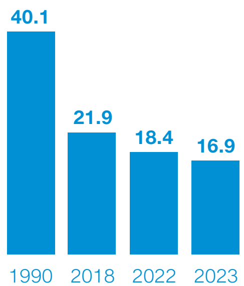
SOUTH AMERICA, AFRICA, MIDDLE EAST

5.1
Sales (billion €)

7,176
Employees

Greenhouse gas emissions[a]

(million metric tons of CO_2 equivalents)



a Scope 1 and Scope 2 (excluding the sale of energy to third parties)

Capital expenditures (capex)

€5.2 billion
(2022: €4.1 billion)

Employees at year-end

111,991
(2022: 111,481)

Research and development expenses

€2.1 billion
(2022: €2.3 billion)

Personnel expenses

€11.0 billion
(2022: €11.4 billion)

Gabriela Uchôna dos Santos

Technical Service Representative

Gabriela, 28, works in Technical Service at the site in São Paulo, Brazil. She is passionate about our customers. She works closely with them to develop innovative solutions tailored to their needs. As part of a project to produce more eco-friendly cleaning agents, she worked in a team on a preservative of natural origin – one of the few ingredients that has mainly been produced synthetically until now. The basis: terpenes extracted from orange peel. No other country produces more oranges than Brazil. So why not use the peel? The preservative Lutensit® EcoCitrus can be used in a variety of household cleaners and detergents to effectively counteract bacteria and fungi in an environmentally friendly way. By using recycled and renewable raw materials instead of fossil ones, Gabriela wants to contribute to more sustainability and environmental compatibility in the home care industry.

Rutger Leenknecht

Carbon Management Expert

Rutger, 27, is an expert in carbon management at our Verbund site Antwerp, Belgium. Inspired by his grandfather, a chemistry professor, Rutger decided to become a chemical engineer. It all starts with chemistry. Chemistry is the industry of industries. Rutger is convinced that a significant contribution to society and environmental protection can be made here, at the beginning of the value chain. As part of the team, he is working to reduce greenhouse gas emissions such as CO_2 and nitrogen dioxide in production. Coordination between different production plants and supply units is crucial here – Rutger wants to reuse the energy that one plant releases as a resource elsewhere. These optimization measures help BASF to continuously reduce the carbon footprint and use resources efficiently.

Zi Ming Yang

Process Engineering Research Assistant

Zi Ming, 30, works as a researcher at BASF's Innovation Campus in Shanghai, China. She comes from the Chinese province of Shanxi, an area that is primarily characterized by coal mining. She realized early on that she wanted to work in sustainable technology research. Her passion for innovation in chemistry led her from her hometown to Oxford University and back to Shanghai. Today, she works with a team on pioneering technologies for advanced heating concepts, hydrogen recovery and CO_2 efficiency. Zi Ming focuses in particular on technology scouting, benchmarking and process modeling to accelerate the transition of cutting-edge technologies from the lab to the production line.

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About This Report

GRI 2, 305

At a glance

- Integrated BASF Report serves as U.N. Global Compact progress report
- Financial reporting in accordance with IFRS, HGB and GAS
- Nonfinancial reporting in accordance with HGB and additional sustainability reporting in accordance with GRI
- External audit by KPMG AG Wirtschaftsprüfungsgesellschaft
- Editorial deadline: February 19, 2024

Integrated reporting

This integrated report documents BASF's economic, environmental and social performance in 2023. We show how we as a company create value for our stakeholders and how sustainability contributes to BASF's long-term success as an integral part of our corporate purpose and our strategy.

Content and structure

The BASF Report, which is published each year in English and German, combines the major financial and sustainability-related information necessary to comprehensively evaluate the company's performance. We select the report's topics based on the following principles: materiality, completeness, sustainability context, balance and stakeholder inclusion. In addition to this report, we publish further information online. The relevant links can be found at the end of each chapter.

WE SUPPORT

IFRS Sustainability Alliance

The management's reports for the BASF Group and BASF SE have been combined for the first time in this annual report. The reporting period is from January 1, 2023, up to and including December 31. Unless otherwise stated, the presentation of the results of operations, financial position and net assets as well as the expected development with its significant opportunities and risks relate to the BASF Group. Information relating exclusively to BASF SE is marked as such and is dealt with in a separate section (Disclosures on BASF SE in accordance with the German Commercial Code (HGB)). The combined Nonfinancial Statement (NFS) is integrated into the Combined Management's Report and includes, as far as possible, the disclosures for the BASF Group and BASF SE as the parent company. Material topics for BASF SE are largely congruent with the topics identified for the BASF Group. Deviations are presented in the separate nonfinancial section on BASF SE on page 189. The NFS disclosures can be found in the relevant sections of the Combined Management's Report and have been prepared in accordance with the appropriate frameworks: the Global Reporting Initiative (GRI) Standards and the reporting requirements of the U.N. Global Compact.

The information on the financial position and performance of the BASF Group complies with the requirements of the International Financial Reporting Standards (IFRS) and, where applicable, the German Commercial Code (HGB), German Accounting Standards (GAS) and the guidelines on alternative performance measures from the European Securities and Markets Authority (ESMA). Internal control mechanisms ensure the reliability of the information presented in this report.

The information contained in this report also serves as a progress report on BASF's implementation of the 10 principles of the U.N. Global Compact. KPMG AG Wirtschaftsprüfungsgesellschaft has performed an independent limited assurance of the disclosures in the online GRI Index. The results of this assurance are also available in the online report in the form of an assurance statement. We also publish additional information on sustainability online in accordance with the industry-specific requirements of the Sustainability Accounting Standards Board (SASB). BASF's Report addresses elements of the framework of the former International Integrated Reporting Council (IIRC), which is now incorporated into the work of the International Sustainability Standards Board (ISSB) to develop internationally recognized standards for sustainability reporting. Our involvement in networks and in national and international standard-setting bodies gives us the opportunity to share our experiences of integrated reporting with stakeholders and, at the same time, give and receive inspiration for enhancing our reporting.

Material topics along the value chain form the focal points of our reporting and define the limits of this report. In identifying, prioritizing and validating material, sustainability-related topics, we are guided by the principle of double materiality, taking into consideration financial materiality and impact materiality. General information on the materiality analysis can be found under "Our Sustainability Concept" from page 48 onward. Material topics are explained in the "Material Topics in Focus" sections.

For more information on the results of operations, net assets and financial position, see page 61 onward

For more information on our sustainability reporting, see page 48 and 100 onward

The 2023 BASF Online Report can be found at basf.com/report

The GRI and Global Compact Index can be found at basf.com/en/gri-gc

The SASB index can be found at basf.com/sasb

Data

All information and bases for calculation in this report are founded on national and international standards for financial and sustainability reporting. The data and information for the reporting period were sourced from the expert units responsible using representative methods. Due to rounding, individual figures may not add up exactly to the totals shown and percentages may not correspond exactly to the figures shown. The reporting period is the 2023 business year. We include relevant information made available up to the preparation of this report by the Board of Executive Directors at the accounts meeting on February 19, 2024 (editorial deadline).

BASF Group's scope of consolidation for its financial reporting comprises BASF SE, with its headquarters in Ludwigshafen, Germany, and all of its fully consolidated subsidiaries and proportionally consolidated joint operations. Shares in joint ventures and associated companies are accounted for, if material, using the equity method in the BASF Group Consolidated Financial Statements and are thus not included in the scope of consolidation.

The section "Employees" refers to employees active in a company within the BASF Group's scope of consolidation as of December 31, 2023. Our data collection methods for environmental protection and safety are based on the recommendations of the International Council of Chemical Associations (ICCA) and the European Chemical Industry Council (CEFIC). We report all data of the worldwide production sites of BASF SE, its fully consolidated subsidiaries and proportionally consolidated joint operations in the sections "Environmental" and "Social." BASF SE subsidiaries that are fully consolidated in the Group financial statements in which BASF holds an interest of less than 100% are included in full in environmental reporting. The emissions of proportionally consolidated joint operations are disclosed pro rata according to the respective shareholding. Work-related accidents at all sites of BASF SE and its subsidiaries as well as joint operations and joint ventures in which we have authority in terms of safety management are compiled worldwide regardless of our interest and reported in full. Unless otherwise indicated, data on social responsibility and transportation safety refers to the BASF Group's scope of consolidation.

External audit

Our reporting is independently audited by third parties. KPMG AG Wirtschaftsprüfungsgesellschaft has audited the BASF Group Consolidated Financial Statements and the Combined Management's Report and has approved them free of qualification. The limited assurance of the sustainability information contained in the Management's Report was conducted in accordance with ISAE 3000 (Assurance Engagements other than Audits or Reviews of Historical Financial Information) and ISAE 3410 (Assurance Engagements on Greenhouse Gas Statements), the relevant assurance standards for sustainability reporting. KPMG conducted a reasonable assurance of all disclosures on the most important nonfinancial key performance indicator "absolute CO_2 emissions" (Scope 1 and 2). KPMG also conducted a limited assurance of the combined Nonfinancial Statement (NFS).

The Independent Auditor's Report can be found on page 221 onward

An assurance statement on the sustainability information in the BASF Report 2023 can be found at basf.com/sustainability_information

An assurance statement of the NFS can be found at basf.com/nfs-audit-2023

Forward-looking statements and forecasts

This report contains forward-looking statements. These statements are based on current estimates and projections of the Board of Executive Directors and currently available information. Forward-looking statements are not guarantees of the future developments and results outlined therein. These are dependent on a number of factors: they involve various risks and uncertainties and they are based on assumptions that may not prove to be accurate. Such risk factors include in particular those discussed in Opportunities and Risks on pages 173 to 183. We do not assume any obligation to update the forward-looking statements contained in this report above and beyond the legal requirements.

Symbols used and captions

You can find more information in this report.

You can find more information online. This information is voluntary and was not audited by the auditor.

[ ] The content of this section is not part of the statutory audit but has undergone a separate limited assurance by our auditor.

The content of this section is voluntary, unaudited information, which was critically read by the auditor.

Captions are not part of the audit. Unless otherwise stated, page numbers relate to pages within the Combined Management's Report or in the Notes to the Consolidated Financial Statements.

1 To Our Shareholders

Dear shareholder,

At BASF, we are accustomed to working under pressure – and not just in our plants. The year 2023 once again required enormous effort on our part, as the entire chemical industry is in upheaval. Our markets, our competitors and the needs of our customers are changing rapidly. The world is still experiencing geopolitical conflicts, weak economic growth and high interest rates due to ongoing inflation. In Europe, structurally higher energy price levels, extremely sluggish growth and overregulation are especially challenging for the competitiveness of local European producers. This difficult environment is demanding everything from us and is reflected in our figures.

However, we accept these challenges. We are taking action to maintain our competitiveness, especially in Germany. We want to grow profitably worldwide and become climate-neutral. We worked hard on this in 2023. I am convinced: We will succeed in all these areas because we are a strong company. We have the will to change and a concrete plan, which we are systematically implementing. And we will emerge even stronger from these tough times, just as we have done repeatedly over our 158-year history.

Clear focus on strengthening competitiveness and profitability

BASF supplies products and services to around 78,000 customers from various sectors in almost every country in the world. We want to further strengthen these relationships and win new customers too. The operating environment has changed significantly in recent years for our Battery Materials, Coatings and Agricultural Solutions businesses. Our competitors in these sectors are making a more focused push into the market and are thus increasingly challenging us. At the same time, these business areas are not integrated so deeply into the BASF Verbund. That is why we will be giving them more space – so they can tailor their business models and processes more precisely to the needs of their customers and perform even more successfully on the market. Despite these changes, BASF remains an integrated company with a broad portfolio. Particularly in a year such as 2023, this structure proved its value once again. The Coatings and Agricultural Solutions divisions generated record earnings, which partly offset weak results in other segments.

> “We have the will to change and a concrete plan.

In Germany in particular, we are working systematically on our competitiveness and profitability. We are reducing our costs by adapting our production structures, among other measures. We acted promptly, but we must not let up. Given the extremely difficult market environment and structural challenges, we need targeted measures at our site in Ludwigshafen in particular to make it fit for the future. And we will continue to be under enormous pressure here owing to the weak demand compared with other regions, high energy prices and increasingly far-reaching regulatory requirements. This is why we are implementing changes where we need to. We are altering where it makes us better. But we are also investing where we see opportunities.

Focus on future industries and growth markets

Our strategy is to produce locally for local markets. We want to be close to our customers, and we focus on innovation-driven growth areas. In 2023, we opened Europe’s first colocated center for battery material production and battery recycling in Schwarzheide, Germany. We are the first global producer of battery materials with production in all three core markets: Europe, the United States and Asia. In Geismar, Louisiana, the expansion of our MDI plant is well underway. This enables us to serve the growing demand from our North American customers in industries such as construction, automotive and furniture. And construction at our new Verbund site in Zhanjiang, China, is proceeding at an impressive pace on a site the size of 550 soccer fields. This project is fully on schedule and on budget.

> We are altering where it makes us better and investing where we see opportunities.

As we decided in 2018, we will be divesting the oil and gas business. At the end of 2023, BASF, LetterOne and Harbour Energy signed an advantageous agreement to combine the businesses of Wintershall Dea and Harbour Energy. It is planned to transfer the exploration and production business, excluding Russia-related activities, to the publicly listed firm Harbour Energy in the fourth quarter of 2024.

Pioneer on the path to climate neutrality

By 2050, we aim to achieve net-zero CO_2 emissions for our production (Scope 1) and our energy purchases (Scope 2). Despite the difficult economic times, we are firmly committed to this ambitious goal. I am excited and proud to see how the entire BASF team is pulling together to make this a reality. We are changing how we produce. With new electrified technologies, such as the world’s first electrically heated steam cracker furnace, we are testing what is possible. We are transitioning our energy supply from grey to green. Whether through investments in wind farms, solar parks or green electricity contracts, we already meet 20% of our electricity demand from renewable sources. By 2030, this proportion should rise to at least 60% worldwide – even though our demand for electricity is growing. We are getting ever closer to this target. We officially inaugurated the offshore wind farm Hollandse Kust Zuid in the Dutch North Sea in 2023. This is an incredible success! And we are already pursuing two other major wind farms: in the German North Sea and off the coast of Zhanjiang in China.

> I am excited to see how the entire BASF team is pulling together.

Moreover, we have committed to reducing the greenhouse gas emissions from raw materials purchased from our suppliers. By 2030, we intend to reduce our specific Scope 3.1 emissions by 15% compared with 2022. In the future, we want to source raw materials with a smaller carbon footprint than today’s level from our suppliers.

Furthermore, we are steadily expanding our portfolio of low-emission products. As part of this, we are also advancing the circular economy. With loopamid®, BASF launched a solution for greater circularity in the textile industry in early 2024. Textile waste is recycled as a valuable raw material to produce polyamide 6. This idea strikes a chord with our customers: Fashion company Zara recently presented a jacket made entirely of recycled polyamide. All its components – from the fabrics and filling to the hook-and-loop fastener and zipper – are made of loopamid®, so the garment is also 100% recyclable. This is a fantastic achievement!

Framework conditions remain difficult

All these successes cannot hide the fact that 2023 was an economically tough year for BASF. We did not reach our targets or meet analyst estimates for sales and income from operations (EBIT) before special items. Our sales in 2023 amounted to €68.9 billion (2022: €87.3 billion), a decrease of around 21% versus the prior year. The downward sales trend was driven by significantly lower prices and volumes, while currency effects also had a dampening effect on sales. EBIT before special items declined to €3.8 billion (2022: €6.9 billion). This year-on-year decline of nearly 45% resulted from lower margins due to decreased sales. These could not be offset by the reduction in fixed costs we achieved.

Yet, a glance at our figures also shows that we are working effectively on our cost base. We considerably reduced our inventory levels and achieved a strong cash flow from operating activities. BASF therefore continues to have a high equity ratio and a strong balance sheet. This is all good news for you, dear shareholders.

“BASF continues to have a high equity ratio and a strong balance sheet.

It is our goal to increase our dividend per share each year, or at least maintain it at the previous year’s level. We will therefore propose a dividend of €3.40 per share, matching the prior-year level, to the Annual Shareholders’ Meeting in April 2024. Based on the 2023 year-end share price of €48.78, the BASF share again offers a high dividend yield of 7.0%.

The framework conditions will remain difficult in 2024. We expect the subdued momentum in the global economy seen in 2023 to continue into the first half of 2024. Global economic growth will likely only pick up slightly as the year progresses.

Positive change requires a team effort

For the chemical industry, Europe will continue to be the most challenging market due to its low growth and structurally higher energy prices compared with other regions. In addition, there are increasingly far-reaching regulatory requirements. BASF and large parts of our customer industries are drowning in this sea of red tape. Nevertheless, I remain an optimist! We can successfully maintain and strengthen our industrial basis in Europe if there is widespread willingness to embrace change among society, business and policymakers. But this will also require a new regulatory framework. One that promotes innovations for climate protection, enables the international competitiveness of new processes and accelerates the expansion of renewable energies at competitive prices. We need an “Industrial Deal” to again foster more entrepreneurship, creativity and profitable growth for the chemical industry and our customer industries in Europe.

At BASF, chemistry is our passion. At every site around the globe, our colleagues pursue this passion with dedication and creativity. They are rethinking chemistry every day, just like the three young employees shown on the cover of this report. I also joined BASF as a young person in 1988, and I have had the opportunity to help shape the development of our company in various roles – for the past six years as Chairman of the Board of Executive Directors. After 36 years at BASF, I will hand over the Chairmanship to Markus Kamieth following the Annual Shareholders’ Meeting on April 25, 2024. I am certain: The company is in great hands with him and the new Board team. I am honored to have spent my entire career devoting all my strength and passion to the prosperity and future of our BASF. I am proud of what we have changed and achieved together, in what were not easy times. From the bottom of my heart, I thank the entire BASF team for their drive, perseverance and motivation. And I thank you, dear shareholders, for your trust.

“Our colleagues are rethinking chemistry every day.

Yours,

Martin Brudermüller

The Board of Executive Directors of BASF SE[1]

Dr. Martin Brudermüller
Chairman of the Board of Executive Directors

Dr. Dirk Elvermann

Michael Heinz

Dr. Markus Kamieth

Dr. Stephan Kothrade

Dr. Melanie Maas-Brunner

1 The Supervisory Board of BASF SE made the following personnel changes to the Board of Executive Directors of BASF SE on December 20, 2023: Dr. Markus Kamieth will succeed Dr. Martin Brudermüller as Chairman of the Board of Executive Directors of BASF SE, effective as of the end of the Annual Shareholders' Meeting on April 25, 2024. Dr. Katja Scharpwinkel succeeds Dr. Melanie Maas-Brunner as member of the Board of Executive Directors, effective February 1, 2024. Anup Kothari will be appointed as a further member of the Board of Executive Directors, effective March 1, 2024.

BASF on the Capital Market

GRI 2

In 2023, stock markets were characterized by a weakening of the global economy. Continued high inflation, higher interest rates and increasing geopolitical tensions led to economic uncertainty and dampened demand in many sectors. A dividend at prior-year level of €3.40 per share will be proposed to the Annual Shareholders' Meeting. Based on the year-end share price for 2023, BASF shares offer a high dividend yield of 7.0%.

At a glance

- BASF share price increased by 5.2% in 2023
- Proposed dividend of €3.40 per share at prior-year level
- Dividend yield of 7.0% based on the 2023 year-end share price

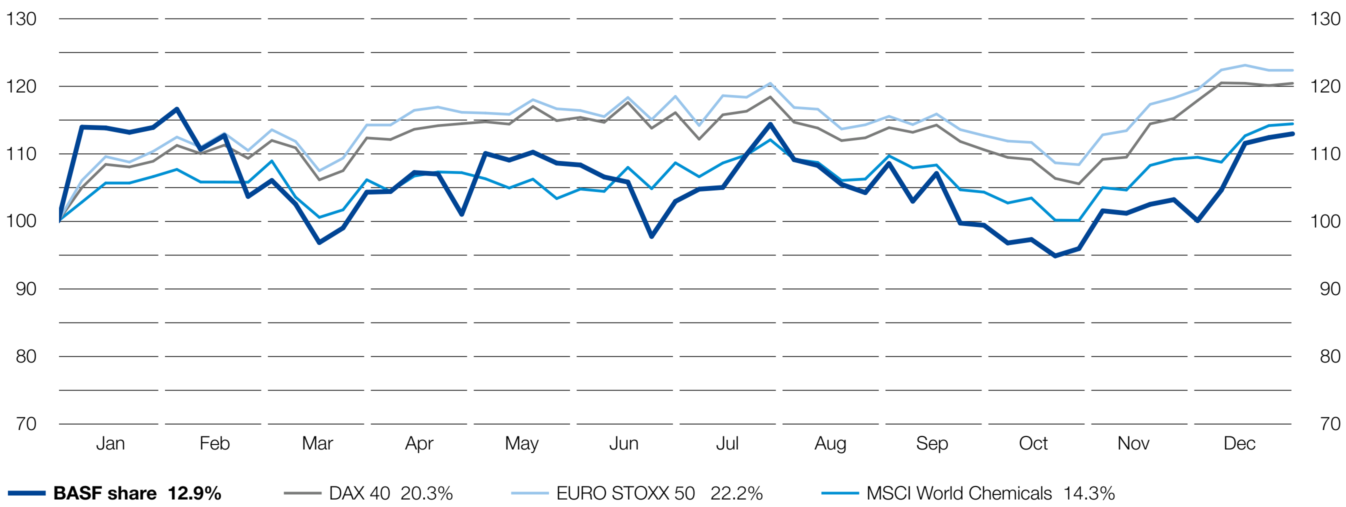
BASF share performance

After BASF's share price reached an annual high of €54.04 on February 3, 2023, it initially declined over the year. During the last two months of 2023, the stock market was supported by expectations of future interest rate cuts. BASF shares recovered in line with the overall market and closed the year at €48.78. Share performance in the course of the year was mainly attributable to the weakening of the economy, continued high inflation, higher interest rates and increasing geopolitical tensions; these led to significant uncertainty on the global markets and dampened demand in many sectors.

Assuming that dividends were reinvested, BASF's share performance increased by 12.9% in 2023. The benchmark indexes of the German and European stock markets – the DAX 40 and the

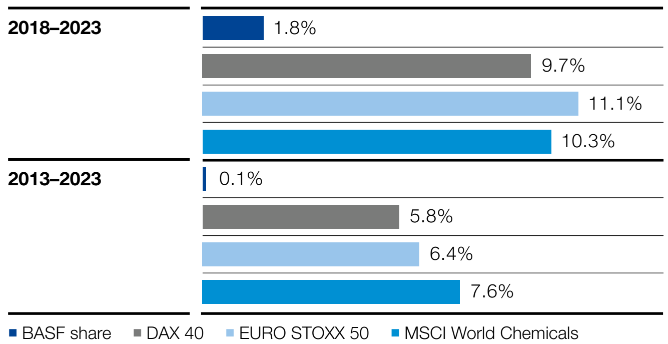
Change in value of an investment in BASF shares in 2023

With dividends reinvested; indexed



Long-term performance of BASF shares compared with indexes

Average annual increase with dividends reinvested

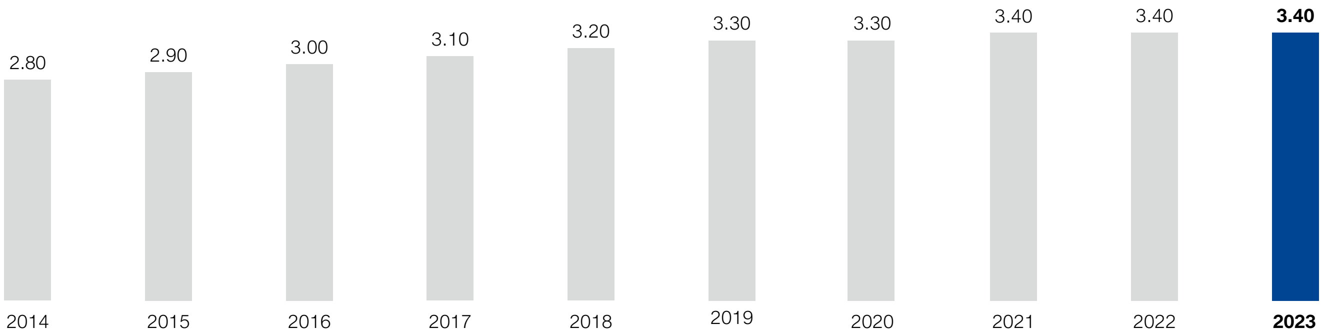


Weighting of BASF shares in important indexes as of December 31, 2023

DAX 40	3.6%
EURO STOXX 50	1.4%
MSCI World Chemicals	3.9%

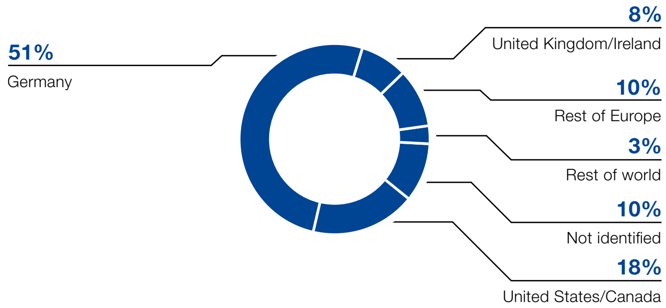
Dividend per share

€ per share



Shareholder structure

By region, rounded



EURO STOXX 50 – rose by 20.3% and 22.2% over the same period, respectively. The global industry index MSCI World Chemicals gained 14.3%.

Proposed dividend

It is to be proposed to the Annual Shareholders' Meeting that a dividend of €3.40 per share, at the same level as in the previous year, be resolved, and thus €3.0 billion[1] be paid out to the shareholders of BASF SE.

With this proposed dividend, BASF shares offer a high dividend yield of 7.0% based on the year-end share price for 2023. BASF is part of the DivDAX share index, which contains the 15 companies with the highest dividend yield in the DAX 40.

Share buyback program

BASF ended its share buyback program on February 24, 2023, earlier than planned. This was done in line with the company's priorities for the use of cash and in view of the profound changes in the global economy over the course of 2022. From January 11, 2022, until February 23, 2023, 25,956,530 own shares were repurchased; this corresponds to 2.8% of the share capital at the time the program was announced. The purchase price for these own shares was around €1.4 billion. Originally, the share buyback program had been planned to reach a volume of up to €3 billion and to be completed by the end of December 2023 at the latest.

Broad base of international shareholders

With over 900,000 shareholders, BASF is one of the largest publicly owned companies with a high free float. An analysis of the shareholder structure carried out at the end of 2023 showed that, at around 18% of share capital, the United States and Canada made up the largest regional group of institutional investors. Institutional investors from Germany accounted for around 4%. Institutional investors from the United Kingdom and Ireland hold 8% of BASF shares, while investors from the rest of Europe hold a further 10% of capital. Approximately 47% of the company's share capital is held by private investors, nearly all of whom reside in Germany. BASF is therefore one of the DAX companies with the largest percentage of private shareholders.

Employees becoming shareholders

In many countries, we offer share purchase programs that turn our employees into BASF shareholders. In 2023, around 26,700 employees (2022: around 27,100) purchased BASF shares worth €68.1 million (2022: €92.8 million).

For more information on employee share purchase opportunities, see page 132 onward

1 Based on the number of outstanding shares as of December 31, 2023 (892,522,164)

BASF – a sustainable investment

At a glance

- CDP again awards BASF Leadership status
- BASF again achieved “Prime” status in ISS ESG rating

BASF has participated in the program established by the international organization CDP for reporting on data relevant to climate protection since 2004. CDP represents more than 740 investors with over $136 trillion in assets and more than 330 major organizations with $6.4 trillion in purchasing power.

In February 2024, CDP once again awarded BASF Leadership status in the categories of climate protection, water management and forest protection for the 2023 business year. BASF achieved a rating of A- in each category. In the climate protection category, CDP assesses, among other things, the transparency of emissions reporting, the handling of opportunities and risks arising from climate change, the climate protection strategy and measures to reduce CO_2 emissions.

The CDP assessment for sustainable water management takes into account how transparently companies report on their water management activities and how they reduce risks such as water scarcity. BASF continues to implement its sustainable water management target at all relevant production sites. CDP also evaluates the extent to which product developments can contribute to sustainable water management for customers. BASF also participated in the CDP’s “Forests” assessment for the fourth time in 2023. The assessment is based on detailed insights into the palm value chain and on activities that impact ecosystems and natural habitats.

MSCI ESG Research awarded BASF an A rating in 2023. The analysts highlighted BASF’s presence in clean technology markets and its clearly defined strategy to reduce CO_2 emissions and water consumption.

BASF again achieved Prime status (B-) in the ISS ESG rating developed by Institutional Shareholder Services, placing it in the top 10% of the companies assessed.

Further information on the BASF share

Securities code numbers	
Germany	BASF11
United States (CUSIP number)	055262505
ISIN International Securities Identification Number	DE000BASF111

International ticker symbols	
Deutsche Börse	BAS
Pink Sheets / OTCQX	BASFY (ADR)
Bloomberg (Xetra trading)	BAS GY
Reuters (Xetra trading)	BASFn.DE

Key BASF share data

		2019	2020	2021	2022	2023
Year-end price	€	67.35	64.72	61.78	46.39	48.78
Year high	€	74.49	68.29	72.61	68.69	54.04
Year low	€	56.20	39.04	57.88	38.85	40.59
Year average	€	64.77	53.31	66.20	49.90	46.71
Daily trade in shares[a]						
	million €	187.6	219.2	170.8	183.0	117.3
	million shares	2.9	4.1	2.6	3.7	2.5
Number of shares December 31	million shares	918.5	918.5	918.5	893.9	892.5
Market capitalization December 31	billion €	61.9	59.4	56.7	41.5	43.5
Earnings per share	€	9.17	-1.15	6.01	-0.70	0.25
Adjusted earnings per share	€	4.00	3.21	6.76	6.96	2.78
Dividend per share	€	3.30	3.30	3.40	3.40	3.40
Dividend yield[b]	%	4.90	5.10	5.50	7.33	6.97
Payout ratio	%	36	.	57	.	.
Price-earnings ratio (P/E ratio)[b]		7.3	.	10.3	.	195.1

a Average, Xetra trading
b Based on year-end share price

In the Morningstar Sustainalytics[1] ESG Risk Ratings, BASF belongs to the best category for “diversified chemicals” with a medium ESG risk and was recognized for its risk management, for example, in the areas of CO_2 emissions, wastewater and waste, and occupational health and safety.

BASF is a founding member of the United Nations Global Compact. This means we consistently support the U.N. Global Compact and its 10 principles of responsible business conduct and the Sustainable Development Goals.

For more information on the key sustainability indexes, see basf.com/sustainabilityindexes
For more information on energy and climate protection, see page 102 onward
For more information on emissions to air, waste and remediation, see page 110 onward
For more information on water, see page 112 onward
For more information on biodiversity, see page 116 onward

Analysts’ recommendations

Around 25 financial analysts regularly publish reports on BASF. The latest analyst recommendations for our shares as well as the average target share price ascribed to BASF by analysts can be found online at basf.com/analystestimates.

Close dialog with the capital market

At a glance

- Increased number of in-person investor events, complemented by virtual formats
- Investor Updates in February 2023 and December 2023

Regular and transparent communication with the capital market is key to increasing long-term value. We engage with institutional investors and rating agencies in numerous one-on-one meetings, as well as at roadshows and conferences worldwide, and give private investors an insight into BASF at informational events. In 2023, we increasingly offered physical formats again in addition to virtual formats such as video and conference calls.

In February 2023, Dr. Martin Brudermüller and Dr. Hans-Ulrich Engel presented concrete measures to increase BASF’s competitiveness in Europe as part of a virtual Investor Update. Detailed information was provided on a cost savings program in nonproduction units with a focus on Europe and on the adaptation of production structures at the Verbund site in Ludwigshafen, Germany.

As part of an Investor Update in the presence of analysts and investors in Ludwigshafen, Germany, in December 2023, Dr. Martin Brudermüller and Dr. Dirk Elvermann announced a more strongly differentiated approach to steering BASF operations and the new financial key performance indicators in the reporting and steering for the BASF Group, which will be used from 2024 onward. Furthermore, the progress made toward the corporate targets for Scope 1 and 2 emissions was presented and the targets for Scope 3.1 emissions were announced for the first time.[2]

For more information on our climate protection targets, see page 29
For more information on the Differentiated Steering concept, see page 37 onward

Analysts and investors have again confirmed the quality of our financial market communications. At the Investors’ Darling awards ceremony, Manager Magazin presented BASF with special prizes for sustainability communications and digital communications. In addition, NetFed, a consultancy specializing in digital communications, awarded the BASF Investor Relations website second place in the IR Benchmark 2023.

For more information on BASF shares, see basf.com/share
For more information on the 2022–2023 share buyback program, see basf.com/sharebuyback
For more information on the Investor Update in February 2023, see basf.com/FY2022
For more information on the Investor Update in December 2023, see basf.com/investor-update
Register for the newsletter with current topics and dates at basf.com/share/newsletter
Contact the Investor Relations team by phone at +49 621 60-48230 or email ir@basf.com

1 Morningstar Sustainalytics provides institutional investors and companies with ESG and corporate governance research, ratings and analytics.
2 Other greenhouse gases are converted into CO_2 equivalents in accordance with the Greenhouse Gas Protocol.

2

Combined Management's Report

Overview

Combined Management's Report

GRI 2

The Combined Management's Report comprises the content on pages 18 to 190, as well as the disclosures required by takeover law and the Declaration of Corporate Governance. The combined Nonfinancial Statement (NFS) is also integrated into the Combined Management's Report.

NFS in accordance with sections 289b, 289c, 315b and 315c of the German Commercial Code (HGB)

The NFS disclosures are located in the relevant sections of the Combined Management's Report and have been prepared in accordance with the appropriate frameworks: the Global Reporting Initiative Standards and the reporting requirements of the U.N. Global Compact. In addition to a description of the business model, the NFS includes disclosures on the environment, employee-related and social matters, respect for human rights, and anti-corruption and bribery matters to the extent that these are required to understand the development and performance of the business, the Group's position and the impact of business development on these aspects.

In accordance with the E.U. Taxonomy Regulation and the supplementary delegated acts, the NFS includes the proportion of the Group's taxonomy-eligible and our Group-wide taxonomy-aligned turnover, capital expenditures (including acquisitions and excluding goodwill in accordance with the E.U. taxonomy) and operating expenditures for the 2023 business year for the two climate targets. For the four new environmental targets, we are reporting the taxonomy-eligible shares for the first time for 2023.

Within the scope of the annual audit, KPMG checked pursuant to section 317(2) sentence 4 HGB that the NFS was presented in accordance with the statutory requirements. KPMG also conducted a limited assurance of the NFS. An assurance statement of the limited assurance can be found online at basf.com/nfs-audit-2023. The audit was conducted in accordance with ISAE 3000 (Assurance Engagements other than Audits or Reviews of Historical Financial Information) and ISAE 3410 (Assurance Engagements on Greenhouse Gas Statements), the relevant international auditing standards for sustainability reporting.

Disclosures required by takeover law in accordance with sections 289a and 315a HGB

The disclosures required by takeover law in accordance with sections 289a and 315a of the German Commercial Code (HGB) can be found in the Corporate Governance chapter starting on page 218. They form part of the Combined Management's Report, which is audited as part of the annual audit.

Compensation Report

The Compensation Report in accordance with section 162 of the German Stock Corporation Act (AktG) is publicly available on the BASF website together with the assurance statement of the substantive and formal audit issued by the auditor.

The Compensation Report is available at basf.com/compensationreport

Declaration of Corporate Governance in accordance with sections 289f and 315d HGB

The Combined Declaration of Corporate Governance of BASF SE and the BASF Group in accordance with sections 289f and 315df HGB can be found in the Corporate Governance chapter from page 218 onward and is a component of the Combined Management's Report. It comprises the Corporate Governance Report, including the description of the diversity concept for the composition of the Board of Executive Directors and the Supervisory Board (excluding the disclosures required by takeover law), compliance reporting, and the Declaration of Conformity pursuant to section 161 AktG. Pursuant to section 317(2) sentence 6 HGB, the auditor checked that the disclosures according to section 315d HGB in accordance with section 289f(2) HGB with were made.

Combined Management's Report in accordance with GAS 20.22

In the BASF Report 2023, we present the Management's Reports for the BASF Group and BASF SE – where possible and not otherwise stated – in combined form for the first time in accordance with GAS 20.22. Information relating exclusively to BASF SE is dealt with in the section "Disclosures on BASF SE in accordance with the German Commercial Code (HGB)."

Recommendations of the Task Force on Climate-related Financial Disclosures

BASF supports the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Disclosures recommended by the TCFD are presented in a number of places throughout this report. The table on page 21 shows the sections and subsections in which the relevant information can be found.

Symbols used and captions

You can find more information in this report.

You can find more information online. This information is voluntary and was not audited by the auditor.

[ ] The content of this section is not part of the statutory audit but has undergone a separate limited assurance by our auditor.

The content of this section is voluntary, unaudited information, which was critically read by the auditor.

Captions and quotes are not part of the audit. Unless otherwise stated, page numbers relate to pages within the Combined Management's Report or in the Notes to the Consolidated Financial Statements.

Combined Nonfinancial Statement (NFS) disclosures in the relevant chapters of the integrated report

NFS disclosure	Topics	Concepts and results
Business model	BASF Group	Pages 23–26
E.U. taxonomy	E.U. taxonomy	Pages 161–166
Environmental matters	Process safety	Page 41 (targets) / pages 101 and 127–128 (targets, measures, results)
	Biodiversity and ecosystems	Pages 116–120 (targets, measures, results)
	Energy and climate protection	Page 41 (targets) / pages 101 and 102–109 (targets, measures, results)
	Emergency response and corporate security	Pages 129 and 152 (targets, measures results)
	Supplier management	Page 41 (targets) / pages 158–160 (targets, measures, results)
	Emissions to air	Pages 101 and 110–111 (targets, measures, results)
	Product stewardship	Pages 131 and 149–151 (targets, measures, results)
	Resource efficiency	Pages 46–47 and 110–111 (targets, measures, results)
	Steering of product portfolio	Pages 48–49 (targets, measures, results)
	Transportation and storage	Pages 101 and 130 (targets, measures results)
	Management of waste and contaminated sites	Pages 101 and 110–111 (targets, measures, results)
	Water	Page 41 (targets) / pages 101 and 112–115 (targets, measures, results)
Employee-related matters	Occupational safety	Page 41 (targets) / pages 131 and 143–144 (targets, measures, results)
	Dialog with employee representatives	Page 137 (targets, measures, results)
	Inclusion of diversity	Page 41 (targets) / pages 138–139 (targets, measures, results)
	What we expect from our leaders	Page 133 (targets, measures, results)
	Health protection	Pages 131 and 143–145 (targets, measures, results)
	International labor and social standards	Pages 155–156 (targets, measures, results)
	Learning and development	Pages 134–135 (targets, measures, results)
	Supplier management	Page 41 (targets) / pages 158–160 (targets, measures, results)
	Employee engagement	Page 41 (targets) / page 133 (targets, measures, results)
	Competition for talent	Pages 133–134 (targets, measures, results)
	Compensation and benefits	Pages 135–136 (targets, measures, results)
Social matters	Societal engagement	Pages 51 and 141–142 (targets, measures, results)
Respect for human rights	International labor and social standards	Pages 155–156 (targets, measures, results)
	Supplier management	Page 41 (targets) / pages 158–160 (targets, measures, results)
	Responsibility for human rights	Pages 154–157 (targets, measures, results)
Anti-corruption and bribery matters	Compliance	Pages 202–204 (targets, measures, results)
	Supplier management	Page 41 (targets) / pages 158–160 (targets, measures, results)
NFS of BASF SE	Employees, innovation, purchasing, health, safety, environment	Pages 189–190 (results)

Recommendations of the Task Force on Climate-related Financial Disclosures in the relevant chapters of the integrated report

Topic	Recommended disclosures	Section/explanation	Page
Governance Disclose the organization's governance around climate-related risks and opportunities.	Describe the board's oversight of climate-related risks and opportunities.	Corporate Governance Report – Direction and management by the Board of Executive Directors Report of the Supervisory Board Our Sustainability Concept – Our organizational and management structures	Pages 192–201 Pages 209–216 Pages 50–51
	Describe management's role in assessing and managing climate-related risks and opportunities.	Our Sustainability Concept – Our organizational and management structures	Pages 50–51
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Opportunities and Risks – Operational opportunities and risks Opportunities and Risks – Financial opportunities and risks Opportunities and Risks – Strategic opportunities and risks	Pages 177–179 Pages 179–180 Pages 180–183
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	Energy and Climate Protection – Strategy and governance Material topics in focus: Climate change Our Sustainability Concept – Our organizational and management structures Our Strategic Action Areas – Sustainability Opportunities and Risks – Operational opportunities and risks Opportunities and Risks – Financial opportunities and risks Opportunities and Risks – Strategic opportunities and risks	Pages 102–103 Page 29 Pages 50–51 Pages 30–31 Pages 177–179 Pages 179–180 Pages 180–183
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Opportunities and Risks – Tools Opportunities and Risks – Strategic opportunities and risks	Pages 175–176 Pages 180–183
Risk management Disclose how the organization identifies, assesses, and manages climate-related opportunities and risks.	Describe the organization's processes for identifying and assessing climate-related risks.	Opportunities and Risks – Risk management process Opportunities and Risks – Tools	Pages 174–175 Pages 175–176
	Describe the organization's processes for managing climate-related risks.	Opportunities and Risks – Risk management process Opportunities and Risks – Strategic opportunities and risks	Pages 174–175 Pages 180–183
	Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.	Opportunities and Risks – Tools	Pages 175–176
Metrics and targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	Energy and Climate Protection – Global targets Energy and Climate Protection – Energy supply	Pages 103–104 Pages 104–106
	Disclose Scope 1, Scope 2, and Scope 3 greenhouse gas (GHG) emissions and the related risks.	Corporate carbon footprint Energy and Climate Protection – Global targets	Page 108 Pages 103–104
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Energy and Climate Protection – Strategy and governance Energy and Climate Protection – Energy supply	Pages 102–103 Pages 104–106

Material Topics in Focus GRI 3

Material topics in the areas of the environmental, social and governance (ESG) along our value chain form the focal points of our reporting and define the limits of this report. In identifying, prioritizing and validating topics, we are guided by the principle of double materiality, taking into consideration financial materiality and impact materiality. The identified topics are explained in this report in the "Material Topics in Focus" sections.

In 2023, we updated our materiality analysis that already addressed the double materiality required by regulations from 2024 onward. This identified sustainability topics on which we have potentially positive or negative impacts through our business activities along the value chain, and that have or could have positive or negative impacts on the company's performance.

The following adjustments were made to the 2022 analysis as part of the update: "Occupational health and safety" has been expanded to include the topic "process safety," while "plastic waste" was integrated into the overarching topic of "circular economy and resource efficiency." Based on this update, a total of 11 topics were identified as material. As a result, we will address material topics in focus chapters in this report. The graphic on the right shows how these topics impact the stages of the value chain.

For more information on our materiality analysis, see page 49 onward

Material topics along the value chain

Focus topic	SUPPLIERS	BASF	CUSTOMERS	Page
Environmental				
Climate Change	Higher impact	Higher impact	Higher impact	Page 29
Circular Economy and Resource Efficiency	Higher impact	Higher impact	Higher impact	Page 46
Emissions to Air, Waste and Remediation	Lower impact	Higher impact	Lower impact	Page 110
Water	Lower impact	Higher impact	Lower impact	Page 112
Biodiversity and Ecosystems	Higher impact	Lower impact	Higher impact	Page 116
Process Safety	Higher impact	Higher impact	Lower impact	Page 127
Social				
Inclusion of Diversity	Higher impact	Higher impact	Lower impact	Page 138
Occupational Safety and Health Protection	Lower impact	Higher impact	Lower impact	Page 143
Product Stewardship for Crop Protection Products and Seeds	Higher impact	Higher impact	Higher impact	Page 149
Governance				
Our Values and Global Standards	Higher impact	Higher impact	Higher impact	Page 33
Responsibility for Human Rights, Labor and Social Standards	Higher impact	Higher impact	Lower impact	Page 154

Higher impact

Lower impact

BASF Group

GRI 2

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Around 112,000 employees contribute to the BASF Group's success worldwide. Our business comprises the Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions segments.

Sites and Verbund

As one of the world's largest chemical companies, BASF is present in 93 countries. We operate 234 production sites worldwide. We laid the foundation for the Verbund concept in Ludwigshafen, Germany, in 1865 – and it remains one of our key strengths to this day. Intelligently linking and steering our Verbund plants creates efficient value chains – from basic chemicals to high value-added solutions. The Verbund enables us to manage our production in a resource-efficient, carbon-optimized and reliable way. By-products from one facility are used as feedstocks elsewhere, for example. This saves raw materials and energy, avoids emissions, lowers logistics costs and leverages synergies.

In addition to Ludwigshafen, Germany, BASF operates five other Verbund sites in Antwerp, Belgium; Freeport, Texas; Geismar, Louisiana; Kuantan, Malaysia; and Nanjing, China. Another Verbund site is being built in Zhanjiang in the southern Chinese province of Guangdong. Following the startup of the engineering plastics plant in 2022, a plant for the production of thermoplastic polyurethanes came onstream there in 2023.

We also use the Verbund principle for more than production, applying it to technologies, the market and digitalization as well. Our research expertise is pooled globally, with the Know-How and Research Verbund in Ludwigshafen, Germany, as the central hub.

For more information on the Verbund concept, see basf.com/en/verbund

For more information on our segments' investments, see page 42 onward

The BASF Group's segments in 2023

Chemicals

The Chemicals segment supplies BASF's other segments and customers with basic chemicals and intermediates.

- Share of sales: 15.0%
- R&D expenses: €83 million
- Investments incl. acquisitions[1]: €2,706 million

Materials

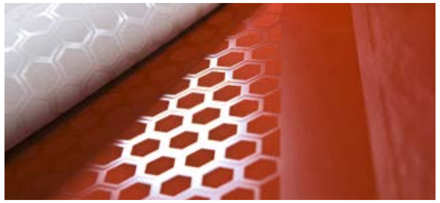
In the Materials segment, we produce advanced materials and their precursors for the plastics and plastics processing industries.

- Share of sales: 20.5%
- R&D expenses: €185 million
- Investments incl. acquisitions[1]: €1,083 million

Industrial Solutions

The Industrial Solutions segment develops and markets ingredients and additives for industrial applications.

- Share of sales: 11.6%
- R&D expenses: €150 million
- Investments incl. acquisitions[1]: €285 million



Surface Technologies

The Surface Technologies segment provides chemical solutions for surfaces and automotive OEM coatings, as well as battery materials and catalysts.

- Share of sales: 23.5%
- R&D expenses: €304 million
- Investments incl. acquisitions[1]: €621 million

Nutrition & Care

The Nutrition & Care segment produces ingredients and solutions for consumer applications such as human and animal nutrition, cleaning agents and personal care.

- Share of sales: 10.0%
- R&D expenses: €150 million
- Investments incl. acquisitions[1]: €765 million

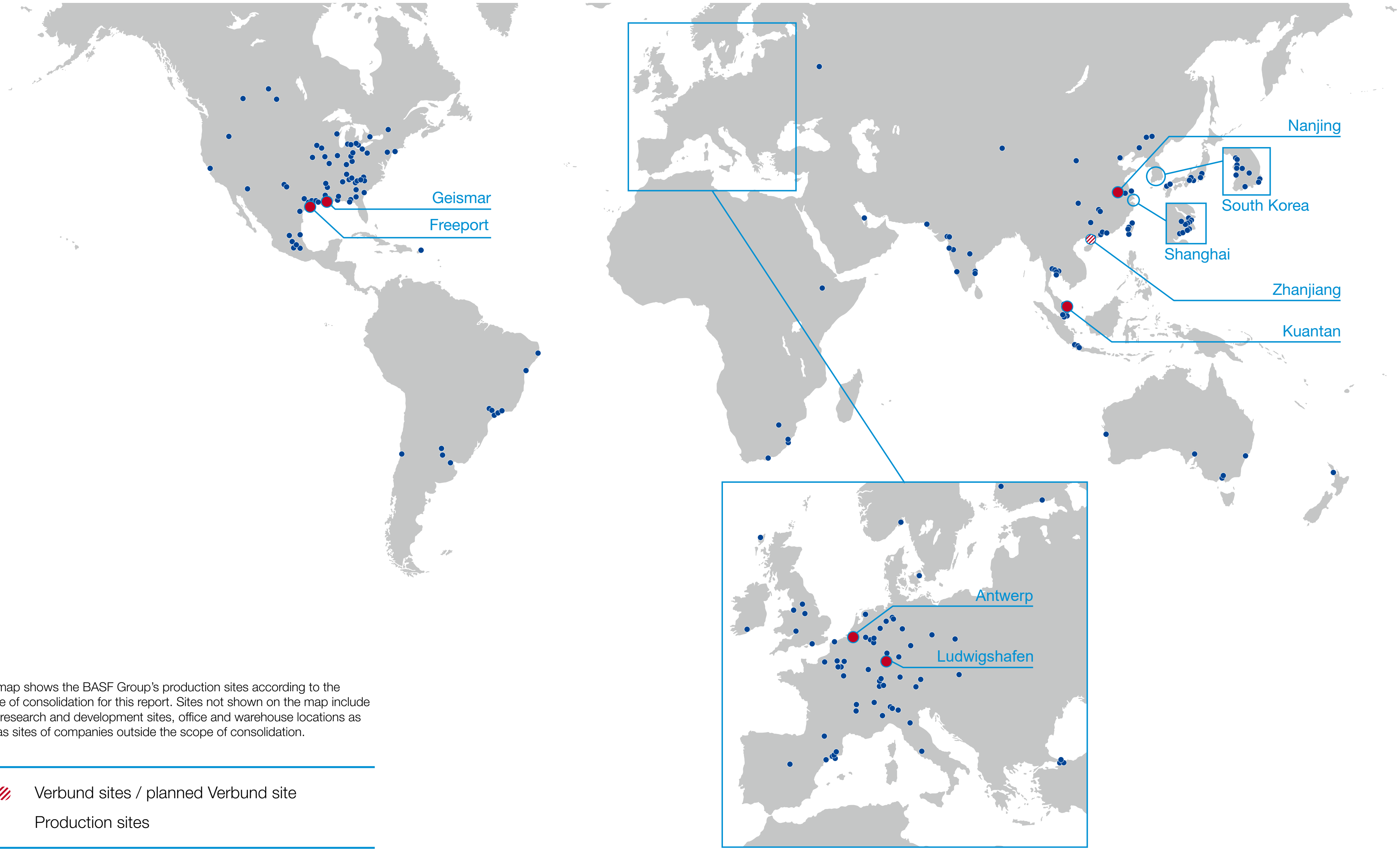
Agricultural Solutions

The Agricultural Solutions segment is an integrated solutions provider of seeds, crop protection products and digital solutions for the agricultural sector.

- Share of sales: 14.6%
- R&D expenses: €900 million
- Investments incl. acquisitions[1]: €353 million

1 Additions to property, plant and equipment and intangible assets

BASF's production sites



The map shows the BASF Group's production sites according to the scope of consolidation for this report. Sites not shown on the map include pure research and development sites, office and warehouse locations as well as sites of companies outside the scope of consolidation.

Verbund sites / planned Verbund site

Production sites

Organization of the BASF Group

The BASF Group consists of 11 operating divisions, which are grouped into six segments as follows:

- **Chemicals**: Petrochemicals, Intermediates
- **Materials**: Performance Materials, Monomers
- **Industrial Solutions**: Dispersions & Resins, Performance Chemicals
- **Surface Technologies**: Catalysts, Coatings
- **Nutrition & Care**: Care Chemicals, Nutrition & Health
- **Agricultural Solutions**: Agricultural Solutions

This segment structure enables us to steer our businesses according to market-specific requirements and the competitive environment. We provide a high level of transparency around the results of our segments and show the importance of the Verbund and value chains to our business success. The operating divisions, the service units, the regions, research and development and the corporate center are the cornerstones of the BASF organization. This organizational structure lays the foundation for customer proximity, competitiveness and profitable growth. BASF aims to differentiate its businesses from their competitors to enable BASF to perform even more strongly in an increasingly competitive market environment.

For more information on the BASF Group's steering concept, see pages 28 and 37

For more information on the products and services offered by the segments, see pages 77, 81, 84, 87, 90 and 93 onward

For more information on the segment structure, see Note 5 to the Consolidated Financial Statements from page 242 onward

The divisions bear strategic and operational responsibility and are organized according to sectors or products. They manage the 49 global and regional business units and develop strategies for 70 strategic business units.

Five service units provide competitive services for the BASF Group:
- Global Engineering Services
- Global Digital Services
- Global Procurement
- European Site & Verbund Management
- Global Business Services (finance and controlling, human resources, safety, intellectual property, communications, procurement, supply chain and in-house consulting services).

BASF's regional and national companies represent the Group locally and support the growth of the operating divisions with local proximity to customers. For financial reporting purposes, we organize the regional companies into four regions: Europe; North America; Asia Pacific; and South America, Africa and Middle East.

Our specific research and development units are integrated into the divisions, and activities with broad relevance for our businesses are bundled in a research division. This division is globally positioned with research centers in Europe, North America and Asia Pacific. With this setup, we are focusing our research activities even more strongly on our customers and their needs.

For more information on our research activities, see page 54 onward

The Corporate Center supports the Board of Executive Directors in steering the company as a whole. This steering includes central tasks from the following areas: strategy, finance and controlling, law, compliance and insurance, tax, environmental protection, health, safety and quality, human resources, communications, investor relations, corporate audit and the Net Zero Accelerator unit.

Procurement and sales markets

BASF supplies products and services to over 78,000[1] customers from various sectors in almost every country in the world. Our customer portfolio ranges from major global customers and small and medium-sized enterprises to end consumers.

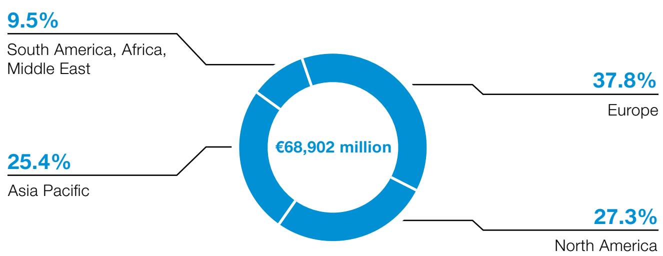
We work with over 70,000 Tier 1 suppliers[2] worldwide. They supply us with important raw materials, chemicals, investment goods and consumables, and perform a range of services.

For more information on suppliers, see page 158 onward; for more information on raw materials, see page 121 onward

BASF sales by industry 2023
Direct customers

> 20%	Chemicals and plastics | Transportation (respectively)
10–20%	Agriculture | Consumer goods (respectively)
< 10%	Construction | Electronics | Energy and resources | Health and nutrition (respectively)

BASF sales by region 2023
Location of customer



1 The number of customers refers to all external companies (sold-to parties) that had contracts with the BASF Group in the business year concerned under which sales were generated.
2 BASF considers all direct suppliers of the BASF Group in the business year concerned as Tier 1 suppliers. These are suppliers that provide us with raw materials, investment goods, consumables and services. Suppliers can be natural persons, companies or legal persons under public law.

Business and competitive environment

BASF's global presence means that it operates in the context of various local, regional and global developments. These include:

- Global economic and political environment
- Legal and political requirements
- International trade agreements
- Industry standards
- Environmental agreements (such as the E.U. Emissions Trading System)
- Social aspects (such as the U.N. Universal Declaration of Human Rights)

BASF holds one of the top three market positions in around 80% of the business areas in which it is active. Our most important global competitors include Arkema, Bayer, Celanese, Clariant, Corteva, Covestro, Dow, DSM-Firmenich, Evonik, Huntsman, SABIC, Sinopec, Solvay, Syngenta, Wanhua and many hundreds of local and regional competitors. We expect competitors from Asia and the Middle East in particular to continue to grow in significance in the years ahead.

Our measures in Europe

The situation in Europe remains challenging. Low market growth and structurally higher gas prices compared with other regions are weakening the competitiveness of the European chemical industry. The comprehensive requirements resulting from the European Green Deal are an additional burden on the industry.

For more information on the development of gas prices in 2023, see page 60

As a reaction to this, BASF announced concrete measures for a cost savings program in nonproduction units with a focus on Europe in February 2023. These measures include the systematic bundling of services in hubs, simplifying structures in divisional management, the rightsizing of service units, and increasing the efficiency of R&D activities. Taking into account new positions to be created, this is expected to result in a total reduction of 2,600 positions worldwide. The cost savings program was launched in 2023. We expect annual cost savings in nonproduction areas to reach more than €600 million by the end of 2024 and more than €700 million by the end of 2026. These figures include measures related to Europe in the Global Business Services and Global Digital Services units. Additional measures in these two service units in other regions will probably contribute a further €200 million.

In addition, in 2023, BASF took measures to adjust production structures at the Verbund site in Ludwigshafen, Germany. These adjustments include the shutdown of the caprolactam plant, the plants for cyclohexanol, cyclohexanone and soda ash, one of the two ammonia plants and the fertilizer facility. In addition, the shutdown of the TDI plant and the precursor plants for dinitrotoluene and toluylenediamine was also announced. Furthermore, the production capacity of adipic acid will be reduced in Ludwigshafen, Germany. The following plant shutdowns have already been completed as of 2023: TDI plant, plant for TDI precursors, ammonia plant and the fertilizer facility. Further shutdowns will be implemented gradually until the end of 2026. These measures in production are expected to affect around 700 positions. BASF expects to reduce fixed costs in this way by more than €200 million per year.

Together with the savings from the aforementioned cost savings program focusing on Europe, we expect total annual savings of around €1.1 billion from the end of 2026.

Corporate legal structure

As the publicly listed parent company of the BASF Group, BASF SE takes a central position: Directly or indirectly, it holds the shares in the companies belonging to the BASF Group and is also one of the largest operating companies. In the BASF Group Consolidated Financial Statements, 260 companies including BASF SE are fully consolidated. We consolidate nine joint operations on a proportional basis and account for 21 companies using the equity method.

For more information, see Note 2 to the Consolidated Financial Statements from page 238 onward

Our Strategy

GRI 203

Chemistry is our passion. We make use of this passion for our customers: We want to offer them the best possible solutions and help them achieve their sustainability goals. With our products and technologies, our innovative and entrepreneurial spirit and the power of our Verbund integration, we want to grow profitably and, at the same time, create value for society and the environment. This is our goal, which is embedded in our corporate purpose: We create chemistry for a sustainable future.

In this section:

Humankind is facing enormous challenges in order to preserve a world worth living in for future generations. The climate is changing, natural resources are becoming scarcer, pressure on ecosystems is increasing and our growing world population needs to be fed. More and more urgently than ever, solutions are needed for a sustainable future. Chemistry plays a key role here. In almost all areas of life, it can pave the way to greater sustainability and accelerate the transformation needed to achieve this. Our innovative products, solutions and technologies help to improve quality of life and protect the environment as well as the climate. We achieve this by using raw materials more efficiently, reducing waste and enabling the production of healthy and affordable food as well as climate-smart mobility.

At the same time, BASF is also undergoing **profound changes**. We are transforming our company and breaking new ground to increase our profitability and achieve climate neutrality. We are facing up to the challenge of making this change socially just. This involves managing long-term policy decisions like the European Green Deal, overcoming the consequences of current geopolitical conflicts and driving forward digitalization.

Our transformation along the value chain

Supply chain

Energy

Renewable energy,[1] low-emission hydrogen, combined heat and power generation

Raw materials

Renewable and recycled raw materials, raw materials based on the use of CO_2

Infrastructure

Network expansion and infrastructure for the transportation of hydrogen and CO_2

Suppliers

Sustainability evaluations, Supplier CO_2 Management Program

Production

Customer-focused production

Minimized transportation routes

Optimized Verbund structures

Efficient value chains

Digitalization and automation

Efficient processes[2]

Operational excellence

Energy and resource-efficient processes

Emission-free steam generation

Electrified processes, energy recovery

Pioneering technologies

Emission-free and low-emission processes[3]

Key technologies: batteries,[4] polymers, biotechnology

Circular economy

New material cycles and recycling technologies

Products

Solutions for a sustainable future

Low-emission, innovative products (pioneers, contributors)[5]

Climate-smart mobility; healthy, affordable food; efficient construction

Business models

Digitalized and circular approaches

Services

Transparency (product carbon footprint, corporate carbon footprint), take-back systems

Selected projects in the 2023 reporting year

1 Inauguration of the Hollandse Kust Zuid offshore wind farm For more information, see page 105

2 New supercomputer Quriosity with increased computing power For more information, see page 30

3 Electrically heated steam cracker furnaces: demonstration plant close to completion For more information, see page 107

4 Battery materials and recycling: our investment in Schwarzheide, Germany For more information, see page 32

5 Innovation driver: new Sustainable Solution Steering method For more information, see page 48

At the same time, these challenges also open up numerous opportunities for new business areas and innovative products. All of this requires a clear vision, responsible action as well as a high degree of creativity and flexibility.

We want to grow profitably and sustainably. To this end, we have set ourselves ambitious targets and defined concrete measures to achieve them: To increase our profitability, we are strengthening our **competitiveness** with our cost savings program focusing on Europe and we are adapting our Verbund structures in Ludwigshafen, Germany, to ensure the site remains future-proof (see page 26). We are investing in **growth markets**, particularly in Asia, with China as the largest and most important growth driver of global chemical production. Furthermore, we are undergoing a fundamental transformation in the way we steer our company. As part of our **Differentiated Steering** concept, we are implementing new financial steering indicators tailored to each business. Our operating divisions are also continuing to adapt their specific business models and processes – supported by customized process structures, IT systems and governance frameworks (see page 37 onward).

To further embed sustainability in our business activities, we are driving **innovations for a sustainable future**, focusing our portfolio on growth areas and developing products with a lower carbon footprint. We are **pioneers in climate-neutral production**. This means we are gradually converting our energy supply from fossil fuels to renewable sources, developing new, pioneering emission-free and low-emission production processes for our products as well as strengthening the circular economy through the use of alternative raw materials and new recycling technologies.

The success of these measures depends primarily on the ideas and commitment of our employees. This is why we want to create an environment in which they can thrive and contribute to BASF’s long-term success. Moreover, the diverse potential of digitalization used in our processes and business models further contributes to the successful implementation of these measures.

For more information on our strategic action areas, see page 30 onward

For more information on our steering concept, see page 37 onward

For more information on our targets, see page 40 onward

For more information on our strategy, see basf.com/strategy

“

Our priorities are clear: Growing profitably and making BASF climate-neutral.

Dr. Martin Brudermüller
Chairman of the Board of Executive Directors

Material topics in focus:

Climate Change

GRI 3, 302

Climate change is the greatest challenge of the 21st century. Swift and resolute action is needed to achieve the targets agreed in the Paris Climate Agreement. We stand by this responsibility. In many areas, products and innovations based on chemistry are the key to a climate-neutral future – from insulation foams for energy-efficient buildings, lightweight construction components and battery materials for electromobility to more sustainable agriculture.

We expanded our climate protection targets: By 2050, we want to achieve **net-zero greenhouse gas emissions** for our production (Scope 1), our energy purchases (Scope 2)[1] and our purchase of raw materials (Scope 3.1). We have set ourselves ambitious milestones on this path: By 2030, we want to reduce Scope 1 and Scope 2 emissions by 25% compared with 2018 – while growing production volumes in parallel. Compared with 1990, this translates into a reduction of around 60%. As we become increasingly transparent about our upstream emissions and want to offer more products with a low carbon footprint to our customers, we have set ourselves another intermediate target: We aim to reduce our raw materials-related emissions specifically by 15% by 2030 from the 2022 baseline.[2]

To achieve our climate protection targets, we are focusing on the following measures: Our electricity needs are increasingly covered using **renewable energy**. We are developing emission-free and low-emission production processes, building on lower-emission steam generation and improving the energy and process efficiency of our plants (**carbon abatement**). We are also increasingly using renewable, recycled and CO_2-based raw materials in order to close material cycles (**circularity**). To reduce our raw materials-related emissions, we are working with our suppliers.

We want to help shape the transformation towards climate neutrality in a socially just way (just transition). This requires a political and regulatory environment that promotes innovation in climate protection, makes it possible to develop new processes that are competitive internationally and resolutely drives forward the expansion of renewable energies. Our electricity requirements from renewable sources will increase significantly due to new, lower-emission production processes. To meet this demand, we are investing in our own power assets (wind farms and solar power plants) and are increasingly buying green electricity on the market (make & buy approach). We are also addressing the question of how climate change affects our sites and implementing climate resilience measures (see page 113).

2030 targets

-25%

Reduction in our absolute Scope 1 and 2 greenhouse gas emissions[1] compared with 2018

-15%

Reduction in our specific Scope 3.1 greenhouse gas emissions[2] compared with 2022

2050 target

Net-zero

Greenhouse gas emissions by 2050 (Scope 1, 2[1] and 3.1)

For more information on energy and climate protection, see page 102 onward

1 Scope 1 and Scope 2 (excluding the sale of energy to third parties). Greenhouse gases are converted into CO_2 equivalents (CO_2e) in accordance with the Greenhouse Gas Protocol.
2 Scope 3.1, raw materials excluding battery materials, services and technical goods, excluding greenhouse gas emissions from BASF trading business. Future adjustment of the baseline in line with the TfS guideline possible depending on the availability of further primary data.

Our Strategic Action Areas

GRI 203

BASF's strategic direction is based on a comprehensive analysis of our markets, competitors and the economic environment. We continuously monitor global trends and short-term developments and anticipate the resulting opportunities and risks. In doing so, we keep a close eye on the demands of our customers and the transformation of our company. The following six strategic action areas enable us to strengthen our leading position in a competitive environment.

Innovation

Innovation is the bedrock and driver of our success. BASF is a leader in the chemical industry with around 10,000 employees in research and development and R&D spending of around €2.1 billion in 2023. We want to further strengthen this position by driving forward our research activities, especially in agriculture, battery materials, polymer technologies and catalytic and biotechnological methods. Our research units are organizationally aligned with the needs of our customers. Customer-focused activities are directly integrated into the divisions. Research activities that are relevant to several operating divisions as well as Group-wide relevant topics are driven by the global division Group Research. In addition, we are pursuing and expanding our cooperations with customers, universities and research institutions.

We want to gear our **innovation pipeline** to sustainability – especially climate protection, circular economy and more sustainable products for our customers. This lays the foundation for future growth. We are working intensively on fundamental innovations for processes, products and business models, for example, for the low-emission production of basic chemicals, new battery materials and catalyst technologies, chemical recycling of plastics and textiles, and digital, climate-smart farming models. At the same time, we are developing new products and product improvements in all business units that can offer our customers sustainability and competitive advantages. These include surface solutions for the aviation and wind power industries, bio-based and biodegradable active ingredients for the cosmetics, detergent and cleaner industries, and engineering plastics based on renewable or recycled raw materials.

For more information on innovation, see page 54 onward

Sustainability

We believe that the economy, environment and society are inextricably linked and interdependent. In all three areas we want to create value with our products, solutions and technologies. Already in 1994, we pledged our commitment to sustainability and since then, have systematically aligned our activities with the principles of sustainability. We want to further strengthen our position as a pioneer for sustainable solutions. We see sustainability as an integral part of our strategy as well as our targets, steering processes and business models. In doing so, our aim is to be a responsible and attractive partner for our customers, develop new growth areas and lay the foundation for the long-term success of our company. Our approach covers the entire value chain – from the responsible procurement of our raw materials and safety and resource efficiency in production to sustainable solutions for our customers.

In this context, protecting the climate is of central importance for us. We have reduced our CO_2 emissions by around 60% since 1990 – at the same time, sales product volumes have increased significantly. By 2030, we want to reduce our absolute CO_2 emissions related to our production (Scope 1) and our energy purchases (Scope 2) by 25% compared with 2018. In 2023, we also set ourselves a target for our raw materials-related emissions (Scope 3.1) to be able to offer our customers an even wider range of products with a low carbon footprint. By 2030, we want to reduce these raw materials-related emissions specifically by 15% from the 2022 baseline. Furthermore, by 2050, we want to achieve net-zero greenhouse gas emissions for our production, our energy and raw

Good to know

Supercomputer enables new research approaches

In 2023, BASF commissioned a new supercomputer in Ludwigshafen, Germany. Quriosity is the world's largest supercomputer used in industrial chemical research. It replaces the supercomputer that has been deployed since 2017. With three petaflops of computing power, the new supercomputer is considerably more powerful than its 1.75-petaflops predecessor. As the complexity of research projects is increasing, we have expanded our computing capacities accordingly.

In the personal care business area, for example, the supercomputer's complex simulations help employees to precisely predict which cosmetic ingredients harmonize optimally together to achieve the desired effect. At an early stage in the development of crop protection products, the supercomputer uses molecular modeling to quickly identify suitable compounds that are effective and environmentally sound. However, the supercomputer is also used in projects outside of research and development, for example, to optimize plant components in production operations.

materials purchases. To achieve our **climate protection goals**, we are relying on the use of renewable energy, taking targeted measures to avoid CO_2 emissions, working to close material cycles and working together with our suppliers to reduce emissions in the supply chain (see page 29).

We are focusing our product portfolio even more strongly on resource efficiency, climate change and energy as well as circular economy in order to meet the increasing sustainability requirements of our customers with innovative solutions and to comply with regulatory requirements. That is why we have updated our **Sustainable Solution Steering** (TripleS) methodology for steering the product portfolio based on sustainability criteria (see page 48). We applied the new methodology for the first time in the 2023 financial year and developed a new key performance indicator, "Sustainable-Future Solutions" sales, which indicates the share of our products with a particular contribution to sustainability in the relevant sales. In addition, a digital solution enables us to calculate the carbon footprint of our approximately 45,000 sales products – from raw materials extraction to the factory gate ("cradle-to-gate"). This enables us to create transparency around the carbon intensity of our products and optimize our processes on this basis: We are increasingly using low-emission and renewable raw materials and are continuously expanding our product portfolio with a lower carbon footprint.

For more information on energy and climate protection and our carbon footprint, see page 102 onward
For more information on the circular economy, see page 46 onward

Production

The production and processing of chemicals is our core business. Our comprehensive product portfolio ranges from basic chemicals to custom system solutions. The strength of our company lies in the **Verbund** and its integrated value chains. This enables us to achieve reliable, efficient and CO_2-optimized production and leverages synergies in the development and application of new technologies and the use of digital solutions. At the same time, the Verbund is the foundation for meeting the increasingly diverse needs of our customers and markets with a differentiated offering.

Our strategy is to produce locally for local markets, close to our customers. We plan to invest €19.5 billion worldwide between 2024 and 2027 to expand our capacities based on market demand and to further increase the availability, efficiency and flexibility of our plants. In particular, we want to benefit from the strong growth of the chemical market in Asia (see "Portfolio"). Our global production footprint contributes to the regional diversification of our sales and earnings distribution, making it part of our risk management. It helps us to compensate for economic weaknesses and a lack of growth prospects in individual markets within the BASF Group. This currently applies to Europe and especially Germany, where high energy prices compared with other regions and a challenging regulatory environment are negatively impacting our competitiveness and growth.

For more information on our production sites and the Verbund structure, see page 23

Digitalization

We want to leverage the diverse growth potential of digitalization, seize the associated opportunities to the benefit of our customers and strengthen our competitiveness. To achieve this, we promote digital skills among our employees, cooperate with partners and make digital technologies and ways of working an integral part of our business.

Digitalizing our plants and systematically analyzing data enables us to further automate processes. In this way, we steer the capacity, availability and efficiency of our plants in line with market conditions, for example, by simulating value streams within our Verbund structure or through predictive maintenance. Linking data from different sources and using artificial intelligence (AI) opens up numerous opportunities for us to manage our business more efficiently and improve our processes, for example, in logistics. Using AI also supports our transformation to climate neutrality and a circular economy, for example by automatically calculating product-specific carbon footprints or improving management of value chains.

The combination of products, services and digital offerings also creates **new business models** and advantages for our customers, such as in the automotive and personal care industry as well as agriculture. In addition, digitalization enables us to further strengthen our innovative power. In 2023, we started up our new supercomputer Quriosity, which is considerably more powerful than its predecessor of the same name (see page 30). At the same time, we are working on new technologies such as quantum computing, for instance as a founding member of the Quantum Technology and Application Consortium (QUTAC). We are also involved in other digitalization initiatives such as the Catena-X network, where we are working with partners to develop a system for standardized data exchange in the automotive value chain. By using a standardized calculation logic for the product carbon footprint (PCF), we help to develop solutions that can reduce CO_2 emissions.

Portfolio

We are steering our portfolio toward **innovation-driven growth areas**. Following major acquisitions in recent years (battery materials, engineering plastics, agricultural solutions), we plan to further develop our portfolio through smaller, bolt-on acquisitions in the future. Major divestitures (pigments, construction chemicals, paper and water chemicals, kaolin minerals) in previous years were followed by the carve-out of the emissions catalysts and precious metals services business into the new BASF Environmental Catalyst and Metal Solutions (ECMS) entity and the divestiture of BASF's nickel-based catalysts production site in De Meern, Netherlands, to IQatalyst B.V. In addition, at the end of 2023, BASF, LetterOne and Harbour Energy plc (Harbour) signed an agreement to combine the businesses of Wintershall Dea and Harbour. With this agreement, large parts of Wintershall Dea's exploration and production business will be transferred to Harbour – a major step toward achieving our announced strategic goal of exiting the oil and gas business.

At the same time, we are strengthening the basis for our organic growth with investments. In 2023, BASF began construction of the third expansion phase of the production plants for methylene diphenyl diisocyanate (MDI) at its Verbund site in Geismar, Louisiana. Together with Yara, we are also evaluating the development and construction of a production plant for blue ammonia[1] using carbon capture and storage (CCS) in the U.S. Gulf Coast region. We are enhancing our range of fragrances and flavors in Europe at the Ludwigshafen site in Germany, with additional plants for menthol and linalool scheduled for startup in 2026. At our site in Chalampé, France, we are building a new hexamethylenediamine (HMD) plant and we are expanding our polyamide 6.6 production in Freiburg, Germany. In 2023, we started up an expanded complex for ethylene oxide and ethylene oxide derivatives at the Verbund site in Antwerp, Belgium. In addition, a new world-scale production plant for alkylethanolamines will be built there by 2024. The Asian market will play a key role in our future growth. With a share of around 50%, **China** is already by far the world's largest chemical market and is a key driver of growth in global chemical production. We have a strong production, sales and innovation base in Asia, and in particular in China, which we will continue to expand. Our largest project is the new Verbund site in Zhanjiang in the southern Chinese province of Guangdong, which we are planning from the outset as a pioneer for sustainability. Once completed, Zhanjiang will be our third-largest Verbund site after Ludwigshafen and Antwerp. The implementation of the project is on schedule. Following the startup of the engineering plastics plant in 2022, a plant for the production of thermoplastic polyurethanes came onstream in 2023. The focus in Zhanjiang is now on the step-by-step establishment of the Verbund structure, starting with the construction of a steam cracker along with downstream plants for the production of petrochemicals and intermediates as well as plants for surfactants and citral. In addition, since 2022 we have been expanding our Verbund site in Nanjing, China, which we operate together with Sinopec. A new tert-butyl acrylate plant came on stream there by the end of 2023 and we have expanded production capacities for several products in the Petrochemicals and Intermediates divisions.

We also reached important milestones in our global **battery materials and battery recycling business** in 2023. This includes investments to increase our production capacities and to establish innovative recycling concepts in the three key regions of Asia, North America and Europe: In June 2023, we opened Europe's first colocated center for battery materials production and battery recycling[2] at the Schwarzheide site in Germany. At our U.S. site in Battle Creek, Michigan, we will offer cathode active materials from recycled metals on a commercial scale from 2024. We are also currently expanding the capacity for cathode active materials of BASF Shanshan Battery Materials Co., Ltd. in China and the new production lines at the Changsha and Shizuishan sites will gradually be put into operation. In Onoda, Japan, work to expand production capacities for cathode active materials at BASF TODA Battery Materials LLC has been underway since the end of 2022. This is scheduled for startup in the second half of 2024.

For more information on material investments and portfolio measures, see page 42 onward

Employees

Our employees are key to BASF's success. That is why we believe that it is important to have an attractive total offer package and an inspiring working environment that fosters and develops employees' individual talents and enables them and their teams to perform at their best. We are pursuing three action areas to make our high-performance organization even more so: empowerment, differentiation and simplification of structures and processes. At the same time, we encourage and promote a leadership culture that empowers our employees to respond to customer needs quickly and efficiently with a solution orientation. We value diversity in people, opinions and experience as being crucial to creativity and innovation. We embrace bold ideas, help our employees to implement them and learn from setbacks. This is founded on an open feedback and leadership culture based on mutual trust, respect and dedication to top performance.

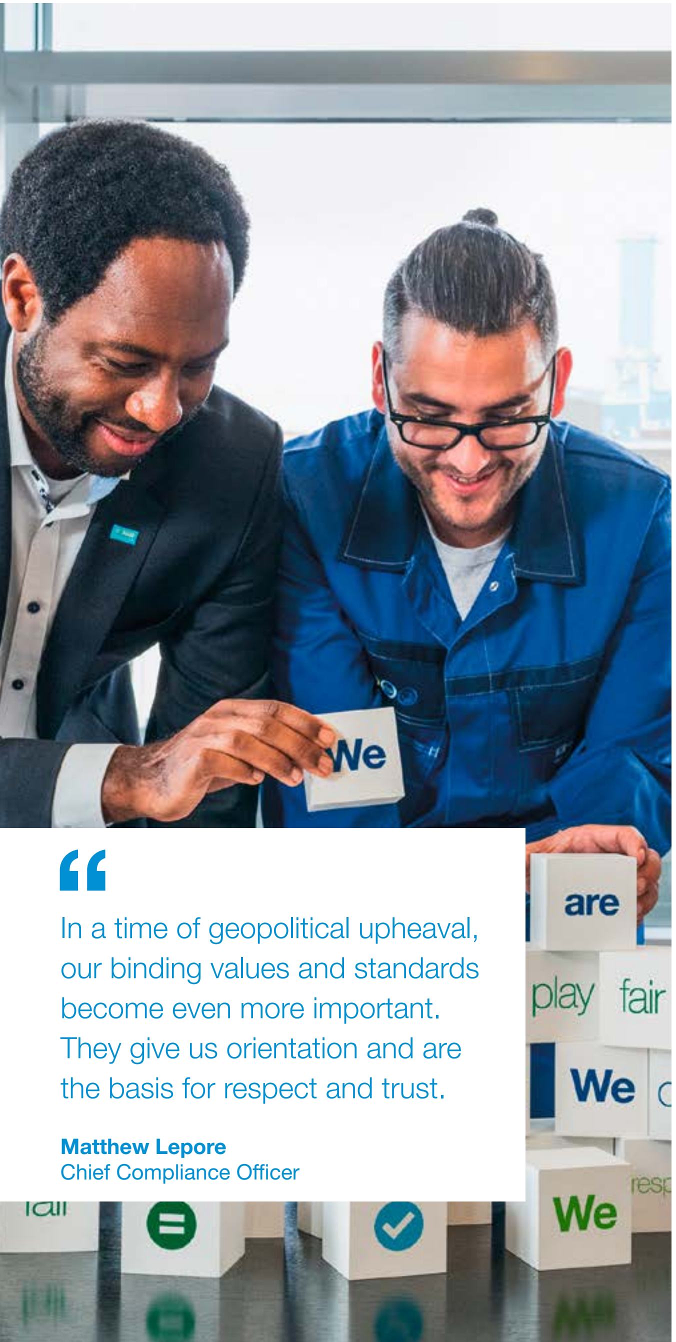
For more information on employees, see page 132 onward

1 Blue ammonia is produced using carbon capture and storage (CCS) technology to reduce CO_2 emissions from the production process. It is identical to conventionally produced ammonia.
2 Our investment and research activities in Schwarzheide and Ludwigshafen, Germany, receive funding from the German Federal Ministry for Economic Affairs and Climate Action and the Ministry for Economic Affairs, Labor and Energy of the German state of Brandenburg under the IPCEI on Batteries (funding code 16BZF101A/B).

Material topics in focus:

Our Values and Global Standards GRI 2

As an international chemical company, we operate in markets and countries with different requirements and conditions. We always follow our corporate values and standards in order to act responsibly and secure our license to operate. By living these values every day, we ensure a culture of respect for our customers, partners and employees.



In a time of geopolitical upheaval, our binding values and standards become even more important. They give us orientation and are the basis for respect and trust.

Matthew Lepore
Chief Compliance Officer

Together with our Code of Conduct and our global standards, our CORE values lay the foundation for responsible conduct and trust-based relationships with our stakeholders. They define how we want to work together:

- **C – creative:** We make great products and solutions for our customers. This is why we embrace bold ideas and give them space to grow. We act with optimism and inspire one another.
- **O – open:** We value diversity, in people, opinions and experience. This is why we foster feedback based on honesty, respect and mutual trust. We learn from setbacks.
- **R – responsible:** We value the health and safety of people above all else. We make sustainability part of every decision. We are committed to strict compliance and environmental standards.
- **E – entrepreneurial:** We focus on our customers, as individuals and as a company. We seize opportunities and think ahead. We take ownership and embrace personal accountability.

Our standards are based on, and in some cases, exceed existing laws and regulations and take internationally recognized principles into account. We respect and promote:

- The Universal Declaration of Human Rights and the two U.N. Human Rights Covenants
- The 10 principles of the U.N. Global Compact
- The core labor standards of the International Labour Organization (ILO) and the Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy
- The OECD Guidelines for Multinational Enterprises
- The Responsible Care® Global Charter
- The German Corporate Governance Code

The main guidelines are primarily summarized in our Group regulations on compliance, human rights, labor and social standards and in the Supplier Code of Conduct. We want to ensure that we act in line with the applicable laws and uphold our responsibility to the environment and society with our comprehensive management and monitoring systems.

The Corporate Audit department continuously monitors compliance with requirements. The head of our legal and compliance organization also acts as Chief Human Rights Officer and oversees the overarching risk management.

For more information on human and labor rights, see page 154 onward
For more information on compliance, see page 202 onward
For more information on responsible procurement and the German Supply Chain Due Diligence Act, see page 158 onward
For more information on the Responsible Care Management System, see page 101 and 131
For more information on the Code of Conduct, see basf.com/code-of-conduct

Business Models of the Segments

Our segments' business models are aligned with their specific strategic action areas. Topics such as customer orientation, innovation and sustainability are the cornerstones of future business success. Thanks to our extensive industry knowledge, we are aware of the particular challenges our customers are facing and we can offer specific solutions.

Chemicals

The Chemicals segment comprises the operating divisions Petrochemicals and Intermediates and is at the **heart of the Verbund**. Its production facilities reliably supply BASF's other segments with chemicals to produce higher value-added products and in this way, ensures the competitiveness of the BASF Group. It also markets high-quality basic chemicals and intermediates to customers in downstream industries.

The segment creates value through process and product innovation and invests in research and development to implement new, sustainable technologies and make existing technologies even more efficient. Thanks to our integrated manufacturing processes, the carbon footprint of several of our products is significantly lower than that of our competitors. Technological leadership, operational excellence and a clear focus on individual value chains are among our most important competitive advantages. We concentrate on the essential success factors of the traditional chemicals business: leveraging economies of scale and the advantages of our Verbund, high asset reliability, continuous optimization of access to raw materials, lean and energy efficient processes, and reliable, cost-effective logistics. We are continuously developing our value chains and are expanding our market position – especially in Asia – with investments and collaborations in growth markets.

Furthermore, we are constantly improving our **global production structures** and aligning these with regional market requirements. In 2023, for example, we expanded capacities for ethylene oxide and ethylene oxide derivatives at the Verbund site in Antwerp, Belgium, to support the continuous growth of our customers and to enhance our market position in Europe. We also started up our state-of-the-art Superabsorbents Excellence Center there. With this investment, we aim to increase the innovation capabilities for our superabsorbents business.

Moreover, we are modernizing our chloroformates and acid chlorides plant in Ludwigshafen, Germany, so that we can continue to reliably support our customers' growth with these products.

Materials

In BASF's Materials segment, the two divisions Monomers and Performance Materials supply high-quality plastics precursors and develop new plastics applications, high-performance materials, systems and digital solutions along their isocyanate and polyamide value chains. Our product portfolio is unique in the industry. This allows us to drive the sustainable transformation of BASF and our various customer industries forward. We are active along the value chains for important durable plastics, from monomers to polymers and their formulated specialties.

With our specific technology knowledge, we are working on **forming and closing loops** and converting plastics back into primary raw materials for the chemical industry. This is how we help to minimize plastic waste, save fossil resources and reduce CO_2 emissions in plastics production. Examples of this are our biomass-balance products, such as our Ultramid® Ccycled®, based on end-of-life tires, products with a significantly reduced carbon footprint and certified compostable bioplastics. In this way, we meet the growing needs in our key markets and help our customers to achieve their sustainability goals.

We want to grow primarily organically by differentiating ourselves through our application expertise and industry knowledge while creating the greatest possible value in our isocyanate and polyamide value chains. Comprehensive knowledge in the field of material simulation is our unique selling point in the industry and enables us to meet customer requirements individually.

We are continuously expanding the range of applications in our portfolio with tailor-made services and product offerings. Our global production network enables us to provide our solutions wherever our customers are. At the same time, we are constantly reviewing the efficiency of our production network and streamlining it where necessary, for example as part of our adaptation of the Verbund structures in Ludwigshafen, Germany.

Industrial Solutions

The Industrial Solutions segment, which consists of the Dispersions & Resins and the Performance Chemicals divisions, markets and develops **ingredients and additives for industrial applications**. These include fuel and lubricant solutions, dispersions, resins, additives, electronic materials and plastic additives. We concentrate on research and development with the aim of enabling more efficient resource use and developing high-performance and more sustainable products and processes, for example, in polymer dispersions, resins and plastic additives. At the same time, this also enables our customers to contribute to sustainability through their applications and processes. Other focus areas are efficient production setups, backward integration in our Production Verbund's value chains, capacity management, and technology and cost leadership.

Our global presence enables us to operate close to our customers and their industries. As a reliable partner, we offer high-quality products with high value added for our customers. Together with them, we work on new solutions and strive for long-term partnerships that create profitable growth opportunities for both sides. To achieve this, we draw on our innovative strength and our many years of experience and in-depth industry expertise. Through our in-depth application knowledge and technological innovations, we strengthen customer relationships in key industries such as the automotive, electronics, plastics and coatings industries.

Surface Technologies

In the Surface Technologies segment and its operating divisions Catalysts and Coatings, the focus is on the **protection, modification and development of surfaces**. Together with our customers, we develop novel products and technologies for catalysts, coatings and battery materials. We also offer precious and base metal as well as surface treatment services. Our aim is to drive growth by leveraging our portfolio of technologies to find the best solution for our customers in terms of functionality and cost. This in turn helps our customers to drive forward innovation in their industries and contribute to sustainable development.

Key growth drivers for us are the positive medium-term development of the automotive market, especially in Asia, the trend toward **sustainable, low-emission mobility**, and the associated rise in demand for battery materials for electromobility. We are developing customized, more sustainable solutions in these growth areas for battery materials, emission control, recycling and innovative coatings in close cooperation with our customers. Our specialties and system solutions in these areas enable our customers to stand out from their competitors.

The automotive industry is undergoing a fundamental transformation. As one of the largest chemicals suppliers to this industry, we will further strengthen our focus on battery materials and recycling and pursue our ambitious growth plan. We have established a new entity (BASF Environmental Catalyst and Metal Solutions) within the Catalysts division for mobile emissions catalysts, automotive catalysts recycling and associated precious metal services. The carve-out was completed in July 2023 as planned. The new organizational structure prepares the business for the upcoming changes in the internal combustion engine market and creates strategic options.

Nutrition & Care

In the Nutrition & Care segment, which comprises the operating divisions Care Chemicals and Nutrition & Health, we strive to expand our position as a leading **provider for nutrition and care ingredients for consumer applications**. Future growth in our markets will be driven by trends such as growing consumer awareness and the resulting demand for sustainable product solutions, natural and organic ingredients and their traceability. Moreover, digitalization, a focused technology and product portfolio, and close cooperation with our customers is crucial to meeting these dynamic market requirements both now and in the future.

We will therefore continue to develop our capabilities in areas such as biotechnology and broaden our portfolio with bio-based and biodegradable products. We support our customers globally with innovative and sustainable products, solutions and concepts, especially for the cosmetic industry as well as for cleaning and washing. In the Nutrition & Health division, we have sharpened our focus to be a supplier for nutrition and aroma ingredients, so we can best serve our customers with reliable and high-quality products.

We are also pursuing a targeted, accelerated marketing strategy and expanding our portfolio for natural and biotechnological products.

From pharma solutions, BASF supplies excipients for human therapeutic drug formulation. Our biopharma ingredients serve a variety of areas, from bioprocessing and formulation of proteins to vaccines and antibodies.

Agricultural Solutions

In the Agricultural Solutions segment, we are working to achieve the balance between economic, environmental and social value creation for a **sustainable and efficient agricultural sector**. While natural resources are limited, the demand for food, feed, fiber and energy is increasing, given the constant growth of the world's population.[1] Accordingly, even more efficient farming is essential. Balanced agriculture is a key enabler in producing enough healthy, affordable food and responding to changing consumer behavior while reducing the impact on the environment.

As one of the world's leading agricultural solutions companies, we are making a positive impact on sustainably transforming agriculture and food systems. Our innovation-driven strategy for agriculture focuses on selected crops and their appropriate cultivation systems: soy, corn (maize) and cotton in the Americas; wheat, canola (oilseed rape) and sunflower in North America and Europe; rice in Asia; and fruit and vegetables globally. We integrate sustainability criteria into all business and portfolio decisions. In doing so, we help farmers achieve better yields, protect the planet and produce economically.

We leverage our expertise in research and development and our deep understanding of the way individual growers manage their farms to provide crop-specific offers across technologies. These include novel solutions for seeds, traits, fungicides, herbicides, insecticides, biological solutions and digital products tailored to the farming needs of their region and crop systems.

1 Compared with 2022, the world's population is expected to grow by around 2 billion people by 2050; source: U.N. World Population Prospects 2022

Good to know

We are committed to sustainable farming to help farmers not only produce more, but also better. We focus on four areas in particular:

More climate-smart farming: We are tackling the challenges of climate change together. With innovative technologies that increase crop yield, improve farm management, and reduce environmental impact. Our technologies include nitrogen management products, herbicides that facilitate conservation tillage, and Seeds & Traits for more stress-resilient crops. We are contributing to more carbon-efficient and weather-resilient farming through our Global Carbon Farming Program.

For more information on the Carbon Farming Program and climate-smart agriculture, see agriculture.basf.com

More sustainable solutions: We systematically steer our innovation pipeline according to sustainability criteria from an early stage, as well as assessing each product in our sales portfolio with respect to its contribution to sustainability as part of our Sustainable Solution Steering. This is how we continually develop innovations and shape a portfolio that offers added value for farmers, the environment and society.

For more information on TripleS (Sustainable Solution Steering), see basf.com/en/sustainable-solution-steering

Digital agriculture: Digitalization is transforming agriculture and making it more resource-efficient and sustainable. Our digital farming solutions are designed to help to produce more with less and grow businesses profitably while improving the environmental footprint of agriculture.

Discover an example of our digital farming solutions at onesmartspray.com

Smart Stewardship: Our tools and services are tailored to farmers' daily work. For the safe use of our products, we offer support in the following areas: access to tools and services, protective equipment, customized training, digital solutions and new and future-oriented application technologies such as drones.

For more information on Smart Stewardship, see page 149 onward

Our Steering Concept

We have firmly anchored our goal of growing profitably and creating value for society in our strategy. Both financial and nonfinancial key figures are an integral part of our steering concept. Until the end of 2023, return on capital employed (ROCE) and CO_2 emissions were our most important key performance indicators. From 2024 onward, we will pursue a Differentiated Steering concept. Industry-specific key performance indicators tailored to the respective business will enable us to increase the competitiveness of our business units and thus the profitability of the BASF Group. We use EBITDA before special items and free cash flow as the new most important key performance indicators for short and medium-term steering. ROCE will continue to play a central role as a medium-term strategic steering indicator.

The BASF Group's steering concept in 2023

Until now, the return on capital employed (ROCE) was used as the key target and steering indicator for the BASF Group. In line with our strategic targets, we aimed to achieve a ROCE considerably above the cost of capital percentage every year. With ROCE, the same data was used for our value-based management, external communication with the capital markets and variable compensation.

We are also pursuing the target of reducing our greenhouse gas emissions. Therefore, CO_2 emissions (Scope 1 and 2)[1] are defined as a steering-relevant indicator, and we report on them as the most important nonfinancial key performance indicator. By 2030, we want to reduce our absolute greenhouse gas emissions by 25% compared with the 2018 baseline.

Further development of the steering concept as of 2024

To increase the value creation of the individual operating divisions, we are introducing a **Differentiated Steering** concept, which we will report on at segment level. Key criteria in the selection of specific steering indicators are the respective strategic direction of the business, the role of the business in BASF's portfolio and the contribution of the business to achieve corporate targets. We are focusing on industry-specific value drivers, which enables us to better integrate market conditions into our management and strengthen our business operations. We will also benchmark our performance even more closely against that of our competitors.

This is why we have further developed our financial steering concept for the financial years from 2024 onward. Here, we will differentiate between short-term and medium-term steering more clearly than before. We have established two new most important financial key performance indicators for the BASF Group's steering:
- Income from operations before depreciation, amortization and special items (EBITDA before special items)
- Free cash flow

ROCE, our most important financial key performance indicator up to and including the 2023 business year, is significantly influenced by strategic decisions such as acquisitions and divestitures as well as investments. Short-term influencing factors, such as the development of earnings or current operating assets, can be better controlled directly via earnings or cash flow figures.

Return on capital employed remains a medium-term key financial target for the BASF Group. We use ROCE to emphasize the importance of managing our return on capital employed over time.

Scope 1 and 2 CO_2 emissions remain the most important non-financial key performance indicator at Group level. We see sustainability as a decisive factor for our long-term business success.

The differentiated approach to steering the operating business units takes into account the different business models of the segments. In the future, capital-intensive segments (Chemicals, Materials, Surface Technologies and Agricultural Solutions) will be measured by their absolute contribution to EBITDA before special items, an earnings indicator that describes operational performance independent of age-related depreciation and amortization of assets and any impairment or reversal of impairment. The key figure is therefore particularly suitable for indicating the profitability of a business and for comparisons with businesses in similar sectors.

1 Scope 1 and Scope 2 (excluding the sale of energy to third parties). Greenhouse gases are converted into CO_2 equivalents (CO_2e) in accordance with the Greenhouse Gas Protocol.

The success of the Industrial Solutions and Nutrition & Care segments primarily depends on the generation of new and profitable business. Therefore, the most effective measure of their performance is a combination of sales growth and margin. Accordingly, the EBITDA margin before special items is the link to the BASF Group's key performance indicator.

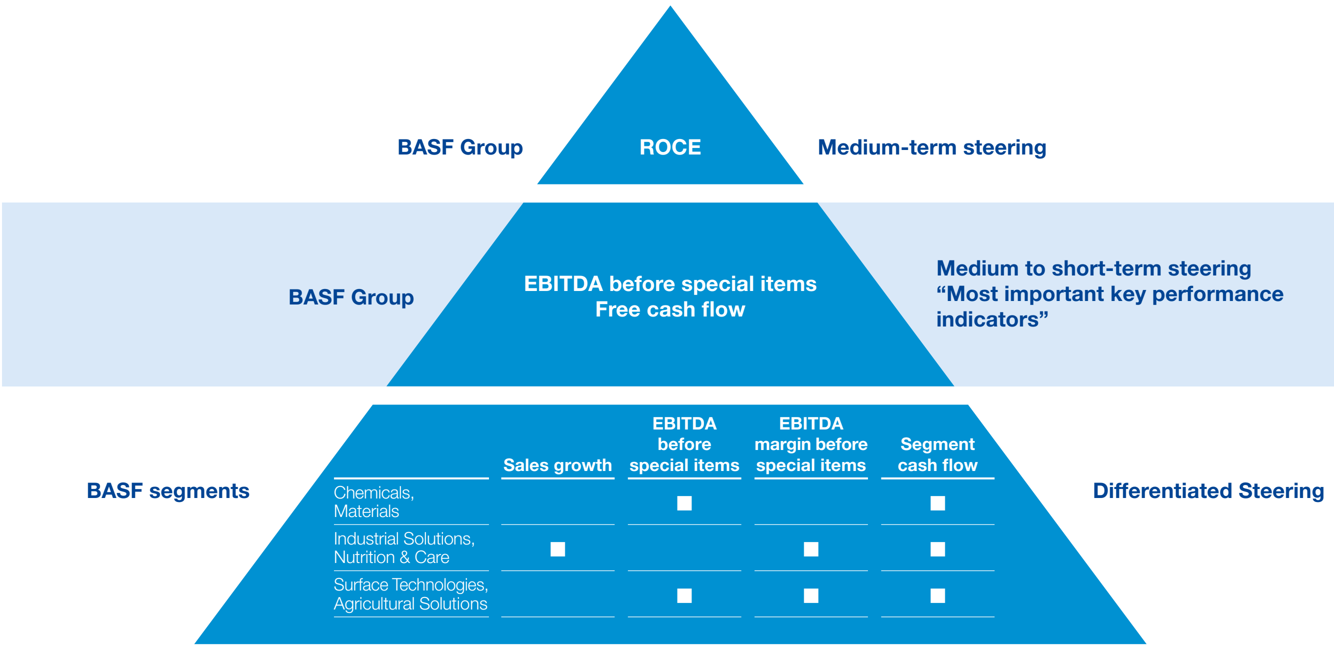
To manage cash flow at segment level, we use a specific key figure, segment cash flow, which includes the elements of free cash flow that can be managed by the operating divisions. This key performance indicator is relevant in all segments.

Value-based management throughout the company

The target agreement process is an important part of our value-based management. It aligns individual employee targets with BASF's targets. The most important financial indicator in the operating business has so far been ROCE. The other units' contribution to value is also assessed according to effectiveness and efficiency on the basis of quality and cost targets. To assess this, we use metrics such as BASF's internal service score in the service units.

We are gradually adapting the target agreement process to the Differentiated Steering concept. From 2024 onward, variable compensation for senior executives in all business units and the Service, Research and Corporate Center units will be based on targets derived from the new key performance indicators for the steering of the respective business unit or the BASF Group.

Differentiated financial steering approach of the BASF Group as of 2024



Key figures in reporting

For the BASF Group, we have been using EBIT before special items and capital expenditures (capex) until now as key performance indicators that have a direct impact on ROCE. EBIT before special items is used to steer profitability at Group and segment level. Capital expenditures are used to manage capital employed in the BASF Group. These comprise additions to property, plant and equipment excluding additions from acquisitions, IT investments, restoration obligations and right-of-use assets arising from leases. Furthermore, we have been commenting on and forecasting sales at Group and segment level so far in our financial reporting as a significant driver for EBIT before special items and our most important key performance indicator, ROCE.

In line with the new steering concept, in future financial reporting, we will comment on and forecast the most important key performance indicators EBITDA before special items and free cash flow for the BASF Group and EBITDA before special items and segment cash flow for the segments. We will continue to forecast capital expenditures on property, plant and equipment[1] as a key factor for free cash flow.

In addition, we will continue to analyze and comment on sales at Group and segment level, but we will not forecast them.

1 Additions to property, plant and equipment excluding acquisitions, restoration obligations, IT investments and right-of-use assets arising from leases

Calculation of ROCE and cost of capital

ROCE is calculated as the EBIT of the segments as a percentage of the average cost of capital basis.

To calculate the EBIT of the segments, we take the BASF Group's EBIT and deduct the EBIT of activities recognized under Other, which are not allocated to the divisions.

The cost of capital basis is calculated using the month-end figures and consists of the operating assets of the segments. Operating assets comprise the current and noncurrent asset items of the segments. They include property, plant and equipment as well as intangible fixed assets, integral investments accounted for using the equity method, inventories, trade accounts receivable, miscellaneous assets generated by core business activities and, if applicable, the assets of disposal groups. The cost of capital basis also includes customer and supplier financing.

We have integrated the cost of capital percentage into our ROCE target as a comparative figure. This is determined using the weighted cost of capital from equity and borrowing costs (weighted average cost of capital). To calculate a pretax figure similar to EBIT, the cost of capital is adjusted using the projected tax rate for the BASF Group for the business year. In addition, the projected net expense of Other is already provided for by an adjustment to the cost of capital percentage. The cost of equity is ascertained using the capital asset pricing model. Borrowing costs are determined based on the financing costs of the BASF Group. The cost of capital percentage for 2024 is 10% (2023: 9%).

Calculation of CO_2 emissions

We calculate the BASF Group's absolute CO_2 emissions on the basis of greenhouse gas emissions, which are the sum of direct emissions from production processes and the generation of steam and electricity (Scope 1), as well as indirect emissions from the purchase of energy (Scope 2). Direct emissions from the generation of energy for third parties are not considered here. Relevant emissions include other greenhouse gases according to the Greenhouse Gas Protocol, which are converted into CO_2 equivalents.

For more information on our CO_2 emissions and climate protection targets, see page 102 onward

Calculation of EBITDA before special items

EBITDA is the result from income from operations reported in the Consolidated Financial Statements plus depreciation, amortization, impairments and reversals of impairments on property, plant and equipment and intangible assets. This is adjusted for special items that may arise from the integration of acquired businesses, from restructuring measures, gains or losses resulting from divestitures and sales of shareholdings, and other expenses and income that arise outside of ordinary business activities. The EBITDA margin before special items is calculated as the ratio of EBITDA before special items to sales revenue. This relative indicator enables operational performance to be compared independently of the size of the underlying business.

Calculation of free cash flow and segment cash flow

Segment cash flow measures the cash inflow and outflow of a segment and thus the contribution to the BASF Group's free cash flow. It includes only those amounts that can be controlled by the segment and is calculated from the EBITDA, changes in inventories and trade accounts receivable, other extraordinary adjustments, for example in connection with acquisitions and divestitures, less payments made for property, plant and equipment and intangible assets. The BASF Group's free cash flow additionally includes transactions that are not allocated to operations as well as adjustments of other noncash effects. Free cash flow is the cash flows from operating activities less payments made for property, plant and equipment and intangible assets.

Reconciliation of segment cash flow to free cash flow

EBITDA
+ Changes in inventories
+ Changes in trade accounts receivable
+ Other changes
– Payments made for property, plant and equipment and intangible assets
= Segment cash flow
+ Net income from shareholdings
+ Financial result
+ Income taxes
+ Changes in other balance sheet items and adjustment of other noncash effects
= Free cash flow

Targets and Target Achievement 2023

For us, business success tomorrow means creating value for the environment, society and business. That is why we pursue ambitious targets along our entire value chain. We report transparently on target achievement so that our stakeholders can track our progress.

Our objective is profitable growth – we set ourselves the following targets up to and including 2023: We want to grow sales volumes faster than global chemical production, further increase our profitability, achieve a return on capital employed (ROCE) considerably above the cost of capital percentage and increase the dividend per share every year based on a strong free cash flow or at least maintain it at prior-year level.

In addition to these financial targets, we have set ourselves broad sustainability targets. We want to considerably reduce our CO_2 emissions in the coming years. In addition to the targets for reducing our emissions from production (Scope 1) and the purchase of energy (Scope 2),[1] we set ourselves a new target for our purchase of raw materials (Scope 3.1)[2] in 2023. We have also added Scope 3.1 emissions to our net-zero target for greenhouse gas emissions by 2050 (see page 29). As part of this target, we are working to strengthen sustainability in our supply chains and use resources more responsibly.

We want to align our product portfolio even more strongly with climate protection and the circular economy. To achieve this, we have further updated the methodology used to assess our product portfolio against defined sustainability criteria and defined a new target figure for products with a particular contribution to sustainability (see page 48).

We want to further improve safety in production and since 2023 we have been reporting according to a new system that focuses on high-severity work-related accidents and incidents.

We also aim to increase the number of women in leadership positions and create a working environment in which our employees feel that they can thrive and perform at their best.

The objective of these targets is to grow profitably, and at the same time, contribute to the United Nations' Sustainable Development Goals (SDGs). We are focusing here on issues that we as a company can influence – especially SDG 2 (Zero hunger), SDG 5 (Gender equality), SDG 6 (Clean water and sanitation), SDG 7 (Affordable and clean energy), SDG 8 (Decent work and economic growth), SDG 12 (Responsible consumption and production) and SDG 13 (Climate action).

For more information on financial indicators, see page 56 onward

For more information on environmental, social and governance, see page 100 onward

Good to know

Most important KPIs

BASF sets itself ambitious targets along the value chain. Two key figures were of particular importance for 2023:

- Return on capital employed (ROCE)
- Absolute CO_2 emissions (Scope 1 and 2)

These most important key performance indicators (KPIs) were the main indicators used to steer the BASF Group up to and including 2023. We also use ROCE for employee incentivization, while the achievement of targets for reducing CO_2 emissions (Scope 1 and Scope 2) influences the compensation of members of the Board of Executive Directors and senior executives.

From the 2024 financial year, we will establish two new most important key performance indicators at financial level besides CO_2 emissions in order to focus more strongly on the short-term value creation of the BASF Group: The following financial key performance indicators are therefore relevant for 2024:

- Income from operations before depreciation, amortization and special items (EBITDA before special items)
- Free cash flow

ROCE remains relevant for steering in the medium term and for incentivization.

For more information on the steering concept, see page 37 onward

For more information on the compensation of the Board of Executive Directors, see basf.com/compensationreport

1 Scope 1 and Scope 2 (excluding the sale of energy to third parties). The target includes greenhouse gases according to the Greenhouse Gas Protocol, which are converted into CO_2 equivalents (CO2e). The baseline year is 2018.
2 Scope 3.1, raw materials excluding battery materials, services and technical goods, excluding greenhouse gas emissions from BASF trading business. Future adjustment of the baseline in line with the TfS guideline possible depending on the availability of further primary data, among other things. The baseline year is 2022.

Profitable growth

2023 status 4.5%
2023 target >9%
SDG 8 9

Most important key performance indicator

Achieve a **return on capital employed (ROCE)** considerably above the cost of capital percentage every year

(See page 62)

2023 status -8.4%
2023 target >1.7%
SDG 8 9

Reasonable assurance

Grow **sales volumes** faster than global chemical production every year

(See page 61)

2023 status -28.7%
2023 target 3%–5%
SDG 8 9

Reasonable assurance

Increase **EBITDA before special items** by 3% to 5% per year

(See page 63)

2023 status €3.40[1]
2023 target >€3.40
SDG 8 9

Reasonable assurance

Increase the **dividend per share** every year based on a strong free cash flow

(See page 15)

Effective climate protection

2018 21.9 million metric tons
2023 status 16.9 million metric tons
2030 target 16.4 million metric tons
SDG 13

Most important key performance indicator

Reduce our absolute **CO_2 emissions (Scope 1 and 2)** by 25% by 2030 (baseline: 2018)[2]

(See page 102)

2022 1.58[4] kg CO_2/kg raw materials
2023 status 1.61 kg CO_2/kg raw materials
2030 target 1.34 kg CO_2/kg raw materials
SDG 13

Reduce our specific **CO_2 emissions (scope 3.1)** by 15% by 2030 (baseline: 2022)[3]

(See page 102)

Responsible procurement

2023 status 89%
2025 target 90%
SDG 8 12

Limited assurance

Cover 90% of our relevant spend with **sustainability evaluations** by 2025

(See page 158)

2023 status 82%
2025 target 80%
SDG 8 12

Limited assurance

Have 80% of our suppliers improve their **sustainability performance** upon reevaluation

(See page 158)

Resource-efficient and safe production

2023 status 0.05
2030 target ≤0.10
SDG 6 8

Limited assurance

Reduce our worldwide **high-severity process safety incidents** per 200,000 working hours to ≤0.10 by 2030[5]

(See page 127)

2023 status 0.03
2030 target ≤0.05
SDG 8

Limited assurance

Reduce our worldwide **high-severity work process-related injuries** per 200,000 working hours to ≤0.05 by 2030[5]

(See page 143)

2023 status 70%
2030 target 100%
SDG 6 12

Limited assurance

Introduce **sustainable water management** at our production sites in water stress areas and at our Verbund sites by 2030

(See page 112)

Committed employees and diversity

2023 status 28.4%
2030 target 30%
SDG 5

Limited assurance

Increase the proportion of **women in leadership positions** with disciplinary responsibility to 30% by 2030

(See page 138)

2023 status 79%[6]
2023 target >80%
SDG 8

Limited assurance

More than 80% of our **employees** feel that at BASF, they can thrive and perform at their best

(See page 133)

Reduction targets

1 Dividend proposed by the Board of Executive Directors
2 Scope 1 and Scope 2 (excluding the sale of energy to third parties). The target includes greenhouse gases according to the Greenhouse Gas Protocol, which are converted into CO_2 equivalents (CO_2e). The baseline year is 2018.
3 Scope 3.1, raw materials excluding battery materials, services and technical goods, excluding greenhouse gas emissions from BASF trading business. Future adjustment of the baseline in line with the TfS guideline possible depending on the availability of further primary data. The baseline year is 2022.
4 The figure for 2022 was adjusted due to increased data availability.
5 We updated the safety targets in 2023.
6 We regularly calculate the employee engagement level. The most recent survey was conducted in 2023.

Material Investments and Portfolio Measures

Investments are a key driver of profitability for our targeted growth. To achieve our climate targets, we are also making targeted investments in modern and more sustainable technologies and processes. Our growth projects play a central role, particularly the new Verbund site in Zhanjiang, China, which we are planning from the outset as a pioneer for sustainability. We are continuously optimizing our portfolio through targeted acquisitions and divestitures.

At a glance

€5.2 billion
Capex[1] in 2023

€19.5 billion
Capex planned for 2024 to 2027

By investing in our plants, we create the conditions for the profitable growth we strive for and continuously improve the efficiency of existing production processes. Investments in new technologies and in the transformation of our energy supply will help to achieve our growth targets and our ambitious climate targets. For the period from 2024 to 2027, we are planning capital expenditures (capex)[1] totaling €19.5 billion, including €6.8 billion for our growth projects.[2]

For more information on our investments from 2024 onward, see page 172

Investments and acquisitions 2023
Million €

	Invest-ments	Acquisi-tions	Total
Intangible assets	142	–	142
of which goodwill	–	–	–
Property, plant and equipment[a]	5,864	–	5,864
Total	**6,006**	–	**6,006**

a Including restoration obligations, IT investments and right-of-use assets arising from leases

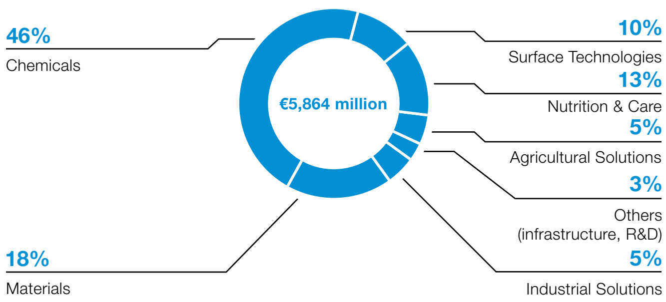
We continued to drive forward our growth projects in 2023 and further expand our position in our three key regions: Asia Pacific, North America and Europe. The Asia Pacific region and China in particular, which already has a significant influence on the growth of the global chemicals market with a share of around 50%, will continue to play a key role here. To serve the increasing needs of various growth industries in this region, we are continuously expanding our market position in China. One example of this is the construction of our new integrated Verbund site in Zhanjiang (see pages 43 and 44). In North America, among other things, we have been further expanding our production capacities in the isocyanates value chain in 2023 (see page 44). In Europe, the opening of the first colocated battery materials and recycling center at the Schwarzheide site in Germany was a milestone on our way to further expanding our position in this area (see page 44).

In addition, we want to refine our portfolio through smaller, bolt-on acquisitions that promise above-average profitable growth and help to expand our market position in a targeted manner. A key consideration is that these acquisitions are innovative, offer a technological differentiation, or make new, sustainable business models possible.

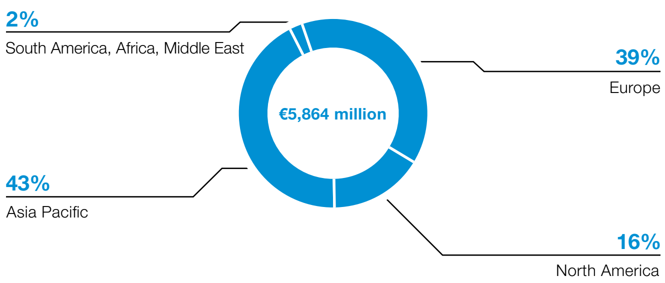
Investments in the segments and regions

Investments in property, plant and equipment amounted to €5,864 million in 2023 (2022: €4,842 million). Capex accounted for €5,198 million of this amount (2022: €4,148 million). Our investments in 2023 focused on the Chemicals, Materials, Surface Technologies and Nutrition & Care segments.

Additions to property, plant and equipment[a] by segment in 2023



Additions to property, plant and equipment[a] by region in 2023



a Including restoration obligations, IT investments and right-of-use assets arising from leases

1 Additions to property, plant and equipment excluding acquisitions, restoration obligations, IT investments and right-of-use assets arising from leases
2 Major growth projects are the construction of our future Verbund site in Zhanjiang, China, as well as our battery materials activities.

Chemicals

Strategically, our investments concentrate on growth markets such as China to support the growth of our local customers. In 2023, we completed the further expansion project of the Verbund site in Nanjing, China, together with our partner Sinopec, to strengthen the joint production of chemical products in China. This means that we have increased our production capacities for propionic aldehyde, propionic acid and purified ethylene oxide. We also built a new tert-butyl acrylate plant. These new and expanded plants came onstream in 2023.

We are continuing the construction of the new Verbund site in Zhanjiang in the southern Chinese province of Guangdong. The site will be constructed in several phases. The core of the Verbund, including a steam cracker and several downstream plants for the production of petrochemicals and intermediates, among other products, is currently being built. As part of the Verbund, these plants should be operational from late 2025 onward.

We are expanding the 2-ethylhexanoic acid plant in Kuantan, Malaysia, with our partner PETRONAS Chemicals Group Berhad. Startup is planned for 2024.

In 2023, we successfully completed the expansion of our production complex for ethylene oxide and derivatives, for example for the production of alkoxylates, at our Verbund site in Antwerp, Belgium. A world-scale alkylethanolamines plant is scheduled for startup there in 2024.

Overview of material investments

Segment	Location	Project	Startup
Chemicals	Antwerp, Belgium	Capacity expansion at ethylene oxide plant	2023
		Construction of a new world-scale alkylethanolamines plant	2024
	Kuantan, Malaysia	Capacity expansion at 2-ethylhexanoic acid plant[a]	2024
	Ludwigshafen, Germany	Modernization of chloroformates and acid chlorides plant	2025
	Nanjing, China	Capacity expansion at plants for propionic aldehyde, propionic acid, purified ethylene oxide, ethanolamines and ethyleneamines, and construction of a new tert-butyl acrylate plant[b]	2023
	Zhanjiang, China[c]	Construction of a new steam cracker and plants for ethylene oxide, syngas, monoethylene glycol, polyethylene, oxo-C4 alcohols, acrylic monomers and neopentyl glycol	2025
Materials	Chalampé, France	Construction of a world-scale production plant for hexamethylenediamine (HMD)	2024
	Geismar, Louisiana	Capacity expansion at MDI plants	2025
	Zhanjiang, China	Construction of a new thermoplastic polyurethane plant	2023
Industrial Solutions	Huizhou, China	Capacity expansion at acrylics dispersions plant	2024
	Huizhou and Zhenjiang, China	Modification at two dispersions plants for anode binder production	2023
	Jiaxing, China	Capacity expansion at sulfuric acid plant	2023
	Lampertheim, Germany and Pontecchio Marconi, Italy	Capacity expansion for hindered amine light stabilizers (HALS)	2024
	Merak, Indonesia	Capacity expansion at acrylics and styrene-butadiene dispersions plants	2023
Surface Technologies	Harjavalta, Finland	Construction of a precursor plant for cathode active materials	–[d]
	Münster, Germany	Construction of a production plant for more sustainable OEM coatings	2025
	Schwarzheide, Germany	Construction of a cathode active materials plant	2023
		Construction of a battery recycling prototype plant	2024
		Construction of a battery recycling plant for production of black mass	2024
	Würzburg, Germany	Capacity expansion for OEM coatings	2025
Nutrition & Care	Antwerp, Belgium	Capacity expansion for alkoxylates	2023
	Düsseldorf, Germany	Gradual upgrade of production plants in accordance with the Good Manufacturing Practice Standard issued by the European Federation for Cosmetic Ingredients (EFfCI)	2023
	Jinshan, China	New production line for UV filters	2023
	Ludwigshafen, Germany	Capacity expansion at production plant for vitamin A	2023
		Construction of a production plant for menthol and linalool	2026
	Zhanjiang, China	Construction of a production plant for citral	2026
Agricultural Solutions	Beaumont, Texas, and Hannibal, Missouri	Modernization of site infrastructure	2027
	Europe[e]	Traceability of crop protection products based on digital identification	2024
	Ludwigshafen, Germany	Construction of a fermentation facility to produce sustainable crop protection products	2025
	Schwarzheide, Germany	Reduction of organic waste streams	2024

a Operated by a fully consolidated joint venture with PETRONAS Chemicals Group Berhad
b Operated by a joint venture with Sinopec; startup of the plant expansions for ethanolamines and ethyleneamines at the beginning of 2024.
c The Verbund site will be built and commissioned in several phases.
d The required approval from the relevant authorities has been granted. Startup of the plant is scheduled following the legally binding conclusion of the opposition proceedings.
e This project will be implemented in Genay and Graveline, France, in Ludwigshafen, Germany, and in Tarragona, Spain.

Materials

In the Materials segment, the expansion of the methylene diphenyl diisocyanate (MDI) plant in Geismar, Louisiana, is continuing as planned with the third and final expansion phase. It will increase production capacity to approximately 600,000 metric tons per year to support the growth of BASF's North American MDI customers. Including the first and second phases, the investment volume totals around $1 billion.

We started up the engineering plastics production plant at our Verbund site in Zhanjiang, China, in August 2022. Building on this, the thermoplastic polyurethane (TPU) plant kicked off its operations in September 2023. This plant is BASF's largest TPU production line globally. It will enable us to better meet the growing market demand in Asia Pacific – particularly in the areas of electromobility and new energy.

In Europe, BASF is investing in a new world-scale production plant for hexamethylenediamine (HMD) at the Chalampé site in France. The new plant, which is scheduled to start operations in 2024, will increase BASF's annual HMD production capacity to 260,000 metric tons.

Industrial Solutions

BASF is investing in production capacity for hindered amine light stabilizers (HALS) at its sites in Lampertheim, Germany, and Pontecchio Marconi, Italy. As part of a multistep investment plan, BASF aims to serve the growing demand for light stabilizers used in durable plastics applications and increase supply security for customers worldwide.

In addition, we have invested in the production of water-based anode binders in two existing dispersion plants in Huizhou and Zhenjiang, China. Stable supply of two new innovative binder products, Licity® and Basonal® Power, came onstream in mid-2023. The investment was due to growing demand in the lithium-ion battery market.

To ensure the supply of high-quality dispersions solutions for the South Asian market, we are expanding our dispersions capacities in Huizhou, China, with an additional production line. It will startup in 2024.

Surface Technologies

We aim to expand our position as a leading and innovative provider of battery materials and recycling solutions and expect to benefit from the strong growth in this market segment. A global, customer-focused production network for battery materials is crucial here. In June 2023, we opened Europe's first colocated battery materials and recycling center at the Schwarzheide site in Germany. The inauguration of the modern production plant for high-performance cathode active materials,[1] the battery recycling prototype plant[1] (startup: beginning of 2024) and the battery recycling plant for the production of black mass from lithium-ion batteries currently under construction (planned startup: 2024) represent important steps toward closing the loop for the European battery value chain. End-of-life batteries and waste from battery production will be mechanically processed in the new plant to produce black mass. The prototype plant will allow for the development of operating procedures and optimization of technology to deliver superior returns of lithium, nickel, cobalt and manganese from end-of-life lithium-ion batteries and unused process materials. The construction of our production facility in Harjavalta, Finland, was completed in 2023, which will supply precursors for cathode active materials.[2] With these investments, BASF is the first cathode active materials supplier with local production capacities in all of what are currently the main markets: China, Japan, North America and Europe.

Nutrition & Care

In 2023, BASF started up the new world-scale vitamin A formulation plant in Ludwigshafen, Germany. The plant's startup followed the expansion of the vitamin A acetate plant in 2021 in order to meet the expected growing market demand for high-quality vitamin A.

In Antwerp, Belgium, BASF expanded production capacities for nonionic surfactants for the home care industry as well as for industrial and institutional cleaning applications by significantly extending the industry-leading alkoxylates portfolio at its Verbund site. This investment expands upstream production capacity for ethylene oxide and ethylene oxide derivatives.

BASF has invested in a citral plant as part of its Verbund site in Zhanjiang, China, and menthol and linalool downstream plants at its Verbund site in Ludwigshafen, Germany. These plants are expected to come on stream from 2026 onward. The investment is driven by a growing demand from the global flavor and fragrance market.

1 Our investment and research activities in Schwarzheide and Ludwigshafen, Germany, receive funding from the German Federal Ministry for Economic Affairs and Climate Action and the Ministry for Economic Affairs, Labor and Energy of the German state of Brandenburg under the IPCEI on Batteries (funding code 16BZF101A/B).
2 The investment in Finland is cofinanced by Business Finland, the Finnish government organization for innovation funding and trade, travel and investment promotion. The required approval from the relevant authorities has been granted. Startup of the plant is scheduled following the legally binding conclusion of the opposition proceedings.

Agricultural Solutions

In the Agricultural Solutions segment, we continue to invest in the traceability of crop protection products based on digital identification as well as in the reduction of CO_2 emissions and organic waste streams in our plants, in Europe. Furthermore, in 2023, we started construction of a fermentation facility for biological and biotechnology-based crop protection products in Ludwigshafen, Germany. Startup is scheduled for the second half of 2025. In Beaumont, Texas, and Hannibal, Missouri, we continue to modernize our site infrastructure.

For more information on our segments, see page 77 onward

Acquisitions

We did not make any major acquisitions in the 2023 business year.

Divestitures

The divestiture of BASF's nickel-based catalysts production site in De Meern, Netherlands, to IQatalyst B.V., a subsidiary of ASC Investment Sarl, Luxembourg, which had been announced in July 2022, was closed on August 31, 2023. BASF had decided to divest the site and the related Fischer-Tropsch and FOCAT[1] portfolio to increase the efficiency of its global chemical catalysts production network. The site was part of BASF's Catalysts division until the completion of the divestiture process. The transaction mainly covered production plants, including the associated infrastructure and inventories, as well as the transfer of the employees working at the site.

For more information on this divestiture, see Note 3 to the Consolidated Financial Statements from page 240 onward

Agreed transactions

On December 21, 2023, BASF, LetterOne and Harbour Energy plc (Harbour) signed an agreement to combine the businesses of Wintershall Dea and Harbour. The E&P business of Wintershall Dea is to be transferred to Harbour: It comprises production and development assets as well as exploration rights in Norway, Argentina, Germany, Mexico, Algeria, Libya (excluding Wintershall AG), Egypt and Denmark (excluding Ravn), and licenses from Wintershall Dea for carbon storage (CCS). In exchange, at closing, the shareholders of Wintershall Dea will receive total cash consideration of $2.15 billion (BASF share: $1.56 billion) and new shares to be issued by Harbour equating to a total shareholding in the enlarged Harbour of 54.5% (BASF share: 39.6%).

Until the completion of the transaction, which is, among other things, subject to antitrust approvals and further official approvals for foreign investments in various countries, among other things, Wintershall Dea and Harbour will continue to operate as independent companies. Subject to these regulatory approvals, closing is targeted for the fourth quarter of 2024.

Wintershall Dea is accounted for as a non-integral shareholding using the equity method. After completion of the transaction, both the shareholding in Wintershall Dea, which will then only include the businesses not transferred to Harbour and the head offices, and the shareholding in Harbour will be accounted for using the equity method in the Consolidated Financial Statements of the BASF Group.

For more information on this divestiture, see Non-Integral Oil and Gas Business from page 97 onward

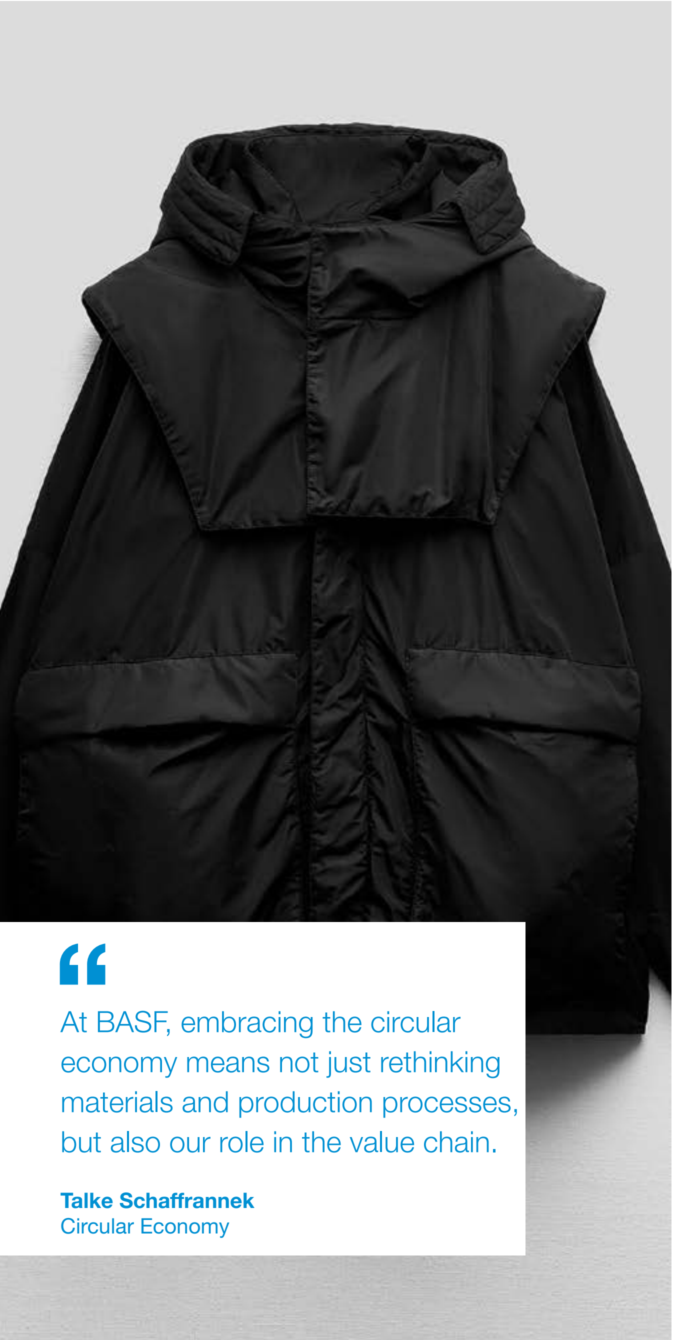
1 Fat and Oil CATalysts

Material topics in focus:

Circular Economy and Resource Efficiency

GRI 3, 301, 304, 306

As the world's population grows, so does demand for limited natural resources. At the same time, many recyclable materials end up in landfill or in waste incineration. Using resources responsibly and closing loops are crucial for our business and achieving our climate targets.



> At BASF, embracing the circular economy means not just rethinking materials and production processes, but also our role in the value chain.
>
> **Talke Schaffrannek**
> Circular Economy

At BASF we think of circularity in two dimensions: In order to achieve our climate targets, we have to not only further reduce our own carbon footprint, but also that of our products. To do this, we use renewable raw materials and recycled raw material sources. At the same time, we are developing products and technologies to help our customers close loops, create value for society and protect the environment.

BASF's Verbund structure presents numerous opportunities for a circular economy: By intelligently networking our plants, we can use by-products from one plant elsewhere as feedstocks or an energy source, thereby using resources efficiently (see pages 102 and 110). We are also focusing our raw material base even more strongly on nonfossil circular alternatives. We procure these raw materials responsibly in order to minimize negative environmental impacts (for example, biodiversity loss) (see page 121 onward).

Currently, less than 10% of the approximately 350 million metric tons[1] of plastic waste generated worldwide each year is currently recycled, yet the global demand for circular feedstocks is rising.

This page:
At the beginning of 2024, Zara launched a jacket that is made entirely from recycled polyamide, from the fabric and lining to the hook-and-loop fastener and zipper. Thanks to BASF's loopamid® solution, the garment is not only made from 100% recycled textile waste, it is also 100% recyclable.

The plastics in our product portfolio are mainly used in durable and demanding applications, such as automotive engineering and insulation foams. As a responsible player in the value chain, we are working to further improve the sustainable use of plastics throughout the entire life cycle. That's why we are developing and marketing solutions for improved mechanical recycling. Where this is not possible, we are driving forward the chemical recycling of plastics as a complementary technology to expand our supply base: Plastics are broken down into their building blocks, which can then be used in production as recycled feedstocks. To do this, we are developing suitable recycling processes, often with partners (see page 124). In a challenging environment with limited availability of alternative raw materials, we still aim to process 250,000 metric tons of recycled and waste-based raw materials, such as pyrolysis oil from mixed plastic waste or end-of-life tires, in our production plants annually from 2025.

Many of BASF's products and technologies are already helping to close loops at many points along the value chain. Together with our customers and other stakeholders, we want to further accelerate the transformation from linear to circular business models. Our target: By 2030, we want to double our sales of solutions for the circular economy to €17 billion (baseline: 2020). As the sustainable properties of our products have been reassessed since 2023 using the updated TripleS method (see page 48), this target will be adjusted in the course of 2024.

1 Bruna Alves, Statista (2023). Lifecycle of plastic waste worldwide in 2019 (infographic). Available at: https://www.statista.com/statistics/1357641/plastic-waste-lifecycle-worldwide/

Material topics in focus: Circular Economy and Resource Efficiency

Our BASF solutions for the circular economy include:

- **Products based on renewable or recycled raw materials:** These include products manufactured in whole or in part from renewable or recycled instead of fossil raw materials. The alternative raw materials are attributed to the end product, partly using what is known as the mass balance approach. This is verified and certified by independent third parties (see box on page 124). We use this approach for example for selected ingredients for the automotive, cosmetics, detergent, cleaner and food industries (see page 122). Other examples are products to which pyrolysis oil from the chemical recycling of plastic waste can be attributed via the mass balance approach (Ccycled® products, see page 125), or products that contain mechanically recycled raw materials (Mcycled®).

- **Products that close material cycles ("close the loop"):** These include products that enable and improve the recyclability of valuable resources. Our first focus area here is the value chain for plastics. For example, multilayer packaging produced with our water-based Epotal® adhesives can be easily separated into its individual recyclable materials during recycling, which can then be reused. We have expanded our ecovio® plastic portfolio and now also offer home-compostable food packaging. The second focus is recycling mineral raw materials. For example, we are driving forward innovative technologies and solutions for recovering metals such as lithium, nickel, cobalt and manganese from end-of-life lithium-ion batteries (see page 125).

- **Products that increase the resource efficiency or lifespan of materials ("extend the loop"):** These include products that reduce resource consumption and environmental impact along the value chain. One example is Oxsilan®, an innovative thin-film technology for protecting metals from corrosion, for example, before painting. The process not only enables higher productivity with lower material use, but also offers a favorable safety, health and environmental profile compared with conventional phosphating processes. This category also includes products that extend service life and/or reduce maintenance intervals. Tinuvin® light stabilizers are one example of this. They extend the lifespan of products such as agricultural films by providing reliable protection against UV radiation, heat and agrochemicals.

One of the steps we have taken to meet our targets and accelerate the transformation is establishing a company-wide Circular Economy Program. As part of this program, BASF teams are currently developing new approaches within three main action areas and over 50 initiatives: alternative raw materials pathways, innovative material cycles and new business models for the circular economy – which also include digital and service-based concepts. We also cooperate with partners along the value chain and are involved in numerous networks, such as the Ellen MacArthur Foundation, the World Business Council for Sustainable Development, the Global Battery Alliance and the Alliance to End Plastic Waste. In doing so, we want to better understand needs, trends and growth opportunities and contribute to the development of standards.

For more information on the circular economy, see basf.com/circular-economy

For more information on plastics, see plasticsjourney.basf.com

Case study

From the clothing bin to the runway

Every year, almost 100 million metric tons of textile waste is produced worldwide, 87% of which is incinerated or disposed of in landfills. At the beginning of 2024, BASF brought an innovative and sustainable solution to the market to boost circularity in the textile industry: loopamid®. Using a new chemical recycling process, textile waste made of polyamide 6 (nylon 6) are first converted into monomers in a process called depolymerization and then purified. The resulting monomers are then converted back into pure polyamide 6 (PA6) through polymerization. This recycled PA6, loopamid®, serves as the raw material for completely new clothing in a circular production model.

BASF is thus offering a solution to close the loop for polyamide 6 in clothing exclusively with textile waste, which can be reused as a valuable feedstock, thereby reducing the consumption of fossil raw materials, for example. loopamid® ensures that textiles remain in their own cycle and garments containing PA6 can be recycled without restrictions. We want to inspire the industry to focus on sustainable textile production and introduce new business models that close loops in textile manufacturing. To this end, we work closely with our partners along the value chain.

Our Sustainability Concept

GRI 2, 3, 203, 304, 413, 415, 416

We bring our corporate purpose – We create chemistry for a sustainable future – to life by systematically integrating sustainability into our strategy, our business, and our assessment, steering and compensation systems. We want to secure our long-term success with products, solutions and technologies that create value added for our customers, the environment and society.

At a glance

- Sustainability aspects integrated into corporate steering
- New targets for climate protection (Scope 3.1) and portfolio steering
- Human rights aspects embedded in decision-making processes

Our strategic approach

Sustainability is integrated into our decision-making processes. Our opportunities and risk management systematically records effects, opportunities and risks arising from our business activities for sustainability topics and how these impact our businesses in a positive or negative way. Decisions regarding investments, acquisitions and divestitures are made while taking comprehensive assessments of sustainability impacts into account. The entire Board of Executive Directors is responsible for sustainability topics, which should be driven forward by all employees. Therefore, BASF's senior executives' long-term variable compensation is also based on the achievement of our targets for reducing CO_2 emissions.

We pursue a holistic sustainability approach that covers the entire value chain – from our suppliers and our own activities to our customers – and contributes to environmental, social and governance key sustainability topics (ESG, see page 100 onward). We have formulated commitments for our conduct and underpinned these with corresponding targets and measures (see page 41). Based on our corporate strategy, we steer the global sustainability target for climate protection for 2030 via the most important key performance indicator (KPI) absolute CO_2 emissions[1] (see page 40). To this end, we have strengthened the necessary steering mechanisms and control systems at Group level, for example with internal reviews. Our transition plan to reduce greenhouse gas emissions includes the use of renewable energy, measures to avoid CO_2 emissions and circular economy solutions (see page 102). In addition to our target to achieve net-zero emissions by 2050,[2] we are pursuing further targets for a more sustainable portfolio, for responsible procurement, resource-efficient and safe production, engaged employees and diversity.

Measuring sustainable value added

We are aware that our business activities can have both positive and negative impacts on the environment and society. We aim to increase our positive contributions and minimize the negative impacts of our business activities. To achieve this, we need to measure how our actions and our products affect the environment and society.

We have many years of experience in this area from evaluating our products and processes using methods such as the SEEbalance® Socio-Eco-Efficiency Analysis, Eco-Efficiency Analyses, our TripleS (Sustainable Solution Steering) methodology, BASF's corporate carbon footprint and the calculation of Product Carbon Footprints (PCF).

We want to offer our customers innovative products and solutions that support their sustainability goals. Our business units are therefore in close contact with our customers in order to better understand their sustainability needs and offer tailored BASF solutions. The insights from this dialog are considered in the implementation of research projects and in innovation processes.

A significant steering tool for the product portfolio, based on the sustainability performance of our products, is TripleS. In 2022, we updated this method in order to further steer our product portfolio to transformation topics such as climate change and energy, resource efficiency and circular economy. With this update we have integrated the TripleS evaluation even more deeply into the assessment of our R&D development processes, also considering the requirements formulated within the Safe and Sustainable by Design framework by the E.U. Commission. Within the scope of the further development of our method, in 2023 we began to reassess the products in the relevant portfolio[3] with regard to their applications and regional aspects. As a result, we categorize our product portfolio into five segments, taking sustainability-related aspects into account: **Pioneer**, **Contributor**, **Standard**, **Monitored** and **Challenged** (see graphic). The reassessment will be completed in 2024. We will take regulatory changes into account if they have a material impact on our portfolio and therefore also on our segmentation. The allocations by segment and sales are therefore provisional.

1 Target includes Scope 1 and Scope 2 emissions (excluding the sale of energy to third parties) as well as Scope 3.1 emissions. Greenhouse gases according to the Greenhouse Gas Protocol are converted into CO_2 equivalents (CO_2e).
2 Target includes Scope 1 and Scope 2 emissions (excluding the sale of energy to third parties) as well as Scope 3.1 emissions, excluding greenhouse gas emissions from BASF trading business. Greenhouse gases according to the Greenhouse Gas Protocol are converted into CO_2 equivalents (CO_2e).
3 The definition of the relevant portfolio and further information can be found in the TripleS manual at basf.com/en/sustainable-solution-steering

The new KPI sales of **Sustainable-Future Solutions** summarizes the total sales of Pioneer and Contributor products. Products allocated to these segments make a positive sustainability contribution in the value chain. For example, polyurethane catalysts, which reduce energy consumption and material use, and high-performance insulation materials, which save energy for end users. In line with our corporate strategy, we have set ourselves the target of making sustainability an even greater part of our innovative power. By 2030, more than 50% of BASF's sales relevant to TripleS[1] are to be attributable to Sustainable-Future Solutions (2023: 41.4%). With TripleS, we are steering our product portfolio and our research and development units toward sustainable solutions. According to our updated methodology, in 2023, around €1 billion of our annual expenditure on research and development contributed to potential Sustainable-Future Solutions.

If, during the reassessment of our portfolio, we identify products with sustainability concerns, we classify them either as "Monitored," or in case of significant concerns, as "Challenged," as we did in the past. A description of possible measures is mandatory for both categories. In the case of Challenged products, we develop our own action plans. These include research projects and reformulations to optimize products or replacing the product with an alternative. To systematically align our portfolio with contributions to sustainability, we are generally phasing out all Challenged products within five years of their initial classification.

Of BASF's €68.9 billion in sales in 2023, €55.5 billion is relevant for the TripleS evaluation. We have analyzed €52.8 billion of this as part of TripleS by the end of 2023.[2] The relevant portfolio comprises BASF Group's sales from sales products to third parties in the business year concerned. This excludes business that is not product-related, such as licenses or services.

TripleS (Sustainable Solution Steering)[a]

TripleS segments	Product performance	Sales (billion €): Sales share validated segmentation	Sales share provisional segmentation	Total
Pioneer	Products with adequate profitability and a positive contribution to sustainability above the market standard	9.77	3.58	**13.35** (24.1%)
Contributor	Products with adequate profitability and a positive contribution to sustainability on market standard with regard to the topics of climate change and energy, resource efficiency and circular economy	8.76	0.83	**9.59** (17.3%)
Standard	Products performing on market standard without a dedicated contribution to the topics of climate change and energy, resource efficiency and circular economy	18.08	6.14	**24.23** (43.6%)
Monitored	Products with specific identified regulatory or customer concerns arising mid-term (2–5 years) or posing a regional reputational risk for BASF	3.55	0.87	**4.42** (8.0%)
Challenged	Products with identified strong regulatory or customer concerns arising short-term (≤2 years), with Substances of Very High Concern in applications with an intended consumer use, violating BASF's Code of Conduct or posing a strong global reputational risk	0.42	0.81	**1.23** (2.2%)

Sales share validated segmentation Sales share provisional segmentation

a Sales shares based on the analysis of the relevant portfolio carried out by the end of 2023.[1] The provisional segmentation has not been audited by KPMG. The allocation to the segments is provisional, as the reassessment of our portfolios has not yet been completed.

Our key sustainability topics

As a cofounder of the U.N. Global Compact, we contribute to the implementation of the United Nations' (U.N.) Agenda 2030. Our products, solutions and technologies help to achieve the U.N. Sustainable Development Goals (SDGs) – especially SDG 2 (Zero hunger), SDG 5 (Gender equality), SDG 6 (Clean water and sanitation), SDG 7 (Affordable and clean energy), SDG 8 (Decent work and economic growth), SDG 12 (Responsible consumption and production) and SDG 13 (Climate action). To prioritize the SDGs relevant to BASF, in 2023, internal experts once again assessed the impacts and positive contributions of our products, our corporate targets and strategic action areas.

In 2023, we updated our **materiality analysis** from 2022. The results do not only set the framework for reporting, but also help us to better understand the complex and sometimes diverging requirements and expectations that our stakeholders have of us and to define strategically relevant topics for our long-term business success. As part of the update in 2023, we reviewed whether new topics had been identified or the topics from the previous year had significantly changed in priority. We used a big data tool to review the relevance of sustainability topics for various stakeholder groups. We also included the expertise of external stakeholders, with whom we are in constant contact, and of employees in this review.

A sustainability aspect is considered material in the sense of double materiality if it has been classified as having both impact materiality and financial materiality. To assess impact materiality, both actual and potential positive and negative impacts of our company's activities were considered along the value chain. To this end, the scale, scope and likelihood of occurrence of these impacts were assessed. For the analysis of financial materiality the topics were classified based on their potential financial impacts on BASF. Specifically, we analyzed how each sustainability aspect affects us geographically, for example, whether a local business unit or an

1 The definition of the relevant portfolio and further information can be found in the TripleS manual at basf.com/en/sustainable-solution-steering
2 Sum of validated and provisional segmentation

entire region is affected, whether it impacts our production, our employees, the achievement of targets we have set for the BASF Group, or our reputation.

Identified key sustainability topics

Environmental

- Biodiversity
- Circularity and resource efficiency
- Climate change adaptation
- Climate change mitigation
- Process safety[1]
- Waste
- Water and wastewater

Social

- Diversity, inclusion and equal work
- Human rights and labor rights
- Occupational health and safety
- Product stewardship

Governance

- Business ethics

The topics from 2022 were confirmed, with two adjustments: "Occupational health and safety" was expanded to include "process safety." "Plastic waste" was integrated into the overarching topic of "circularity and resource efficiency." Based on this update, 11 topics were identified as material (see list) and confirmed by the BASF Sustainability Reporting and Controlling Committee. At the beginning of 2024, we will review the methodology of our materiality analysis again to ensure that it meets the requirements of the European Sustainability Reporting Standards, for example, in terms of double materiality.

For more information on our materiality analysis, see basf.com/materiality

Our organizational and management structures

Together with decentrally organized specialists, the units Corporate Strategy & Sustainability and Corporate Finance are responsible for integrating sustainability into decision-making processes and for steering and reporting on sustainability topics. The Corporate Strategy & Sustainability unit is also responsible for the global steering of climate-related matters. The Net Zero Accelerator unit plays a key role in achieving our climate protection targets by accelerating and implementing projects related to low-emission production technologies, circular economy and renewable energy. The Corporate Finance unit reports to the Chief Financial Officer, while the other two units report to the Chairman of the Board of Executive Directors.

Sustainability topics are discussed and managed by the Board of Executive Directors. When making its decisions, the Board of Executive Directors considers the results and recommendations from sustainability evaluations of business processes. It makes decisions with strategic relevance for the Group and monitors the implementation of strategic plans and target achievement. The Supervisory Board is regularly briefed on the development of individual sustainability topics by the Board of Executive Directors.

The Chief Human Rights Officer is responsible for further embedding human rights aspects in decision-making processes. He reports directly to the Chairman of the Board of Executive Directors (see page 154).

We systematically evaluate sustainability criteria, including the effects of climate change, as an integral part of decisions on investments, acquisitions and divestitures in property, plant and equipment and financial assets. In this way, we not only assess economic dimensions, but also the potential impacts on areas such as the environment, human rights or the local community. We evaluate both the potential impacts of our activities here as well as how we are affected.

If we identify potential negative impacts, for example, in planned investments, these are presented transparently in the internal decision-making process together with possible mitigation measures.

In our Sustainable Finance Roundtable, experts from departments such as Finance, Corporate Strategy, Investor Relations and Communications discuss new legal or capital market-driven requirements. The interdisciplinary group analyzes the steadily growing requirements, assesses the impacts on BASF and drives forward the necessary change processes as well as the concrete implementation of measures.

The Sustainability Reporting and Controlling Committee is the central decision-making body for questions relating to internal and external reporting and the controlling of sustainability topics. This committee of managers from the relevant Corporate Center and operating units facilitates rapid decisions to ensure that external and internal requirements for sustainability-related information and data are met immediately and in the best possible way.

For more information on our financial and sustainability targets, see pages 40 and 41

For more information on our risk management, see pages 173 to 183

For more information on compensation structures, see the compensation report at basf.com/compensationreport

1 The topic is presented separately here due to its allocation to the "Environmental" category, but it was considered in the materiality analysis as "Process safety, occupational health and safety."

Our stakeholder management

BASF's business success depends on the societal acceptance of our business activities (license to operate). Parts of our business activities, such as the use of certain new technologies or our environmental impacts, are often viewed by stakeholders with a critical eye. We take questions from our stakeholders seriously, initiate dialogs and participate in discussions (see page 140 onward). Our stakeholders include customers, employees, investors, suppliers, the communities surrounding our sites, and representatives from industry, academia, politics and society. We are in ongoing exchange through a variety of formats of our strategic stakeholder engagement.

We are involved in networks, lobbying groups and associations in order to jointly promote sustainability topics. In our own independent exchange formats, we discuss our contribution to a socially just climate transformation (just transition) with representatives from business, science, politics and civil society. For example, we discussed solutions and challenges on the path to climate neutrality with our stakeholders at the BASF Sustainability Lab in 2023. In-depth, context-related discussions take place in topic-specific committees such as the Human Rights Advisory Council and the Nature Advisory Council.

We promote continuous exchange between local residents and our site management with community advisory panels. We also involve key stakeholders in the decision-making process about future investments at an early stage in order to work together on viable solutions. Our political advocacy is conducted in accordance with transparent guidelines and our publicly stated positions.

For more information on the dialog with our stakeholder groups, see page 140

For more information on our guidelines for responsible lobbying, see basf.com/responsible-lobbying

For more information on the Industry Associations Review, see basf.com/en/corporategovernance

For more information on the BASF Sustainability Lab, see basf.com/en/sustainability-lab

For more information on our stakeholder engagement, see basf.com/en/stakeholder-engagement

Our societal engagement approach

Our societal engagement is an important part of our sustainability management and our corporate responsibility. Communities at our sites and disadvantaged groups around the world are particularly important to us. Our activities are bundled in three action areas globally across all levels of the BASF Group: We want to improve people's quality of life by preventing and combating disease (health), promoting educational equality, employability and economic participation (skills), and conserving natural resources (resources). Our aim is to make a positive contribution to society by leveraging our expertise and resources. In accordance with our societal engagement policy, our actions are in line with our compliance requirements, BASF's strategy and our sustainability commitments.

For more information on our societal engagement, see page 141

How We Create Value

GRI 413

The following overview[1] shows how we create value for our stakeholders. It is modeled on the framework of the former International Integrated Reporting Council (IIRC).

Discover the interactive How We Create Value graphic in the BASF Online Report at basf.com/how-we-create-value

Inputs
Business model
Outputs
Outcomes[2]
Impact

Inputs

Financial	Innovations	Production	Environment	Employees	Partnerships
Our aim is to ensure solvency at all times, limit financial risks and optimize the cost of capital.	We develop innovative solutions for and with our customers to expand our leading position.	Safety, quality and reliability are key to excellence in our production and plant operations.	We use natural resources to manufacture products and solutions with high value added for our customers.	Everything we do is based on the expertise, knowledge, motivation and commitment of our employees.	Trust-based relationships are crucial to our license to operate and our reputation.
47.3% Equity ratio	~10,000 R&D employees	€5.2 billion Capex	~1 MMT Renewable raw materials	111,991 Employees around the world	>70,000 Suppliers
>900,000 Shareholders	€2.1 billion R&D expenses	20% Electricity from renewable sources	1,518 million m^3 Total water abstraction	€11.0 billion Personnel expenses	~78,000 Customers

Business model

Our corporate purpose:
We create chemistry for a sustainable future

Segments
Chemicals
Materials
Industrial Solutions
Surface Technologies
Nutrition & Care
Agricultural Solutions

The business models of our six segments contribute to solving the challenges of our customers.

Our customers

With our six strategic focus areas, we focus on our customers and aim to grow profitably.

Strategy
Innovations
Sustainability
Production
Digitalization
Portfolio
Employees

Our values:
creative, open, responsible, entrepreneurial

1 The content of the graphic has been audited within the scope of the relevant sections of the Combined Management's Report.

Outputs

Financial	Innovations	Production	Environment	Employees	Partnerships
€3.8 billion EBIT before special items	~1,000 New patents worldwide	~45,000 Sales products	>1,400 Mass balance products based on alternative raw materials	79% Engagement index according to 2023 employee survey	668 Suppliers screened by BASF as part of Together for Sustainability
€3.0 billion Proposed dividend payment to shareholders[1]	>€10 billion Sales of products that have been on the market for up to five years	5.7 MMT CO_2 emissions avoided through the Verbund and combined heat and power generation	79% Water demand recirculated	28.4% Women in leadership positions	~50 Strategic customer networks

Outcomes[2]

Relevant external impact factors for our company's success as well as positive and negative impacts of our business activities:

Economic

Relevant external impact factors
- Customer demand and requirements
- Investment readiness
- Capital market trends
- State of the economy, competitive conditions, investment climate

Impacts of our business activities
- \+ Growth, progress and value creation
- \+ Our customers' competitiveness and innovative strength
- \+ Digital transformation of the industry
- \+ Attractive dividend yield
- − Reduced value creation for the state, customers, investors and employees

Environmental

Relevant external impact factors
- Challenges/opportunities arising from climate change
- Availability of/access to renewable resources
- Sustainability targets of our customers
- Regulations on product safety

Impacts of our business activities
- \+ Contribution to climate protection/climate change adaptation
- \+ Reduced use of resources and avoidance of waste
- \+ Environmentally friendly and safe products
- − The emission of CO_2 and other greenhouse gases
- − Resource consumption and nonrecyclable waste
- − Potential misuse or spillage of products

Social

Relevant external impact factors
- Demand for sustainable products, willingness to pay
- Stakeholder trust
- Interest of qualified personnel and leaders
- Labor, environmental and social standards

Impacts of our business activities
- \+ Improved quality of life
- \+ Attractive jobs and diversity
- \+ Taxes and competitive wages and salaries
- \+ Integration, help to overcome social challenges
- − Procurement of raw materials with risk of violation of standards
- − Personnel adjustments

BASF

How we maximize positive impacts / minimize negative impacts:

- Corporate strategy
- Portfolio management
- Cost management and cost of capital optimization
- Differentiated Steering (from 2024 onward)

- Programs for carbon management and the circular economy
- Water and energy management
- Measures to protect biodiversity
- Responsible Care Management

- Supplier management
- Sustainability projects in the supply chains
- Compliance Program and Code of Conduct
- Employee training programs

Impact

We achieve long-term business success by creating value for our customers, our shareholders, our company, the environment and society (see basf.com/en/value-to-society).

1 Based on the dividend proposed by the Board of Executive Directors and the number of outstanding shares as of December 31, 2023 (892,522,164)

2 The outcomes category shows examples of impacts on our business and impacts that our activities may have as well as the measures we take.

Innovation

Innovations based on chemistry play a pivotal role in overcoming the greatest challenges of our time. Our activities are aimed at developing new products, reducing the carbon footprint of our existing products, entering new markets and further increasing our productivity. We are intensively working together with our customers on innovative products and processes for a sustainable future.

At a glance

€2.1 billion
Research and development expenses

~1,000
New patents filed

- Innovation focus on developing sustainable products and processes for our customers
- Close cooperation with universities, research institutes and companies
- Close cooperation between research and business units

Innovation has always been the key to BASF's success. The knowledge and skills of our highly qualified employees is our most valuable resource and the source of our innovative strength. In 2023, approximately 10,000 employees worldwide were working in research and development (R&D).

Our **research and development expenses** amounted to €2,130 million in 2023 (2022: €2,298 million). R&D activities in our operating divisions, which are mainly application and customer-related, accounted for 83% of this figure. Cross-divisional and long-term topics were responsible for 17% of these expenses.

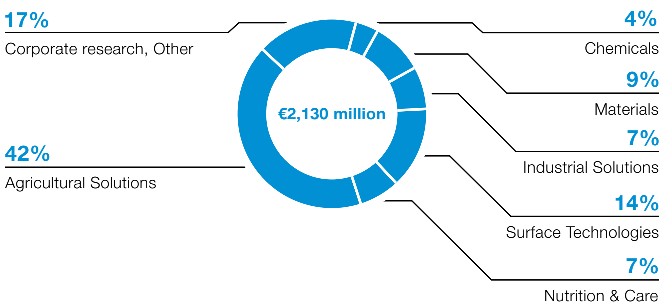
Our **innovation focus** is on developing new products, solutions and product improvements that offer our customers competitive and sustainability advantages. By helping them reduce their carbon footprint, use resources more efficiently and manufacture products in a more environmentally friendly way and recycle them, we also ensure our long-term competitiveness and at the same time, play a role in decoupling growth from the consumption of limited resources.

In 2023, we generated sales of around €10 billion with products launched on the market in the past five years that stemmed from research and development activities. In the long term, we aim to further increase sales and earnings with new and improved products – especially with products that make a positive sustainability contribution in the value chain (see page 48).

Our research and development units explicitly address the industry-specific needs of our customers. Customer-focused activities are directly integrated into the operating divisions. Research activities that are relevant to several operating divisions are bundled in the cross-functional global division Group Research. It supports the R&D activities of our divisions and drives forward cross-divisional projects on topics relevant to the entire Group, such as avoiding CO_2 emissions in chemical processes and products, energy efficiency and recycling technologies. The unit is globally positioned with research centers in Europe, North America and Asia Pacific. Together with the research and development units in our operating divisions, Group Research forms the core of our global Know-How Verbund.

Additionally, we use corporate funding to finance research activities that are of broad relevance to the BASF Group and go beyond the industry-specific focus of the individual operating divisions, such as digital tools, polymer technologies, catalyst processes and biotechnological methods.

Research and development expenses by segment 2023



Furthermore, we promote creative research approaches and drive forward the development of new business areas. For example, we are developing innovative coating technologies and materials that make innovative surfaces and functions possible. Functional films can be used to reduce the frictional resistance of surfaces or improve UV protection and weather resistance.

As part of our Carbon Management R&D Program, we are focusing in particular on projects at the energy-intensive starting point of the value chain. This will enable us to offer our customers even more products with a lower carbon footprint in the future.

Employees in research and development

~10,000

Our **global research and development presence** – and its effectiveness – is vital to our long-term success. This enables us to respond to the needs and requirements of the regional markets in a differentiated way, establish new customer relationships and leverage growth potential. Scientific collaborations give us access to talent, strengthen our Research and Development Verbund and make BASF an even more attractive partner and employer.

The largest and most important site in our research network is Ludwigshafen in Germany. We are currently building a new Catalyst Development and Solids Processing Center there to bring process innovations and new chemical catalysts to market faster. Startup is planned for 2024.

We are also continuing to advance our R&D activities in Asia. For instance, in mid-2023, we completed the expansion of the BASF Innovation Campus Shanghai in China, which was opened in 2012, with new laboratories for advanced materials and systems as well as for chemical engineering.

The number and quality of our **patents** also demonstrate our innovative power and long-term competitiveness. In 2023, we filed 1,046 new patents worldwide, of which 42.2% were for innovations with a particular focus on sustainability. The Patent Asset Index, a method that compares patent portfolios, once again ranked us among the leading companies in the chemical industry in 2023.

For more information on innovation, see basf.com/innovations

Global network

Our global network of top universities, research institutes and companies forms an important part of our Know-How Verbund. It gives us direct access to external scientific expertise, talented minds from various disciplines as well as new technologies. Our academic research alliances bundle partnerships with several research groups in a region or with a specific research focus.

In the **United States**, we celebrated the 10-year anniversary of our Northeast Research Alliance (NORA) in 2023. In the future, we want to include additional partners from across the whole of North America under a new name: the North America Open Research Alliance. NORA focuses on materials science and biosciences, catalysis research, digitalization and cooperation with startups. We are also a member of the interdisciplinary California Research Alliance (CARA). Teams at the CARA research center are working on new functional materials, formulations, digital methods, catalysis, chemical synthesis, and in engineering sciences and biosciences.

The Joint Research Network on Advanced Materials and Systems (JONAS) is active in **Europe** and focuses on supramolecular chemistry, polymer chemistry and sustainable technologies. We are working on innovative components and materials for electrochemical energy storage with the Karlsruhe Institute of Technology (KIT) at the Battery and Electrochemistry Laboratory (BELLA). At the joint Catalysis Research Laboratory (CaRLa), BASF is researching homogeneous catalysis in cooperation with the University of Heidelberg. BasCat is a joint laboratory operated by the UniCat cluster of excellence and BASF at the Technical University of Berlin, where new heterogenous catalysis concepts are being explored together with the Fritz Haber Institute of the Max Planck Society. Within the British Alliance for Research and Innovation (BARI), BASF is researching with thematic clusters in chemical engineering (flow chemistry) and digitalization (crystallization, corrosion) together with Imperial College London.

At the Network for Asian Open Research (NAO) in the **Asia Pacific** region, research focuses on polymer and colloid chemistry, catalysis, machine learning and smart manufacturing.

The Academic Research Alliances are complemented by cooperative partnerships with around 280 universities and research institutes as well as collaborations with a large number of companies.

For more information on our collaboration initiatives, see basf.com/innovate-with-us

The BASF Group's Business Year

GRI 201

Economic Environment[1]

Global economic growth in 2023 was weighed down in many countries by high inflation and rising interest rates. Due to both front-loading and catch-up effects from the coronavirus pandemic, demand for goods increased much slower than demand for services. Industrial production and demand for chemicals were therefore extremely weak.

For the outlook on the economic environment in 2024, see page 167 onward

At a glance

+2.6% Global GDP growth

+1.7% Increase in global chemical production

- Weak growth in demand for goods
- Rising interest rates and high inflation
- Growth in chemical production in China; decline in the rest of the world

Global gross domestic product (GDP) grew by 2.6% compared with the previous year (2022: +3.1%). Global industrial production rose by 1.4% (2022: +2.9%). Global chemical production rose by 1.7% (2022: +2.1%), albeit with marked variation between different regions. While chemical production grew by 7.5% in China, it shrank by 3.9% in the rest of the world.

The average price for a barrel of Brent crude oil remained considerably below the prior-year level at $82 per barrel (2022: $101 per barrel). The annual average gas price in Northwestern Europe was €40.52 per MWh ($12.83 per mmBtu), around two-thirds below the prior-year level, but still more than twice as high as the average annual price for 2015 to 2020 and more than five times as high as in the United States.

Trends in the global economy in 2023

Macroeconomic development in 2023 was dampened overall. However, there was significant regional variation. While gross domestic product growth in the United States accelerated considerably in the third quarter after a moderate first half of the year, gross domestic product in the European Union (E.U.) largely stagnated. In the United States, private demand was supported by the depletion of savings, rising employment and growing wages. Despite solid labor markets, consumers in the E.U. were reluctant to spend in view of the rise in electricity and gas prices and the uncertainty caused by the war in Ukraine. Economic development in Asia was mixed. In China, a dynamic start to the year in the first quarter was followed by weak growth in the rest of the year. Domestic demand in China remained subdued due to the economic uncertainty surrounding the real estate crisis and exports suffered as a result of the weakness of the global economy. In Japan, the economy picked up temporarily due to the weaker exchange rate, growing private consumption and high demand for cars domestically and abroad.

In our customer industries, existing order backlogs continued to be processed after the disruptions in the supply chains had largely receded. This catch-up effect led to high growth rates, particularly in the automotive industry, which had previously been affected by significant supply problems. In contrast, demand for consumer goods such as furniture and consumer electronics fell considerably following the boom in demand during the coronavirus lockdowns. In the construction industry, the sharp rise in interest rates in many countries was increasingly reflected in falling demand.

1 All information relating to past years in this section can deviate from the previous year's report due to statistic revisions. Where available, calendar-adjusted macroeconomic growth rates are reported. Figures for 2023 not yet available in full are estimated.

The persistently high energy prices did not fully reflect the weak global economy. The oil price in particular was supported on the supply side by several production cuts by the OPEC+ countries.

Gross domestic product

Real change compared with previous year

	2023	2022
World	**2.6%**	**3.1%**
European Union	0.5%	3.6%
United States	2.5%	1.9%
Emerging markets of Asia excluding China[1]	4.7%	5.7%
China	5.2%	3.0%
Japan	1.8%	0.9%
South America	1.4%	3.7%

Economic trends by region

In the **E.U.**, GDP grew by just 0.5% in 2023 (2022: +3.6%). As in the previous year, there were considerable differences between the traditional tourist destination countries and the economies that are more oriented toward industry and goods exports. While GDP in Spain increased by more than 2%, France and Italy only achieved GDP growth of less than 1%.

Conversely, in **Germany**, gross domestic product decreased slightly by 0.1% after adjustment for calendar variations. Private consumption fell due to the high inflation rate and the resulting decline in the purchasing power of private households. In contrast to the other major E.U. countries, government spending also fell considerably, due to the absence of pandemic-related extra spending. The weak global economy was ultimately reflected in a decline in exports, although this was also offset by a sharper decline in imports. Foreign trade therefore made a positive contribution to the growth of the German economy overall. Due to the decline in production in the energy-intensive industries and in the construction industry, German industrial production declined by around 1%.

Growth in the **Eastern E.U. countries** also slowed significantly (2023: +0.5%, 2022: +4.2%). Although consumer price inflation decreased slightly compared with the previous year, at around 11% it was considerably higher than in Western E.U. countries (around 6%). In addition to the loss of purchasing power, these countries were particularly affected by the weakness of the manufacturing sector due to their above-average industrial share.

In the **United Kingdom**, GDP only grew weakly, by 0.5% (2022: +4.3%), as private consumption only increased slightly against the backdrop of high inflation rates and as rising interest rates increasingly restricted the spending flexibility of private households.

In the **United States**, economic performance was considerably better than we had expected at the beginning of the year. At 2.5%, GDP grew more strongly in 2023 than in the previous year (+1.9%). Growth was mainly driven by private services consumption and a demand for motor vehicles and leisure goods. Private households continued to deplete the savings they had accumulated during the coronavirus pandemic. Industrial construction, which benefited from government subsidies for the semiconductor industry, also contributed to growth. Conversely, production in the manufacturing industry declined slightly by 0.5%.

In 2023, the economy in **China** recovered only hesitantly from the coronavirus-related restrictions in 2022. After low growth in 2022 (+3.0%), the growth target of 5% was achieved. However, domestic demand for goods grew only modestly and goods exports were weak due to the ailing global economy. The crisis in the housing sector continued despite government support measures, and youth unemployment remained high. Against this backdrop, Chinese consumers were particularly reluctant to spend on consumer durables.

In most of the other emerging markets of Asia, particularly **India** (2023: +6.5%, 2022: +7.3%) and **Indonesia** (2023: +5.1%, 2022: +5.3%), growth remained at a high level against the backdrop of solid domestic demand. At 4.7%, the entire country group grew at a slower rate than in the previous year (+5.7%). In **Japan**, gross domestic product grew at an above-average rate of 1.8% (2022: +0.9%) due to a weak yen, declining imports and rising automotive exports, increasing investments and a moderate rise in private consumption. In **South Korea**, however, growth was weaker than in the previous year due to weak export demand from China and low demand for information technology goods (2023: +1.4%, 2022: +2.6%).

In **South America**, growth in **Brazil** (2023: +3.0%, 2022: +3.0%) was supported by high production growth in agriculture. In Argentina, economic development declined in an environment of very high inflation rates and a rapidly falling currency (2023: -1.7%, 2022: +5.0%). All in all, the countries in the region grew by 1.4% in 2023, considerably slower than in the previous year (2022: +3.7%).

Trends in key customer industries

Global demand for goods grew only weakly in 2023. The high inflation rates in many countries reduced private purchasing power and dampened growth in consumption overall. Demand for consumer durables continued to decline as consumers had front-loaded purchases during the coronavirus lockdowns. Rising interest rates and the high level of economic uncertainty also reduced companies' willingness to invest. However, catch-up effects led to high rates of growth in the automotive industry.

Global industrial production expanded by only 1.4% overall in 2023 (2022: +2.9%). Industrial production in the advanced economies declined by 0.4% (2022: +1.6%); in the emerging markets, by contrast, industrial production grew by 2.8% (2022: +3.9%). In the E.U., industrial production declined by 1.7%; in North America, it

1 We define the emerging markets of Asia as the ASEAN countries (Brunei, Indonesia, Malaysia, Myanmar, Cambodia, Laos, the Philippines, Singapore, Thailand, Vietnam), India, Pakistan and Bangladesh.

only rose by 0.9%, while in Asia it grew by 2.9% overall. Despite the weak economy in China, the growth in global industrial value creation came almost exclusively from there (total global growth contribution +1.4 percentage points, 1.3 percentage points of which came from China). The E.U.'s global contribution was negative at around -0.2 percentage points. All the other regions only contributed little to global industrial growth overall.

Global automotive production grew dynamically by 9.4% or 7.7 million units in 2023 to a total production of 90.1 million passenger cars and light commercial vehicles (2022: +6.7%, 82.3 million units), thus reaching the pre-coronavirus pandemic level again. High growth was achieved in all regions. At 12.5%, growth was highest in the E.U.; in North America (+9.5%) and Asia (+9.0%), rates of growth were somewhat slower. In terms of unit sales, growth was highest in Asia, the world's largest vehicle market with 51 million units. A total of 4.3 million more vehicles were produced, thereof almost 2.5 million in China and 1.1 million in Japan. However, absolute growth was also very high in the E.U. and North America, with around 1.6 million and 1.4 million vehicles respectively.

Growth in the production of battery electric vehicles (BEVs) was significantly higher than that of the market as a whole: A total of 2.3 million more BEVs were produced; this corresponds to growth in this segment of around 28% compared with the previous year. Consequently, electric vehicles' share of all vehicles produced rose from around 10% in 2022 to around 12% in 2023.

Growth in key customer industries

Real change compared with previous year

	2023	2022
Industry total	**1.4%**	**2.9%**
Transportation	9.5%	7.7%
Of which: automotive industry	9.4%	6.7%
Energy and resources	0.9%	3.6%
Construction	1.8%	2.6%
Consumer goods	-0.1%	2.9%
Electronics	0.8%	4.9%
Health and nutrition	0.7%	2.7%
Agriculture	3.1%	1.9%

Production in the **construction industry** was impacted in many countries by the continued rise in interest rates and the persistently high construction costs. The real estate crisis in China had a substantial impact on global growth in residential construction, as Chinese residential construction accounts for around a quarter of the global residential construction market. While residential construction in all major economic areas contracted by around 3.5% overall on the basis of partially estimated figures, moderate growth continued to be recorded in the construction of other buildings (+2.9%). Growth in industrial construction was particularly high in the United States, which benefited from subsidy offers for the semiconductor industry. Infrastructure construction continued to expand dynamically worldwide (+6.8%). However, the global construction industry expanded by only 1.8% overall in 2023 (2022: +2.6%).

In the **consumer goods industry**, production stagnated in 2023 (-0.1%) after growing by 2.9% in the previous year. In the furniture industry, production declined by more than 6%, while it declined by just under 3% in the textile industry. By contrast, the production of chemicals for the manufacture of care products grew moderately by around 2%.

The **electronics industry** only grew slightly (2023: +0.8%, 2022: +4.9%). Production fell in communication electronics, while it stagnated in electronic components, computers and peripheral devices overall and there was a moderate increase in classic entertainment and other electronics.

The **energy and raw materials** sector expanded by around 0.9% in 2023 (2022: +3.6%). Oil and gas production stagnated overall. Oil production cuts by the OPEC+ countries were more than offset by higher production in North America, resulting in a slight increase in oil supply overall. The production of liquid gas also increased slightly, while Russian gas exports via pipeline fell significantly. The low production growth in industry and the warm weather reduced demand for gas. The weak global industrial economy was also reflected in only slight production growth in other industrial non-energy raw materials.

Production in **health and nutrition** almost stagnated in 2023, at 0.7% (2022: +2.7%). In the pharmaceutical industry, production stagnated as well: Growth in the E.U. and North America was offset by a decline in Asia. Production in the food industry declined in the E.U. and in North America against the backdrop of high food inflation rates. Conversely, production rose moderately in Asia.

At 3.1%, **agriculture** grew more strongly than in the previous year (+1.9%). While production in Asia saw growth of 3.5%, growth in North and South America accelerated following the long periods of drought in 2022, from -1.6% in 2022 to 2.8% in 2023. Agricultural production in Eastern Europe also grew again by nearly 4% following the war-related decline of 1.2% in the previous year.

Trends in the chemical industry

Global growth in the chemical industry was very weak overall in 2023 (2023: +1.7%, 2022: +2.1%), but varied greatly from region to region. While the chemical industry in China grew dynamically by 7.5%[1] on the basis of official figures, it shrank by 3.9% in the rest of the world as a whole.

Production losses were especially severe in the **E.U**. Following a decline of 5.2% in 2022, production recorded a further decline of 7.6% in 2023. In **Germany**, production fell even more sharply by 9.7% (after -12.1% in 2022). These sharp declines primarily reflect base effects from the previous year. In view of the overall weak demand for industrial goods, the correspondingly low demand for intermediate inputs from the chemical industry and ongoing import pressure from China, production in the E.U. and Germany remained largely at the low level reached in the fourth quarter of 2022. The decline in production in the second half of 2022 due to energy costs could not be compensated for in this weak environment. In addition, gas prices in Northwestern Europe remained high by international standards, even though they had dropped below pre-Ukraine war levels by 2023.

In the **United Kingdom**, chemical production decreased by 8.4% (2022: -4.5%).

Despite low energy prices internationally, chemical production in the **United States** also essentially trended sideways over the course of the year and closed the year with a decline in production of 1.0% (2022: +2.2%). One major reason for the weak development was the low domestic demand for equipment for private households and from the construction industry.

In contrast, chemical production in **Asia** expanded by 4.6%. This varied widely by country. In **China**, the world's largest chemical market, production expanded by 7.5% (2022: +6.6%).[1] In India, production largely stagnated. Conversely, Japan (-6.6%), South Korea (-10.0%) and Taiwan (-10.5%) recorded sharp declines in production.

Chemical production in the **Middle East** also decreased by 1.5%. Almost all countries in the region recorded negative growth rates. At 7.7%, Turkey saw the sharpest decline.

Chemical production (excluding pharmaceuticals)

Real change compared with previous year

	2023	2022
World	**1.7%**	**2.1%**
European Union	-7.6%	-5.2%
United States	-1.0%	2.2%
Emerging markets of Asia excluding China	-2.4%	-1.7%
China[1]	7.5%	6.6%
Japan	-6.6%	-3.7%
South America	-4.7%	2.5%

1 Our own estimate of the growth rate, based on official statistics from China for the overall market and individual products.

Price trends for key commodities

Demand for oil increased by 2% in 2023, remaining slightly below the growth rate of global GDP. The main driver of the additional demand was China, which accounted for almost half of the growth in demand. Demand from the transportation sector increased sharply after the end of the zero-COVID policy. Furthermore, Chinese oil reserves increased considerably compared with the previous year.

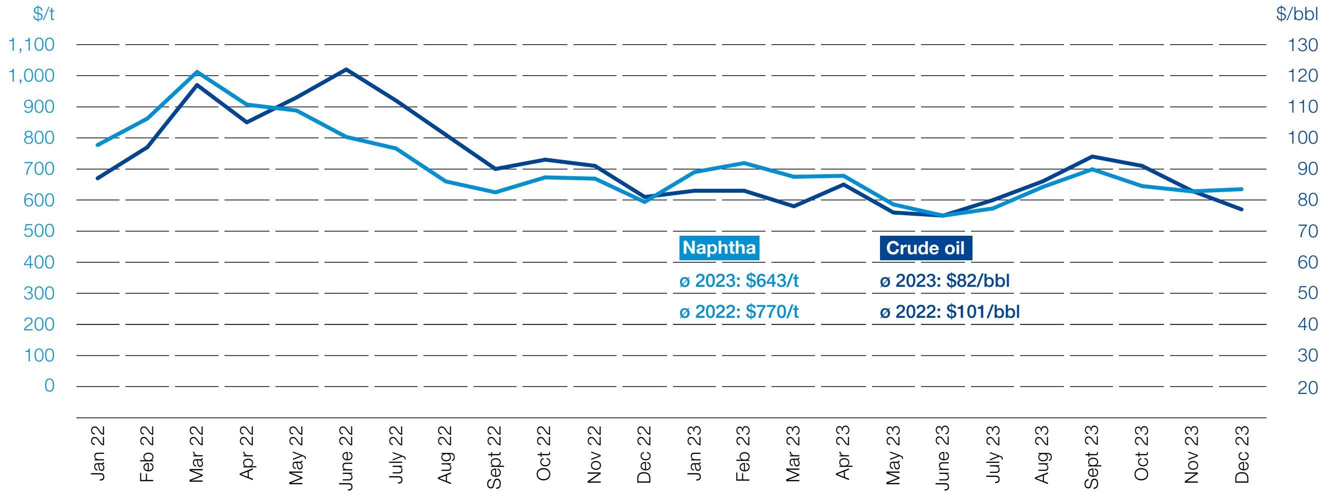
There were contrasting developments on the supply side of the oil market: While the OPEC countries, including Saudi Arabia in particular, reduced their production in order to stabilize the oil price in the weak economic environment, production in the United States increased considerably. Despite the sanctions against Russia, the Russian oil supply remained largely unchanged. As a result, the oil price fell from $101 per barrel of Brent crude in 2022 to $82 per barrel in 2023. The price of oil fluctuated over the course of the year between $75 per barrel in June and $94 per barrel in September. Over the course of the year, the average monthly price for the chemical raw material naphtha ranged between $550 per metric ton in June and $719 per metric ton in February. At $643 per metric ton, the annualized average price of naphtha in 2023 was around 16% lower than in 2022 ($770 per metric ton).

The price of gas in Northwestern Europe fell considerably in 2023 to around one-third of the prior-year level, as gas consumption declined considerably due to savings made by private households, industry and commerce, combined with lower demand in industry and exceptionally high average temperatures. At the same time, the infrastructure for the supply of liquid gas was expanded in Northwestern Europe. Gas storage levels were therefore above their respective seasonal long-term averages throughout the year. The average gas price in Northwestern Europe in 2023 was €40.52 per MWh ($12.83 per mmBtu). In the previous year, it averaged €124.16 per MWh ($38.01 per mmBtu) due to the abrupt interruption in pipeline supplies from Russia. Fluctuations in the price of gas were also considerably lower than in the previous year. The highest monthly average was reached in January at €62.82 per MWh ($19.83 per mmBtu), while the lowest was recorded in July at €29.37 per MWh ($9.52 per mmBtu).

The average price of gas in the United States was $2.54 per mmBtu, likewise considerably below the prior-year level ($6.36 per mmBtu). Gas prices in China averaged around $12.77 per mmBtu nationally (2022: $12.21 per mmBtu).

Price trends for crude oil (Brent) and naphtha

$/barrel, $/metric ton



Results of Operations

Continued high inflation and higher interest rates as well as increasing geopolitical tensions led to economic uncertainty and dampened demand in many sectors. As a result, the global economy as well as global industrial and chemical production grew in part at a considerably more moderate pace than in the previous year. In this market environment, BASF's business also largely fell short of expectations: Sales, EBIT before special items and ROCE declined considerably overall compared with the 2022 business year. By contrast, the Agricultural Solutions and Surface Technologies segments increased their EBIT before special items considerably and slightly, respectively, in this challenging market environment.

Business reviews by segment can be found from page 74 onward

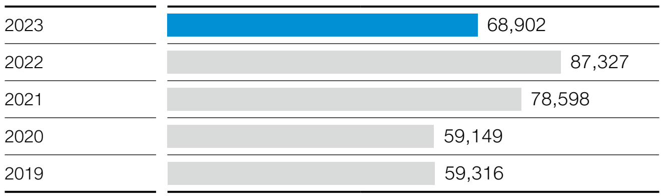
For more information on the development of CO_2 emissions, see page 102 onward

At a glance

- Sharp declines in sales, EBIT before special items and ROCE
- Earnings per share of €0.25; adjusted earnings per share of €2.78

Sales amounted to €68,902 million in the 2023 business year – a decrease of €18,424 million compared with the previous year. This sales development was mainly driven by considerably lower prices and volumes. Lower raw materials prices in particular led to lower prices in almost all segments. Considerable price increases in the Agricultural Solutions segment were unable to compensate for this. Sales volumes fell significantly in all segments as a result of weak demand from many of our customer industries. Currency effects, mainly relating to the Chinese renminbi, also weighed down sales performance. Portfolio effects, mainly in the Industrial Solutions segment and especially due to the sale of the kaolin minerals business as of September 30, 2022, also had a negative impact on sales.

Sales
Million €

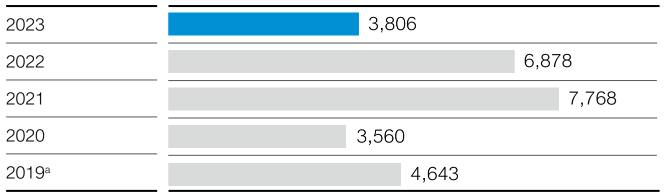


Factors influencing sales of the BASF Group

	Change in million €	Change in %
Volumes	-7,368	-8.4%
Prices	-8,703	-10.0%
Currencies	-2,141	-2.5%
Acquisitions	–	–
Divestitures	-212	-0.2%
Total change in sales	**-18,424**	**-21.1%**

Income from operations (EBIT) before special items declined by €3,072 million compared with the prior-year figure, to €3,806 million, primarily due to a considerably lower earnings contribution from Chemicals and Materials. EBIT before special items decreased in the Chemicals segment, primarily due to lower margins and volumes, as well as lower contributions from shareholdings accounted for using the equity method. Earnings were lower in the Materials segment, largely as a result of lower polyamide and ammonia margins. The Nutrition & Care and Industrial Solutions segments' EBIT before special items was considerably lower than the prior-year figure, mainly as a result of lower volumes and margins. Conversely, the Agricultural Solutions segment strongly increased EBIT before special items, primarily as a result of price increases and a one-time payment that was received. The slight earnings growth in Surface Technologies was attributable to the considerably higher EBIT before special items in the Coatings division due to price and volume increases, which more than compensated for the significant decline in earnings of the Catalysts division. EBIT before special items attributable to Other improved considerably, mainly as a result of higher income from other businesses and lower corporate research costs.

EBIT before special items
Million €



a EBIT before special items for 2019 has been restated to reflect the reclassification of income from non-integral companies accounted for using the equity method to net income from shareholdings.

Special items[1] in EBIT amounted to -€1,566 million in 2023 compared with -€330 million in the previous year. Special expenses resulted in particular from other charges due to impairments totaling around €1.1 billion. These comprised impairments on property, plant and equipment in the Surface Technologies segment, especially in the battery materials business, on plants in the Agricultural Solutions segment, and on tangible and intangible assets in the Materials segment. Furthermore, special charges totaling €396 million (previous year: €249 million) resulted from restructuring measures, in particular in connection with the cost savings program focusing on Europe, the adjustments to production structures at the Verbund site in Ludwigshafen, Germany, and the carve-out of the BASF Environmental Catalyst and Metal Solutions unit within the Catalysts division. Special charges from divestitures amounted to €59 million after a special income of €174 million in 2022. Integration costs of €17 million resulted mainly from the integration of the BASF Shanshan companies acquired in 2021.

1 Special items may arise from the integration of acquired businesses, from restructuring measures, gains or losses resulting from divestitures and sales of shareholdings, impairments and other expenses and income that arise outside of ordinary business activities.

Special items

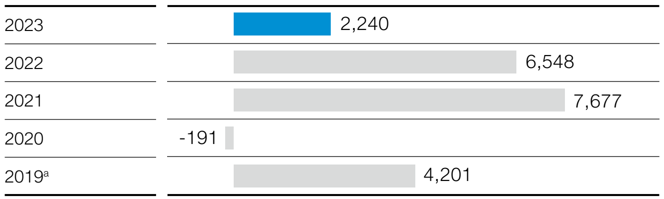
Million €

	2023	2022
Restructuring measures	-396	-249
Integration costs	-17	-32
Divestitures	-59	174
Other charges and income	-1,093	-222
Total special items in EBIT	**-1,566**	**-330**
of which impairments and reversals of impairments	-1,076	-316
Total special items in EBITDA	-490	-15

At €2,240 million, **EBIT** for the BASF Group in 2023 was considerably lower than the prior-year figure. This figure includes income from integral companies accounted for using the equity method, which declined by €194 million to €192 million. This decline was mainly attributable to the €175 million lower earnings contribution by BASF-YPC Company Ltd., Nanjing, China.

EBIT

Million €



[a] EBIT for 2019 has been restated to reflect the reclassification of income from non-integral companies accounted for using the equity method to net income from shareholdings.

We use the indicator **return on capital employed (ROCE)** to measure our rate of return. ROCE fell to 4.5% (2022: 10.0%) due to a sharp decline in earnings.[1]

For more information on the calculation of ROCE, see page 39

The calculation of EBIT as part of our statement of income is shown in the Consolidated Financial Statements on page 227

ROCE

Million €

		2023	2022
EBIT of BASF Group		2,240	6,548
– EBIT of Other		-778	-523
EBIT of the segments		3,018	7,070
Cost of capital basis of segments, average of month-end figures		**66,687**	**70,982**
ROCE	**%**	**4.5**	**10.0**

Capital employed

Million €

	2023	2022
Intangible assets	12,733	13,576
+ Property, plant and equipment	22,425	21,374
+ Integral investments accounted for using the equity method	1,753	2,052
+ Inventories	14,961	15,608
+ Accounts receivable, trade	11,989	13,919
+ Current and noncurrent other receivables and other assets[a]	2,827	4,309
+ Assets of disposal groups	–	144
Cost of capital basis of segments, average of month-end figures	**66,687**	**70,982**
+ Deviation from cost of capital basis at closing rates as of December 31	-3,959	-3,300
+ Assets not included in cost of capital basis	14,667	16,791
Assets of the BASF Group as of December 31	**77,395**	**84,472**

[a] Including customer/supplier financing and other adjustments

1 For more information on net assets, see page 66 onward

Net income from shareholdings, financial result and income after taxes

Net income from shareholdings amounted to -€200 million in 2023 after -€4,939 million in 2022. In the previous year, net income from shareholdings was dampened by special charges of €6.3 billion, in particular from non-cash-effective impairments on Wintershall Dea, a non-integral shareholdings accounted for using the equity method, primarily in connection with the termination of business activities in Russia. Wintershall Dea's earnings contribution in 2023 amounted to -€130 million and included special items of -€164 million for impairments and reversals of impairments as well as for provisions as part of the planned adjustment of the corporate structure.

Compared with the previous year, the €202 million decrease in the **financial result** was partly due to the €105 million lower interest result. Higher interest expenses for financial indebtedness, primarily as a result of higher interest rates, were only partially offset by higher interest income. In addition, the other financial result decreased by €97 million, mainly due to higher net expenses in connection with bonds in foreign currency and related hedging instruments.

Overall, **income before income taxes** amounted to €1,420 million in 2023, after €1,190 million in the previous year. Income tax expenses were €1,041 million (2022: €1,581 million). The tax rate of 73.3% was mainly due to valuation allowances on deferred tax assets on loss carryforwards as well as their nonrecognition, particularly in Germany.

The decrease in **noncontrolling interests** by €82 million to €154 million primarily resulted from lower earnings contributions from the BASF Shanshan companies in China.

Net income was €225 million compared with -€627 million in 2022.

Earnings per share amounted to €0.25 (2022: -€0.70).

For more information on the items in the statement of income, see the Notes to the Consolidated Financial Statements on page 227

For more information on the tax rate, see Note 12 to the Consolidated Financial Statements from page 260 onward

Additional indicators for results of operations

We also use alternative performance measures (APMs) to steer the BASF Group. Investors, analysts and rating agencies use them to assess our performance. These are not defined by IFRS. As such, the methods of calculation can differ from those used by other companies. Alternative performance measures for the results of operations are EBIT before special items, EBITDA before special items, EBITDA, the EBITDA margin before special items and adjusted earnings per share. Other APMs are net debt,[1] free cash flow[1] and capital expenditures (capex).[2]

From the 2024 reporting year onward, we will use **EBITDA before special items** and **free cash flow** as the new most important key performance indicators for short and medium-term steering of the BASF Group. A detailed explanation of how these key performance indicators are calculated can be found in "Our Steering Concept" from page 37 onward.

EBITDA before special items in 2023 was €3,092 million below the 2022 figure at €7,671 million; **EBITDA** decreased by €3,568 million to €7,180 million. The **EBITDA margin before special items** was 11.1% in 2023 compared with 12.3% in the previous year.

EBITDA before special items
Million €

		2023	2022
EBIT		2,240	6,548
– Special items		-1,566	-330
EBIT before special items		**3,806**	**6,878**
+ Depreciation and amortization		3,798	3,827
+ Impairments and reversals of impairments on property, plant and equipment and intangible assets before special items		67	57
Depreciation, amortization, impairments and reversals of impairments on property, plant and equipment and intangible assets before special items		**3,865**	**3,885**
EBITDA before special items		**7,671**	**10,762**
Sales revenue		68,902	87,327
EBITDA margin before special items	%	**11.1**	**12.3**

EBITDA
Million €

	2023	2022
EBIT	2,240	6,548
+ Depreciation and amortization	3,798	3,827
+ Impairments and reversals of impairments on intangible assets and property, plant and equipment	1,143	373
Depreciation, amortization, impairments and reversals of impairments on property, plant and equipment and intangible assets	**4,941**	**4,200**
EBITDA	**7,180**	**10,748**

1 For more information on these indicators, see the Financial Position from page 68 onward
2 For more information on capex, see Material Investments and Portfolio Measures on page 42 and Our Steering Concept on page 38

Adjusted earnings per share

Million €

		2023	2022
Income after taxes		**379**	**-391**
– Special items[a]		-1,811	-6,637
+ Amortization, impairments and reversals of impairments on intangible assets		879	652
– Amortization, impairments and reversals of impairments on intangible assets contained in special items		257	0
– Adjustments to income taxes		171	372
Adjusted income after taxes		**2,640**	**6,526**
– Adjusted noncontrolling interests		156	248
Adjusted net income		**2,484**	**6,278**
Weighted average number of outstanding shares (in thousands)[b]		892,641	901,754
Adjusted earnings per share	**€**	**2.78**	**6.96**

a Includes special items in net income from shareholdings and in the financial result totaling -€245 million for 2023 and -€6,307 million special items in net income from shareholdings for 2022.
b Due to the share buyback program terminated in February 2023, the weighted average number of outstanding shares in the 2023 business year was 892,640,562 and 901,754,219 in the 2022 business year.

Compared with earnings per share, **adjusted earnings per share** is firstly adjusted for special items. Amortization, impairments and reversals of impairments on intangible assets are then eliminated. Amortization of intangible assets primarily results from the purchase price allocation following acquisitions and is therefore of a temporary nature. The effects of these adjustments on income taxes and on noncontrolling interests are also considered. This makes adjusted earnings per share a suitable measure for making comparisons over time and predicting future profitability.

In 2023, adjusted earnings per share amounted to €2.78 compared with €6.96 in the previous year.

For more information on the earnings per share according to IFRS, see Note 6 to the Consolidated Financial Statements on page 248

Sales and earnings

Million €

		2023	2022	+/-
Sales		68,902	87,327	-21.1%
Income from operations before depreciation, amortization and special items		7,671	10,762	-28.7%
Income from operations before depreciation and amortization (EBITDA)		7,180	10,748	-33.2%
EBITDA margin before special items	%	11.1	12.3	–
Depreciation and amortization[a]		4,941	4,200	17.6%
Income from operations (EBIT)		2,240	6,548	-65.8%
Special items		-1,566	-330	-374.2%
EBIT before special items		3,806	6,878	-44.7%
Income before income taxes		1,420	1,190	19.3%
Income after taxes		379	-391	.
Net income		225	-627	.
Earnings per share	€	0.25	-0.70	.
Adjusted earnings per share	€	2.78	6.96	-60.1%

a Depreciation and amortization of property, plant and equipment and intangible assets (including impairments and reversals of impairments)

Sales and earnings by quarter in 2023[a]

Million €

		Q1	Q2	Q3	Q4	Full year
Sales		19,991	17,305	15,735	15,871	68,902
Income from operations before depreciation, amortization and special items		2,864	1,944	1,545	1,317	7,671
Income from operations before depreciation and amortization (EBITDA)		2,811	1,908	1,363	1,099	7,180
Depreciation and amortization[b]		944	934	969	2,094	4,941
Income from operations (EBIT)		1,867	974	394	-995	2,240
Special items		-65	-33	-181	-1,287	-1,566
EBIT before special items		1,931	1,007	575	292	3,806
Income before income taxes		1,930	851	-38	-1,323	1,420
Income after taxes		1,604	555	-209	-1,571	379
Net income		1,562	499	-249	-1,587	225
Earnings per share	€	1.75	0.56	-0.28	-1.78	0.25
Adjusted earnings per share	€	1.93	0.72	0.32	-0.18	2.78

Sales and earnings by quarter in 2022[a]

Million €

		Q1	Q2	Q3	Q4	Full year
Sales		23,083	22,974	21,946	19,323	87,327
Income from operations before depreciation, amortization and special items		3,743	3,293	2,325	1,401	10,762
Income from operations before depreciation and amortization (EBITDA)		3,709	3,396	2,255	1,389	10,748
Depreciation and amortization[b]		924	1,046	960	1,270	4,200
Income from operations (EBIT)		2,785	2,350	1,294	119	6,548
Special items		-34	11	-53	-254	-330
EBIT before special items		2,818	2,339	1,348	373	6,878
Income before income taxes		1,878	2,658	1,239	-4,585	1,190
Income after taxes		1,321	2,179	952	-4,843	-391
Net income		1,221	2,090	909	-4,847	-627
Earnings per share	€	1.34	2.31	1.01	-5.42	-0.70
Adjusted earnings per share	€	2.70	2.37	1.77	0.09	6.96

a Quarterly results not audited
b Depreciation and amortization of property, plant and equipment and intangible assets (including impairments and reversals of impairments)

Net Assets

Assets

	December 31, 2023		December 31, 2022	
	Million €	%	Million €	%
Intangible assets	12,216	15.8	13,273	15.8
Property, plant and equipment	24,080	31.1	22,967	27.3
Integral investments accounted for using the equity method	2,054	2.7	2,356	2.8
Non-integral investments accounted for using the equity method	4,518	5.8	4,645	5.5
Other financial assets	1,099	1.4	1,120	1.3
Deferred tax assets	617	0.8	880	1.0
Other receivables and miscellaneous assets	1,339	1.7	1,810	2.2
Noncurrent assets	**45,923**	**59.3**	**47,050**	**55.7**
Inventories	13,876	17.9	16,028	19.0
Accounts receivable, trade	10,414	13.5	12,055	14.3
Other receivables and miscellaneous assets	4,504	5.8	6,591	7.8
Marketable securities	53	.	232	0.3
Cash and cash equivalents	2,624	3.4	2,516	3.0
Current assets	**31,472**	**40.7**	**37,422**	**44.4**
Total assets	**77,395**	**100.0**	**84,472**	**100.0**

Assets

At a glance

- Decrease in total assets of €7.1 billion, mainly due to lower working capital
- Noncurrent assets slightly below prior-year figure at €45.9 billion

Total assets amounted to €77,395 million as of December 31, 2023, €7,077 million below the prior year-end figure. Lower current assets were the main reason for the decline.

Noncurrent assets declined by €1,127 million compared with December 31, 2022, to €45,923 million. The decrease of intangible assets amounted to €1,056 million and was mainly attributable to amortization of €612 million and impairments of €267 million. Currency effects of €291 million also contributed to the decline. Additions of €142 million had an offsetting effect.

Property, plant and equipment increased by €1,113 million, mainly due to additions of €5,864 million, particularly in connection with the construction of our Verbund site in Zhanjiang, China. Depreciation amounted to €4,062 million and included impairments of €883 million. A currency effect of €555 million counteracted the increase in property, plant and equipment.

Compared with the end of the previous year, the carrying amounts of integral investments accounted for using the equity method declined by €302 million to €2,054 million. This resulted primarily from a lower carrying amount of BASF-YPC Company Ltd., Nanjing, China, due to dividend payments and currency effects.

The carrying amounts of non-integral shareholdings accounted for using the equity method as of December 31, 2023, were €127 million below the prior year-end figure, in particular due to the decline in the carrying amount of Wintershall Dea to €4,251 million (previous year: €4,364 million).

The €263 million decrease in deferred tax assets largely resulted from valuation allowances on deferred taxes in Germany.

Noncurrent other receivables and miscellaneous assets amounted to €1,339 million, €471 million below the figure of December 31, 2022, which was mainly attributable to lower defined benefit assets.

Due to our active working capital management, **current assets** decreased by €5,950 million compared with December 31, 2022, in particular as a result of the reduction in inventories by €2,152 million. All segments contributed to this, in particular Materials, Nutrition & Care and Chemicals.

We reduced trade accounts receivable by €1,641 million compared with the previous year, primarily in the Surface Technologies, Materials and Nutrition & Care segments.

Other current receivables and miscellaneous assets were €2,087 million below the prior-year figure, which was mainly attributable to lower precious metal trading items and lower tax refund claims.

The value of marketable securities decreased by €179 million compared with December 31, 2022, while cash and cash equivalents increased by €109 million to €2,624 million.

For more information on the composition and development of individual asset items, see the Notes to the Consolidated Financial Statements from page 234 onward

Financial Position

Equity and liabilities

	December 31, 2023		December 31, 2022	
	Million €	%	Million €	%
Subscribed capital	1,142	1.5	1,144	1.4
Capital reserves	3,139	4.1	3,147	3.7
Retained earnings	32,517	42.0	35,453	42.1
Other comprehensive income	-1,521	-2.0	-171	-0.2
Noncontrolling interests	1,368	1.8	1,350	1.6
Equity	**36,646**	**47.3**	**40,923**	**48.4**
Provisions for pensions and similar obligations	2,896	3.7	2,810	3.3
Deferred tax liabilities	1,140	1.5	1,543	1.8
Tax provisions	335	0.4	330	0.4
Other provisions	1,684	2.2	1,650	2.0
Financial indebtedness	17,085	22.1	15,171	18.0
Other liabilities	1,739	2.3	1,606	1.9
Noncurrent liabilities	**24,879**	**32.2**	**23,110**	**27.4**
Accounts payable, trade	6,741	8.7	8,434	10.0
Provisions	3,214	4.2	3,799	4.5
Tax liabilities	801	1.0	995	1.2
Financial indebtedness	2,182	2.8	3,844	4.6
Other liabilities	2,931	3.8	3,368	4.0
Current liabilities	**15,871**	**20.5**	**20,440**	**24.3**
Total equity and liabilities	**77,395**	**100.0**	**84,472**	**100.0**

Equity and liabilities

At a glance

- Equity ratio of 47.3% slightly below prior-year level
- Net debt of €16,590 million almost unchanged
- Cash flows from operating activities above previous year

Equity decreased by €4,277 million compared with the previous year to €36,646 million. Retained earnings were €2,937 million below the figure as of December 31, 2022. This resulted from the dividends paid to the shareholders of BASF SE for 2022, which amounted to €3,035 million, while the net income amounted to €225 million. Other comprehensive income decreased by €1,349 million, in particular as a result of currency effects and actuarial losses.

At 47.3%, the equity ratio was slightly below the prior-year level (48.4%).

Noncurrent liabilities increased by €1,769 million compared with the 2022 year-end. This was mainly attributable to the €1,914 million increase in noncurrent financial indebtedness. The increase primarily resulted from the issue of three eurobonds with a nominal value totaling €1.5 billion and the taking up of loans amounting to around €1.8 billion. The reclassification of a 500 million eurobond and two loans totaling €760 million from noncurrent to current financial indebtedness as well as exchange rates and interest had an offsetting effect.

The €133 million increase in other noncurrent liabilities compared with the prior-year figure largely resulted from higher lease liabilities.

At €2,896 million, provisions for pensions and similar obligations were slightly above the prior year-end figure. The rise in obligations due to lower discount rates in all relevant currency zones was largely offset by the return on plan assets and lower defined benefit assets.

Tax and other provisions were almost on prior-year level.

Current liabilities decreased by €4,569 million to €15,871 million compared with December 31, 2022, largely as a result of the considerable decrease in trade accounts payable by €1,693 million and current financial indebtedness by €1,662 million. The decrease in financial indebtedness was mainly due to the scheduled repayment of a U.S. dollar bond and a eurobond as well as a GBP bond with an aggregate carrying amount of about €2.1 billion. Furthermore, commercial paper at BASF SE were reduced by around €650 million. This was partially offset by the aforementioned reclassifications of a bond and two loans.

Current provisions were €584 million below the prior-year figure, largely as a result of lower provisions for bonus payments. Slightly higher provisions for rebates had an offsetting effect.

Other liabilities declined by €437 million year on year, mainly due to lower advance payments received and lower negative fair values of derivatives.

Tax liabilities decreased by €194 million.

Net debt amounted to €16,590 million on December 31, 2023, and was therefore almost on a level with the prior year-end.

For more information on the composition and development of individual asset items, see the Notes to the Consolidated Financial Statements from page 234 onward

For more information on the development of the balance sheet, see the Ten-Year Summary on page 317

Net debt

Million €

	December 31, 2023	December 31, 2022
Noncurrent financial indebtedness	17,085	15,171
+ Current financial indebtedness	2,182	3,844
Financial indebtedness	**19,268**	**19,016**
– Marketable securities	53	232
– Cash and cash equivalents	2,624	2,516
Net debt	**16,590**	**16,268**

Off-balance sheet obligations

Off-balance sheet obligations mainly relate to long-term purchase obligations for raw materials and long-term supply agreements for electricity from renewable sources. In addition, obligations exist in connection with initiated or planned investment projects (2023: €11,064 million), primarily in connection with the construction of the new BASF Verbund site in Zhanjiang, China.

For more information, see Note 24 to the Consolidated Financial Statements on page 290 and the forecast from page 170 onward

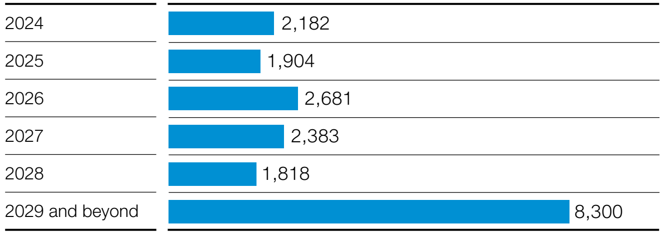
Financing policy and credit ratings

Our financing policy aims to ensure our solvency at all times, limiting the risks associated with financing and optimizing our cost of capital. We preferably meet our external financing needs on the international capital markets.

BASF continues to strive for a solid A rating, which ensures unrestricted access to financial and capital markets. Our financing measures are aligned with our operational business planning as well as the company's strategic direction and also ensure the financial flexibility to take advantage of strategic options.

Maturities of financial indebtedness

Million €

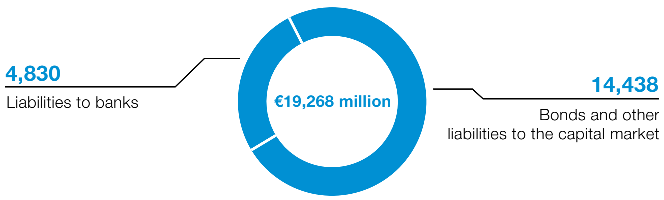


BASF enjoys good credit ratings, especially compared with competitors in the chemical industry. Fitch confirmed its rating of A/F1/outlook stable on November 8, 2023. Moody's rating of A3/P-2/outlook stable from September 4, 2023, also remained unchanged. Standard & Poor's adjusted its rating of A/A-1/outlook negative to A-/A-2/outlook stable on August 2, 2023.

We have solid financing, both for ongoing business and for investment projects initiated or planned. Corporate bonds form the basis of our medium to long-term debt financing. These are issued in euros and other currencies with different maturities as part of our €20 billion debt issuance program. The goal is to create a balanced maturity profile, diversify our financing and optimize our debt capital financing conditions.

For short-term financing, we use BASF SE's global commercial paper program, which has an issuing volume of up to $12.5 billion. As of December 31, 2023, no commercial paper were outstanding under this program. A firmly committed, syndicated credit line of €6 billion with a term until 2026 covers the repayment of outstanding commercial paper. It can also be used for general company purposes. This credit line was not used at any point in 2023. In 2023, BASF Integrated Site (Guangdong) Co. Ltd., China, signed a syndicated bank term loan facility totaling 40 billion Chinese renminbi with a maturity of 15 years for the construction of the Verbund site in Zhanjiang. Of this amount, 1 billion Chinese renminbi (€127 million) was utilized as of December 31, 2023. Our external financing is largely independent of short-term fluctuations in the credit markets.

Financing instruments
Million €



BASF Group's most important financial contracts contain no side agreements with regard to specific financial ratios (financial covenants) or compliance with a specific rating (rating trigger). To minimize risks and leverage internal optimization potential within the Group, we bundle the financing, financial investments and foreign currency hedging of BASF SE's subsidiaries within the BASF Group where possible. Foreign currency risks are primarily hedged centrally using derivative financial instruments in the market.

Our interest risk management generally pursues the goal of reducing interest expenses for the BASF Group and limiting interest risks. Interest rate hedging transactions are therefore conducted with banks in order to turn selected liabilities to the capital market from fixed to variable interest rates or vice versa.

For more information on the financing tools and hedging instruments used, see Note 20 from page 280 onward and Note 25 from page 291 onward in the Notes to the Consolidated Financial Statements

Statement of cash flows

Cash flows from operating activities amounted to €8,111 million, compared with €7,709 million in the previous year. The improvement was primarily due to cash inflow from net working capital. Net income increased by €852 million year on year to €225 million. Depreciation and amortization of property, plant and equipment and intangible assets were €740 million above the prior-year figure, in particular due to impairments. The non-cash-effective equity results improved by €4,577 million. In the previous year, these included the negative earnings contribution of -€4,853 million from Wintershall Dea AG, Kassel/Hamburg, Germany. The adjusted earnings for the aforementioned noncash items therefore decreased by €2,985 million compared with the previous year.

In 2023, dividends received from investments accounted for using the equity method amounted to €622 million following €1,629 million in the previous year. The main reason for the decline was the €716 million decrease in dividend payments from Wintershall Dea AG.

The reduction in inventories in 2023 released cash amounting to €1,896 million. In contrast, €1,991 million was tied up in an inventories buildup in the previous year. The change in trade accounts receivable led to a cash inflow of €1,443 million, an increase of €1,223 million compared with the previous year. The cash outflow from the trade accounts payable change amounted to €1,544 million, compared with an inflow of €451 million in the previous year. Funds amounting to €1,918 million were released from other operating assets, an increase of €1,621 million compared with 2022. The increase in cash released was mainly the result of a stronger reduction in precious and industrial metal trading items and tax receivables. The change in other operating liabilities and pension provisions led to a cash outflow of €730 million, an increase of €246 million compared with the previous year.

Cash flows from investing activities totaled -€4,991 million in 2023, after -€3,778 million in the previous year. Payments made for property, plant and equipment and intangible assets rose by €1,020 million to €5,395 million, mainly due to investments in the new Verbund site in Zhanjiang, China. In 2023, cash flows from investing activities included payments made for acquisitions of €5 million. As in the previous year, these related to an adjusted purchase price payment for Solvay's polyamide business. Payments received for divestitures in the amount of €32 million resulted from minor transactions. In the previous year, payments received in the amount of €691 million resulted primarily from the sale of shares in the Hollandse Kust Zuid wind farm and the sale of the kaolin minerals business.

Cash flows from financing activities amounted to -€2,905 million. In addition to the payment of dividends in the amount of €3,094 million (2022: €3,248 million), BASF bought back own shares worth €70 million (2022: €1,331 million). This was partially offset by net additions to financial and similar liabilities of €259 million (2022: €565 million).

Free cash flow, which remains after deducting payments made for property, plant and equipment and intangible assets from cash flows from operating activities, represents the financial resources remaining after investments. It amounted to €2,715 million in 2023 following €3,333 million in the previous year.

For more information on the statement of cash flows, see Note 26 to the Consolidated Financial Statements from page 306 onward

Statement of cash flows

Million €

	2023	2022
Net income	225	-627
Depreciation of property, plant and equipment and amortization of intangible assets	4,941	4,200
Changes in net working capital[a]	1,795	-1,321
Miscellaneous items[a]	1,150	5,456
Cash flows from operating activities	**8,111**	**7,709**
Payments made for property, plant and equipment and intangible assets	-5,395	-4,375
Acquisitions/divestitures	27	678
Changes in financial assets and miscellaneous items	377	-81
Cash flows from investing activities	**-4,991**	**-3,778**
Capital increases/repayments and other equity transactions	-70	-1,331
Changes in financial and similar liabilities	259	565
Dividends	-3,094	-3,248
Cash flows from financing activities	**-2,905**	**-4,013**
Cash-effective changes in cash and cash equivalents	215	-83
Changes in cash and cash equivalents from foreign exchange rates and changes in the scope of consolidation	-106	-25
Cash and cash equivalents at the beginning of the year	2,516	2,624
Cash and cash equivalents at the end of the year	**2,624**	**2,516**

a The cash flow statement has been adjusted. Net working capital and miscellaneous items have been redefined. Net working capital now comprises inventories and trade accounts receivable less trade accounts payable. The prior-year figures have been restated accordingly.

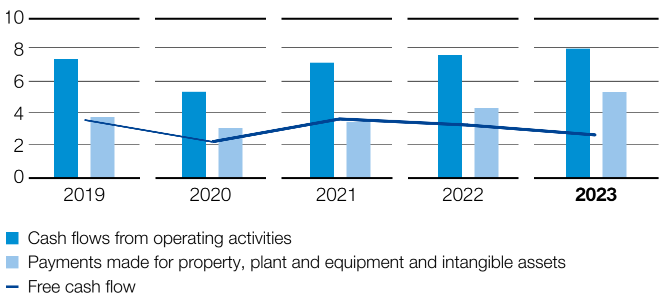
Free cash flow

Million €

	2023	2022
Cash flows from operating activities	8,111	7,709
– Payments made for property, plant and equipment and intangible assets	5,395	4,375
Free cash flow	**2,715**	**3,333**

Cash flow

Billion €



Actual Development Compared with Outlook for 2023

Sales, earnings and ROCE forecast for the BASF Group

In 2023, the BASF Group's **sales** decreased to €68.9 billion and were thus considerably below the forecast range at the beginning of the year of €84 billion to €87 billion and below the forecast range adjusted in July 2023 of €73 billion to €76 billion. This was the result of lower sales in all segments. Sales performance in the Chemicals, Materials, Nutrition & Care and Agricultural Solutions segments in particular was weaker than initially expected. Sales also declined considerably in Other, after we had expected slight sales growth in February 2023. The decline in sales resulted mainly from significantly lower prices than anticipated, primarily as a result of lower raw materials prices. Prices declined in all segments except for Agricultural Solutions. Contrary to our expectations, sales volumes decreased sharply in all segments, especially due to lower demand. Portfolio effects had a slightly negative impact, as expected.

At €3.8 billion, **EBIT before special items** was outside both the forecast range of €4.8 billion to €5.4 billion from February 2023 and the adjusted range of €4.0 billion to €4.4 billion from July 2023. Developments in the segments varied: In the Chemicals and Materials segments, EBIT before special items declined considerably as forecast. The Industrial Solutions and Nutrition & Care segments recorded a considerably sharper decline in earnings than initially expected. In contrast, the development in the Agricultural Solutions and Surface Technologies segments and in Other were better than assumed. Agricultural Solutions exceeded our expectations and considerably increased earnings. Other also recorded a considerable increase in earnings, despite our expectations of a considerable decline. Surface Technologies slightly increased EBIT before special items and thus exceeded our forecast of a slight decline in earnings.

Forecast/actual comparison

	Sales		EBIT before special items		ROCE	
	2023 forecast	2023 actual	2023 forecast	2023 actual	2023 forecast	2023 actual
Chemicals	↘	↓	↓	↓	↓	↓
Materials	↗	↓	↓	↓	↓	↓
Industrial Solutions	↘	↓	↘	↓	↘	↓
Surface Technologies	↘	↓	↘	↗	↘	↓
Nutrition & Care	→	↓	↘	↓	↓	↓
Agricultural Solutions	↗	↘	↗	↑	↗	↘
Other	↗	↓	↓	↑	–	–
BASF Group	**€84 billion–€87 billion[a]**	**€68.9 billion**	**€4.8 billion–€5.4 billion[a]**	**€3.8 billion**	**7.2%–8.0%[a]**	**4.5%**

→ At prior-year level: no change (+/-0.0%)
↗ | ↘ Slight increase/decrease: "slight" represents a change of 0.1%-5.0% for sales; 0.1%-10.0% for earnings; 0.1 to 1.0 percentage points for ROCE
↑ | ↓ Considerable increase/decrease: "considerable" represents a change of 5.1% or higher for sales; 10.1% or higher for earnings; more than 1.0 percentage points for ROCE

a We updated our outlook in July 2023, forecasting sales of between €73 billion and €76 billion, EBIT before special items of between €4.0 billion and €4.4 billion, and a ROCE of between 6.5% and 7.1%.

Our expectations for **ROCE** were accurate in the Chemicals, Materials and Nutrition & Care segments. In the other segments, ROCE was below our expectations. Overall, ROCE for the BASF Group amounted to 4.5%, below the cost of capital rate of 9% for 2023 and below the range we had forecast in February 2023 of between 7.2% and 8.0%. The adjusted range of 6.5% to 7.1% in July 2023 was also not reached. This ROCE development was attributable to the declines in earnings in the segments, which was partly due to unexpected impairments in the fourth quarter of 2023. A considerably lower cost of capital basis was unable to compensate for this.

CO_2 emissions forecast for the BASF Group

CO_2 emissions amounted to 16.9 million metric tons, well below the forecast range in February 2023 of 18.1 million metric tons to 19.1 million metric tons and slightly below the adjusted range from July 2023 of 17.0 million metric tons to 17.6 million metric tons. The main driver for this was the reduced production volume due to persistently weak demand. We continued to use electricity from renewable sources and purchase green electricity certificates.

Capex forecast for the BASF Group

In 2023, we invested a total of €5.2 billion in property, plant and equipment, excluding additions from acquisitions, IT investments, restoration obligations and right-of-use assets arising from leases. The figure forecast in February 2023 was around €6.3 billion. The Chemicals and Surface Technologies segments as well as Other spent considerably less in 2023 than originally planned.

Sales, earnings and ROCE forecast for the segments

Sales in the **Chemicals** segment declined considerably in 2023, after we had expected a slight decline in sales at the beginning of the year. Prices declined in both operating divisions as expected, albeit to a more considerable extent than anticipated. In addition, volumes decreased considerably due to a slowdown in demand. We had initially assumed volume growth in the segment. The segment's EBIT before special items and ROCE declined considerably, as forecast.

Contrary to our assumption of slight sales growth, sales in the **Materials** segment were considerably below the prior-year level. Here, too, this was mainly due to demand- and raw materials prices-related price and volume decline after we had assumed a price increase and slight volume growth at the beginning of 2023. EBIT before special items and ROCE declined considerably as expected.

Compared with the previous year, sales in the **Industrial Solutions** segment decreased considerably, contrary to our expectation of a slight decline. This was mainly due to the sharp decline in sales volumes in the Performance Chemicals division as a result of weak demand. In February, we forecast volume growth for the division. As expected, lower volumes in the Dispersions & Resins division, lower prices in both divisions and the negative portfolio effect from the divestiture of the kaolin minerals business also had a negative impact on sales. The segment's EBIT before special items decreased significantly instead of only slightly as forecast. Both divisions contributed to this with considerably lower earnings. We had assumed a considerable increase in EBIT before special items for the Performance Chemicals division in our forecast. Contrary to our expectation of a slight decline, ROCE was also considerably below the previous year as a result of earnings development.

Sales in the **Surface Technologies** segment were considerably below the prior-year figure. We had originally assumed a slight decline in sales. While price developments in both divisions were as forecast, the Catalysts division was unable to increase volumes as expected. However, EBIT before special items rose slightly; we had initially expected a slight decrease. This was attributable to the expected considerable earnings growth in the Coatings division, which even more than compensated for the anticipated decline in earnings in the Catalysts division. ROCE was considerably lower due to impairments on property, plant and equipment, particularly in the battery materials business. We had expected a slight decline in ROCE in February.

Despite our assumption of sales on a level with the previous year, sales in the **Nutrition & Care** segment decreased considerably. The divisions recorded declines in volumes, contrary to our expectations. Prices decreased as assumed. In line with sales performance, EBIT before special items declined significantly due to volumes and margins, after we had assumed only a slight decline. ROCE was considerably below the previous year, as forecast.

Sales decreased slightly in the **Agricultural Solutions** segment and did not increase slightly as originally forecast. The expected price increases were not able to fully compensate for the unforeseen decline in sales volumes driven by a change in market dynamics. EBIT before special items increased considerably, primarily as a result of price increases and the receipt of a one-time payment. At the beginning of the year, we had only expected a slight improvement. ROCE was slightly lower, contrary to our assumption of a slight increase. This was mainly driven by impairments on production facilities in Europe as well as charges for measures in the context of the cost savings program focusing on Europe.

Sales in **Other** were significantly lower compared with the prior-year figure due to lower sales in commodity and energy trading. We had forecast a slight increase in February 2023. Contrary to expectations, EBIT before special items increased considerably. This was mainly due to a higher contribution from other businesses compared with the previous year and lower expenses for corporate research.

For more information on our forecast for 2024, see page 170 onward
For more information on investments, see page 42 onward

Business Review by Segment

GRI 304

Segments:
Chemicals
Materials
Industrial Solutions
Surface Technologies
Nutrition & Care
Agricultural Solutions

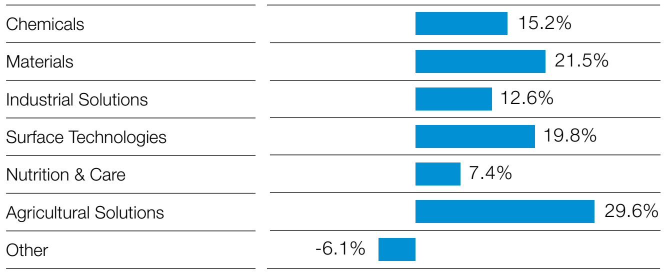
Segment overview
Million €

	Sales		Income from operations before depreciation, amortization and special items (EBITDA before special items)		Income from operations (EBIT) before special items	
	2023	2022	2023	2022	2023	2022
Chemicals	10,369	14,895	1,167	2,774	361	1,956
Materials	14,149	18,443	1,650	2,686	826	1,840
Industrial Solutions	8,010	9,992	965	1,437	625	1,091
Surface Technologies	16,204	21,283	1,520	1,464	938	902
Nutrition & Care	6,858	8,066	565	1,067	107	618
Agricultural Solutions	10,092	10,280	2,270	1,928	1,563	1,220
Other	3,220	4,368	-466	-594	-614	-749
BASF Group	**68,902**	**87,327**	**7,671**	**10,762**	**3,806**	**6,878**

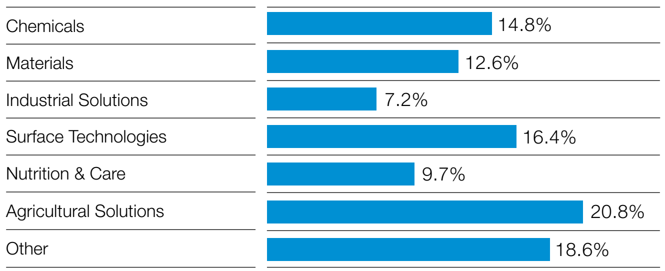
	Income from operations (EBIT)		Assets		Investments including acquisitions[a]	
	2023	2022	2023	2022	2023	2022
Chemicals	364	1,758	11,468	10,481	2,706	1,701
Materials	378	1,776	9,716	10,864	1,083	880
Industrial Solutions	660	1,097	5,576	6,318	285	322
Surface Technologies	366	612	12,657	14,899	621	740
Nutrition & Care	119	605	7,496	8,038	765	642
Agricultural Solutions	1,131	1,221	16,089	17,071	353	414
Other	-778	-523	14,393[b]	16,803[b]	195	268
BASF Group	**2,240**	**6,548**	**77,395**	**84,472**	**6,006**	**4,967**

a Additions to property, plant and equipment
b Includes assets of businesses recognized under Other and reconciliation to assets of the BASF Group

Contributions to EBITDA before special items by segment and Other in 2023



Contributions to assets by segment and Other in 2023

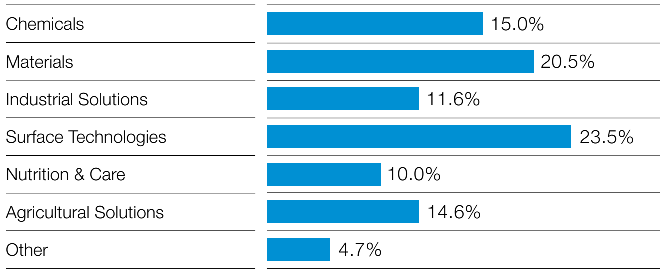


Sales[a]

Million €

	Q1		Q2		Q3		Q4	
	2023	2022	2023	2022	2023	2022	2023	2022
Chemicals	2,833	4,004	2,679	4,349	2,430	3,793	2,427	2,749
Materials	3,844	4,821	3,609	4,862	3,349	4,715	3,348	4,045
Industrial Solutions	2,143	2,493	2,050	2,643	1,948	2,687	1,869	2,169
Surface Technologies	4,578	5,457	4,226	5,446	3,887	5,333	3,514	5,047
Nutrition & Care	1,826	1,971	1,712	2,074	1,688	2,123	1,631	1,898
Agricultural Solutions	3,891	3,397	2,231	2,459	1,744	2,142	2,227	2,282
Other	877	940	799	1,142	689	1,153	855	1,133
BASF Group	**19,991**	**23,083**	**17,305**	**22,974**	**15,735**	**21,946**	**15,871**	**19,323**

Contributions to total sales by segment and Other in 2023



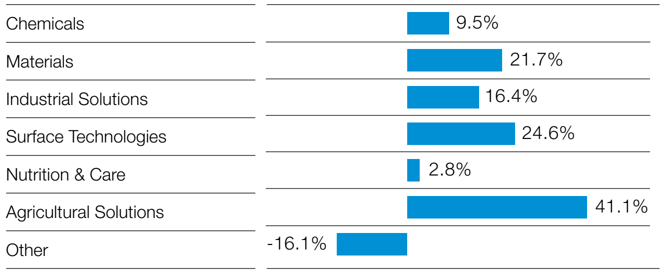
Income from operations (EBIT) before special items[a]

Million €

	Q1		Q2		Q3		Q4	
	2023	2022	2023	2022	2023	2022	2023	2022
Chemicals	241	858	202	853	47	323	-129	-79
Materials	243	751	265	668	158	277	161	144
Industrial Solutions	216	348	124	323	122	299	162	120
Surface Technologies	263	267	230	227	257	239	188	170
Nutrition & Care	82	244	33	213	-15	180	7	-19
Agricultural Solutions	1,260	868	213	223	53	7	37	122
Other	-373	-518	-60	-168	-46	22	-135	-85
BASF Group	**1,931**	**2,818**	**1,007**	**2,339**	**575**	**1,348**	**292**	**373**

a Quarterly results not audited

Contributions to EBIT before special items by segment and Other in 2023



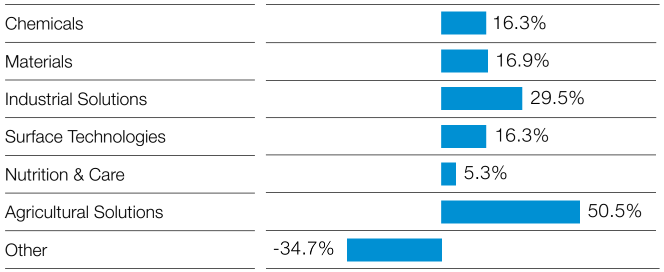
Income from operations (EBIT)[a]

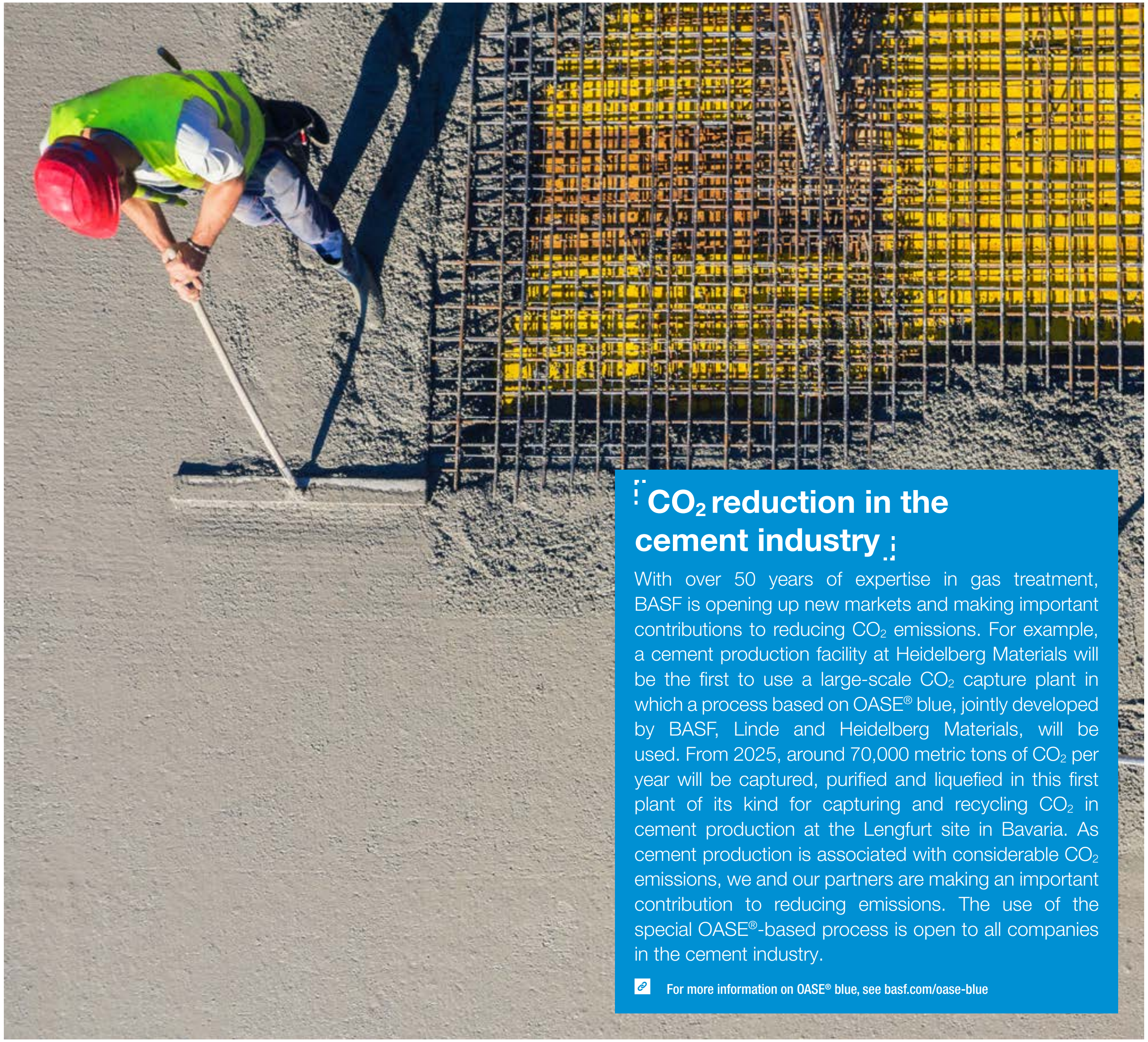
Million €

	Q1		Q2		Q3		Q4	
	2023	2022	2023	2022	2023	2022	2023	2022
Chemicals	240	857	213	851	46	322	-134	-272
Materials	246	749	228	650	108	272	-205	105
Industrial Solutions	197	343	195	310	113	309	156	135
Surface Technologies	230	260	190	81	194	197	-248	75
Nutrition & Care	80	246	61	209	-24	178	2	-28
Agricultural Solutions	1,261	863	208	210	41	-1	-380	149
Other	-388	-534	-121	40	-83	17	-186	-46
BASF Group	**1,867**	**2,785**	**974**	**2,350**	**394**	**1,294**	**-995**	**119**

a Quarterly results not audited

Contributions to EBIT by segment and Other in 2023





CO_2 reduction in the cement industry

With over 50 years of expertise in gas treatment, BASF is opening up new markets and making important contributions to reducing CO_2 emissions. For example, a cement production facility at Heidelberg Materials will be the first to use a large-scale CO_2 capture plant in which a process based on OASE® blue, jointly developed by BASF, Linde and Heidelberg Materials, will be used. From 2025, around 70,000 metric tons of CO_2 per year will be captured, purified and liquefied in this first plant of its kind for capturing and recycling CO_2 in cement production at the Lengfurt site in Bavaria. As cement production is associated with considerable CO_2 emissions, we and our partners are making an important contribution to reducing emissions. The use of the special OASE®-based process is open to all companies in the cement industry.

For more information on OASE® blue, see basf.com/oase-blue

Chemicals

The Chemicals segment consists of the Petrochemicals and Intermediates divisions. It supplies the other segments with basic chemicals and intermediates, contributing to the organic growth of our key value chains as well as to our direct customer business. Alongside internal transfers, our customers mainly come from the chemical and plastics industries. We aim to further expand our competitiveness through technological leadership and operational excellence.

For more information on the Chemicals segment's business model, see page 34 onward

Sales	Segment cash flow
€10,369 million	**-€936 million**
2022: €14,895 million	2022: €1,878 million
EBIT before special items	EBITDA before special items
€361 million	**€1,167 million**
2022: €1,956 million	2022: €2,774 million

Business review

At a glance

- Decline in sales mainly due to lower prices and volumes
- Significantly lower EBIT before special items in both operating divisions

In the Chemicals segment, **sales to third parties** amounted to €10,369 million in the 2023 business year; this corresponds to a decrease of €4,526 million compared with the prior-year figure. In the Petrochemicals division sales declined by €3,127 million to €7,418 million, while sales in the Intermediates division decreased by €1,398 million to €2,951 million.

Factors influencing sales – Chemicals

	Chemicals	Petrochemicals	Intermediates
Volumes	-11.9%	-11.7%	-12.4%
Prices	-17.1%	-16.9%	-17.6%
Currencies	-1.4%	-1.1%	-2.1%
Portfolio	–	–	–
Sales	**-30.4%**	**-29.7%**	**-32.2%**

Sales performance was mainly driven by considerably lower prices and volumes in both divisions as a result of weak demand coupled with high product availability and lower raw materials prices. As a result, prices in the Petrochemicals division fell significantly in all business areas. In the Intermediates division, increased capacities of Chinese competitors led to additional price pressure, which meant that price levels declined in the butanediol and derivatives business in particular.

Segment data – Chemicals

Million €

		2023	2022	+/-
Sales to third parties		10,369	14,895	-30.4%
of which Petrochemicals		7,418	10,546	-29.7%
Intermediates		2,951	4,349	-32.2%
Intersegment transfers		3,606	4,860	-25.8%
Sales including transfers		13,975	19,754	-29.3%
Income from operations before depreciation, amortization and special items		1,167	2,774	-57.9%
Income from operations before depreciation and amortization (EBITDA)		1,167	2,771	-57.9%
EBITDA margin before special items	%	11.3	18.6	–
Depreciation and amortization[a]		803	1,013	-20.8%
Income from operations (EBIT)		364	1,758	-79.3%
Special items		4	-198	.
EBIT before special items		361	1,956	-81.6%
Investments including acquisitions[b]		2,706	1,701	59.1%
Segment cash flow		-936	1,878	.
Assets		11,468	10,481	9.4%
Return on capital employed (ROCE)	%	3.3	15.6	–
Research and development expenses		83	93	-10.4%

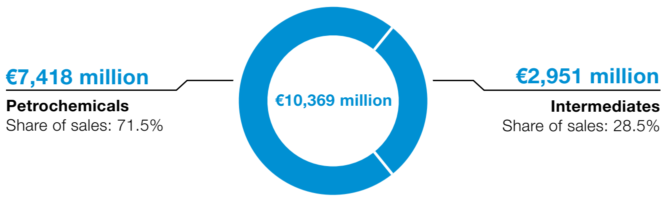
a Depreciation and amortization of property, plant and equipment and intangible assets (including impairments and reversals of impairments)
b Additions to property, plant and equipment and intangible assets

Weak demand weighed down the segment's volume development significantly. Compared with the previous year, volumes in the Petrochemicals division decreased, particularly for steam cracker products, styrene monomers and in the propylene value chain. In the Intermediates division, volumes decreased considerably in all business areas.

Currency effects, largely relating to the Chinese renminbi and the U.S. dollar, also had a negative impact on sales.

Chemicals – sales

By division



Income from operations (EBIT) before special items of the segment was €361 million, €1,596 million below the figure of the very strong previous year. The decline in EBIT before special items in both operating divisions was primarily attributable to the lower margins and volumes, and lower contributions from shareholdings accounted for using the equity method. Reduced fixed costs and lower raw materials and energy prices had an offsetting effect in both divisions.

At €364 million, **EBIT** decreased by €1,394 million compared to 2022.

For the outlook for 2024, see page 170 onward

Division sales by region
(Location of customer)

Divisions	Europe	North America	Asia Pacific	South America, Africa, Middle East	Total (million €)
Petrochemicals	54.6%	30.0%	10.5%	5.0%	7,418
Intermediates	41.2%	18.4%	36.6%	3.7%	2,951

Divisions, products, applications

	Products	Customer industries and applications
Petrochemicals	Ethylene, propylene, butadiene, benzene, alcohols, solvents, plasticizers, alkylene oxides, glycols, acrylic monomers, styrene and polystyrene, styrenic foams, superabsorbents	Chemical, plastics, construction, detergent, hygiene, automotive, packaging and textile industries; production of paints, coatings, cosmetics and oilfield as well as paper chemicals Use in the BASF Verbund
Intermediates	Basic products: butanediol and derivatives, alkylamines and alkanolamines, neopentyl glycol, formic and propionic acid Specialties: specialty amines such as tertiary butylamine and polyetheramine, gas treatment chemicals, vinyl monomers, acid chlorides, chloroformates, chiral intermediates	Chemical, plastics, coatings, construction, automotive, wind energy, pharmaceutical and agricultural industries; production of detergents and cleaners, textile fibers, cosmetics, oilfield and paper chemicals Use in the BASF Verbund

Production capacities of selected products in the regions[a]

Product	Europe	North America	Asia Pacific	South America, Africa, Middle East	Annual capacity (metric tons)
Acrylic acid	■	■	■	■	1,510,000
Alkylamines	■	■	■		250,000
Formic acid	■	■	■		305,000
Benzene	■	■	■		910,000
Butadiene	■	■	■		680,000
Butanediol equivalents	■	■	■		550,000
Ethanolamines and derivatives	■		■		440,000
Ethylene	■	■	■		3,480,000
Ethylene oxide	■	■	■		1,655,000
Neopentyl glycol	■	■	■		255,000
Oxo-C4 alcohols (calculated as butyraldehyde)	■	■	■		1,625,000
PolyTHF®	■	■	■		350,000
Propionic acid	■		■		220,000
Propylene	■	■	■		2,680,000
Styropor®/Neopor®	■		■		545,000
Superabsorbents	■	■	■	■	585,000
Plasticizers	■	■			595,000

a All capacities are included at 100%, including plants belonging to joint operations and joint ventures.

Ultramid® B3WG6 BC64 is used for the crash absorber for the Mercedes-Benz S-Class
Photo: © BASF

Crash absorber made from alternative raw materials

Together with Mercedes-Benz AG, we have developed the crash absorber for the Mercedes-Benz S-Class, a safety-relevant part, which combines alternative raw materials using the mass balance approach. Pyrolysis oil from used tires and biomethane from agricultural waste replace fossil raw materials is used here, without compromising on quality for our customers. We want to continue to drive forward circular solutions in the automotive industry and support our customers in achieving their sustainability goals. The Performance Materials division is aiming to increase the proportion of plastics based on alternative raw materials in its global sales to 20% by 2030.

For more information on BASF's sustainable plastics solutions for the automotive industry at basf.com/en/plastics

Materials

The Materials segment comprises the Performance Materials and Monomers divisions. The segment's portfolio includes advanced materials and their precursors for new applications and systems such as isocyanates, polyamides and inorganic basic products as well as specialties for plastics and plastics processing industries. We differentiate ourselves through specific technology expertise, industry knowledge and customer proximity, and want to create maximum value in the isocyanate and polyamide value chains.

For more information on the Materials segment's business model, see page 34 onward

Sales
€14,149 million
2022: €18,443 million

Segment cash flow
€1,369 million
2022: €2,363 million

EBIT before special items
€826 million
2022: €1,840 million

EBITDA before special items
€1,650 million
2022: €2,686 million

Business review

At a glance

- Segment sales decline mainly due to considerably lower prices and volumes
- Significant decrease in EBIT before special items

Compared with the previous year, **sales to third parties** in the Materials segment declined by €4,294 million to €14,149 million. Sales in the Monomers division decreased by €2,971 million to €6,905 million. In the Performance Materials division, sales were €1,323 million lower at €7,244 million.

Factors influencing sales – Materials

	Materials	Performance Materials	Monomers
Volumes	-6.6%	-6.2%	-7.0%
Prices	-14.3%	-6.5%	-21.0%
Currencies	-2.4%	-2.8%	-2.1%
Portfolio	–	–	–
Sales	**-23.3%**	**-15.4%**	**-30.1%**

Significantly lower prices due to very weak demand and lower raw materials prices were the main reasons for the decline in sales in both divisions. In the Monomers division, prices fell in all business areas, especially in the ammonia and polyamide value chains. In the Performance Materials division, prices decreased in all business areas.

Segment data – Materials

Million €

		2023	2022	+/-
Sales to third parties		14,149	18,443	-23.3%
of which Performance Materials		7,244	8,567	-15.4%
Monomers		6,905	9,877	-30.1%
Intersegment transfers		864	1,742	-50.4%
Sales including transfers		15,013	20,186	-25.6%
Income from operations before depreciation, amortization and special items		1,650	2,686	-38.6%
Income from operations before depreciation and amortization (EBITDA)		1,523	2,660	-42.7%
EBITDA margin before special items	%	11.7	14.6	–
Depreciation and amortization[a]		1,146	884	29.6%
Income from operations (EBIT)		378	1,776	-78.7%
Special items		-449	-63	-608.6%
EBIT before special items		826	1,840	-55.1%
Investments including acquisitions[b]		1,083	880	23.1%
Segment cash flow		1,369	2,363	-42.1%
Assets		9,716	10,864	-10.6%
Return on capital employed (ROCE)	%	3.6	14.9	–
Research and development expenses		185	201	-7.7%

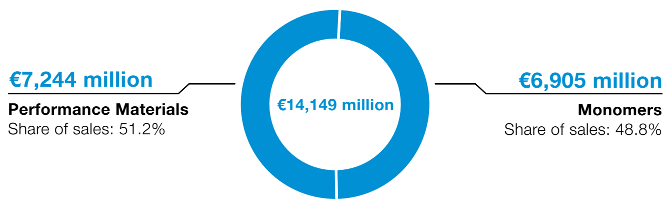
a Depreciation and amortization of property, plant and equipment and intangible assets (including impairments and reversals of impairments)
b Additions to property, plant and equipment and intangible assets

Declining demand over the course of the year led to significantly lower volumes, especially in Europe. Volume growth in the Monomers division in Asia Pacific, mainly as a result of considerably higher isocyanate volumes, had an offsetting effect.

Negative currency effects, mainly relating to the Chinese renminbi, also weighed down the sales performance of the segment.

Materials – sales

By division



At €826 million, **income from operations (EBIT) before special items** of the segment was €1,013 million below the figure of 2022. EBIT before special items declined considerably in the Monomers division due to lower polyamide and ammonia margins. The slight decline in earnings in the Performance Materials division was driven by lower margins and volumes. Considerably reduced fixed costs in both divisions, primarily as a result of lower production costs, were unable to compensate for this.

EBIT decreased by €1,399 million to €378 million. This included special charges amounting to €464 million, mainly for impairments on intangible assets and production plants in Europe, for costs in connection with adaptations to the production structures at the Verbund site in Ludwigshafen, Germany, and for measures in the context of the cost savings program focusing on Europe.

For the outlook for 2024, see page 170 onward

Division sales by region
(Location of customer)

Divisions	Europe	North America	Asia Pacific	South America, Africa, Middle East	Total (million €)
Performance Materials	35.7%	25.1%	34.2%	5.0%	7,244
Monomers	42.8%	21.3%	31.1%	4.8%	6,905

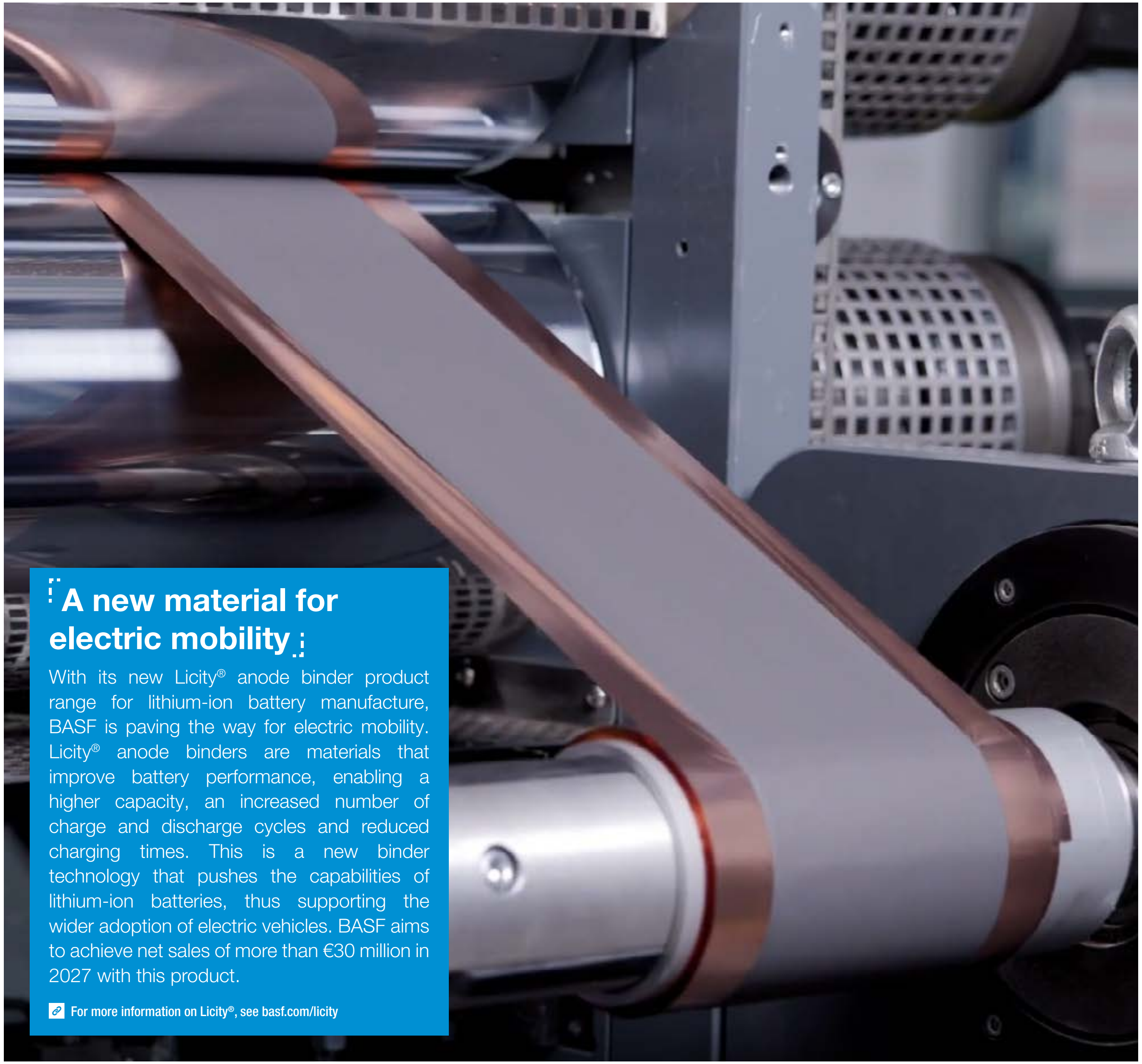
Divisions, products, applications

	Products	Customer industries and applications
Performance Materials	Engineering plastics, polyurethane systems, thermoplastic polyurethane, foam specialties, biodegradable plastics	Transportation (including automotive, e-mobility), industrial (including electric and electronics), consumer goods (including footwear, sports and leisure, household appliances and furniture, medical devices), construction (including thermal insulation)
Monomers	Isocyanates (MDI, TDI), ammonia, caprolactam, adipic acid, chlorine, urea, glues and impregnating resins, caustic soda, polyamides 6 and 6.6, standard alcoholates, sulfuric and nitric acid	Plastics, woodworking, furniture, packaging, textile, construction and automotive as well as other industries Use in the BASF Verbund

Production capacities of selected products in the regions[a]

Product	Europe	North America	Asia Pacific	South America, Africa, Middle East	Annual capacity (metric tons)
Ammonia	■	■			1,370,000
Chlorine	■				595,000
Urea	■				545,000
Isocyanates	■	■	■		2,400,000
Polyamides 6 and 6.6	■	■	■		885,000
Polyamide precursors	■	■	■		1,220,000
Propylene oxide	■				675,000
Sulfuric acid	■				920,000

a All capacities are included at 100%, including plants belonging to joint operations and joint ventures.



A new material for electric mobility

With its new Licity® anode binder product range for lithium-ion battery manufacture, BASF is paving the way for electric mobility. Licity® anode binders are materials that improve battery performance, enabling a higher capacity, an increased number of charge and discharge cycles and reduced charging times. This is a new binder technology that pushes the capabilities of lithium-ion batteries, thus supporting the wider adoption of electric vehicles. BASF aims to achieve net sales of more than €30 million in 2027 with this product.

For more information on Licity®, see basf.com/licity

Industrial Solutions

The Industrial Solutions segment consists of the Dispersions & Resins and the Performance Chemicals divisions. It develops and markets ingredients and additives for industrial applications, such as polymer dispersions, resins, additives, electronic materials and antioxidants. We aim to grow organically in key industries such as automotive, plastics, paints and coatings, electronics, and energy and resources, and expand our position by leveraging our comprehensive industry expertise and application know-how.

For more information on the Industrial Solutions segment's business model, see page 34 onward

Sales
€8,010 million
2022: €9,992 million

Segment cash flow
€1,292 million
2022: €852 million

EBIT before special items
€625 million
2022: €1,091 million

EBITDA before special items
€965 million
2022: €1,437 million

Business review

At a glance

- Considerable decline in sales mainly due to decreases in volumes and prices
- EBIT before special items significantly reduced, mainly as a result of lower volumes and margins

Sales to third parties in the Industrial Solutions segment declined by €1,983 million compared with 2022 to €8,010 million in 2023. Sales in the Dispersions & Resins division decreased by €1,098 million to €4,921 million, while they declined by €885 million to €3,088 million in the Performance Chemicals division.

Factors influencing sales – Industrial Solutions

	Industrial Solutions	Dispersions & Resins	Performance Chemicals
Volumes	-10.4%	-9.3%	-12.0%
Prices	-5.3%	-6.2%	-4.0%
Currencies	-2.3%	-2.5%	-2.0%
Portfolio	-1.8%	-0.3%	-4.2%
Sales	**-19.8%**	**-18.2%**	**-22.3%**

The main reason for this was considerably lower sales volumes in almost all business areas and all regions due to lower demand.

Lower raw materials prices in particular led to considerably lower prices overall. Price levels in the Dispersions & Resins division decreased in almost all business areas. In the Performance Chemicals division, prices decreased mainly for plastic additives.

Segment data – Industrial Solutions

Million €

		2023	2022	+/-
Sales to third parties		8,010	9,992	-19.8%
of which Dispersions & Resins		4,921	6,019	-18.2%
Performance Chemicals		3,088	3,973	-22.3%
Intersegment transfers		436	507	-14.0%
Sales including transfers		8,445	10,499	-19.6%
Income from operations before depreciation, amortization and special items		965	1,437	-32.8%
Income from operations before depreciation and amortization (EBITDA)		1,010	1,443	-30.0%
EBITDA margin before special items	%	12.0	14.4	–
Depreciation and amortization[a]		349	346	0.9%
Income from operations (EBIT)		660	1,097	-39.8%
Special items		35	6	480.4%
EBIT before special items		625	1,091	-42.7%
Investments including acquisitions[b]		285	322	-11.5%
Segment cash flow		1,292	852	51.6%
Assets		5,576	6,318	-11.7%
Return on capital employed (ROCE)	%	11.0	16.0	–
Research and development expenses		150	172	-13.0%

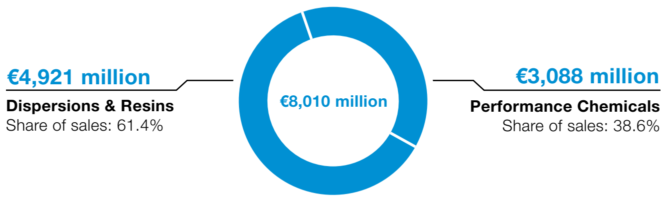
a Depreciation and amortization of property, plant and equipment and intangible assets (including impairments and reversals of impairments)
b Additions to property, plant and equipment and intangible assets

In addition, slightly negative currency effects, largely relating to the Chinese renminbi and the U.S. dollar, burdened sales performance.

Portfolio effects also dampened sales performance slightly, mainly as a result of the divestiture of the kaolin minerals business in the Performance Chemicals division as of September 30, 2022.

Industrial Solutions – sales

By division



At €625 million, **income from operations (EBIT) before special items** of the segment was €466 million below the prior-year figure. Earnings in the Performance Chemicals division decreased in particular due to lower volumes and margins, negative currency effects and the missing earnings contributions from the divested kaolin minerals business. In the Dispersions & Resins division, the decline in earnings was mainly a result of volume-related lower margins.

Reduced fixed costs, primarily due to lower personnel costs had a positive effect in both operating divisions.

EBIT declined by €436 million compared with 2022 to €660 million. In 2023, this included special income, mainly due to a payment in connection with a plant closure in China in 2019, as well as special charges, primarily for measures in the context of the cost savings program focusing on Europe.

For the outlook for 2024, see page 170 onward

Division sales by region
(Location of customer)

Divisions	Europe	North America	Asia Pacific	South America, Africa, Middle East	Total (million €)
Dispersions & Resins	37.5%	25.4%	29.9%	7.2%	4,921
Performance Chemicals	35.3%	26.5%	26.0%	12.3%	3,088

Division, products, applications

	Products	Customer industries and applications
Dispersions & Resins	Polymer dispersions, resins, additives, electronic materials	Paints and coatings, construction, paper, printing and packaging, adhesives and electronics industries
Performance Chemicals	Antioxidants, light stabilizers and flame retardants for plastic applications Fuel additives, polyisobutene, brake fluids and engine coolants, lubricant additives and basestocks, components for metalworking fluids and compounded lubricants Process chemicals for the extraction of oil, gas, metals and minerals; chemicals for enhanced oil recovery	Chemicals, plastics, consumer goods, automotive and transportation industries as well as energy and resources

Production capacities of selected products in the regions[a]

Product	Europe	North America	Asia Pacific	South America, Africa, Middle East	Annual capacity (metric tons)
Acrylics dispersions	■	■	■	■	1,820,000
Formulation additives	■	■	■		72,000
Polyisobutene	■		■		265,000

a All capacities are included at 100%, including plants belonging to joint operations and joint ventures.

An innovative surface film for aviation

With NovaFlex Sharkskin, BASF has developed a surface film that mimics the fine structure of a shark's skin. The film optimizes the aerodynamics on flow-related parts of the aircraft, meaning that less fuel is needed and CO_2 emissions are reduced. Applying NovaFlex SharkSkin film to a Boeing 777-300 reduces the aerodynamic drag by more than 1%, saving 1,250 metric tons of CO_2 per aircraft per year. Using the technology at its highest expansion level could reduce CO_2 emissions by as much as 3%.

For more information on NovaFlex SharkSkin, see basf.com/sharkskin

Surface Technologies

The Surface Technologies segment comprises the Catalysts and Coatings divisions, which offer chemical solutions for surfaces. Its portfolio serves industries such as the automotive and chemical sectors and includes automotive OEM and refinish coatings, surface treatment, catalysts, battery materials and precious and base metal services. We improve our customers' applications and processes with tailored products, technologies and solutions, and support them through geographical proximity across all regions. The aim is to drive BASF's growth by leveraging our portfolio of technologies and expanding our position as a leading and innovative provider of battery materials and surface coatings solutions.

For more information on the Surface Technologies segment's business model, see page 34 onward

Sales **€16,204 million** 2022: €21,283 million	Segment cash flow **€1,488 million** 2022: €61 million
EBIT before special items **€938 million** 2022: €902 million	EBITDA before special items **€1,520 million** 2022: 1,464 million

Business review

At a glance

- Considerable decline in sales mainly due to lower precious metal prices and volumes
- Increase in EBIT before special items as a result of considerable earnings growth in the Coatings division

Sales to third parties in the Surface Technologies segment declined by €5,079 million compared with the previous year to €16,204 million. The Catalysts division recorded a sales decrease of €5,245 million to €11,818 million. The increase in sales in the Coatings division, by €166 million to €4,387 million, could not compensate for this.

Factors influencing sales – Surface Technologies

	Surface Technologies	Catalysts	Coatings
Volumes	-9.6%	-13.0%	4.3%
Prices	-11.1%	-15.2%	5.5%
Currencies	-3.1%	-2.4%	-5.7%
Portfolio	-0.1%	-0.1%	-0.2%
Sales	**-23.9%**	**-30.7%**	**3.9%**

Lower sales were mainly driven by lower prices and volumes in precious metal trading, mobile emissions catalysts and in battery materials in the Catalysts division. At €7,578 million, sales in precious metal trading and precious metal sales in the mobile emissions catalysts business[1] were below the previous year (€12,336 million). Considerable price increases and a slight volume growth in the Coatings division only partially compensated for this. The Coatings division raised prices in all business areas, while sales volumes increased particularly in the automotive OEM coatings and surface treatment businesses. This was mainly driven by the higher level of automotive production as a result of resolved supply chain problems and an increase in inventories at car manufacturers.

Negative currency effects, largely relating to the Chinese renminbi, dampened the segment's sales performance.

Portfolio effects, particularly in the Catalysts division as a result of the divestiture of the production site in De Meern, Netherlands, as of August 31, 2023, had a slightly negative impact on sales.

Segment data – Surface Technologies

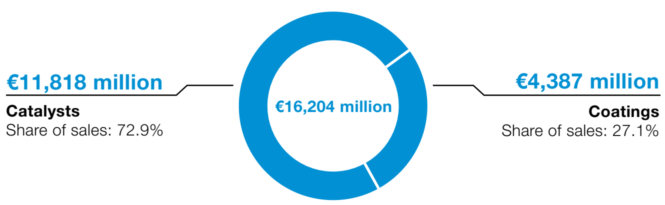
Million €

		2023	2022	+/-
Sales to third parties		16,204	21,283	-23.9%
of which Catalysts		11,818	17,062	-30.7%
Coatings		4,387	4,220	3.9%
Intersegment transfers		176	198	-10.9%
Sales including transfers		16,381	21,481	-23.7%
Income from operations before depreciation, amortization and special items		1,520	1,464	3.8%
Income from operations before depreciation and amortization (EBITDA)		1,351	1,264	6.9%
EBITDA margin before special items	%	9.4	6.9	–
Depreciation and amortization[a]		986	651	51.3%
Income from operations (EBIT)		366	612	-40.3%
Special items		-572	-290	-97.6%
EBIT before special items		938	902	4.0%
Investments including acquisitions[b]		621	740	-16.2%
Segment cash flow		1,488	61	.
Assets		12,657	14,899	-15.0%
Return on capital employed (ROCE)	%	2.7	3.9	–
Research and development expenses		304	335	-9.1%

a Depreciation and amortization of property, plant and equipment and intangible assets (including impairments and reversals of impairments)
b Additions to property, plant and equipment and intangible assets

Surface Technologies – sales

By division



1 Sales, volume growth, EBITDA before special items and the EBITDA margin before special items excluding precious metals for the BASF Group and for the Surface Technologies segment are presented under Selected Key Figures Excluding Precious Metals on page 319

The segment increased **income from operations (EBIT) before special items** by €36 million to €938 million. The considerable earnings growth in the Coatings division, which resulted mainly from price and volume-related margin increases, more than compensated for a considerable decrease in EBIT before special items in the Catalysts division. This was mainly a result of a sharp fall in lithium prices. In addition, lower contributions from precious metal trading reduced earnings in the division. Higher margins in the automotive and refining catalysts businesses could only partially offset this.

EBIT declined by €247 million compared with the previous year to €366 million. This included special charges amounting to €576 million. In the Catalysts division, these comprised impairments on property, plant and equipment, in particular in the battery materials business, as well as charges resulting from the carve-out of the BASF Environmental Catalyst and Metal Solutions unit. In the Coatings division, special charges arose in particular from measures to increase efficiency.

For the outlook for 2024, see page 170 onward

Division sales by region
(Location of customer)

Divisions	Europe	North America	Asia Pacific	South America, Africa, Middle East	Total (million €)
Catalysts	28.5%	30.9%	35.0%	5.5%	11,818
Coatings	30.9%	25.4%	26.0%	17.7%	4,387

Divisions, products, applications

	Products	Customer industries and applications
Catalysts	Automotive catalysts, indoor air quality catalysts, process catalysts and technologies, battery materials, precious and base metal services and recycling	Automotive, chemical and pharmaceutical industries, refineries, battery manufacturers Solutions for the protection of air quality as well as the production of fuels, chemical and plastics as well as battery materials and battery material recycling
Coatings	Coatings solutions for automotive applications, technology and system solutions for surface treatments, decorative paints	Automotive industry, body shops, steel industry, aviation, aluminum applications in the architecture and construction industries, household appliances, painting businesses and private consumers

Two new active ingredients from one process

Probiolift™ and Postbiolift™ are two new biotic ingredients from BASF's personal care business area that support healthy skin aging. Unlike other biotics existing on the cosmetic market, the newly developed ingredients are the first to use a bacterium that is found naturally in the skin: *Lactobacillus crispatus*. One gram of Probiolift™ contains over 1 million useful bacteria. The result is a product that improves skin elasticity and reduces the appearance of wrinkles around the eyes. BASF uses an energy-efficient and more sustainable fermentation process and produces both active ingredients using an innovative process without waste.

For more information on Probiolift™ and Postbiolift™, see basf.com/probiolift

Nutrition & Care

The Nutrition & Care segment, consisting of the Care Chemicals and Nutrition & Health divisions, serves the growing needs of food and feed producers as well as the pharmaceutical, cosmetics, detergents and cleaners industries as well as the increasingly sophisticated demands of fast-moving consumer goods. We also offer solutions for technical applications, for example. We strive to expand our position as a leading provider of ingredients for consumer goods in the areas of nutrition, home and personal care through organic growth. We focus on growth markets, with a special focus on more sustainable products and digital business models in consumer markets.

For more information on the Nutrition & Care segment's business model, see page 34 onward

Sales
€6,858 million
2022: €8,066 million

Segment cash flow
€503 million
2022: -€99 million

EBIT before special items
€107 million
2022: €618 million

EBITDA before special items
€565 million
2022: €1,067 million

Business review

At a glance

- Decline in sales mainly related to volumes and prices
- Lower volumes and margins led to a considerably lower EBIT before special items

Sales to third parties in the Nutrition & Care segment declined by €1,208 million compared with the prior-year figure to €6,858 million. The Care Chemicals division recorded a decline in sales of €898 million to €4,721 million. In the Nutrition & Health division, sales declined by €310 million to €2,137 million.

Factors influencing sales – Nutrition & Care

	Nutrition & Care	Care Chemicals	Nutrition & Health
Volumes	-7.1%	-8.3%	-4.3%
Prices	-5.8%	-5.9%	-5.7%
Currencies	-2.1%	-1.8%	-2.6%
Portfolio	–	–	–
Sales	**-15.0%**	**-16.0%**	**-12.7%**

Lower demand was the main reason for the sales performance. This resulted in lower sales volumes in all business areas of the Care Chemicals division. In the Nutrition & Health division, a considerable increase in sales volumes in the aroma business could not offset the decrease in volumes in the other business areas.

Segment data – Nutrition & Care
Million €

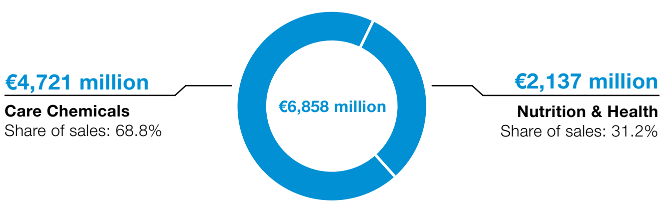
		2023	2022	+/-
Sales to third parties		6,858	8,066	-15.0%
of which Care Chemicals		4,721	5,619	-16.0%
Nutrition & Health		2,137	2,447	-12.7%
Intersegment transfers		429	588	-27.1%
Sales including transfers		7,286	8,654	-15.8%
Income from operations before depreciation, amortization and special items		565	1,067	-47.0%
Income from operations before depreciation and amortization (EBITDA)		578	1,055	-45.2%
EBITDA margin before special items	%	8.2	13.2	–
Depreciation and amortization[a]		459	450	2.0%
Income from operations (EBIT)		119	605	-80.3%
Special items		12	-13	.
EBIT before special items		107	618	-82.7%
Investments including acquisitions[b]		765	642	19.0%
Segment cash flow		503	-99	.
Assets		7,496	8,038	-6.7%
Return on capital employed (ROCE)	%	1.5	7.5	–
Research and development expenses		150	172	-12.9%

a Depreciation and amortization of property, plant and equipment and intangible assets (including impairments and reversals of impairments)
b Additions to property, plant and equipment and intangible assets

Reduced prices due to lower raw materials prices and high product availability on the market also dampened the segment's sales performance. In the Care Chemicals division, prices decreased in the oleo surfactants and alcohols business, as well as in the home care, industrial and institutional cleaning and industrial formulators business. In the Nutrition & Health division, prices mainly declined for vitamins.

Furthermore, currency effects, largely relating to the Chinese renminbi, had a slightly negative impact on sales performance.

Nutrition & Care – sales
By division



Income from operations (EBIT) before special items declined by €511 million to €107 million. The Nutrition & Health division recorded an overall negative EBIT before special items, mainly as a result of lower margins in vitamins. Reduced fixed costs resulting from efficiency measures had an offsetting effect. The Care Chemicals division made a significant earnings contribution; however, this was considerably below the figure of the previous year as a result of lower margins due to lower volumes in all business areas.

Compared with 2022, **EBIT** declined by €486 million to €119 million. This included special income from the sale of an office building in Europe in the second quarter of 2023.

For the outlook for 2024, see page 170 onward

Division sales by region

(Location of customer)

Divisions	Europe	North America	Asia Pacific	South America, Africa, Middle East	Total (million €)
Care Chemicals	53.1%	18.6%	18.8%	9.4%	4,721
Nutrition & Health	36.9%	17.8%	33.6%	11.7%	2,137

Division, products, applications

	Products	Customer industries and applications
Care Chemicals	Ingredients for skin and hair cleansing and care products, such as emollients, cosmetic active ingredients, polymers and UV filters Solutions and ingredients for detergents and cleaners for household, institutional or industry use, such as surfactants, enzymes, chelating agents, water-soluble polymers, biocides and products for optical effects Chemical ingredients and processing additives, for example, for crop protection, excipients for chemical processes such as emulsion polymerization, metal surface treatment and textile processing, as well as products for concrete additives, biofuels and other industrial applications	Cosmetics, detergent and cleaner industry, agrochemical industry, technical applications for various industries
Nutrition & Health	Additives for the food and feed industries, such as vitamins, carotenoids, sterols, enzymes, emulsifiers, omega-3 fatty acids Industrial enzymes for bioethanol and food production, natural and synthetic flavors and fragrances, such as citral, geraniol, citronellol, L-menthol and linalool, Isobionics® Santalol, valencene and nootkatone Excipients for the pharmaceutical industry and selected, high-volume active pharmaceutical ingredients, such as ibuprofen and omega-3 fatty acids	Food and feed industries, flavor and fragrance industry, pharmaceutical industry and bioethanol industry

Production capacities of selected products in the regions[a]

Product	Europe	North America	Asia Pacific	South America, Africa, Middle East	Annual capacity (metric tons)
Anionic surfactants	■	■	■	■	550,000
Citral	■		■		78,000
Chelating agents	■	■		■	170,000
Methane sulfonic acid	■				50,000
Nonionic surfactants	■	■	■		650,000

a All capacities are included at 100%, including plants belonging to joint operations and joint ventures.

Virus-resistant tomato seed varieties for less food loss

Tomato brown rugose fruit virus (ToBRFV) is an aggressive and persistent plant virus that causes severe crop losses in tomatoes worldwide. After discovering the virus, BASF quickly identified genetic sources of resistance and applied state-of-the-art breeding methods to be able to offer resistant and competitive varieties. The first resistant tomato varieties were made available under the Nunhems® brand in 2020 and BASF has since expanded the range to more than 20 varieties for different markets and consumer preferences. Using these resistant varieties in combination with appropriate hygiene protocols offers a solution that benefits both growers and the food supply chain.

For more information on ToBRFV-resistant seed varieties, see basf.com/en/rugose-virus

Agricultural Solutions

In the Agricultural Solutions segment, we aim to further strengthen our market position as an integrated solutions provider. Our offer comprises seeds, traits and seed treatment products and biological and chemical crop protection solutions, complemented by digital farming products to help farmers achieve a better yield. Our strategy is based on innovation-driven organic growth and targeted portfolio expansion through acquisitions and collaborations. Customer needs, societal expectations and reducing environmental impacts are what motivate us to innovate.

For more information on the Agricultural Solutions segment's business model, see page 34 onward

Sales
€10,092 million
2022: €10,280 million

Segment cash flow
€1,746 million
2022: €179 million

EBIT before special items
€1,563 million
2022: €1,220 million

EBITDA before special items
€2,270 million
2022: 1,928 million

Business review

At a glance

- Sales slightly below previous year as a result of volume and currency effects
- Considerable increase in EBIT before special items due to price rises, among other factors

At €10,092 million, **sales to third parties** in the Agricultural Solutions segment in 2023 were slightly below the figure of the previous year. Considerably higher prices in almost all regions and indications were not fully able to compensate for lower volumes and negative currency effects. The decline in volumes was mainly driven by a change in market dynamics over the course of the year, primarily due to the significant channel destocking at distributors.

Factors influencing sales – Agricultural Solutions

Volumes	-6.5%
Prices	8.2%
Currencies	-3.5%
Portfolio	–
Sales	**-1.8%**

In **Europe**, sales rose to €2,600 million due to considerably higher prices and were therefore €170 million higher than the prior-year figure. Considerably lower sales volumes for crop protection products and negative currency effects, mainly from the Turkish lira, had a negative impact on sales.

Sales in **North America** amounted to €4,002 million and were almost at prior-year level. This was mainly driven by both lower sales volumes, particularly of herbicides, and negative currency effects due to the Canadian dollar and U.S. dollar. Considerably higher price levels had an offsetting effect.

Segment data – Agricultural Solutions
Million €

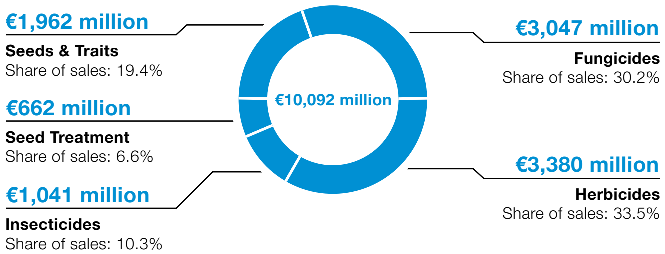
		2023	2022	+/-
Sales to third parties		10,092	10,280	-1.8%
Intersegment transfers		36	40	-11.0%
Sales including transfers		10,128	10,320	-1.9%
Income from operations before depreciation, amortization and special items		2,270	1,928	17.7%
Income from operations before depreciation and amortization (EBITDA)		2,177	1,922	13.2%
EBITDA margin before special items	%	22.5	18.8	–
Depreciation and amortization[a]		1,046	701	49.2%
Income from operations (EBIT)		1,131	1,221	-7.4%
Special items		-433	1	.
EBIT before special items		1,563	1,220	28.1%
Investments including acquisitions[b]		353	414	-14.7%
Segment cash flow		1,746	179	875.6%
Assets		16,089	17,071	-5.7%
Return on capital employed (ROCE)	%	6.4	7.1	–
Research and development expenses		900	944	-4.6%

a Depreciation and amortization of property, plant and equipment and intangible assets (including impairments and reversals of impairments)
b Additions to property, plant and equipment and intangible assets

In **Asia**, sales of €1,072 million were €58 million lower than in the previous year. Considerably higher prices were unable to compensate for considerable negative currency effects, mainly from the Indian rupee and the Chinese renminbi, and significantly lower volumes, particularly for herbicides.

Sales in the **region South America, Africa, Middle East** amounted to €2,418 million, €294 million below the previous year. This was attributable to lower volumes in all indications and negative currency effects, mainly from the Argentine peso. Higher prices were unable to compensate for this.

Agricultural Solutions segment – sales
Indications and sectors



Income from operations (EBIT) before special items rose considerably compared with the previous year, by €343 million to €1,563 million, due to price increases, among other factors. A one-time payment that was received also had a positive impact on earnings.

EBIT declined by €91 million compared with 2022 to €1,131 million. This included special items in the amount of €433 million. Special charges arose mainly from impairments on production facilities in Europe as well as for measures in the context of the cost savings program focusing on Europe.

For the outlook for 2024, see page 170 onward

Agricultural Solutions sales by region
(Location of customer)

Division	Europe	North America	Asia Pacific	South America, Africa, Middle East	Total (million €)
Agricultural Solutions	25.8%	39.7%	10.6%	24.0%	10,092

Products and applications

Indications and sectors	Applications	Selected products
Fungicides	Protecting crops against harmful fungal diseases; improving plant health, securing yield and harvest quality with chemical and biological solutions	Boscalid, dimethomorph, F 500®, Initium®, metiram, metrafenone, Revysol®, Serifel®, Xemium®
Herbicides	Reducing competition from weeds for nutrients, water and sunlight to secure yield and harvest quality	Dicamba, dimethenamid-p, glufosinate, imazamox, Kixor®, Luximo®, pendimethalin, Tirexor®, topramezone
Insecticides	Combating insect pests in agriculture and beyond with chemical and biological solutions, such as in the areas of public health, professional pest control and landscape maintenance	Alpha-cypermethrin, Axalion®, Broflanilide, chlorfenapyr, fipronil, Inscalis®, Interceptor®, Nealta®, teflubenzuron, Termidor®
Seed Treatment	Improving seeds' potential with chemical and biological protection as well as inoculants	ILEVO®, Integral® Pro, Poncho Votivo®, Relenya®, Sepiret®, Systiva®, Teraxxa™, Vault® HP
Seeds & Traits	Seeds & Traits for key field crops such as canola (oilseed rape), cotton, soybean and wheat, as well as vegetable seeds	Credenz®, FiberMax®, InVigor®, LibertyLink®, Nunhems®, Stoneville®

Other

Sales in Other amounted to €3,220 million, €1,148 million below the prior-year figure. The decline in sales was mainly due to lower sales in both commodity and energy trading.

EBIT before special items in Other improved by €135 million to -€614 million. This was mainly driven by higher contributions from other businesses compared with the previous year as well as lower expenses in connection with corporate research and the corporate headquarters.

EBIT decreased by €256 million compared with 2022 to -€778 million. This was primarily due to special income in 2022 attributable to the partial divestiture of the interest in the Hollandse Kust Zuid wind farm.

Financial data – Other[a]

Million €

	2023	2022	+/–
Sales	3,220	4,368	-26.3%
Income from operations before depreciation, amortization and special items	-466	-594	21.5%
Income from operations before depreciation and amortization (EBITDA)	-626	-368	-70.1%
Depreciation and amortization[b]	153	155	-1.4%
Income from operations (EBIT)	-778	-523	-48.9%
Special items	-164	226	.
EBIT before special items	-614	-749	18.0%
of which costs for cross-divisional corporate research	-242	-325	25.5%
costs of corporate headquarters	-222	-258	14.0%
other businesses	83	-43	.
foreign currency results, hedging and other measurement effects	-29	33	.
miscellaneous income and expenses	-204	-156	-30.8%
Investments including acquisitions[c]	195	268	-27.1%
Assets[d]	14,393	16,803	-14.3%
Research and development expenses	356	381	-6.4%

a Information on the composition of Other can be found in Note 5 to the Consolidated Financial Statements from page 242 onward.
b Depreciation and amortization of property, plant and equipment and intangible assets (including impairments and reversals of impairments)
c Additions to property, plant and equipment and intangible assets
d Includes assets of businesses recognized under Other and reconciliation to assets of the BASF Group

Non-Integral Oil and Gas Business

BASF holds 72.7% of the ordinary shares in Wintershall Dea AG; 27.3% are held by LetterOne.

Macroeconomic environment

The price of a barrel of reference Brent crude oil averaged $82 in 2023 (2022: $101 per barrel). Gas prices on the European spot markets averaged €40.52 per MWh ($12.83 per mmBtu) for the year and were therefore considerably lower than the high gas prices in the previous year (€124.16 per MWh or $38.01 per mmBtu), which were influenced by the very tense situation on the European gas market due to the significant reduction in gas supplies from Russia to the E.U.

Equity-accounted income of the oil and gas business

Wintershall Dea AG contributed -€130 million to net income from shareholdings in 2023 (2022: -€4,853 million). This included special items in the amount of -€164 million associated in particular with the planned adjustment of the corporate structure. Impairment losses and reversals on the part of Wintershall Dea almost balanced each other out in 2023.

In 2022, net income from shareholdings in Wintershall Dea including special items amounted to around -€6.3 billion. Those primarily resulted from impairments and reversals of impairments on Wintershall Dea's Russian assets and on its gas transportation business.

BASF received dividend payments of €291 million from Wintershall Dea in 2023. In the previous year, dividend payments from Wintershall Dea amounted to approximately €1 billion.

Wintershall Dea conducts production, development[1] and exploration activities in the following countries:

- Egypt (production, development, exploration)
- Algeria (production)
- Argentina (production, development)
- Denmark (production, exploration)
- Germany (production, development, exploration)
- Libya (production)
- Mexico (production, development, exploration)
- Netherlands (production, development, exploration)
- Norway (production, development, exploration)
- United Arab Emirates (development)
- United Kingdom (production, development, exploration)

Wintershall Dea is also active in gas transportation. This includes interests in GASCADE Gastransport GmbH and OPAL Gastransport GmbH & Co. KG held by WIGA Transport Beteiligungs-GmbH & Co. KG, and the interest in Nord Stream AG held directly by Wintershall Dea AG.

Withdrawal from Russia

On January 17, 2023, Wintershall Dea announced its full exit from Russia in compliance with all legal requirements. In this context, Wintershall Dea is implementing a legal separation of its Russia-related business. This comprises the interest in the joint ventures in Russia, the shareholdings in Wintershall AG (51% interest) in Libya and Wintershall Noordzee BV (50% interest) in the Netherlands as well as the interest in Nord Stream AG (15.5% interest).

Agreement with Harbour Energy on the merger of businesses

On December 21, 2023, BASF, LetterOne and Harbour Energy plc (Harbour) signed an agreement to combine the businesses of Wintershall Dea and Harbour. Accordingly, the E&P business of Wintershall Dea is to be transferred to Harbour; it comprises production and development assets as well as exploration rights in Norway, Argentina, Germany, Mexico, Algeria, Libya (excluding Wintershall AG), Egypt and Denmark (excluding Ravn), and licenses from Wintershall Dea for carbon capture and storage (CCS). In exchange, the shareholders of Wintershall Dea will receive a total cash consideration of $2.15 billion (BASF interest: $1.56 billion) on completion of the transaction as well as new shares to be issued by Harbour, equating to a total 54.5% shareholding in the enlarged Harbour (BASF interest: 39.6%). The agreed enterprise value for Wintershall Dea's assets amounts to $11.2 billion. On completion of the transaction, Wintershall Dea's outstanding bonds with a nominal value of around $4.9 billion will be transferred to Harbour.

In 2022, the combined business had pro forma sales of $13.5 billion and EBITDAX[2] of $10.3 billion. Overall, production volumes of Harbour and Wintershall Dea amounted to 526 thousand barrels of oil equivalent per day in 2022. At the end of 2022, combined 2P reserves stood at 1.5 billion barrels of oil equivalent.

Until the completion of the transaction, Wintershall Dea and Harbour will continue to operate separately as independent companies. The transaction is subject to antitrust approvals and official approvals for foreign investments, among other things, in various countries. Subject to these regulatory approvals, closing is scheduled for the fourth quarter of 2024.

1 Development activities include projects before and after the final investment decision.
2 EBITDAX is defined as sales revenue and other income less production and operating expenses, less production-related taxes and less general administrative expenses, adjusted for special effects.

With this agreement, BASF is taking a major step toward achieving its announced strategic goal of exiting the oil and gas business. Completion of the transaction will create opportunities for BASF to monetize its shares in the combined company easily, as Harbour is listed on the London Stock Exchange.

Furthermore, Wintershall Dea is working on the separate sale of its interest in WIGA Transport Beteiligungs-GmbH & Co KG (WIGA), which is not part of the transaction.

Restructuring

Wintershall Dea's headquarters and its employees are not part of the transaction with Harbour. This means that, in addition to the restructuring initiated in September 2023, further restructuring and ultimately the closure of the headquarters in Kassel and Hamburg, which currently employ around 850 people, will be necessary. Harbour intends to transfer employees from these units to the combined company. Since signing, the parties have been working on further details regarding the transfer of employees in a joint integration committee. In 2023, Wintershall Dea already reduced its Management Board from five to three members. In 2023, Wintershall Dea recognized the necessary provisions for the implementation of the upcoming restructuring measures.

Wintershall Dea's activities in 2023

Wintershall Dea produced 118 million BOE (barrels of oil equivalent) in 2023 (2022: 117 million excluding Russia) of which around 77 million BOE of gas (2022: 77 million excluding Russia). This corresponded to a daily production of 323 thousand BOE (2022: 321 thousand excluding Russia).

Several Norwegian development projects were successfully started in 2023. Hyme and Bauge started production in April 2023; Dvalin started production in July 2023.

In Argentina, the development of the Fénix project is progressing as planned, the underwater pipeline has been laid and the construction of the production platform has been completed. Gas production is expected to begin in 2025.

Wintershall Dea drilled nine exploration wells in 2023, of which five were successful. The result of one well is still pending.

In February 2023, Wintershall Dea, together with INEOS and the state-owned company Nordsøfonden, was granted the Greensand carbon capture and storage (CCS) license C2023/01 (IRIS) in the Danish North Sea. By 2026, up to 1.5 million metric tons of CO_2 per year are to be stored underground under this license.

In March 2023, Wintershall Dea was awarded its second operated CCS license in the Norwegian North Sea (Havstjerne). The storage facility is to be operated by Wintershall Dea, which holds 60% of the shares. The remaining shares of 40% are held by Stella Maris AS. The annual storage potential is estimated to be up to 7 million metric tons of CO_2.

In March 2023, Wintershall Dea and its partners submitted the development plan for the Zama oil field in the Gulf of Mexico and the project was approved by the authorities in June. The field is expected to produce up to 180,000 barrels of oil per day at its peak, which corresponds to around 10% of Mexico's current total oil production.

At the end of March 2023, Wintershall Dea completed the acquisition of the 37% interest in the producing Hokchi Block off the coast of Mexico. The Hokchi Block, operated by Hokchi Energy, a subsidiary of Pan American Energy, currently produces around 24,000 BOE per day.

In April 2023, operator Wintershall Dea and its partners Harbour Energy and Sapura OMW discovered a significant oil deposit in the Kan prospect in Block 30, off the coast of Mexico. According to initial estimates, the deposit is approximately equal to 200 to 300 million BOE.

In August 2023, Wintershall Dea obtained the first CCS license in the United Kingdom. The expected annual storage potential of the Camelot license is up to 6 million metric tons of CO_2. Furthermore, Wintershall Dea received a 10% share in the Poseidon license (also in the United Kingdom) in November 2023.

In October 2023, Wintershall Dea completed the acquisition of shares in the Algerian Reggane Nord gas project from its previous project partner Edison. Wintershall Dea has thus increased its participating interest to 24%.

Also in October 2023, Wintershall Dea and its partners started gas production in the Egyptian onshore block East Damanhur, following successful exploration. Gas production is around 35 MMscf per day.

Wintershall Dea was once again recognized as one of the best companies in the industry in Morningstar Sustainalytics' ESG Risk Rating (2023 ESG Risk Rating: 25.6 – medium risk). Wintershall Dea's ESG risk management is rated as strong.

Regional Results

Regions
Million €

	Sales by location of company			Sales by location of customer		
	2023	2022	+/-	2023	2022	+/-
Europe	27,631	35,821	-22.9%	26,022	33,922	-23.3%
of which Germany	11,449	15,170	-24.5%	6,833	8,977	-23.9%
North America	19,003	24,343	-21.9%	18,833	23,869	-21.1%
Asia Pacific	17,142	21,309	-19.6%	17,520	21,823	-19.7%
of which Greater China	9,427	11,850	-20.4%	9,366	11,624	-19.4%
South America, Africa, Middle East	5,126	5,854	-12.4%	6,527	7,713	-15.4%
BASF Group	**68,902**	**87,327**	**-21.1%**	**68,902**	**87,327**	**-21.1%**

Europe

Sales at companies located in Europe declined by 22.9% to €27,631 million compared with the previous year. This was primarily due to a sharp decline in sales in the Chemicals and Materials segments. Sales also declined significantly in the Surface Technologies, Industrial Solutions and Nutrition & Care segments and in Other. Conversely, the Agricultural Solutions segment recorded a considerable increase in sales.

The decline in sales in Europe was attributable in particular to lower volumes related to reduced demand in all segments. Considerably lower prices, mainly in the Materials, Chemicals and Surface Technologies segments, contributed to the decline in sales. Higher prices in the Agricultural Solutions segment and in the Coatings division had an offsetting effect. Negative currency effects in all segments and portfolio effects, especially in the Industrial Solutions segment, had a slightly negative impact on sales.

North America

Sales at companies located in North America declined by 21.9% to €19,003 million compared with 2022. In local currency terms, they were 20.2% below the prior-year figure. This was mainly due to significantly lower sales in the Surface Technologies segment. Chemicals, Materials, Other, Industrial Solutions and Nutrition & Care also recorded considerable declines in sales. In the Agricultural Solutions segment, sales decreased slightly.

Lower prices driven by raw materials costs in the Chemicals segment and lower precious metal prices in Surface Technologies were the main factors affecting sales performance in North America. In addition, lower sales volumes in all segments as a result of weak demand reduced sales. Currency effects had a slightly negative impact on sales. In addition, sales were reduced by slightly negative portfolio effects, especially in the Industrial Solutions segment following the sale of the kaolin minerals business as of September 30, 2022.

Asia Pacific

Sales at companies located in Asia Pacific declined by 19.6% compared with the previous year to €17,142 million. In local currency terms, sales declined by 14.0%. This was largely due to a considerable decline in sales in the Surface Technologies segment. Sales in the Materials, Chemicals, Industrial Solutions and Nutrition & Care segments were also significantly below the prior-year figure. In the Agricultural Solutions segment, sales decreased slightly.

The sales performance was primarily the result of lower price levels, particularly in the Surface Technologies, Chemicals and Materials segments. In addition, currency effects dampened sales performance. The decline in sales volumes was primarily driven by the Catalysts division in the Surface Technologies segment. Chemicals and Materials increased volumes slightly; the same was true for the Coatings and Nutrition & Health divisions. Portfolio effects, particularly in the Industrial Solutions segment, reduced sales slightly.

South America, Africa, Middle East

Sales at companies located in South America, Africa and the Middle East decreased by 7.6% in local currency terms and by 12.4% in euros to €5,126 million. Almost all segments recorded considerably lower sales. The Surface Technologies segment improved sales slightly.

Lower sales volumes overall and negative currency effects were the main reasons for the decline in sales in the region. Considerable volume growth in Surface Technologies was unable to offset the negative volume development in the other segments. Slightly lower prices overall also weighed down sales performance, despite the price increases in Agricultural Solutions and Surface Technologies.

Environmental, Social and Governance

We want to contribute to a world with enhanced quality of life for everyone. That is why we have firmly anchored sustainable and responsible conduct into our corporate purpose, our strategy, our targets and our operational business.

The **impacts of our business activities** on the areas of environmental, social and governance are important aspects of our general opportunity and risk management (see page 173). We contribute to sustainability and to the **United Nations' Sustainable Development Goals** (SDGs) in many ways (see page 49). For instance, our innovations, products and technologies help to use natural resources more efficiently, meet the demand for food, enable climate-smart mobility, reduce emissions and waste, or increase the capabilities of renewable energy. At the same time, we cause CO_2 emissions, use water and source raw materials from suppliers, which may involve a potential risk of violating environmental, labor or social standards. This is why we are constantly working to broaden our positive contributions to key sustainability topics (see page 49) along our value chain and reduce the negative impacts.

We are committed to doing business in a **responsible, safe and resource-efficient** way. Our actions are guided by our corporate values and our global Code of Conduct. With our comprehensive management and monitoring systems, we want to ensure that we act in line with the applicable laws and uphold our responsibility to the environment and society. We require our business partners to comply with prevailing laws, regulations and internationally recognized principles. To discuss critical issues and, if needed, develop solutions together, we seek dialog with our stakeholders. We are also involved in numerous sustainability initiatives to drive forward sustainability both in general and specifically in relation to our value chains.

Overview of the chapters on environmental, social and governance

E Environmental

S Social

G Governance

Environmental

Environmental protection is one of the most important global challenges of our time. We see it as part of our corporate obligation to preserve the natural foundations of life for future generations. Our core business – production, processing and transportation of chemicals – therefore demands a responsible approach. Our aim is to minimize the impact we have on the environment along the entire value chain. This also includes protecting the climate and using increasingly scarce resources as efficiently as possible.

In this section:

Our Management and Control Systems

GRI 2, 3, 303, 403

In order to minimize negative impacts and protect the environment, a holistic approach and continuous monitoring are essential. That is why we have established comprehensive management and control systems. Our Responsible Care Management System comprises the global directives, standards and procedures for environmental protection, health and safety.

Responsible Care Management System

BASF is actively involved in the International Council of Chemical Associations' global Responsible Care® initiative. Our Responsible Care Management System covers the environmental protection, health and safety aspects that we have identified as material (for more information on health and safety, see page 143 onward). Environmental protection is particularly relevant for the procurement and transportation of our raw materials, the production at our plants, activities at our sites and warehouses, as well as distribution of our products. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center defines Group-wide management and control systems and monitors compliance with internal requirements as well as legal regulations, while the sites and Group companies implement these requirements locally. Our global network enables information and insights to be shared across the BASF Group on an ongoing basis.

Our policies and requirements are continuously updated. This is why we also maintain dialog with government institutions, associations and international organizations. We set ourselves ambitious goals for environmental protection (see page 41). We regularly review our performance and progress with audits. In the 120 audits conducted in 2023, we took a risk-based approach. We assess the potential risks and weaknesses of all our major activities – from research and development to production and logistics – and the potential effects of these on the environment. Worldwide, 132 BASF production sites are certified in accordance with the international environmental management standard ISO 14001 (2022: 132).

For more information on Responsible Care®, see basf.com/en/responsible-care
For more information on our Responsible Care audits, see page 101 and 131
For more information on supplier management, see page 158

Costs and provisions

We continually invest in reducing the impact of our actions on the environment. We also establish appropriate provisions for environmental protection measures and the remediation of active and former sites.

For more information, see Notes 9 and 22 to the Consolidated Financial Statements on pages 251 and 288

Costs and provisions for environmental protection in the BASF Group
Million €

	2023	2022
Operating costs for environmental protection[a]	1,162	1,305
Investments in new and improved environmental protection plants and facilities[b]	321	270
Provisions for environmental protection measures and remediation[c]	948	946

a Operating costs include costs entirely used for environmental protection as well as pro rata costs for environmental protection in production plants, energy generation facilities and laboratories.
b Investments comprise end-of-pipe measures as well as integrated environmental protection measures.
c Values shown refer to December 31 of the respective year.

Energy and Climate Protection

GRI 2, 3, 201, 302, 304, 305

As an energy-intensive company, we take responsibility for the efficient use of energy and global climate protection and are committed to the Paris Climate Agreement. The transformation of BASF toward climate neutrality is a challenge. We are determined to follow this path and become a pioneer in low-emission chemistry.

At a glance

16.9 million metric tons
Scope 1 and Scope 2 greenhouse gas emissions[1]

2.6 TWh
Electricity from renewable energy

- Ambitious emission reduction targets
  – Net Zero Accelerator unit promotes measures
- New Scope 3.1 target[3] to reduce raw materials procurement emissions
  – Supplier CO_2 Management Program for suppliers
- Corporate and product carbon footprints create transparency

Strategy and governance

Our products and solutions contribute to reducing greenhouse gas emissions in many areas. At the same time, we are working to significantly reduce our CO_2 emissions[2] along the value chain. This creates opportunities for our business activities: Thanks to our transformation toward climate neutrality, we can increasingly offer our customers products with a reduced product carbon footprint (PCF). However, emissions from our production, our energy procurement and our upstream and downstream value chain have a negative impact on the climate. Climate protection is therefore very important to us and is an important part of our corporate strategy. Climate scenarios are incorporated into the strategies of our business units. We continuously analyze short and long-term opportunities and risks for our business operations arising in connection with the topics of energy and climate protection as part of our opportunity and risk management (for more information, see page 182 onward).

We are pursuing **ambitious climate protection targets**. In addition to the targets for reducing our emissions from production processes (Scope 1)[1] and the purchase of energy (Scope 2)[1], we set ourselves a target for reducing our specific raw materials-related emissions (Scope 3.1)[3] in the reporting year (see "Global targets"). Based on increased transparency and data availability, we will be able to steer our upstream emissions, which make up the majority of our total emissions along the value chain, in a more targeted manner in the future. We have extended our long-term target of achieving net-zero greenhouse gas emissions by 2050 and are striving toward this target for Scope 3.1 in addition to Scope 1 and 2 (see page 104).

To reduce our greenhouse gas emissions and demand for fossil raw materials, we are focusing on the following measures:

- **Renewable energy:** We are increasingly meeting our electricity needs from renewable sources (see "Energy supply").
- **CO_2 abatement:** We are taking targeted measures to avoid CO_2 emissions: These include lower-emission steam generation (see "Energy supply"), the development of new technologies (see "Climate-smart technologies") and continuous measures in the area of operational excellence (see "Energy efficiency").
- **Circularity:** We are increasingly using renewable and recycled raw materials as well as raw materials based on the use of CO_2 in order to move from linear value creation to closed material cycles (see "Raw materials" from page 121 onward).

2030 targets

-25%
Reduction in our absolute Scope 1 and 2 greenhouse gas emissions[1] compared with 2018

-15%
Reduction in our specific Scope 3.1 greenhouse gas emissions[3] compared with 2022

2050 target

Net-zero
Greenhouse gas emissions by 2050 (Scope 1, 2[1] and 3.1)

We only consider external offsetting measures for our Scope 1 and Scope 2 emissions[1] as a temporary solution in the medium term if our activities do not make the desired contribution to reducing emissions. We bundle measures to achieve our Scope 3.1 target[3] primarily in purchasing-specific measures (see box on "Managing our emissions in the value chain," page 106).

By adjusting our **organizational structures**, we have created the conditions for implementing our climate protection targets and the measures that contribute to them in a focused and swift manner: The Corporate Center's Environmental Protection, Health, Safety and Quality (EHSQ) unit, which reports to the Board of Executive Directors, develops Group-wide requirements and guidelines for collecting emissions and energy data and for energy management. It conducts regular audits to monitor the implementation of and compliance with internal guidelines and legal requirements by our sites and Group companies. The Corporate Strategy & Sustainability unit develops the BASF Group's climate targets and strategic levers for achieving them. The driving force behind the implementation is the Net Zero Accelerator unit,

1 Excluding the sale of energy to third parties. Greenhouse gases are converted into CO_2 equivalents (CO_2e) in accordance with the Greenhouse Gas Protocol
2 The term "CO_2 emissions" includes all greenhouse gases in accordance with the Greenhouse Gas Protocol and is used synonymously with "greenhouse gas emissions."
3 Scope 3.1, raw materials excluding battery materials, excluding services and technical goods. Excluding greenhouse gas emissions from BASF trading business. Future adjustment of the baseline in line with the TfS guideline possible depending on the availability of further primary data.

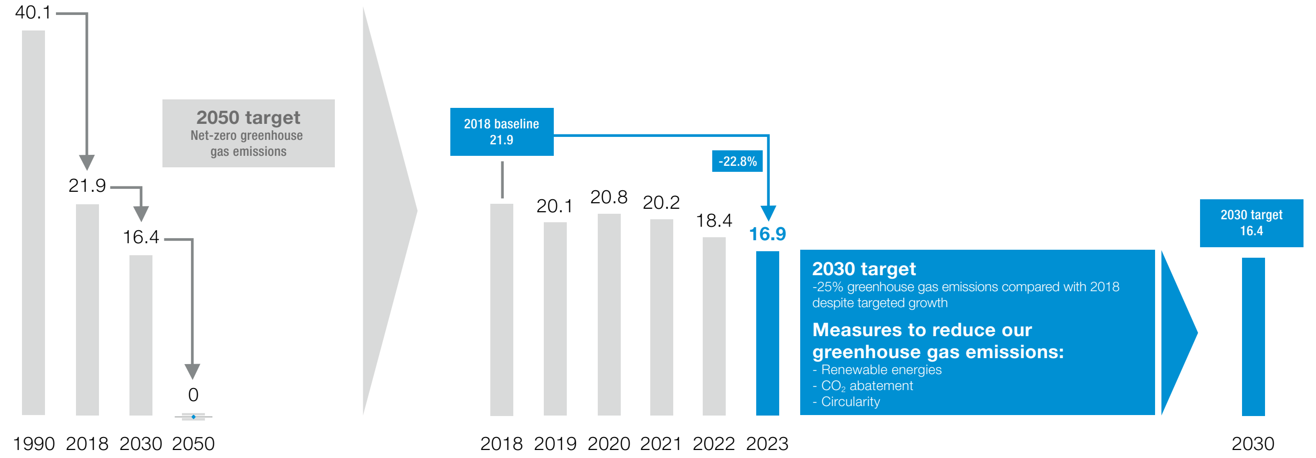
which focuses on the accelerated implementation of existing and new cross-divisional projects to reduce emissions. The Global Procurement unit, together with Corporate Development, is responsible for purchasing processes and procurement guidelines with regard to our raw materials-related targets. Global Procurement reports to the Chief Financial Officer; the Corporate Sustainability and Net Zero Accelerator units report to the Chairman of the Board of Executive Directors. This enables us to lay the foundation for integrating climate protection-relevant aspects into strategic decision-making processes such as investments, acquisitions and core business activities (see page 50). Group-wide Scope 1 and Scope 2 emissions have been anchored in the BASF Group's steering and compensation systems as the most important nonfinancial key performance indicator since 2020, giving them even more weight (see page 40).

By reducing our own CO_2 emissions and those upstream in the value chain, we contribute to our customers achieving their climate protection targets. To increase transparency and target our CO_2 reduction measures to those areas where they bring the greatest added value, we continuously determine the Product Carbon Footprint for around 45,000 sales products (see "Product Carbon Footprints"). In addition, we offer our customers solutions that help prevent greenhouse gas emissions and improve energy and resource efficiency.

We are committed to reporting transparently on our climate protection targets and progress, as well as on the impact of climate change on BASF. In this context, we support the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Since 2019, BASF's annual report has included an overview showing the sections and subsections in which TCFD-relevant information can be found (see page 21). We also participate in the program established by the international nonprofit organization CDP for reporting on data relevant to climate protection and have done so since 2004. BASF achieved a score of A- in CDP's 2023 climate change questionnaire, again attaining Leadership status.

Development of the BASF Group's greenhouse gas emissions (Scope 1 and 2)[1]

Million metric tons of CO_2 equivalents



Companies at the leadership level are distinguished by factors such as the completeness and transparency of their reporting.

All parts of society must work together to effectively protect the climate. This is why we support various national and international initiatives and are involved in partnerships. For example, we engaged in close dialog with the Science Based Targets initiative (SBTi) to derive science-based climate protection targets for the chemical sector.

For more information on climate protection, see basf.com/climate_protection

For more information on the CDP climate change questionnaire, see basf.com/en/cdp

Global targets

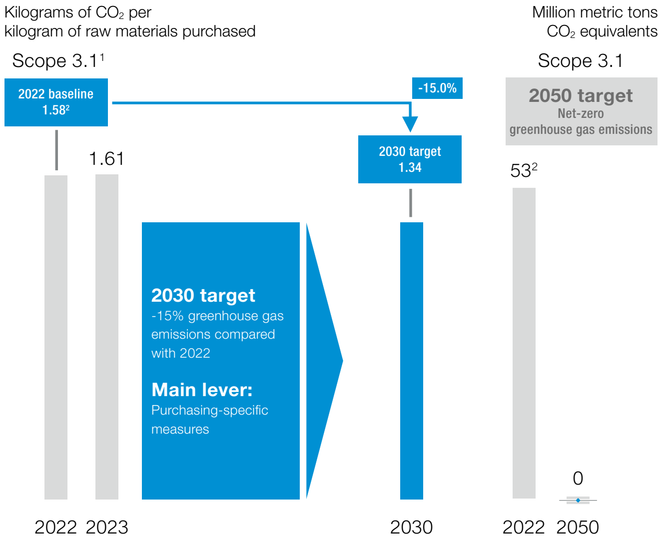
Compared with the 2018 baseline, we want to reduce greenhouse gas emissions from our production processes (Scope 1) and our energy purchases (Scope 2) by 25% by 2030.[1] This means that we aim to reduce greenhouse gas emissions from 21.9 million metric tons to 16.4 million metric tons – despite our growth plans and the construction of a new Verbund site in Southern China. This corresponds to a decrease of around 60% compared with 1990. Our long-term goal is net-zero greenhouse gas emissions by 2050.[1]

In 2023, the BASF Group's emissions from production and energy purchases[1] amounted to 16.9 million metric tons of CO_2 equivalents (2022: 18.4 million metric tons). The decline compared with the previous year as a result of a weak economy led to persistently low production volumes and therefore lower emissions in 2023. The share of electricity from renewable sources was increased compared with the previous year, to 20%, and, together with measures to increase energy and process efficiency, made a relevant contribution to reducing emissions.

1 Scope 1 and Scope 2 (excluding the sale of energy to third parties). The target includes greenhouse gases according to the Greenhouse Gas Protocol, which are converted into CO_2 equivalents (CO_2e).

We also set ourselves an ambitious Scope 3.1 target[1] for our specific raw materials-related emissions in the reporting year. By 2030, we want to reduce these in relation to the purchasing volume specifically by 15% from the 2022 baseline. This does not initially include raw materials-related emissions from battery materials, which we intend to further expand in the coming years. Battery materials make a significant contribution to reducing CO_2 emissions and thus facilitate the transformation of the transportation sector. Required raw materials such as lithium, nickel and cobalt will not be able to be replaced by more sustainable alternatives in the foreseeable future. Accordingly, we cannot reduce the associated emissions significantly in the short term. As soon as recyclable solutions come into play with the increase in available end-of-life batteries, we will include these raw materials in our target definition (for more information on our battery recycling activities, see page 125).

Development of the BASF Group's greenhouse gas emissions (Scope 3.1)



In 2023, specific Scope 3.1 emissions[1] amounted to 1.61 kilograms of CO_2 per kilogram of raw material purchased (2022: 1.58[2]). This increase is attributable to the decline in production and the associated reduced use of raw materials in Europe.

In the long term, we strive to reduce Scope 3.1 emissions to an unavoidable minimum by 2050, thereby expanding our long-term net-zero target to include these greenhouse gas emissions. Despite all our efforts, there will be residual share of emissions in 2050 that cannot be avoided using technical or economic approaches. These emissions must be offset by measurements outside our value chains. One option is to sequester carbon into the soil through farming (carbon farming, see page 36).

For more information on climate protection, see page 29
Our projection of greenhouse gas emissions for 2024 can be found in the forecast from page 170 onward

Energy supply

Our total energy consumption was 50.1 million MWh in 2023 (2022: 52.9 million MWh), slightly below the prior-year figure due to the lower production levels. Total energy consumption includes fuel demand in our own central power and steam generation plants, primary energy requirements in our process plants, and net power and steam imports.

To **generate our own steam and power**, we mainly use natural gas (78.8%) and substitute fuels (17.8%). The latter are residues from chemical production plants that cannot be reused in the BASF Verbund. In 2023, we covered 51% of our electricity demand with our own gas and steam turbines in highly efficient combined heat and power plants. Combined heat and power generation reduces the carbon footprint of our energy production and ensures that fuels are used as efficiently as possible: For instance, compared with separate methods of generating steam and electricity, we saved 10.8 million MWh of fossil fuels and avoided 2.2 million metric tons of CO_2 emissions in 2023.[3] To achieve the highest possible energy yield with the lowest possible greenhouse gas emissions, we continuously optimize our combined heat and power plants. In 2023, internally generated power in the BASF Group had a carbon footprint of around 0.26 metric tons of CO_2 per MWh of electricity and was below the national grid factor at most BASF sites.

The **Verbund system** is also key to carbon-optimized energy supply at our sites. It helps us realize synergies and manage value chains in a resource-efficient way. For example, waste heat from one plant's production process is used as energy in other plants. The Verbund saved us around 17.3 million MWh in 2023, which translates to 3.5 million metric tons less CO_2 released into the atmosphere.[3] With combined power and steam generation as well as our continuously optimized Energy Verbund, we were thus able to avoid a total of 5.7 million metric tons of CO_2 emissions in 2023. We will continue to invest in the creation and optimization of Verbund structures and drive forward the consolidation of production at highly efficient sites.

1 Scope 3.1, raw materials excluding battery materials, excluding services and technical goods, excluding greenhouse gas emissions from BASF trading business. Future adjustment of the baseline in line with the TfS guideline possible depending on the availability of further primary data.
2 The value for 2022 was adjusted due to increased data availability.
3 Calculation basis: electricity conversion efficiency of conventional power plants: 45%; steam generation efficiency 90%

A core component in reducing our greenhouse gas emissions is the gradual conversion of our energy supply from fossil to **renewable sources**. This mainly affects our electricity supply. In 2023, electricity from renewable sources as a share of total electricity consumption rose compared with the previous year to 20% (2022: 17%[1]). Our electricity consumption will increase significantly in the coming years due to the planned gradual electrification of our steam generation and the switch from natural gas-based to electricity-based, low-emission production processes, for example in our steam crackers (see page 107). Nevertheless, we aim to source more than 60% of our power needs from renewable sources by 2030.

In the transformation of our power supply, we are pursuing a **make & buy** approach. Firstly, BASF is investing in its own renewable power assets. Secondly, we are purchasing green power on the market through long-term supply agreements with plant operators, power purchase agreements or renewable energy certificates, depending on the region and market regulations. Profitability and additionality are key purchasing criteria: This means that the electricity purchased is primarily sourced from new renewable energy facilities.

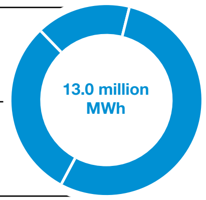
Energy supply of the BASF Group 2023

Electricity supply[a]

20% Renewable (internally generated + purchased)

28% Nonrenewable (purchased)

52% Nonrenewable (internally generated)

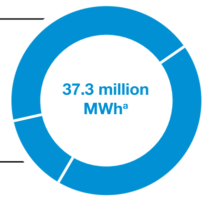


Steam supply

43% Waste heat

13% Purchased (nonrenewable)

44% Internally generated



Fossil fuels and residual fuels used in the BASF Group's central power and steam generation plants

78.8%	**Natural gas**	25.3 million MWh
0.9%	**Heating oil**	0.3 million MWh
2.5%	**Coal**	0.8 million MWh
17.8%	**Substitute fuels**	5.7 million MWh
Total:		32.1 million MWh

a Conversion factor: 0.75 MWh per metric ton of steam

In 2023, we successfully advanced our plan for a power supply from renewable sources. The Hollandse Kust Zuid offshore wind farm, a joint project with Vattenfall and Allianz, was officially inaugurated in fall 2023 and should be fully operational in 2024. With 139 turbines and a capacity of 1.5 gigawatts, it is one of the largest offshore wind farms in the world. We have signed a memorandum of understanding with Vattenfall for a shareholding in the wind farms Nordlicht 1 and 2 as part of a further project. It is envisaged that 49% of the shares will be sold to BASF. Construction is due to start in 2026, subject the final investment decision, expected in 2025. With a total capacity of 1.6 gigawatts, the wind farm should be completely operational in 2028. We plan to use just under half of the electricity generated to supply our production sites in Europe, particularly Ludwigshafen, Germany. In order to be able to fully supply our Verbund site in Zhanjiang in Southern China, which is currently under construction, with electricity from renewable sources in the future, we have entered into a joint venture with Mingyang for an offshore wind farm in Southern China, which includes development, construction and operation. The planned wind farm in Zhanjiang in the province of Guangdong will have a capacity of 500 megawatts and is scheduled to go into operation in 2025, subject to approval. We have also extended our long-term supply contract with the State Power Investment Corporation (SPIC) and secured a supply of 1,000 gigawatt hours of green electricity per year from 2025. In 2023, we also concluded further long-term supply agreements for green power at other sites in Asia, such as the Verbund site in Nanjing, China, and our sites in South Korea. In North America, for example, we were able to secure around 250 megawatts of solar generation capacity through virtual power purchase agreements in 2022. Further long-term supply contracts exist with X-ELIO, providing capacity of 48 megawatts of solar power to supply the Freeport, Texas, site and with EDF Energy Services, providing 35 megawatts of wind energy for the Freeport and Pasadena sites in Texas. In some regions, we have also acquired green power certificates. The aim is to gradually replace these temporary measures with our own power assets or long-term supply agreements.

The carbon footprint of purchased electricity in 2023 was around 0.22 metric tons of CO_2 per MWh (market-based approach), slightly below the prior-year level (2022: 0.23 metric tons CO_2 per MWh).[1]

1 The comparative figure for 2022 has been adjusted to reflect updated data.

Good to know

Managing our emissions in the value chain

Reducing Scope 3 emissions presents us with particular challenges, as these are only partly within our own direct sphere of influence and are subject to a large number of external factors. In recent years, we have been able to considerably increase the data availability and thereby transparency of our Scope 3.1 emissions. With our new target and dedicated measures, we want to control upstream emissions in a more targeted manner in the future.

We launched the **Supplier CO_2 Management Program** in 2021 to achieve transparency regarding these emissions. The goal is to obtain a more accurate data base and better manage and reduce emissions in the supply chain. In a first step, we have requested the Product Carbon Footprints of our raw materials since 2021 and support our suppliers in determining these, for example, by sharing our knowledge of valuation and calculation methods with them. Since the start of the program, we have asked more than 1,600 suppliers, covering around 70% of our raw materials-related greenhouse gas emissions. After around two years, we have more than 800 validated Product Carbon Footprints for our raw materials. In a second step, we will now work with our suppliers on solutions to reduce product-related emissions. To this end, we are building up a team of experts in our procurement organization, supported by interdisciplinary experts from the operating divisions and the Net Zero Accelerator unit.

We are also further developing our **purchasing processes** and establishing the Product Carbon Footprint as a relevant criterion for raw materials in the purchasing guidelines. In addition to reducing our raw materials-related emissions (Scope 3.1), we are taking targeted measures to reduce Scope 3 emissions along the entire value chain. In order to reduce emissions from the use of sold products (Scope 3.11), for example, we rely on product adaptations: For example, climate-damaging blowing agents for foaming polyurethane foams can now be largely dispensed with in the downstream value chain. We also want to reduce emissions resulting from the disposal of our products (Scope 3.12). This is possible, for example, through the increased use of renewable raw materials (see page 122) or circular solutions (see page 46). Both ensure that less and less CO_2 pollutes the atmosphere throughout the life cycle of our products.

In 2023, we built a stationary long-term sodium sulfur-based storage system (NAS®) at our Schwarzheide site in Germany. It supports the power supply of individual systems via the plant's own solar park. Together with NGK Insulators Ltd., BASF Stationary Energy Storage GmbH makes NAS batteries and develops them further.

Alongside electricity, steam generation is an important component of our energy supply. In the future, new technologies should make a significant contribution to reducing CO_2, for example by recovering energy from the waste heat of our production and infrastructure facilities. In this context, we are examining various concepts such as using electric heat pumps and e-boilers as well as electrifying steam drives.

Climate-smart technologies

To further reduce CO_2 emissions, we are also developing completely new technologies for emission-free and low-emission production. They will need large volumes of electricity from renewable sources in order to realize their full potential. The main focus here is on basic chemicals, which are often still emissions-intensive to produce. This applies, for example, to steam crackers, which use high levels of energy to break down crude petroleum into olefins and aromatics. We made significant progress here in 2023 with the construction of a demonstration plant for electrically heated steam cracker furnaces (see box on page 107). Another important basic material in the chemical industry is hydrogen, which we have so far mainly used as a raw material. One common but emissions-intensive way of obtaining hydrogen is steam reforming. We are already testing an alternative process – methane pyrolysis – in Ludwigshafen, Germany. This process is virtually emission-free if renewable energy is used and requires considerably less electricity compared with other methods, such as water electrolysis. We successfully tested a new reactor concept at the pilot plant, which went into operation in 2021, thus overcoming the first important technical hurdle for further scaling. Furthermore, we started construction of a PEM (proton exchange membrane)

Case study

Electrification of our steam crackers

Many everyday products would not exist without steam crackers. They split petroleum into olefins and aromatics – both important groups of substances for numerous chemical value chains. The cracking reaction requires high temperatures of around 850 degrees Celsius, which until now have been achieved by burning natural gas.

Heating concepts that use electricity from renewable sources could reduce process-related emissions by at least 90% in the future. We want to test the feasibility of this new process, as well as direct and indirect heating concepts together with our partners SABIC and Linde in a demonstration plant.[1] At the beginning of 2024 this plant was completed at our Ludwigshafen site in Germany and has since then been gradually being put into operation. The prototype is completely integrated into one of the two existing steam crackers at the site.

water electrolyzer[2] with a capacity of 54 megawatts at the Ludwigshafen site in Germany with Siemens Energy in 2023. Powered by electricity from renewable energy, the plant, which will go into operation in 2025, is expected to produce up to 8,000 metric tons of emission-free hydrogen and thus reduce greenhouse gas emissions at the site by up to 72,000 metric tons per year. BASF will primarily use the hydrogen produced as a raw material for the manufacture of products with a reduced carbon footprint. In addition, we expect new hydrogen applications in the future, such as energy use, and thus a trend toward increasing demand for hydrogen. Access to large quantities of low-emission or emission-free hydrogen at competitive prices is therefore becoming increasingly important for BASF.

Another focus area of our technological development is carbon capture and storage (CCS). For example, we are currently part of an industrial CCS project at the Antwerp site in Belgium (Kairos@C) as the first phase of the Antwerp@C project, which could enable BASF to avoid the emission of up to 1 million metric tons of CO_2 into the atmosphere every year from production. Together with Yara, we are also evaluating the development and construction of a world-scale production plant for low-emission blue ammonia using CCS in the United States. Approximately 95% of the CO_2 generated from the production process is to be captured and permanently stored in the ground.

Energy efficiency and specific greenhouse gas emissions

Energy use and greenhouse gas emissions are closely linked to capacity utilization at our plants and its product portfolio. Specific greenhouse gas emissions in 2023 amounted to 0.584 metric tons of CO_2 equivalents per metric ton of sales product,[3] an increase of 1.2% compared with the previous year (2022: 0.577 metric tons). This was mainly due to persistently lower and inconsistent capacity utilization at our plants, which resulted in a decline in plant efficiency. In contrast, the use of renewable power had a positive impact on specific greenhouse gas emissions. Since 1990, we have been able to lower our overall greenhouse gas emissions from BASF operations by 57.8% and even reduce specific emissions (per metric ton of sales product) by 74.5%.

Through our **operational excellence** projects, we aim to make our plants and processes even more efficient and resource saving, thereby avoiding CO_2 emissions. Certified energy management systems according to DIN EN ISO 50001 at all relevant production sites[4] play a particularly important role here. These help us to identify and implement further potential for improvement in energy efficiency. This not only reduces greenhouse gas emissions and saves valuable energy resources but also increases our competitiveness. In 2023, 78 production sites worldwide had certified energy management systems, representing around 89% of our primary energy demand.

A global working group provides ongoing support to the sites and Group companies in implementing and maintaining certified energy management systems. All energy efficiency measures are recorded in a global database, analyzed and made available to BASF sites as examples of best practices.

In 2023, we implemented more than 500 measures to reduce energy and resource consumption and increase our competitiveness. In our steam cracker in Ludwigshafen, Germany, for example, we were able to monitor and analyze energy consumption more specifically by introducing a digital tool for energy optimization, thereby further optimizing the energy efficiency of the crude gas compression process and cracking furnaces. This enables us to avoid more than 15,000 metric tons of CO_2 emissions per year. At a plant in Freeport, Texas, an optimized control system increased process efficiency while reducing the power consumption of the compressors. This led to an annual reduction of more than 6,000 metric tons of CO_2. In Caojing, China, we can reduce annual emissions by more than 25,000 metric tons of CO_2 by harnessing reaction heat through process adjustments and the integration of an absorption heat pump for steam generation.

1 The project has been granted €14.8 million from Germany's Federal Ministry for Economic Affairs and Climate Action (BMWK) under the Decarbonization in Industry funding program. This project is also being financed by the European Union via the NextGenerationEU fund.
2 The project is funded by the BMWK and the Federal State of Rhineland-Palatinate.
3 Sales product volumes include sales between BASF Group companies; merchandise is not taken into account.
4 Relevant sites are selected based on the amount of primary energy used and local energy prices.

Corporate carbon footprint

BASF has published a comprehensive corporate carbon footprint every year since 2008. This reports on all emissions along the value chain – from raw materials extraction to production and disposal. We are continually working to reduce greenhouse gas emissions both in our own production and, together with our partners, along the value chain (see "Strategy and governance").

In 2023, our greenhouse gas emissions according to the Greenhouse Gas Protocol, including **Scope 1 and Scope 2 emissions**[1] were 17.851 million metric tons of CO_2 equivalents (2022: 19.149 million metric tons[2]). Of this amount, 87% were Scope 1 emissions (2022: 87%[2]) and 13% were Scope 2 emissions (2022: 13%[2]). Carbon dioxide was by far the largest component and accounted for 98% of emissions (2022: 98%).

Scope 3 emissions arising upstream and downstream of our operations in the value chain are calculated in accordance with the Corporate Value Chain (Scope 3) Accounting and Reporting Standard published by the Greenhouse Gas Protocol and the WBCSD Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (WBCSD Chemicals). For 2023, we calculated Scope 3 emissions of around 85 million metric tons of CO_2 equivalents (2022: 94 million metric tons[2]).[3] There was a further reduction in total emissions along the BASF value chain in 2023 due to lower production volumes.

The largest contribution to emissions along the value chain in 2023 was in category 3.1 (purchased raw materials and technical goods and services) at 47 million metric tons of CO_2 equivalents (2022: 53 million metric tons[2]). To calculate these upstream greenhouse gas emissions, we used both primary data from our suppliers from the Supplier CO_2 Management Program (see box on "Managing our emissions in the value chain") and industrial averages and values from external databases.[4] We have been able to reduce our emissions from the use of products sold (Scope 3.11) by around 75% since 2018.[5] In addition to raw materials-related emissions, the disposal of our products (Scope 3.12) accounts for the second-largest share of our Scope 3 emissions at around 24 million metric tons of CO_2 equivalents (2022: 26 million metric tons).

For more information on our emissions reporting, see basf.com/corporate_carbon_footprint

For more information on the Supplier CO_2 Management Program, see basf.com/suppliers

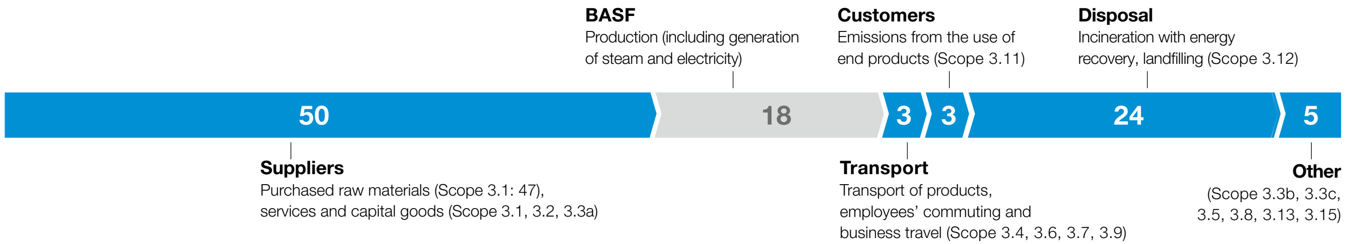
Additional key indicators for energy and climate protection in BASF operations

	2023	2022	2018 (baseline)
Specific greenhouse gas emissions[a] (metric tons of CO_2 equivalents per metric ton of sales product[b])	0.584	0.577	0.577
Primary energy demand[c] (million MWh)	49.917	54.206	60.586
Energy efficiency (kilograms of sales product[b] per MWh)	580	589	626

a Scope 1 and Scope 2 (market-based) according to the GHG Protocol, excluding emissions from the generation of steam and electricity for sale to third parties
b Sales product volumes include sales between BASF Group companies; merchandise is not taken into account.
c Primary energy used in BASF's plants as well as in the plants of our energy suppliers to cover energy demand for production processes. Purchased renewable power has a primary energy conversion efficiency rate of 100%.

Scope 3 emissions along the BASF value chain in 2023[a]

Million metric tons of CO_2 equivalents



a According to the Greenhouse Gas Protocol; Scope 1, 2 and 3; reported categories within Scope 3 are shown in parentheses. Scope 3 emissions in category 10 ("Processing of sold products") are not reported according to the standard for the chemical sector. Only direct use phase emissions are reported in the customer category (Scope 3.11). Excluding greenhouse gas emissions from BASF trading activities.

1 Market-based approach, including sale of energy to third parties
2 The comparative figure for 2022 has been adjusted to reflect updated data.
3 In 2023, we changed the calculation of Scope 3 emissions in categories 3.1 and 3.12 due to increased availability of primary and secondary data. This did not lead to any significant changes in the results. For more information on the calculation method, see basf.com/corporate_carbon_footprint
4 The database values are updated on an annual basis. Significant changes in these values are reflected accordingly in our calculations. BASF operations excluding oil and gas business
5 BASF business without oil and gas operations

Product Carbon Footprints

In 2020, we developed a digital solution to make our product-specific greenhouse gas emissions more transparent and thereby determined the carbon footprints of around 45,000 sales products. These Product Carbon Footprints (PCFs) include all greenhouse gas emissions – from raw materials extraction to the finished product leaving the factory gates ("cradle-to-gate"). PCFs provide us with important information for assessing the climate impact of our products and guidance for implementing mitigation measures so that our customers can benefit from reduced CO_2 emissions in the value chain.

In 2023, we further expanded our portfolio of products with a certified reduced carbon footprint, including engineering plastics. We already offer some of our products, such as the intermediates neopentyl glycol and propionic acid, the isocyanates MDI and Lupranat®, the amino resin Kaurit® and the adhesive raw material acResin® with a net-zero carbon footprint. These lower PCFs are primarily made possible by the substitution of fossil raw materials. For instance, we use electricity from renewable sources instead of electricity from fossil fuels to produce **low-PCF and zero-PCF products**. We also use – in whole or in part – renewable, waste-based or recycled raw materials such as castor oil, biomethane or pyrolysis oil from plastic waste. These alternative resources often have a better carbon footprint compared with fossil raw materials. The alternative resources are allocated to the end product using the mass balance approach (see box on page 124).

The digital methodology we have developed to calculate PCFs meets general life cycle analysis standards such as ISO 14040, ISO 14044 and ISO 14067, as well as the Greenhouse Gas Protocol Product Standard. In 2023, we received certification from TÜV Rheinland, which confirms that our calculation method and reporting fully comply with the requirements of Together for Sustainability (TfS). We make our automated PCF calculation approach available to interested industry players through partnerships. At the same time, we are involved in various initiatives to drive transparency, harmonization and standardization across the industry. This also took place as part of TfS, where we were involved in the creation of a uniform guideline for calculating the carbon footprint of products in the chemical industry. This will enable the climate impact of products to be directly compared and evaluated based on a standardized approach. A digital solution for sharing PCF data between companies is currently in the pilot phase and should be implemented in 2024.

Harmonizing the approaches used to calculate PCFs allows us to better manage greenhouse gas emissions that arise during the extraction of raw materials or the manufacture of precursors.

For more information on Product Carbon Footprints, see basf.com/en/pcf

BASF Group's greenhouse gas emissions according to the Greenhouse Gas Protocol[a]

Million metric tons of CO_2 equivalents

BASF operations	2023	2022	2018 (baseline)
Scope 1[b]			
CO_2 (carbon dioxide)	14.345	15.434	17.025
N_2O (nitrous oxide)	0.239	0.348[c]	0.677
CH_4 (methane)	0.025	0.025	0.027
HFC (hydrofluorocarbons)	0.026	0.035[c]	0.091
SF_6 (sulfur hexafluoride)	0	0.001	0
Scope 2[d]			
CO_2	2.289	2.547[c]	4.067
Total	16.924	18.390[c]	21.887
Offsetting	0	0	0
Total after offsetting	**16.924**	**18.390[c]**	**21.887**
Sale of energy to third parties (Scope 1)[e]			
CO_2	0.927	0.759	0.773
Total	**17.851**	**19.149[c]**	**22.660**
Use of biomass[f]			
CO_2	0.112	0.084	n.a.

a BASF reports separately on direct and indirect emissions from the purchase of energy. Scope 1 emissions encompass both direct emissions from production and generation of steam and electricity, as well as direct emissions from the generation of steam and electricity for sale. Scope 2 emissions comprise indirect emissions from the purchase of energy for BASF's use.
b Emissions of N_2O, CH_4 and HFC have been translated into CO_2 emissions using the Global Warming Potential, or GWP, factor. GWP factors are based on the Intergovernmental Panel on Climate Change (IPCC) 2007, errata table 2012 for the 2018 reporting year, and IPCC 2014 for the 2022 reporting year. HFC (hydrofluorocarbons) are calculated using the GWP factors of the individual components.
c The comparative figure for 2022 has been adjusted to reflect updated data.
d Market-based approach. Under the location-based approach, Scope 2 emissions were 3.588 million metric tons of CO_2 in 2022 and 3.317 million metric tons of CO_2 in 2023.
e Includes sales to BASF Group companies. as a result, emissions reported under Scope 2 can be considered twice in some cases.
f Emissions are reported separately from Scope 1 and Scope 2 in accordance with the Greenhouse Gas Protocol.

Material topics in focus:

Emissions to Air, Waste and Remediation

GRI 2, 3, 305, 306

We are constantly working on reducing the environmental impact of our business. This includes reducing emissions to air, preventing waste and protecting the soil by operating our plants safely and efficiently and using resources responsibly. We are also developing product solutions for our customers that can reduce emissions and waste.

"Almost half of our waste can be recycled or thermally recovered.

Dr. Claudia Kappler
Corporate Environmental Protection, Energy and Remediation

Strategy and governance

Our product solutions, such as catalysts and additives, contribute to reducing pollutants in the air and reducing waste. What's more, the implementation of circular models offers us business opportunities. However, emissions to air and waste from our production processes along with existing contaminated sites can have a negative impact on the environment. We systematically record opportunities and risks arising from emissions to air, waste and contaminated sites as part of our general opportunity and risk management (see page 182 onward).

The safe and efficient operation of our plants and the responsible management of resources and waste are core elements of our Responsible Care Management System. We have defined our global standards for emissions to air, waste and contaminated sites in Group-wide requirements, the implementation of which is the responsibility of the sites and Group companies. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center conducts regular audits to monitor compliance with legal requirements and internal provisions. BASF's global network of experts shares information, insights and best practices on an ongoing basis. Continuous monitoring and documentation of atmospheric emissions, waste streams and contaminated sites as well as the implementation of measures for improvement are an integral part of our environmental management. In addition to greenhouse gases (see page 102 onward), other air pollutants such as nitrogen oxides and ammonia are emitted as a result of power generation and production. We evaluate and analyze these emissions and reduce them using emission control technologies.

This page:
In 2020, we initiated a program for the disposal of solid waste at our site in Guaratinguetá, Brazil, with MAWERYC (Management of Waste and Recovery Cycle). The aim is to reduce environmental pollution by avoiding waste and implementing solutions with more sustainable technologies. Thanks to the program, we are currently saving around 1,000 metric tons of CO_2 equivalents each year.

Through **targeted waste management**, we want to keep material consumption and disposal volumes to a minimum by systematically tracking our material flows and following a clear hierarchy: We aim to avoid waste as far as possible, for example, by continuously optimizing our processes or developing new production methods. This is where our Verbund structure with its networked plants and value chains comes in: The by-products of one plant serve as feedstock elsewhere in the BASF Verbund, avoiding waste and enabling us to use raw materials as efficiently as possible. If these cannot be used within the Verbund structures, we assess whether they can be recycled or thermally recovered. We have established processes for the safe, proper and environmentally responsible disposal of materials that we cannot recycle or where recycling is not legally permitted. If we use external waste disposal companies, we conduct regular audits to verify that waste is disposed of properly. In this way, we also contribute to soil protection and keep today's waste from becoming tomorrow's contamination. If soil or groundwater contamination has occurred at active, acquired or

Material topics in focus: Emissions to Air, Waste and Remediation

former sites, we review and implement appropriate remediation measures.

We are committed to reducing the impact on air and soil and minimizing disposal volumes and material consumption along our value chains. We require suppliers to comply with internationally recognized environmental standards. This is assessed as part of our supplier management. We support our suppliers in developing and implementing measures for improvement, for example in waste management (see page 160).

We offer our customers a wide range of products that can remove air pollutants or reduce waste – from industrial process catalysts, fuel additives and emissions catalysts for various industries to additives and track-and-trace technologies to extend the useful life of plastics or improve mechanical recycling of plastic waste.

We are increasingly aligning our actions with the circular economy principle. For example, we are increasingly using recycled and waste-based raw materials in our production, recycling operating supplies and expanding our capacities for recovering precious metals from spent automotive and industrial catalysts. We are also developing product-specific recycling technologies and are involved in cross-industry networks and initiatives to avoid plastic waste and strengthen the circular economy.

For more information on the circular economy, see page 46

Emissions to air

Total emissions of air pollutants from our plants amounted to 21,605 metric tons in 2023 (2022: 23,354[1]). Emissions of ozone-depleting substances as defined by the Montreal Protocol totaled 12 metric tons in 2023 (2022: 14 metric tons). Emissions of heavy metals[2] in 2023 rose to 5 metric tons due to changes in the product portfolio (2022: 4 metric tons).

1 The comparative figure for 2022 has been adjusted to reflect updated data.
2 Heavy metals are included in the figure for dust (see the table "Emissions to air").

Emissions to air
Metric tons

Air pollutants from BASF operations	2023	2022
CO (carbon monoxide)	3,450	3,739[a]
NO_x (total nitrogen oxides)	8,433	9,326
NMVOC (nonmethane volatile organic compounds)	4,433	4,621
SO_x (total sulfur oxides)	1,350	1,553
Dust	1,763	2,060
NH_3 (ammonia) and other inorganic substances	2,175	2,054[a]
Total	**21,605**	**23,354[a]**

a The comparative figure for 2022 has been adjusted to reflect updated data.

We want to further reduce emissions with various measures. For instance, we reduce nitrogen oxides using catalysts and feed waste gases back into the production process.

Waste

BASF generated 2.13 million metric tons of waste in 2023 (2022: 2.21 million metric tons). Of this, 53.7% was disposed of (2022: 52.6%). Hazardous waste accounted for 74.4% of the total disposed waste (2022: 75.2%). Based on the concept of the circular economy, we are continuously examining options for recycling or thermal recovery for all waste. In this way, we were able to find new uses for 46.3% of our waste in 2023 (2022: 47.4%). We continuously identify and evaluate the safest and most environmentally sound disposal routes for nonrecyclable waste. In 2023, most of our hazardous waste was incinerated (72.3%), where possible with energy recovery. 9.9% of hazardous waste was disposed of in landfill. This was mainly contaminated construction waste that cannot be recycled due to legal requirements.

Waste generation in the BASF Group
Million metric tons

	Hazardous waste[a]		Nonhazardous waste[a]	
	2023	2022	2023	2022
Recycled	0.15	0.14	0.32	0.31
Thermally recovered	0.42	0.49	0.09	0.11
Waste recovered	**0.57**	**0.63**	**0.42**	**0.42**
Through incineration (without energy recovery)	0.61	0.64	0.06	0.05
In surface landfills	0.14	0.12	0.21	0.22
Other[b]	0.10	0.12	0.03	0.02
Waste disposed of	**0.85**	**0.87**	**0.29**	**0.29**
Total waste generation	**1.42**	**1.50**	**0.71**	**0.71**

a Waste is classified as hazardous or nonhazardous waste according to local regulations.
b Physical/chemical and biological treatment, underground disposal

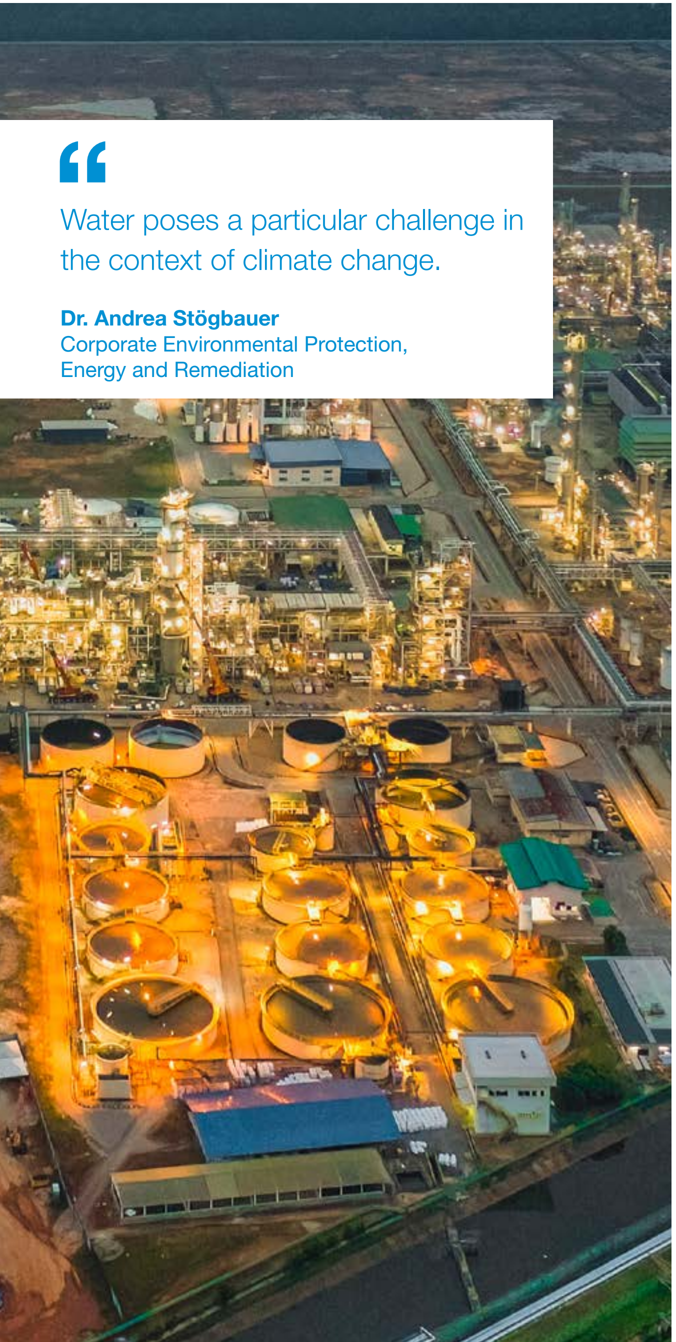
Contaminated sites

We have binding global standards for managing contaminated sites, implemented by a global network of experts. We develop remediation solutions that aim to balance nature conservation, climate protection concerns, costs and social responsibility. These site and case-specific measures take into account the legal frameworks and currently available technology. We document contamination risks and the status of soil and groundwater for our sites worldwide in a database. Ongoing remediation work continued on schedule in the reporting year and planning was completed for further measures.

For more information, see Notes 9 and 22 on pages 251 and 288

Material topics in focus:

Water GRI 3, 303, 304



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Water poses a particular challenge in the context of climate change.

Dr. Andrea Stögbauer
Corporate Environmental Protection, Energy and Remediation

Water is of fundamental importance in chemical production. It is used as a coolant, solvent and cleaning agent, and to make our products. Waterways are used to transport goods. At the same time, water is a scarce commodity in an increasing number of regions. That is why we promote the responsible use of this resource with sustainable water management.

Strategy and governance

As a manufacturing company, we need water for production. In order to use water as efficiently as possible, we are building on intelligent cooling water systems, increased reuse and multimodal transportation concepts with combined transportation methods. A lack of water presents a risk for us. Our demand for water, the volume of wastewater we generate and the associated emissions to water can have an impact on the environment. We systematically record the short and long-term opportunities and risks that arise from water as part of our general opportunity and risk management (see page 178 onward).

The responsible use of water as a resource is a core element of our Responsible Care Management System and an important part of our commitment to the United Nations' Sustainable Development Goals (SDGs). This is also reflected in our position paper on water protection, which we published in 2021.

Our global standards and provisions for water are defined in Group-wide requirements. Among other things, these stipulate that water protection concepts must be implemented at all production sites. The requirements also cover aspects such as process and transportation safety (see pages 127 and 130) in order to prevent production and transportation-related product spillages into water bodies as far as possible. Our sites and Group companies are responsible for implementing and complying with internal and legal requirements. This is regularly audited by the Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center. BASF's global network of experts shares information, insights and best practices around the responsible use of water on an ongoing basis.

Introducing and implementing sustainable water management has been a cornerstone of our strategy for many years now. Our focus here is on our Verbund sites and on production sites in water stress areas.[1] We look at water availability, water quality and the impact of our water use on the environment and other users. For this, we use the standard of the Alliance for Water Stewardship (AWS)

This page:
At our Verbund site in Kuantan, Malaysia, we are aiming to reduce our demand for water by 50% by 2030 compared with 2022. In the site-specific initiative to save and recycle water, we are focusing on increasing the reuse of wastewater, condensate and collected rainwater.

2030 target

Introduction of sustainable water management at our production sites in water stress areas and at our Verbund sites

1 We define water stress areas as regions in which more than 40% of available water is used by industry, households and agriculture. Our definition is based on the Water Risk Atlas (Aqueduct 3.0) published by the World Resources Institute. For more information, see wri.org/aqueduct.

Material topics in focus: Water

as guidance. AWS is a global multistakeholder organization that promotes the responsible use of water, which we are a member of.

In the wake of advancing climate change, the resulting water shortages and extreme weather events, **climate resilience measures** are becoming increasingly important. We have established early-warning systems for the Ludwigshafen site in Germany in order to secure our supply of raw materials and transportation via water and developed a special type of ship for extremely low water levels. In 2023, we were able to inaugurate a tanker and a ship for transporting specialty chemicals, which are optimized for low water levels and are for the exclusive use of BASF. Further measures at our sites are aimed at reducing our demand for water, for example, through recycling and intelligent cooling water systems.

For more information on our risk management, see page 178 onward

Engagement in the value chain

We advocate the responsible use of water as a resource along the entire value chain. We audit supplier compliance with environmental standards in our regular supplier assessments (see page 159). Where improvement is necessary, we support suppliers in developing and implementing appropriate measures, such as the correct handling of wastewater. In addition, we are involved in a wide range of initiatives to promote sustainability in the supply chain. For example, efficient water use is a core part of the Pragati project to improve sustainability in castor bean farming (see page 123).

We work with numerous partners along the value chain and from civil society to protect water as a resource. In addition to the Alliance for Water Stewardship, we are involved in networks such as the Alliance to End Plastic Waste (AEPW) and Operation Clean Sweep® to prevent waste from plastic production from entering water bodies.

We offer our customers solutions that help purify water and use it more efficiently and minimize pollution. These include high-performance plastics to produce ultrafiltration membranes, intermediates to produce flocculants for water treatment, or seeds with higher drought and heat tolerance.

We report transparently and comprehensively on how we use water. For instance, in 2023, we again participated in the program established by the nonprofit organization CDP for reporting on data relevant to climate protection, on the topic of water. BASF again achieved leadership status with an A- rating in the final assessment. CDP evaluates how transparently companies report on their water management activities and how they reduce risks such as water scarcity. The assessment also considers the extent to which product developments can also contribute to sustainable water management at the customers of the evaluated companies.

> With our sustainable water management, we cover around 90% of BASF's water abstraction.
>
> **Dr. Andrea Stögbauer**

For more information on our position paper on water protection, see basf.com/water

For more information on the CDP water questionnaire, see basf.com/en/cdp

Global target and measures

Our goal is to introduce sustainable water management at our Verbund sites and at all production sites in water stress areas by 2030, covering around 90% of BASF's total water abstraction. We achieved 70% of our target in 2023 (2022: 62%).[1] Sustainable water management was introduced at seven further sites in 2023 (2022: seven sites).

As part of sustainable water management, our sites regularly assess the water situation in the catchment area. This raises awareness of potential risks and impacts such as water scarcity for the population. Based on the assessments conducted until the end of 2023, we did not identify a significant impact on water availability and quality resulting from our activities at any site.

Another important part of our sustainable water management is the continuous analysis and implementation of measures for improvement. For example, process optimizations such as the use of modified valves or the recycling of low-temperature cooling water at the General Lagos site in Argentina are leading to water savings of 15%. At our Verbund site in Freeport, Texas, we commissioned a membrane bioreactor for treating wastewater in 2023, which improved the capacity and performance of the wastewater treatment plant. In the future, the treated wastewater is to be recycled, thereby reducing the need for freshwater. Depending on the local situation, we also implement measures together with other stakeholders. One example is the Lake Winnipeg Basin project in the Canadian province of Manitoba, where we are working with project partners to analyze the benefits of water management for the environment, farmers and other stakeholders.

Water balance

Our **water abstraction** totaled 1,518 million cubic meters in 2023 (2022: 1,590 million cubic meters). This demand was covered for the most part by freshwater such as rivers and lakes (88% of total water abstraction). At some sites, we use alternative sources such as treated municipal wastewater, brackish water or seawater. A small part of the water we use reaches our sites as part of raw materials and steam, or is released in our production processes. We abstract most of the water we need for cooling and production

1 Our water target also continues to take into account the sites that we identified as water stress sites in accordance with Pfister et al. (2009) prior to 2019.

Material topics in focus: Water

Water balance in the BASF Group 2023

Million cubic meters per year

Abstraction / supply

1,518[a]

Of which in water stress areas: 1%

Surface water / freshwater	1,249
Brackish water / seawater	168
Groundwater	74
Drinking water	20
Reusable wastewater from third parties	3
Water from raw materials	5

88%

12%

Use

6,528

Water used in cooling processes

Percentage in recirculating cooling systems 82%

194

Water used in production[b]

Percentage of water reused 6%

Discharge

1,352[a]

Of which cooling water: 1,204

Of which wastewater from production:[b] 148

Surface water / freshwater	1,179
Brackish water / seawater	156
Groundwater	1
External treatment plant	16

Consumption

67[a]

Of which in water stress areas: 15%

a The difference between water abstraction and discharge is due to water consumption and limited measurement accuracy in water discharge.
b Total from production processes, sanitary facilities, rinsing and cleaning in production

ourselves. In 2023, 5% of our total water demand was covered by third parties (2022: 5%).

Water use in 2023 totaled 6,722 million cubic meters (2022: 6,917 million cubic meters). Put in relation to total water abstraction, this means that we use every liter we abstract around four times, or cover 79% of our water demand with reuse. We predominantly use water for cooling purposes (88% of total water abstraction), after which we discharge it back to our supply sources with no product contact. We reduce our water abstraction for cooling purposes mainly by using recooling plants. Around 12% of our total water abstraction is used in production plants, for example, for extraction or dissolution processes or for cleaning. Here, too, we reduce our demand for water by reusing wastewater. Most of the water used for production purposes is discharged back to water bodies after being treated in our own or third-party wastewater treatment plants.

The BASF Group's **water consumption** describes the amount of water that is not discharged back into a water body, meaning that it is no longer available to other users. Consumption is mainly attributable to the evaporation of water in recirculating cooling systems. A smaller amount is from the water contained in our products. Water consumption in 2023 amounted to around 67 million cubic meters (2022: 69 million cubic meters).

In 2023, around 25% of our production sites were located in water stress areas (2022: 25%). These sites accounted for 1% of BASF's total water abstraction (2022: 1%[1]). In water stress areas, we mainly source water from third parties (79%) and largely cover our demand with freshwater. Water consumption in water stress areas accounted for 15% of BASF's total water consumption in 2023 (2022: 17%) and was primarily attributable to evaporation in cooling processes. Wastewater in water stress areas accounted for less than 1% of BASF's total wastewater. The share of wastewater from cooling processes in water stress areas is lower than for the BASF Group as a whole. Cooling water is rarely used for once-through cooling here. Instead, it is generally recirculated to reduce water demand. Production wastewater in water stress areas is primarily treated at third-party facilities.

The supply, treatment, transportation and recooling of water is often associated with a high energy demand. We are constantly working to optimize our energy consumption and the amount of water we use, and to adapt to the needs of our operations and the environment.

1 Aqueduct 3.0 was used to identify sites in water stress areas to determine pro rata water abstraction and water consumption.

Material topics in focus: Water

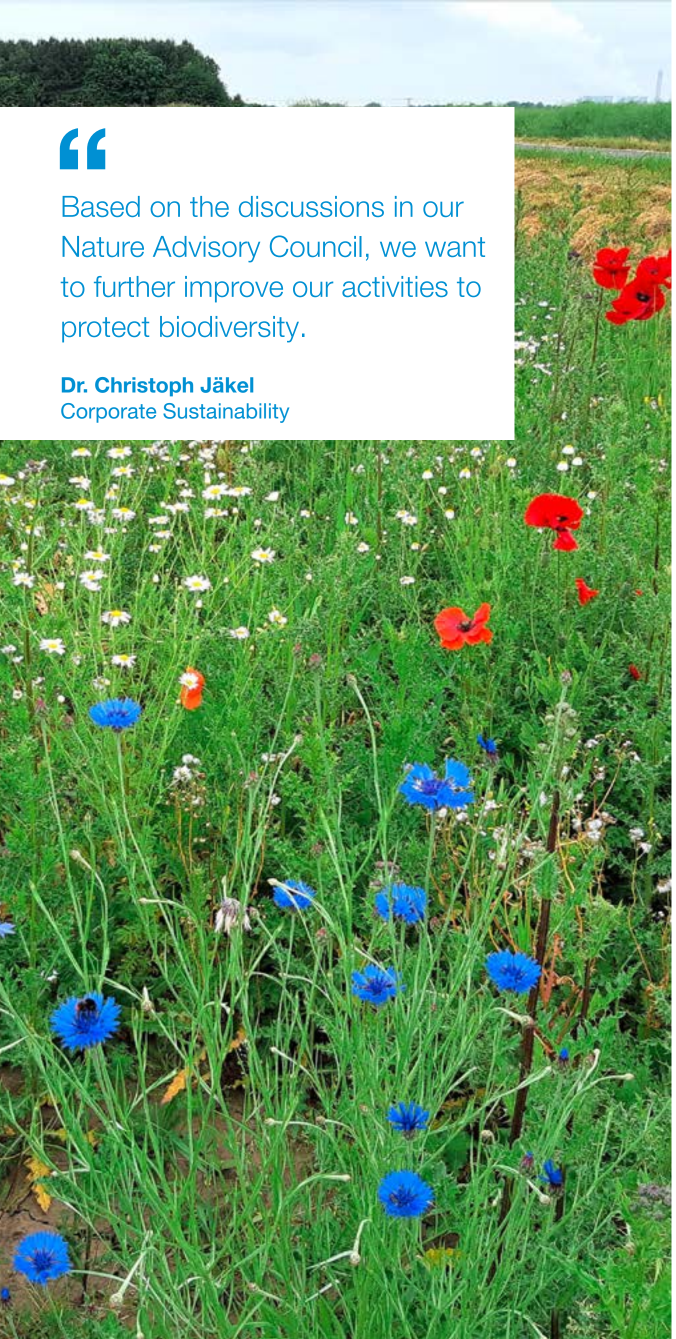
Emissions to water

Our wastewater is subject to strict controls and we carefully assess the impact of wastewater discharge in accordance with the applicable laws and regulations. Both internal audits and the responsible local authorities regularly assess whether the analyses and safety precautions at our sites comply with internal and legal requirements. A total of 1,352 million cubic meters of water were discharged from BASF production sites in 2023 (2022: 1,400 million cubic meters). Including 148 million cubic meters of wastewater from production. Emissions of nitrogen to water amounted to 2,100 metric tons in 2023 (2022: 2,400 metric tons[1]). Around 8,800 metric tons of organic substances were emitted in wastewater (2022: 10,600 metric tons). Our wastewater contained 13 metric tons of heavy metals (2022: 15 metric tons[1]). Phosphorus emissions amounted to 220 metric tons (2022: 230 metric tons[1]).

Our approach is to reduce wastewater volumes and contaminant loads at the source in our production processes and to reuse wastewater and material flows internally as far as possible. To treat wastewater, we use both central measures in wastewater treatment plants and the selective pretreatment of individual wastewater streams before these are sent to the wastewater treatment plant. We use different methods depending on the type and degree of contamination – including biological processes, chemical oxidation, membrane technologies, precipitation or adsorption. In order to avoid unanticipated emissions and the pollution of surface water or groundwater, we have water protection concepts for our production sites in place. This is mandatory for all production sites as part of our Responsible Care Management System (see page 131). The wastewater protection plans involve evaluating wastewater in terms of risk and drawing up suitable monitoring approaches. We use audits to check that these measures are being implemented and complied with.

For more information, see basf.com/water

1 The comparative figure for 2022 has been adjusted to reflect updated data.



"Based on the discussions in our Nature Advisory Council, we want to further improve our activities to protect biodiversity.

Dr. Christoph Jäkel
Corporate Sustainability

Material topics in focus:

Biodiversity and Ecosystems

GRI 3, 304

Biodiversity, which describes the variety of life forms on Earth, is under threat. As a chemical company, we use many valuable resources provided by nature such as water, air and soil. At the same time, our business activities have an impact on nature, through emissions into the environment or the purchase of renewable raw materials. Protecting biodiversity is therefore a key element of our commitment to climate protection and sustainability. We want to contribute to achieving the global goal to halt and reverse biodiversity loss by 2030.

Strategy and governance

To better understand BASF's impact on nature, we are guided by the five drivers of biodiversity loss defined by the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES): **land-use change**, **pollution**, **climate change**, **overexploitation** and **invasive species**. We do not consider the latter to be material for BASF.

We achieve positive effects on biodiversity primarily through the responsible use of natural resources and through our solutions and technologies, such as biodegradable plastics and chemical recycling, which help reduce waste, for example. Negative impacts might arise in our supply chain through our production activities and through the use of our products. We record opportunities and risks resulting from the loss of biodiversity as part of our general opportunity and risk management.

With specific measures along our entire value chain, we minimize the loss and strengthen the preservation of biodiversity. Our sustainability-related corporate goals for climate protection (see page 102), circular economy (see page 46), water management (see page 112), responsible management of emissions, waste and remediation (see page 110) as well as the procurement of renewable raw materials (see page 122) contribute to the protection of biodiversity.

The United Nations' Convention on Biological Diversity, with the new Kunming Montreal Global Biodiversity Framework (GBF), serves as an important orientation and reference framework for BASF. It aims to halt and reverse the loss of biodiversity by 2030. We also align with the United Nations' Sustainable Development Goals (SDGs), including Life below water (SDG 14) and Life on land (SDG 15).

Biodiversity is an important aspect for many of our stakeholders, such as investors, customers, legislators, suppliers, insurers and nongovernmental organizations. We actively seek out partnerships with relevant interest groups and organizations worldwide, for example in the Taskforce on Nature-related Financial Disclosures (TNFD), to expand our knowledge, to raise awareness about biodiversity and to drive necessary actions forward (see page 140).

We align our biodiversity measures with the impact of our business activities along the value chain. Our focus here is on three areas: supply chains, sites and production, and product impacts. For this purpose, we are guided by the risk mitigation hierarchy: We try to avoid having an impact on nature. If this is not feasible, we want to reduce these impacts, support the restoration of nature or contribute to the transformation of value chains toward better environmental sustainability.

This page:
BASF is working with farms in the United Kingdom to show how agricultural use and the protection of biodiversity can be reconciled. Planting wildflower strips and creating habitats for birds and insects have led to a long-term improvement in biodiversity and soil health.

Material topics in focus: Biodiversity and Ecosystems

Currently, there is no standardized, globally accepted indicator for the loss of biodiversity (in contrast to greenhouse gas emissions as a key indicator of climate change). In addition, impacts must be considered primarily in a local context. We therefore use indicators such as nitrogen emissions to water to measure drivers of biodiversity loss and species occurrence to assess the status of ecosystems. For example, we regularly examine the fish population in the Rhine around the Ludwigshafen site using electrofishing. With this method, the animals are temporarily stunned with a weak electric field for documentation purposes and removed with a fishing net before being returned to the water. In 2023, species diversity was found to be the same as in 2021.

We use various methods to measure our sustainability performance that implicitly and explicitly consider relevant opportunities and risks for biodiversity. Examples of this include the BASF Eco-Efficiency Analysis as well as AgBalance® in the context of agricultural products and the corresponding biodiversity calculator.

Newly developed assessment methods help us to better understand influences on biodiversity. We regularly test various analysis tools available on the market. Taking into account the LEAP (Locate, Evaluate, Assess, Prepare) methodology developed by TNFD, we are systematizing our existing strategic approach. Based on this understanding, we seek dialog with partners and enter into strategic cooperations, through which we drive forward measures to protect biodiversity around the world (e.g., Wildlife Habitat Council).

An internal working group addresses strategic aspects and the identification of impacts, dependencies, opportunities and risks arising from biodiversity. In 2023, for instance, a survey of BASF's divisions was conducted on the importance of biodiversity aspects and their perceived economic relevance. This revealed significant differences: High importance and economic relevance are particularly evident in units nits that provide solutions for agriculture or source renewable raw materials. Another result of this working group was the establishment of the new Nature Advisory Council (see box).

Responsibility to our sites and production

Our risk management regularly examines the risks to our business activities from the loss of biodiversity. Moreover, when making decisions about investing in the construction of new sites or expanding existing ones, we conduct systematic assessments of sustainability aspects, such as the potential impact on forests and biodiversity.

We use the WWF Biodiversity Risk Filter, a tool developed by the World Wide Fund for Nature (WWF) and partners with global coverage of sites and value chains, to identify dependencies on ecosystem services (e.g., risk of water availability) and assess the impact of biodiversity loss on our business in addition to the impact of our activities on ecosystems (e.g., risk of environmental pollution).

When managing our sites and plants, we aim to ensure the preservation of biodiversity by minimizing negative impacts on the environment (biodiversity loss drivers: pollution, overexploitation). We therefore keep emissions from our production to air, water and soil as low as possible, avoid and reduce waste and manage contaminated sites carefully (see page 110 onward). BASF is committed to the goals of Operation Clean Sweep® and is constantly working on measures to prevent plastic production waste from entering the environment. We use databases such as the Integrated Biodiversity Assessment Tool (IBAT) to examine the proximity of production sites to internationally recognized **protected areas**. We have been documenting the results in our environmental database since 2021. This allows us to raise awareness of biodiversity at a local level, assess and, if necessary, reduce potential impacts of our sites on these areas. In 2023, 5% of our production sites were adjacent to a Ramsar site[1] and 1% were adjacent to a category I, II or III protected area as defined by the International Union for Conservation of Nature.[2] None of our production sites were adjacent to a UNESCO protected area. In addition, we used the STAR tool (Species, Threat, Abatement and Restoration), based on the IUCN Red List of Threatened Species, to analyze how many of our production sites are located adjacent to endangered species (amphibians, birds, mammals). The results show that some of our production sites are located in areas with high or very high STAR values. We took a closer look at the drivers at these locations (e.g., tourism, fishing, invasive species or the occurrence of diseases). These were generally not related to chemical production.

We are implementing local measures to protect biodiversity at a number of sites. In Breuil-le-Sec, France, for example, a team has

Good to know

New Nature Advisory Council

In 2023, BASF founded a new advisory council for topics related to the protection of biodiversity and ecosystems, the Nature Advisory Council (NAC), to obtain an independent societal perspective on our activities related to nature and biodiversity issues.

The aim is to obtain constructive feedback and specific advice on nature-related topics and our strategic approach as well as our contributions to a sustainable future.

The Nature Advisory Council is currently made up of four members from the fields of science, relevant value chains and multilateral organizations. The NAC met for the first time in November 2023 and discussed BASF's approach to sustainability and the necessary adjustments around planetary boundaries and the biodiversity crisis using concrete examples from corporate practice, such as the extraction of important raw materials and BASF's activities in the field of agriculture. Future meetings will address other important drivers of biodiversity loss and how they relate to BASF's strategy.

For more information on our Nature Advisory Council, see basf.com/en/nature-advisory-council

1 "Wetlands of international importance" in accordance with the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention)
2 We have defined "adjacent" as the area within a 3 km radius.

Material topics in focus: Biodiversity and Ecosystems

been working on increasing the site's biodiversity since 2014. Fallow land and an orchard were planted, nesting boxes were built for swallows and animal and plant species were regularly counted and monitored. The site has been certified by the local nongovernmental organization CPIE (Centre Permanent d'Initiative pour l'Environnement) for its measures to protect biodiversity. It serves as a reference site for BASF in France. Furthermore, we use recooling plants at our sites. This allows us to reuse water several times as cooling water and reduce our water consumption. Recooling also reduces thermal emissions when we return the cooling water to the waterways. This ensures that our activities have a minimal impact on the habitats of plants and animals. We are constantly working to optimize our energy consumption and the amount of water we use, and to adapt to the needs of our business and the environment (see page 112).

We are committed to complying with the provisions of the international Nagoya Protocol when using biological resources. This supplementary agreement to the U.N.'s Convention on Biological Diversity regulates access to genetic resources and benefit sharing. It sets out obligations (for example, compensation payments) for the users of genetic resources such as plantbased raw materials. We use internal control mechanisms to monitor compliance with these standards.

Management of our product impact

BASF offers products and solutions for a wide range of industries. We want to ensure that our products meet our customers' standards in terms of quality and, through appropriate use, pose no risk to humans, animals or the environment (see page 146). Our commitment to the objectives set forth by the Responsible Care® charter of the International Council of Chemical Associations (ICCA) obligates us to continuously minimize the negative effects of our products on the environment, health and safety and to optimize our products on an ongoing basis. It is important to consider the potential impacts of product use on biodiversity, for example, with regard to the biodiversity loss driver of pollution.

We evaluate our products and solutions in crop protection and seeds, for example, throughout the entire research, development and registration process. After they have been approved for the market, we continue assessing them regularly for potential risks and impacts to the ecosystems in which they are used. We have initiated various projects and offer trainings to prevent misuse of our products (see page 149).

All types of land development, such as agriculture and forestry, play a role in changing biodiversity (driver of biodiversity loss: land-use change). Activities such as tillage, drainage, fertilization and the use of crop protection products can affect flora and fauna, for example, by influencing food sources. Minimizing these impacts while ensuring the necessary productivity is one of the biggest challenges farmers are facing.

Our Agricultural Solutions division focuses on four areas to help farmers to find the right balance between productivity and sustainability. The focus areas are more climate-smart farming, more sustainable solutions, digital farming and smart stewardship (see box on page 36). In this context, we work with farmers to create balanced agricultural systems which enable productive and efficient farming of high-quality food products and at the same time promote biodiversity in the agricultural landscape. For example, we advise them on soil cultivation practices and look for suitable ways to improve biodiversity in farmlands. Our many years of experience in sustainability measurement and evaluation in agriculture are particularly useful here. Our modern seed solutions and crop protection products also enable better yield on existing farmlands and thus help protect natural habitats.

With our **AgBalance® method**, we can measure and compare the impacts of different agricultural practices on the environment according to the principle of Life Cycle Assessment (LCA). Using the corresponding biodiversity calculator, we can assess the impact on biodiversity. Based on these assessments, we issue recommendations for measures with scientifically proven effectiveness (according to the analyses of Conservation Evidence, a project team at the University of Cambridge, United Kingdom), such as planting hedges and flower strips or establishing nesting places to benefit pollinators such as wild bees and farmland birds.

Axalion® is one example of BASF's more environmentally friendly crop protection products. The insecticidal active ingredient received its first approval in Australia at the end of 2022 and has been sold there under the name Efficon® since April 2023. Approval was also granted in South Korea in 2023. Axalion® enables farmers to control a wide range of piercing and sucking pests that are harmful to crops. At the same time, it is highly compatible with beneficial insects such as pollinators. The active ingredient thus supports farmers in managing the challenges they face around productivity and environmental protection.

Material topics in focus: Biodiversity and Ecosystems

Responsibility to our supply chains

Some of the business activities of our raw materials suppliers involve land uses that can influence biodiversity (driver of biodiversity loss: land-use change). We have laid down our expectations of our suppliers with regard to environmental, labor and social standards in the supply chain as well as our commitment to preserving biodiversity in the Supplier Code of Conduct (see page 159).

BASF procures various renewable raw materials. Just as for fossil raw materials, we consider how renewable resources impact aspects of sustainability along the value chain. Alongside positive effects like avoiding greenhouse gas emissions (driver of biodiversity loss: climate change), these can also have negative effects, for example, through the drivers of biodiversity loss overexploitation and land-use change, depending on the raw material. Through our sourcing practices, we aim to preserve ecosystems and enable sustainable land development that supports the livelihoods of the people who depend on them (see page 122).

There is a high risk especially for palm and palm kernel oil that forest areas are cleared to create farmland. To anchor sustainability topics more firmly in procurement we established the BASF Palm Commitment in 2011, which was updated in 2015, and is implemented through our **Palm Sourcing Policy**. Third-party certification with standards such as the Roundtable on Sustainable Palm Oil (RSPO) standard enables us to take biodiversity criteria into account when purchasing raw materials (see page 122).

We are committed to the environmental sustainability of other supply chains through our own initiatives. One example is our **rambutan program**. It was launched in 2014 in close collaboration with partners in Vietnam to source botanical ingredients for cosmetic products from certified organic rambutan gardens. In cooperation with local farmers and NGOs, BASF's program promotes the preservation of biodiverse habitats, as well as good agricultural practices, gender equity and fair working conditions.

Our position on **forest protection** sets out our commitment to preserving biodiversity in areas of High Conservation Value such as High Carbon Stock forest areas and peatlands in the procurement of renewable raw materials. In 2023, BASF again participated in the "Forests" assessment conducted by the international organization CDP and achieved a score of A-, once more giving it Leadership status. The assessment is conducted based on detailed insights into the palm value chain and activities that impact ecosystems and natural habitats.

For more information on the CDP forests questionnaire, see basf.com/en/cdp

Partnerships for biodiversity

Engaging in ongoing dialog with a variety of stakeholders is important to BASF. On the one hand, we want to share our knowledge and on the other hand, learn from other to improve our own practices. To this end, we established a **Nature Advisory Council** (NAC) in 2023 (see page 117).

We cooperate with several organizations including the Roundtable on Sustainable Palm Oil, the Sustainable Palm Oil Forum, the Brazilian Coalition on Climate, Forests and Agriculture and the High Carbon Stock Approach Steering Group. BASF is a member in the forum of the Taskforce on Nature-related Financial Disclosures (TNFD) initiative, which provides recommendations for reporting on nature-related risks and activities. We are an active advisory member of the working group for chemical sector guidelines that TNFD established at the beginning of 2023. Our involvement in organizations such as the Alliance to End Plastic Waste and the Alliance for Water Stewardship (see page 113) helps to preserve biodiversity in bodies of water.

Together with international partners and based on the dialog with stakeholders in the food value chain, we are driving forward measures to promote sustainable agriculture. In the United States, for example, BASF is a member of the Honey Bee Health Coalition, which aims to preserve healthy honey bee populations and support healthy populations of native and managed pollinators in productive agricultural systems and thriving ecosystems. BASF France SAS is part of the Entreprises pour l'Environnement network, which launched the Act4nature campaign with the main objective of protecting and enhancing biodiversity.

We have been working with farms in the United Kingdom on pilot projects since 2002 to demonstrate how the protection of biodiversity can be reconciled with the complex challenges farmers face. Local farmers grow a variety of annual crops to establish demonstration plots. Practices within the field, such as mixtures of cover crops, as well as measures at the edge and outside the field,

Material topics in focus: Biodiversity and Ecosystems

such as planting wildflower strips and creating habitats for birds and insects, have demonstrably led to a long-term improvement in biodiversity and soil health. Data collected and analyzed on one of the farms between 2009 and 2019 by a team of local agronomists and ornithologists on behalf of BASF shows that farmland bird species considered threatened by U.K. experts (26 on the Red List and 19 on the Amber List) benefit greatly from sustainable agriculture combined with high-quality ecological habitats.

For more than 10 years, we have been working with different farmers and experts from the BASF FarmNetwork Sustainability, an association of farms in Europe, to integrate more connected biodiversity areas into agricultural production. By creating and maintaining new habitats and linking habitats for living, breeding and feeding, biodiversity can be sustainably promoted in modern, conventional agriculture. External scientists accompany the project and examine the effectiveness of the biodiversity measures. The results are published annually in a report. Based on the insights gained from working together, an advisory board of experts from agriculture, nature conservation and environmental protection developed a biodiversity checklist and published it in 2021. This summarizes 10 ecologically effective measures to promote biodiversity. Since 2021, BASF has supported farmers participating in its **#wirzahlenBiodiversität ("We pay biodiversity") program** financially and with professional advice.

BASF also offers various e-learning modules on biodiversity and agriculture to support farmers in implementing the necessary and effective measures in practice. The interactive training sessions are available to all interested farmers free of charge.

For more information on our responsible management of resources, see page 46

For more information on product stewardship, see pages 146 and 149

For more information on our commitment to biodiversity, see basf.com/biodiversity

For more information on our position on forest protection, see basf.com/forestprotection

Raw Materials

GRI 3, 203, 204, 301, 304, 308, 413, 414

Raw materials are the starting point of our value creation. We want to use these resources efficiently and responsibly. As part of our activities to achieve greater sustainability, we are turning to recycled and renewable raw materials to replace fossil raw materials and reduce emissions along the value chain. Our focus is on a secure supply and a stable supply chain, in which our suppliers source and produce raw materials in line with environmental and social requirements. At the same time, our chemical products are raw materials for our customers and we want to increasingly offer them with a reduced carbon footprint.

At a glance

~30,000
Different raw materials purchased

~1 million metric tons
Renewable raw materials purchased

- BASF's Verbund concept enables the efficient use of resources
- Recycled and renewable raw materials are gaining in importance
- Raw materials purchased from over 6,000 suppliers
- Numerous projects to improve supply chain sustainability

Strategy and governance

Our strategy covers the entire value chain – from responsible procurement and the efficient use of raw materials in our own processes and recycling by-products to developing resource-saving solutions for our customers.

Fossil raw materials continue to be among our most important raw materials and sourcing and producing them causes greenhouse gas emissions, which contribute to climate change. We are trying to reduce these emissions by using recycled and renewable raw materials. However, these alternatives can also pose sustainability challenges, such as risks in the supply chain. We see one solution in a transition to a **circular economy** in which we want to decouple growth from resource consumption with process and product innovations.

BASF's Verbund concept is key to making the use of raw materials in our own processes as efficient as possible: Intelligently linking and steering our plants and processes creates efficient value chains. By-products from one plant are used as feedstocks elsewhere. This saves raw materials and energy. At the same time, the Verbund offers numerous opportunities to use renewable and recycled raw materials. Going forward, we want to better leverage this potential.

The Corporate Center unit Corporate Development sets binding, Group-wide purchasing guidelines for the procurement of raw materials. They are supplemented by specific internal requirements, for example, on sourcing palm-based raw materials or certain mineral raw materials. We use a multistage control process to ensure compliance with these requirements. We systematically record short and long-term opportunities and risks caused by our purchase of raw materials as part of our general opportunity and risk management (see page 182 onward).

Alongside economic, environmental and social criteria, we also consider aspects such as product safety and supply security when selecting suppliers and raw materials. Our expectations of our suppliers are laid down in our Supplier Code of Conduct (see page 159). We take a closer look at suppliers in critical supply chains, for example, for mineral raw materials and renewable resources as well as a number of pigments. Upstream stages of the value chain are assessed for serious sustainability risks and, if necessary, suitable remedial measures are introduced. In addition, we develop and test approaches in joint initiatives with suppliers and other partners to make the supply of raw materials more sustainable. Examples include our cooperative ventures and investments for recycling lithium-ion batteries for electric vehicles (see page 125) and our joint activities on certified sustainable supply chains for renewable raw materials such as palm, palm kernel and castor oil.

Resource efficiency and stewardship are also becoming increasingly important for our customers. That is why we are constantly working to switch to more sustainable raw materials and reduce the resources consumed in the manufacturing of our products, for example through more efficient processes and innovative technologies. This enables us to offer our customers more sustainable solutions, for example with a smaller carbon footprint or better biodegradability. Our products also improve resource efficiency and sustainability at many points along the value chain. For example, BASF additives increase the service life and mechanical recyclability of plastics, which saves fossil resources, reduces CO_2 emissions and enables a circular economy.

For more information on our supplier management, see page 158 onward
For more information on circular economy, see page 46

Fossil and petrochemical resources

BASF's most important raw materials (based on volume) include gas and crude oil-based petrochemical products such as naphtha and benzene. We use liquid gas and natural gas as fuels to generate energy and steam, and as raw materials to produce key basic chemicals such as ammonia or acetylene. Naphtha is mainly fed into our steam crackers, where it is split into products such as olefins and aromatics. The olefins ethylene and propylene are both important feedstocks for BASF's numerous value chains. We use aromatics such as benzene or toluene to manufacture engineering plastics, among other products. Thanks to a high degree of forward and backward integration, we can produce feedstocks for our value chains efficiently while conserving resources within the BASF Verbund. This increases supply security and strengthens our resilience to fluctuations in the supply chain. We source key raw materials from different suppliers to minimize supply risks. This also applies to natural gas, for which we are further diversifying our supplier structure due to the changed supply situation in Europe. For example, we have signed a long-term supply agreement for liquefied natural gas (LNG) from the United States starting in 2026. In the following years, the agreed delivery volume can cover about one third of BASF's expected natural gas demand in Europe. In addition, we have reduced our demand through technical optimizations in the BASF Production Verbund and converted further power plants to bivalent operation – they can thus be operated with natural gas or heating oil. We are also continuously evaluating whether fossil and petrochemical resources can be replaced with nonfossil or recycled alternatives.

Renewable resources

In addition to fossil resources, we employ renewable raw materials, mainly based on vegetable oils, fats, grains, sugar and wood. In 2023, we purchased around 1 million metric tons of renewable raw materials. We use these to produce ingredients for the detergent and cleaner industry and natural active ingredients for the cosmetics industry, for example. We further use renewable feedstocks such as biomethane and bionaphtha in our Verbund as an alternative to fossil resources. The mass balance approach allows us to attribute the amount of renewable raw materials used to a wide variety of end products (see box on page 124). Examples include biomass balanced glues and impregnating resins for the woodworking industry such as Kaurit®Zero and Kauramin® Balance, various biomass balanced versions of Trilon® and Sokalan® products for the detergent and cleaner industries, biomass balanced tetrahydrofuran (THF) for the production of elastic fibers for the textile industry, a product range of biomass balanced engine coolants under the Glysantin® brand and biomass balanced styrene as a precursor for numerous styrenics.

Our aim is to continuously increase the share of renewable raw materials in our value chains. Just as for fossil raw materials, we also consider economic criteria, aspects of supply security, process and product safety and the availability of various raw materials as well as the potential **impact on sustainability** along the value chain. Alongside positive effects such as reducing greenhouse gas emissions, these can also have negative effects, depending on the raw materials. We therefore take the protection of biodiversity and ecosystems into account when sourcing renewable raw materials and also include social factors such as working conditions and food security in our risk analyses. We carefully weigh up advantages and disadvantages, for example with life cycle analyses. At the same time, we seek dialog with our stakeholders to identify conflicting goals. We also take into consideration recognized certification standards in our decisions, such as the Roundtable on Sustainable Palm Oil (RSPO). For our biomass balance portfolio, we source renewable raw materials that are certified according to recognized standards such as the International Sustainability and Carbon Certification (ISCC) or the organization for sustainably produced biomass REDcert.

As part of our commitment to greater sustainability, we focus on supply chains that are relevant quantitatively and are involved where there is currently a lack of certification standards. We are also working on product innovations and on enhancing our production processes to improve the profitability and competitiveness of renewable resources. For example, we are developing innovative processes such as biocatalysis and fermentation for the production of vitamins and enzymes, and driving forward white biotechnology for the production of chemical components from renewable resources.

Palm oil, palm kernel oil and their derivatives are some of our most important renewable raw materials. We mainly use these to produce ingredients for the cosmetics, detergent, cleaner and food industries. We aim to ensure that palm-based raw materials come from certified sustainable sources. We have been a member of the RSPO already since 2004 and are involved in other national and international initiatives, such as the German Forum for Sustainable Palm Oil and the High Carbon Stock Approach organization. Based on our Group-wide Supplier Code of Conduct (see page 159), we have outlined our expectations of suppliers in the palm-based value chain in an additional sourcing policy (BASF Palm Sourcing Policy). This addresses aspects such as forest and peat conservation, respect for human and labor rights, smallholder inclusion, and certification and traceability standards. As part of our supplier and risk management, we have used the internet platform palmoil.io to monitor deforestation activities and other possible breaches of regulations at our suppliers' sites. For the first time in 2023, our Care Chemicals division published a comprehensive **Responsible Sourcing Report**, in which we will report annually on our measures and progress toward more sustainability and transparency in the palm value chain as well as further renewable raw materials value chains. It replaces the previously published Palm Progress Report.

We purchased 159,798 metric tons of palm oil and palm kernel oil in 2023 (2022: 191,714). We again met our own voluntary commitment to source only RSPO-certified palm oil and palm kernel oil. This avoided more than 225,000 metric tons of carbon emissions compared with the procurement of conventional palm oil and palm kernel oil. As part of our voluntary commitment, we also aim to procure the main derivatives[1] based on palm oil and palm kernel oil entirely from certified sustainable sources by 2025. In addition, we maintained the RSPO supply chain certification of our sites for cosmetic ingredients. At the end of 2023, 25 production sites worldwide were certified by the RSPO (2022: 25).

We source most of our palm-based raw materials from Malaysia and Indonesia. As of the end of 2023, we were able to trace around 96% of our global palm footprint[2] to oil mill level (2022: 97%). Smallholders account for around one-third of the total volumes produced there. We are involved in local initiatives to expand our supplier base for RSPO-certified palm oil products while strengthening smallholder structures and sustainable production methods at local level. Since 2018 we have been working together with The Estée Lauder Companies, the RSPO and civil society organization Solidaridad in Indonesia. The project in the province of Lampung supported around 1,000 independent smallholders in improving their livelihoods and the sustainable production of palm oil

1 Fractions and primary oleochemical derivatives as well as vegetable oil esters
2 The global palm footprint in this context includes certified and noncertified palm-based raw materials.

and palm kernel oil. Upon completion of the project, the declared goal of certifying one-third of the participants of the program according to the RSPO Smallholder Standard was almost achieved (313 certifications). In 2023, BASF partnered with a leading natural cosmetics manufacturer and the Indonesian nonprofit organization Kaleka to support smallholders in Central Kalimantan. The aim is to promote regenerative agricultural methods as well as to help establish political framework conditions and regulations. We are also involved in a local project in Sumatra through the Forum for Sustainable Palm Oil (FONAP).

Also important for BASF, albeit at a much smaller scale, is **castor oil**. We use castor oil to manufacture products such as plastics and ingredients for paints and coatings, as well as products for the cosmetics and pharmaceutical industries. With the objective of establishing a certified sustainable supply chain for castor oil, we launched the Sustainable Castor Initiative – Pragati in 2016 together with the companies Arkema and Jayant Agro and with Solidaridad. The initiative aims to improve the economic situation of castor bean farmers in India and, at the same time, raise awareness of sustainable farming methods. Over 80% of the world's castor beans are produced in India, mainly by smallholders. As part of Pragati, smallholder farmers receive training on topics such as cultivation methods, efficient water use, health and the safe use of crop protection products based on a specially developed sustainability code, SuCCESS. Since the project was initiated, more than 7,000 smallholders and over 27,000 hectares of land have been certified for sustainable castor cultivation. Yields from this land were 36% higher than average amounts for the region published by the local government for the 2022/2023 harvest cycle. In addition to SuCCESS, the Sustainable Castor Association (SCA), which was launched in 2019 by the founders of the Pragati initiative, has also developed a sustainability code for the wider supply chain. This will allow castor beans obtained from the program to be further processed into certified castor oil and derivatives and to be introduced into the downstream supply chain. In 2023, we again sourced certified sustainable castor oil from the program after our Düsseldorf-Holthausen site in Germany became the first chemical company in the world to be certified in 2021. The site supplies customers with the first certified products based on certified sustainable castor oil.

We are also driving the market transformation toward certified, sustainably sourced oleochemicals for another renewable raw material: **coconut oil**. We use coconut oil to manufacture ingredients for products such as detergents, cleaning agents and cosmetics. BASF is the world's first chemical company to offer certified sustainable ingredients for personal care products based on coconut oil. Following our production site in Cassina Rizzardi, Italy, we successfully certified another site in Zona Franca, Spain, under the Rainforest Alliance Mass Balance Coconut scheme in 2023.

Plants also form the basis of many other products in our portfolio for cosmetics. These include our biopolymers, which we have been offering under the Verdessence™ brand, and our bioactives. Through sustainable sourcing practices, we aim to preserve ecosystems and enable sustainable management for the people whose livelihoods depend on them. For example, we have already been combining economic, environmental and social aspects for several years in our holistic procurement initiatives for argan (Morocco), rambutan and galanga (both Vietnam). With the **Responsibly Active program**, we are bundling our existing activities (see box on page 123).

For more information on biodiversity, see page 116 onward

For more information on our voluntary commitment to palm oil products and the Responsible Sourcing Report, see basf.com/en/palm-dialog

For more information on the Responsibly Active program, see personal-care.basf.com/responsibly-active

Case study

Responsibility for bioactives

With the **Responsibly Active program**, we are bundling our activities in the area of bioactives to protect natural resources, to improve the working conditions of people along the supply chain and to reduce the impact on the climate and environmental footprint in production. We have made concrete progress:

As part of full traceability in the botanical supply chain, for example, we have developed a digital tool that tracks every step of argan oil production. Thanks to developments such as these, our Care Chemicals division is able to trace 98% of its botanical supply chains to the country of origin and 42% to the source.

In another project, we worked with suppliers and non-governmental organizations to support women and small businesses along the moringa[1] supply chain through training.

1 Moringa oleifera Lam (Moringaceae) is a tree native to India that is cultivated in the tropics and subtropics. BASF researches active ingredients and markets them for cosmetic applications.

Recycled feedstocks

Recycling is playing an increasingly important role due to limited resources, growing sustainability requirements in the markets, and regulatory developments. In a challenging environment with limited availability of alternative raw materials, we still aim to process 250,000 metric tons of recycled and waste-based raw materials in our production plants annually from 2025, replacing fossil raw materials.

A focal point of our activities here is the **chemical recycling** of plastics. This technology complements mechanical recycling and can help to reduce the amount of plastic waste that is disposed of in landfills or thermally recovered. Chemical recycling breaks down plastics into their building blocks or converts them into basic chemicals. Different methods are used to achieve this.

In our ChemCycling® project, our technology partners use the pyrolysis process to extract pyrolysis oil from mixed plastic waste or end-of-life tires, which are not mechanically recycled as of yet. We feed the pyrolysis oil into the BASF Verbund as a substitute for fossil raw materials and manufacture new products from it using the mass balance principle (see page 124). Our customers can process these mass balanced products in the same way as conventional products. Our portfolio of Ccycled® products now comprises around 240 products, which our customers use for a wide range of applications – from food packaging and transport cases for temperature-sensitive drugs to high-performance plastics for the automotive industry and functional textiles. In order to expand our customer portfolio with mass balanced Ccycled® products, we signed a new cooperation agreement with our partner Pyrum in 2023. This provides for a conditional loan of initially €25 million. It is intended to serve as startup financing for the planning, project development and construction of at least three new Pyrum plants, each with an annual capacity of 20,000 metric tons of end-of-life tires. BASF intends to use the pyrolysis oil produced in the new plants as a recycled raw material in production.

Good to know

The mass balance approach

Many BASF value chains start in syngas plants or steam crackers, where fossil resources, mostly natural gas and naphtha, are converted into hydrogen and carbon monoxide or important basic chemicals such as ethylene and propylene. These are used to create thousands of products in the BASF Verbund.

In addition to fossil raw materials, we feed alternative raw materials into the Verbund that come from bio-based and chemically recycled sources, such as bionaphtha, biomethane and pyrolysis oil. These alternatives are used in place of fossil feedstocks for our mass balance products. As fossil, bio-based and recycled feedstocks are processed simultaneously, the raw materials cannot be directly physically assigned to resulting derivatives. However, through monitoring by independent third parties such as TÜV Nord on the basis of recognized certification systems, such as REDcert[2] or ISCC PLUS, it can be verified that an adequate amount of alternative raw materials has been used for the amount of mass balance sales product. This ensures that fossil raw materials are saved with every sale of these certified products.

Mass balanced products are identical in quality to conventionally produced products, but the use of alternative raw materials contributes to sustainability, for example, through fewer carbon emissions and lower demand for fossil raw materials. This method has already been applied to over 1,400 BASF products including engineering plastics such as polyamide as well as superabsorbents, dispersions and intermediates.

We share our expertise in numerous stakeholder platforms, including the World Business Council for Sustainable Development (WBCSD), Together for Sustainability (TfS) and nova-Institute's Renewable Carbon Initiative, to harmonize and standardize different attribution methods and certification schemes for mass balance products.

For more information on the mass balance approach, see basf.com/massbalance

In addition, BASF continues to drive forward the recycling of foams from used mattresses. Using a process developed by BASF, the raw materials can be recovered from flexible polyurethane foams to produce new mattresses. Thanks to this new process, in 2023, our cooperation partner NEVEON was able to produce new polyurethane foams from the polyol recovered for the first time on a metric ton scale. The mattresses produced with this material contain 80% recycled content in the polyol component. Approximately 100 mattresses produced using this process are used exclusively in BASF's own business hotel René Bohn in Ludwigshafen, Germany.

We have many years of experience and a high degree of specialization in **recycling precious metals** such as platinum, palladium and rhodium. They are used in mobile emissions catalysts as well as in process and chemical catalysts. We primarily use the precious metals recovered in this way as feedstocks to manufacture new products for the automotive, chemical, electronics and green hydrogen industries. The carbon footprint for recycled precious metals is up to 90% lower than for primary metals from a mine.

With the rapidly growing market for electric vehicles, there is also an increasing need for **recycling lithium-ion batteries**. As a leading producer of battery materials with local production capacities in the three main markets – Asia, Europe and North America – BASF has in-depth expertise in battery chemistry and process technology. We are utilizing these competencies to address battery recycling as an additional growth market in cooperation with partners along the value chain (see page 32). In this way, we want to ensure that valuable metals remain in the production cycle for as long as possible. This conserves resources and significantly reduces the carbon footprint of cathode active materials compared with the industry standard. At our site in Schwarzheide, Germany, a new plant for the production of black mass from spent lithium-ion batteries and battery production waste will be built in the course of 2024, as well as a prototype plant for a metal refinery, which is scheduled for completion in early 2024. This will allow for the development of new operating procedures and optimization of technology to deliver superior recovery rates of metals, such as lithium, nickel, cobalt and manganese, from the black mass. In addition, we will produce cathode active materials from recycled metals on a commercial scale at our U.S. site in Battle Creek, Michigan, from 2024. This will reduce the carbon footprint of cathode active materials by around 25% compared with the use of primary metals. These are used in the lithium-ion battery cells from our partner Nanotech Energy. Together with Nanotech Energy, American Battery Technology Company (ABTC) and TODA Advanced Materials Inc. (TODA), we are aiming to establish a local battery value chain in a closed cycle.

For more information on circular economy, see page 46

Mineral raw materials

We procure a number of mineral raw materials, which we use to produce automotive and process catalysts or battery materials for electromobility, among other products. We are continually improving our products and processes to minimize the use of primary mineral raw materials.

Responsible sourcing of mineral raw materials is important to BASF as we are aware of the challenges in the supply chain and our due diligence. We have implemented the E.U. Conflict Minerals Regulation. This defines supply chain due diligence for tin, tantalum, tungsten and their ores as well as gold (3TG) imported into the E.U. from conflict-affected and high-risk areas (CAHRAs).

In addition, BASF is committed to responsible and sustainable global supply chains for other mineral raw materials. These include **cobalt**, a key component in the production of battery materials. We have organized our cobalt supply chain according to established sustainability guidelines such as the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals. Our goal is to not purchase cobalt from artisanal mines as long as responsible labor, social and environmental standards cannot be verified.

Together with BMW Group, Samsung SDI Co. Ltd., Samsung Electronics Co. Ltd., Volkswagen AG, Stihl AG & Co. KG and GIZ, we have been involved in the cross-industry Cobalt for Development initiative since 2018. It aims to improve working and living conditions for artisanal miners in the Democratic Republic of Congo. To achieve this, the initiative offers programs such as training on important environmental, social and governance aspects of responsible mining practices. In 2023, mining cooperatives continued to receive trainings on topics such as occupational safety and environmental management. Furthermore, together with local nongovernmental organizations and Bon Pasteur/the Good Shepherd International Foundation, GIZ is supporting local communities to develop stable sources of income as an alternative to mining. Residents are trained, for example, in farming during the dry season, learning a trade, starting a business and using financial resources effectively. As a result, households have increased their income by 36% and are better able to cope with crises or shortages. Around 3,000 people are already benefiting from this. The pilot project has also financed the construction and equipment of a school, provided educational training for teachers and developed teaching materials. Today, 600 children are taught in a new school building.

BASF is currently exploring an investment to develop a nickel-cobalt refining complex in Indonesia together with Eramet, a global mining and metallurgy company, to supply cathode active materials to the growing electric vehicle market. BASF has not yet decided whether this project will be implemented. Part of the evaluation process is an intensive review and assessment of environmental, social and governance risks (ESG).

We are also involved in various German and international initiatives to strengthen sustainability and innovation in the value chain for batteries. For example, we are a partner in a consortium led by the system change consultancy Systemiq that has received funding of €8.2 million from the German Federal Ministry of Economics and Climate Action to develop a digital product passport for batteries. This aims to address the requirements of the E.U. Battery Regulation and both capture data that maps information about the origin of raw materials and create the basis for an efficient circular economy.

Close cooperation with the Global Battery Alliance (GBA) is also intended to ensure global compatibility of the digital battery passport. Cofounded by BASF in 2017, the GBA has over 150 members and promotes dialog between business, governments and civil society. It develops the steering tools aiming to establish a sustainable and responsible battery circular economy by 2030. Following the publication of the Greenhouse Gas Rulebook in 2022, the GBA unveiled a revised edition in 2023 as the result of a public consultation. As the first framework of its kind, it contains around 80 specifications and rules for the globally harmonized – and therefore comparable – accounting of greenhouse gas emissions along the battery value chain. As an impartial platform, GBA strives to facilitate a consensus between the relevant stakeholders. The aim of this and further rulebooks is to create transparency for comprehensive and standardized reporting of ESG topics on the basis of broad acceptance.

Together with BMW Group, Mercedes-Benz AG, Fairphone B.V., Daimler Truck AG and Volkswagen Group, we have also been a member of the **Responsible Lithium Partnership** since 2021. It advocates for the responsible use of natural resources in Chile's Salar de Atacama, home to the world's largest lithium reserves and a significant portion of global production. To this end, GIZ was commissioned to organize a local multistakeholder platform on the water-related opportunities and risks of lithium and copper mining and other economic activities and to promote action plans. BASF participated in a study organized by BMW together with experts from the University of Alaska and the University of Massachusetts to investigate hydrological conditions in the Salar de Atacama. The results of this study are incorporated as an important component of the Responsible Lithium Partnership's work.

Another mineral raw material that BASF processes is **mica**.[1] As a base for effect pigments, it is mainly used in the production of coatings and seed coatings. BASF is conscious of its social responsibility with regard to mica sourcing and applies high standards which, among other things, exclude child labor. Suppliers are asked to source mica in accordance with our Supplier Code of Conduct. As an active member of the Responsible Mica Initiative (RMI), we advocate for the eradication of child labor and unacceptable working conditions, specifically in India's mica supply chain. The initiative focuses on labor standards, strengthening local communities and legal frameworks. As RMI's most recent progress report shows, activities in the relevant regions of India have already led to improved income and living conditions. These include improved access to clean drinking water through the installation of pumps and filtration systems and improved access to health care through doctors' visits in villages and enrollment in public health insurance plans.

For more information on responsibility for human rights, labor and social standards, see page 154

For more information on the Cobalt for Development project, see basf.com/cobalt-initiative

For more information on the Global Battery Alliance, see globalbattery.org

For more information on the Responsible Mica Initiative, see responsible-mica-initiative.com

1 Mica minerals, such as muscovite, phlogopite, biotite, damourite, alurgite, annite, gilbertite, mariposite and fuchsite, are classified as phyllosilicates. In colloquial language, mica minerals are referred to as mica.

Material topics in focus:

Process Safety

GRI 2, 413

Process safety is a core part of safe, reliable and thus future-proof production. Our comprehensive safety concepts are designed to provide the best possible protection for employees, contractors and our sites' neighbors, and to prevent damage to property and the environment.

"For us, emergency response means being prepared at all times and at all locations for a possible incident.

Gert Van Bortel
Emergency Response

Strategy and governance

We rely on comprehensive preventive measures to ensure process safety and are continually improving the safety of our production processes. Opportunities arise in particular in the automation and digitalization of processes. In our complex production plants, incidents may nevertheless occur that have a potential impact on humans and the environment. We systematically record opportunities and risks in the area of process safety as part of our general opportunity and risk management (see page 178 onward).

Our production plants are at the heart of our business. To ensure efficient and safe production and to counteract incidents in our plants, we set binding global standards for process safety. Our sites and Group companies are responsible for implementing and complying with Group-wide requirements and local standards. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center performs regular audits to check compliance with these requirements.

This page:
In September 2023, around 100 Emergency Response personnel trained for emergencies as part of the major incident drill that takes place twice a year in Ludwigshafen, Germany. The scenario: A defective seal causes a solvent-containing liquid to escape from a system, leading to ignition and deflagration. Exercises of this kind are an integral part of the preventive safety concept at our sites.

2030 target[1]

Reduce our worldwide High Severity Process Safety Incidents per 200,000 working hours[a] **≤0.10**

a Hours worked by BASF employees, temporary workers and contractors

We pursue ambitious targets for process safety. As part of our continuous improvement process, we regularly monitor progress toward our goals. We critically reviewed our occupational and process safety targets and key performance indicators in 2022. Since 2023, we have been focusing on high-severity incidents. Our reporting continues to be based on established industry standards, with a stronger focus on people.

Global targets and measures

We set high safety standards in the planning, construction and operation of our plants around the world. These meet and, in some cases, go beyond local legal requirements. Our global requirements provide the framework for the safe construction and operation of our plants as well as the protection of people and the environment. Our experts develop a safety concept for every plant that considers the key aspects of safety, health and environmental protection – from

1 In 2023, we adjusted our safety targets.

Material topics in focus: Process Safety

plant design to the end of production – and that defines respective safety measures.

In order to maintain a high level of safety at our plants worldwide over their entire life cycles, we carry out implementation checks in all our plants at regular intervals based on risk potential to verify the implementation of our safety concepts. This also applies to the timely completion of the prescribed (process) safety assessments and the resulting safety measures. We regularly update our plants' safety concepts, taking into particular account new findings, technological opportunities and regulatory developments.

We use the number of High Severity Process Safety Incidents (hsPSI) per 200,000 working hours as a reporting indicator. We have set ourselves the target of reducing High Severity Process Safety Incidents to a rate of no more than 0.10 per 200,000 working hours by 2030.[1] In 2023, we recorded 0.05 hsPSI per 200,000 working hours worldwide. The rate of all process safety incidents in the BASF Group was 0.3 in 2023 (2022: 0.3). We investigate every incident in detail, analyze causes and use the findings to derive suitable measures. We share the findings in our global network in the interest of continuous improvement.

To reduce process safety incidents, we focus in particular on technical measures, digital solutions and on a leadership culture that places even greater emphasis on process safety and dealing openly with mistakes. In addition, we are continually refining and expanding our training methods and offerings to increase risk awareness and strengthen our safety culture. In 2023, for example, a program to reduce process incidents at our site in Pudong, China, focused on the topic of tightness and the prevention of leaks and covered this in training courses.

> "We focus our targets on high-severity incidents in order to focus more strongly on people.
>
> **Gert Van Bortel**

We play an active role in improving process safety around the world in internal and external networks, through our involvement in organizations such as the International Council of Chemical Associations (ICCA), the European Process Safety Centre (EPSC) and the Center for Chemical Process Safety (CCPS), and by fostering dialog with government institutions.

For more information on process safety, see basf.com/process_safety

For more information on occupational safety and health protection, see page 143 onward

1 Hours worked by BASF employees, temporary workers and contractors

Case study

Learning through simulation

An Operator Training Simulator (OTS) can be used to provide a realistic training environment for plant operators so they can learn the skills needed in practice. Similar to a flight simulator, OTS systems can be used to simulate the processes of complex chemical plants.

In this way, new employees can familiarize themselves with their field of work in a practical manner. They can train how to operate the plant, which valves need to be opened or closed under which conditions and which trends in the process control system are particularly important to keep an eye on. An OTS can also be used to simulate conditions that rarely occur in day-to-day work – such as exceptional malfunctions. The simulator is therefore also suitable for training experienced employees.

By using OTSs, we want to further increase the operational safety of our plants and rectify faults faster and better. Several of our operating divisions use simulators. The Petrochemicals division is currently developing OTSs for all of its plant clusters at the Verbund site under construction in Zhanjiang, China, in close cooperation with the Global Engineering Services unit. The advantage of considering an OTS at the same time as planning new projects is that weak points can be identified and rectified before construction begins.

In Nanjing, China; Port Arthur, Texas; Ludwigshafen, Germany; and Antwerp, Belgium, the simulators have already been in successful use at selected plants for several years.

Emergency Response

GRI 2, 410, 413

We aim to avoid safety-related incidents as far as possible with comprehensive preventive measures and clearly defined responsibilities. Should an emergency nevertheless arise, we have established structures and processes that enable effective crisis management.

Strategy and governance

We want to be as prepared as possible for crisis situations at global, regional and local level – from process safety incidents to goods spillages and emergencies – through extensive emergency preparedness and emergency response regulations and measures. That is why our **emergency and crisis management** focuses on the protection of our employees, contractors and neighbors, the safety of our plants and sites, and the protection of the environment. To ensure rapid and effective crisis management, we have defined appropriate structures and processes and laid them down in binding Group-wide requirements. Our sites and Group companies are responsible for implementing and complying with these internal requirements and the legal specifications. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center conducts regular audits to monitor this.

Unusual incidents are recorded and reported centrally in accordance with a standardized Group-wide procedure (e-Rapid Incident Report). The aim is to identify risks at an early stage and, if necessary, initiate appropriate remedial and communication measures. All incidents are followed up on to identify potential for improvement, which is integrated into existing concepts as needed.

Organization and responsibilities

Incidents are initially handled by the local crisis organization or local emergency response team. We have implemented precautionary organizational measures with clearly defined responsibilities and procedures at all sites for this purpose. The employees responsible receive regular training. This includes safety and emergency drills, which vary in scope and the number of people involved. Depending on the situation, we also involve business partners and our sites' communities, such as local authorities or neighboring companies, both in drills and in the event of an emergency. Additional teams may be called in for emergencies, depending on the extent of the damage and how it develops.

The Global Crisis Management Support Team (GCMS), led by a member of the Board of Executive Directors is activated in the event of a crisis situation. It provides the strategic direction for crisis management and is supported by issue-specific and specialist working groups.

We are involved in external networks, which quickly provide information and assistance in emergencies. These include the International Chemical and Environmental (ICE) initiative and the German Transport Accident Information and Emergency Response System (TUIS), in which BASF plays a coordinating role. In 2023, we provided assistance to public emergency response agencies and other companies in 116 cases (2022: 131). This included information on chemicals and their proper disposal, on-site operational support for transportation accidents involving hazardous goods and information on human biomonitoring.[1] We apply the experience we have gathered to improve our own processes and set up similar systems in other countries.

For more information on emergency response, see basf.com/emergency_response

1 Human biomonitoring (HBM) is a tool for health-related environmental monitoring with which populations are examined for their exposure to pollutants from the environment.

Transportation Safety

GRI 2, 306

Our regulations and measures for transportation safety are part of our Responsible Care Management System. These cover the delivery of raw materials, the handling and distribution of chemical products between BASF sites, warehouses and customers, and the transportation of waste.

At a glance

Zero
Transportation incidents with significant impact on the environment

- Risk minimization along the entire transportation chain
- Risk assessment based on national and international dangerous goods regulations
- Regular review of logistics service providers

Strategy and governance

As a chemical company, we transport some hazardous goods that may have potentially negative effects on people and the environment if handled improperly or in the event of accidents involving third parties. Whether by road, rail, ship or air, we want to ensure that our products are loaded, transported and handled in accordance with the relevant regulations and their hazard potential. That is why we depend on global standards, an effective organization, training and reliable logistics partners. Our goal is to **minimize risks** along the entire transportation chain.

All BASF products intended for transport must be clearly identifiable, classified, securely packaged and labeled. The transportation of dangerous goods is subject to mandatory national and international dangerous goods regulations as well as our global requirements. Our sites and Group companies are responsible for implementing these transportation safety regulations and requirements. Compliance is regularly monitored by the Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center using globally standardized transportation safety reviews. External logistics partners are evaluated based on risk either through assessments or on-site audits.

Our global network of BASF experts trains the responsible leaders and their employees on transporting dangerous goods. This network also ensures that information, insights and best practices are shared on an ongoing basis.

Preventive safety measures

National and international dangerous goods regulations are based on an assessment of transportation risks and define rules and measures for safely transporting dangerous goods. We use various tools to minimize transportation risks. For example, for every dangerous good to be transported, we check in each case whether the packaging has been approved for that product and is suitable for the type of transport. We conduct digital dangerous goods checks before shipping orders are released. In addition, vehicles are subjected to a thorough dangerous goods check prior to loading and rejected if there are any issues.

Above and beyond this, we use our global requirements to specifically assess the safety and environmental risks of transporting and handling raw materials and sales products with high hazard potential. This is based on the Guidance on Safety Risk Assessment for Chemical Transport Operations published by the European Chemical Industry Council (CEFIC).

We stipulate worldwide requirements for our logistics service providers and assess them in terms of safety and quality. Our experts use our own tools as well as internationally approved schemes for evaluation and monitoring. These include the ship inspection reports issued by the Chemical Distribution Institute (CDI) and the Oil Companies International Marine Forum (OCIMF).

Transportation incidents

To evaluate transportation safety, we systematically record transportation incidents according to defined criteria. We use the number of transportation incidents[1] as a reporting indicator. In 2023, we recorded 16 transportation incidents worldwide (2022: 25).

A particular focus is incidents involving goods spillages that could lead to significant environmental impacts. These include dangerous goods leaks in excess of 200 kilograms on public traffic routes, provided transport was arranged by BASF. We recorded no incidents in 2023 with spillage of more than 200 kilograms of dangerous goods[2] (2022: 1). There have therefore been no incidents with a significant impact on the environment (2022: 0).

For more information on transportation safety, see basf.com/distribution_safety

1 Data is collected based on the International Council of Chemical Association's (ICCA) Guidance for Reporting Performance and includes road, rail and container shipping incidents.
2 Hazardous goods are classified in accordance with national and international hazardous goods regulations.

Social

As a global company, we are responsible for our actions along the entire value chain. A trust-based relationship with our stakeholders and careful management of our supply chains are crucial to our business success. We value an inspiring and safe working environment for our employees. We are in close contact with our local community and respond to the needs of our customers and the concerns of society.

Our Management and Control Systems

GRI 2, 3, 303, 403

The health and safety of our employees and contractors is our top priority, as is the quality and safety of our products. To this end, we have established comprehensive management and control systems. Our Responsible Care Management System comprises the global directives, standards and procedures for environmental protection, health and safety.

Responsible Care Management System

BASF is actively involved in the International Council of Chemical Associations' global Responsible Care® initiative. Our Responsible Care Management System covers the environmental protection, health and safety aspects that we have identified as material. When it comes to health protection and safety, this is particularly relevant for the production at our plants, activities at our sites and warehouses, as well as distribution of our products down to our customers' application of our products. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center defines Group-wide mandatory management and control systems and monitors compliance with internal requirements as well as legal regulations through audits, while the sites and Group companies implement these requirements locally. Our global network enables information and insights to be shared across the BASF Group on an ongoing basis.

Our policies and requirements are continuously updated. We also maintain dialog with government institutions, associations and international organizations for this reason. We set ourselves ambitious goals for safety and health protection (see page 41). We assess the potential risks and weaknesses of all our major activities – from research and development to production and logistics – and the potential effects of these on safety, the environment and our surroundings. We use databases to record accidents, near misses and safety-related incidents at our sites as well as along our transportation routes. This documentation helps us to continuously improve. Appropriate measures are derived according to specific cause analyses.

For more information on Responsible Care®, see basf.com/en/responsible-care

Responsible Care audits

Regular audits help ensure that our safety, health and environmental protection standards are met. We conduct regular audits every three to six years at all BASF sites and at companies in which BASF is a majority shareholder. We take a **risk-based approach** here. An audit database ensures that all sites and plants worldwide are regularly audited. We have defined our regulations for Responsible Care audits in a global Corporate Requirement. The Board of Executive Directors is regularly informed about the results of the audits. Newly acquired sites and companies are generally audited for the first time after the integration phase is complete, generally within one to two years depending on complexity and number of sites. During our audits, we create a safety and environmental profile that shows if we are properly addressing the hazard potential. If this is not the case, we agree on corrective measures to be implemented within a certain time frame depending on the identified hazard potential. We monitor this in follow-up audits, among other things.

In the BASF Group in 2023, 120 environmental and safety audits were conducted at 72 sites (2022: 115 audits at 73 sites). The sites were audited based on their individual risk profile. Auditing of the sites acquired in 2020 from Solvay was interrupted due to local coronavirus restrictions in 2022 was continued and completed in the 2023 reporting year. In addition, eight sites were audited on occupational medicine and health protection (2022: 16).

For more information on occupational safety and health protection, see page 143 onward

Employees

GRI 2, 3, 201, 401, 402, 404, 405

Our employees make a significant contribution to BASF's success. We want to attract and retain talents for our company and support them in their development. To do so, we strive to cultivate a working environment that inspires and connects people. It is founded on a culture of open leadership based on mutual trust, respect and dedication to top performance.

At a glance

111,991
Employees around the world

- Global targets on employee engagement and promotion of women in leadership positions
- Focus topics in 2023: promoting diversity and supporting the resilience of teams, leaders and the organization

Strategy

Our employees are key to the successful implementation of BASF's strategy. That is why we rely on our employees and leaders. We help them to develop the necessary skills to support our customers in the best possible way and provide them with the tools they need to do so. We promote a working atmosphere based on mutual trust with attractive working conditions, in which employees can develop their individual skills and potential. We want to further strengthen our employee engagement and innovative power through the inclusion of diversity. This also positions us to meet the challenges of an increasingly rapidly changing environment.

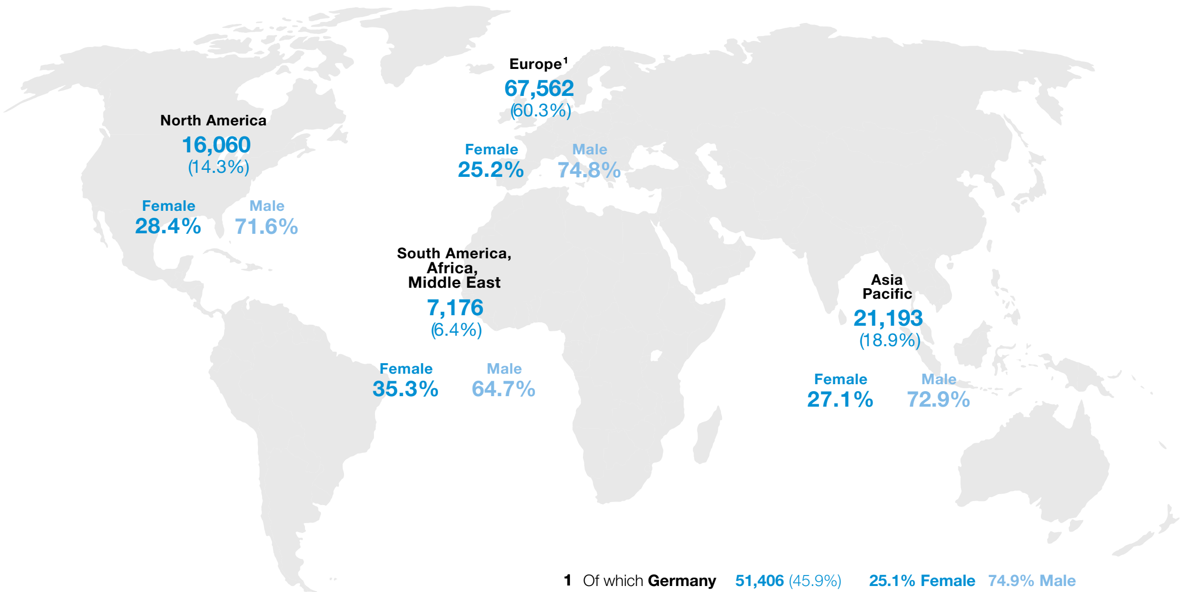
Nevertheless, attracting and retaining qualified employees presents us with an increasing number of challenges and risks. By offering various learning and development opportunities as well as attractive compensation and benefits, and with our commitment to supporting a balance between personal and professional life, we want to maintain our reputation as an attractive employer. In order to continue to attract and retain talents for our company in the future, we work continuously on BASF's attractiveness as an employer. We systematically record short and long-term opportunities and risks as part of our general opportunity and risk management (see page 182 onward).

Number of employees

As of December 31, 2023, the number of employees increased to 111,991 employees compared with 111,481 employees as of December 31, 2022. The rise was primarily due to staff increases in Asia Pacific, especially for the new Verbund site in Zhanjiang, China. This was partially offset by retirements and departures due to dormant employment as well as measures in connection with the cost savings program focusing on Europe. We employed 3,045 apprentices (2022: 3,049), of which 21.3% were women. A total of 2,305 employees were on temporary contracts (of which 43.4% were women).

BASF Group employees by region

(Total: 111,991, of which 26.7% women, as of December 31, 2023)



1 Of which **Germany** 51,406 (45.9%) 25.1% Female 74.9% Male
Of which **BASF SE** 34,213 (30.5%) 22.3% Female 77.7% Male

Employee engagement

BASF can rely on the engagement of its employees. Employee surveys and pulse checks are used as **feedback tools** to actively involve employees in shaping their working environment. The results are communicated to employees, the Board of Executive Directors and the Supervisory Board, among others.

We have performed regular global employee surveys since 2008, and since 2019, we have also recorded the employee engagement level as an index score based on the answers to five key questions. Overall, more than 84,400 employees worldwide participated in the 2023 survey (participation rate: 74%[1]). The survey revealed an engagement index of 79%, which constitutes a drop of two percentage points compared with the previous year (2022: 81%). Our aim is to get this score back above 80%, the target defined in the BASF strategy. We support our leaders in addressing topics that help to strengthen employee engagement together with their teams in a decentralized way. In addition, in 2023, we launched the centrally coordinated initiative "Learn from the Best." As part of the initiative, BASF units from all regions that have achieved exceptionally high levels of employee engagement are presented. These examples serve not just as inspiration for others, but also promote cross-unit exchange.

What we expect from our leaders

Our leaders and their teams should contribute to BASF's success. This is why we promote high-quality leadership and measure its impact. We understand impactful leadership as leaders that serve as role models by having – in line with our corporate values – a positive influence on the engagement and development of their employees, and by developing and implementing business strategies together with their teams. These aspects are part of the standard global nomination criteria for leadership positions.

Our leadership culture is based on BASF's corporate values (see page 33) and our specific expectations of leaders' conduct are derived from these: The **CORE Leadership Values** serve as the guiding principles for all leaders and set out our expectations of leadership conduct. They are aligned with BASF's strategic goals and reflect our company's leadership vision.

By offering a wide range of targeted training and development opportunities for leaders at all levels, we help to ensure the future viability of BASF. We offer our leaders opportunities for each phase of their career as well as various formats that enable them to learn from one another and from external experts. We aim to develop leaders who lead their teams with professional competence, optimism, empathy and trust, and in this way, create a competitive advantage for BASF.

In order to further anchor the CORE Leadership Values in day-to-day work, the focus topic **Care and Coach for Performance** was defined for our leadership training in 2023. We gave leaders impetus to work on the topic of resilience and to further strengthen their role as coaches (see page 135). These virtual training courses and inspirational events provided senior executives in particular with opportunities for self-reflection, global exchange, practicing and consolidating competencies and skills.

To identify and develop the best talent at an early stage, we also use potential assessments. Among other things, we identify indicators for future leadership success and compare the skills already developed by the talents with the requirements for management tasks with greater responsibility. This enables us to offer even more targeted development opportunities and help to further increase the quality and number of our potential leaders.

Regular feedback plays an important role in the development of leaders. In 2023, we did not make it mandatory to use our global feedback tool FEEDback&forward. Nevertheless, 800 leaders voluntarily used the tool and obtained valuable feedback from their teams. This corresponds to around 10% of our leaders. In 2024, we will make using our leadership feedback tool mandatory again.

Competition for talent

Attracting and retaining the best employees is crucial to our success. Having an attractive and compelling total offer package for employees is becoming increasingly important considering the strong global competition for the best qualified employees and leaders. This is why we are constantly working on measures to better appeal to talents worldwide and are increasingly using digital platforms such as our country-specific career websites as well as global and regional social networks.

Our **talent search activities** in 2023 were based on a mix of face-to-face events and digital offerings. For example, we are represented at digital trade fairs and conferences. This virtual contact enables a demand-oriented, flexible and location-independent approach. As a result, we were able to continue to attract and recruit talented employees.

In 2023, we introduced a new digital recruitment tool in Europe, North America and South America. On this basis, we have established a global recruiting process. The new system offers improved user-friendliness and is designed to speed up the recruitment process. Artificial intelligence (AI) features enable people applying to BASF to match their CV with all job offers. The solution is scheduled for launch in Asia Pacific in 2024.

We want to ensure the availability of qualified employees and safeguard existing knowledge today and in the years to come. At the BASF SE site in Ludwigshafen, Germany, we perform analyses to make the demographic situation for different operational job profiles transparent for the responsible leaders. On this basis, we offer specific measures for succession planning, knowledge sharing and moderated knowledge transfer. To combat the shortage of

1 The scope of employees surveyed goes beyond the scope of consolidation. However, there are exceptions for companies that represent joint ventures and joint operations, as well as companies held for sale.

skilled workers in production and technical areas in Ludwigshafen, Germany, we increasingly used social media channels to alert qualified specialists to career prospects at BASF in 2023. We also cooperated with the German employment agency, for example, to target skilled workers at informational events and to recruit suitable candidates for BASF who are currently available on the labor market or will be in the near future.

We once again achieved high scores in a number of employer rankings in 2023. For example, in a study conducted by Universum, young scientists ranked BASF as the sixth most attractive employer in Germany (2022: seventh). In North America, BASF was named as one of the top 50 companies for diversity for the 11th consecutive year by Fair360 (formerly DiversityInc). In Asia, Top Employer recognized BASF China as one of the best employers for the 13th time in succession.

The BASF Group hired 9,168 new employees in 2023. The percentage of employees who resigned during their first three years of employment – the early turnover rate – was 1.4% worldwide in 2023. This turnover rate was 0.8% in Europe, 3.0% in North America, 1.9% in Asia Pacific and 2.3% in South America, Africa, Middle East.

The voluntary turnover rate, or the proportion of employees who left the company voluntarily, amounted to 3.5% globally. This rate was 2.2% in Europe, 7.1% in North America, 4.7% in Asia Pacific and 5.2% in South America, Africa, Middle East.

As of December 31, 2023, the BASF Group was training 3,045 people in various occupations. We spent a total of around €130 million on vocational training in 2023.

For more information on careers at BASF, see basf.com/careers

BASF Group new hires in 2023

	2023	Of which women (%)
Europe	3,868	29.9
North America	2,342	31.8
Asia Pacific	2,164	32.2
South America, Africa, Middle East	812	45.9
Total	**9,168**	**32.3**

Learning and development

Learning and development are essential success factors for a strong and future-oriented company culture. The **skills and competencies** of our employees are critical for profitable growth and lasting success. For this reason, we want to further modernize our learning culture and step up our efforts to promote continuous, self-directed learning and learning from others. Employee development at BASF is underpinned by the principle that development opportunities and support are open to all employees.

We understand development as continuous learning by building individual experience and skills, further training or changing jobs. A trust-based relationship between employees and leaders as well as regular feedback through continuous meaningful conversations are crucial to employee development. These regular conversations can be initiated by both leaders or employees and take different forms – leaders and employees can agree on this in the annual employee dialog.

Employees also define their individual learning objectives together with their leader as part of the continuous conversations. These are to be adapted to the specific requirements of the position concerned and future needs. Learning can take place in various formats and at different locations – at work, as social or formal training – depending on individual and workplace demands.

Our learning opportunities are available for a variety of employee development needs: starting a career, expanding knowledge, personal growth and leadership development. In 2023, we focused some offers on strengthening resilience (see page 135). In addition, the many academies in the divisions and service units offer training on specific professional content. Since 2023, we have been offering Campus Events for newcomers in all regions to welcome them to BASF, share general information such as our strategy and give them the opportunity to network with each other.

To achieve our ambitious digitalization goals, we are focusing on digital skills development of our leaders and employees, as well as on agile transformation. One example of this is our training course on the current development of generative AI applications. We offer content on this topic for various target groups in the form of self-led learning paths, training courses and individual or group coaching. In this way, we want to enable BASF employees to gain an understanding of data, data analysis and AI. After all, in order to exploit the full potential of AI solutions, it is essential to combine new technologies with the experience and expertise of employees. Employees can gain practical experience using the chatBASF AI assistant.

Good to know

⌈Resilience helps in difficult times⌋

Resilient teams and companies with a resilient culture are better able to overcome challenges and recover from them more quickly. Resilient people can deal with difficulties more easily and use them as an opportunity for growth. For this reason, and in a challenging and increasingly rapidly changing environment, we focused on promoting resilience in the learning opportunities for leaders and in various opportunities for employees in 2023. Under the motto "Care and Coach for Performance," we offered our senior executives various training modules and learning opportunities in virtual formats. These also included training on how leaders can apply a coaching-oriented leadership style and make better use of their emotional intelligence. As role models and coaches, leaders can better promote the strengths of their team members and support them in their development.

In addition, we have provided leaders and employees with a wide range of resources and independent learning opportunities to inform themselves and develop their own skills. These included in particular strategies and rituals for self-care and caring for employees. It is important to us to enable teams to perform at their best, even in challenging situations, without neglecting their own health. This training portfolio was supplemented by tailored initiatives from our Corporate Health Management (see page 145), as well as by regional and local offerings. In North America, we offer digital solutions that enable affected employees to take advantage of offers to improve their mental health, regardless of their location or working hours. Over the past five years, BASF has built up a network of employees in the United Kingdom and Ireland who act as first aiders for mental health issues (Mental Health First Aiders). They complement Corporate Health Management and can provide confidential advice and professional support to those who need it.

Compensation and benefits

⌈We want to attract and retain engaged and qualified employees, and motivate them to achieve top performance with a comprehensive package that includes market-oriented compensation, benefits, individual development opportunities and a good working environment. Our employees' compensation is based on **global compensation principles** according to position, market and performance. As a rule, compensation comprises fixed and variable components as well as benefits that often exceed legal requirements. In many countries, these benefits include company pension benefits, supplementary health insurance and share programs. We regularly review our compensation systems at the global and local levels. We are committed to the U.N. Global Compact's goal of paying employees a living wage to support them and their families by 2030. Since 2022, we have been conducting a global analysis to determine whether we pay employees such a wage and to close any gaps.

We want our employees to contribute to the company's success. This is why the compensation granted to the vast majority of our employees includes variable compensation components, with which they participate in the success of the BASF Group as a whole and are recognized for their individual performance. The same principles essentially apply for all employees worldwide. The amount of the variable component is determined by economic success as well as the employee's individual performance. We use the BASF Group's return on capital employed (ROCE) to measure economic success for the purposes of variable compensation. This links **variable compensation** to our ROCE target.[1] Individual performance is assessed as part of a globally consistent performance management process. In numerous Group companies, our "plus" share program ensures employees' long-term participation in the company's success through incentive shares. In 2023, for example, around 26,700 employees worldwide (2022: around 27,100) participated in the "plus" share program.

1 In calculating compensation-relevant ROCE, adjustments are made for negative and positive special items resulting from acquisitions and divestitures (for example, integration costs in connection with acquisitions and gains or losses from the divestiture of businesses) when these exceed a corridor of +/-1% of the average cost of capital basis. An adjustment of compensation-relevant ROCE (in the first 12 months after closing) therefore only occurs in cases of exceptionally high special items resulting from acquisitions and divestitures.

From 2024 onward, variable compensation for senior executives in the BASF Group will be adapted to the Differentiated Steering concept and based on targets derived from the new key performance indicators for the steering of the respective business unit or the BASF Group (see page 40).

BASF offers senior executives the opportunity to participate in a **long-term incentive (LTI)** program[1] in the form of a performance share plan. The four-year program takes into account the development of the total shareholder return. It incentivizes the achievement of strategic growth, profitability and sustainability targets. To take part in this program, participants must hold BASF shares, the amount of which is based on their individual fixed compensation. In 2023, around 93% of the people eligible to participate in the long-term incentive program around the world did so, holding between 30% and 70% of their fixed annual compensation in BASF shares.

The share price-based compensation program (BASF option program, BOP), which had existed since 1999, was offered for the last time in 2020. Due to the maximum program term of eight years, exercise gains from the BOP program can still accrue until June 30, 2028.

For more information on share-price based compensation offers and BASF's share programs, see the Notes to the Consolidated Financial Statements from page 310 onward

For more information on the compensation of the Board of Executive Directors and the Supervisory Board, see the Compensation Report at basf.com/compensationreport

Personnel expenses

Expenses for wages and salaries, social security contributions and assistance, as well as for pensions totaled €10,950 million in 2023. In the previous year, these amounted to €11,400 million. The decline was mainly due to the lower additions of bonus provisions, currency effects, particularly from the U.S. dollar and the Argentine peso, as well as lower pension expenses. A higher wage and salary level as well as a higher average number of employees had an offsetting effect.

BASF Group personnel expenses
Million €

	2023	2022	+/-
Wages and salaries	8,773	9,102	-3.5%
Social security contributions and assistance expenses	1,612	1,598	+0.9%
Pension expenses	565	701	-19.4%
Total personnel expenses	**10,950**	**11,400**	**-3.9%**

Balancing personal and professional life

Our identity as an employer includes our belief in supporting our employees in balancing their personal and professional lives. We want to strengthen their identification with the company and our position in the global competition for qualified personnel. We want to achieve this with a **wide range of offerings** aimed at employees in different phases of life. We have formulated global guidelines for more flexibility that regulate where, when and how employees can work. These opportunities have become an integral part of our employees' day-to-day work, job permitting. These include flexible working hours, part-time employment, remote working, and time-off options. Desk-sharing concepts support the new form of collaboration and create areas to withdraw as well as interaction spaces for sharing ideas and being creative together. There are also external and internal coworking opportunities that employees can take advantage of.

We want to support employees in achieving a better work-life balance, for example in relation to childcare or caring for relatives, by offering additional services. We are continually working to expand these options.

Childcare is essential for many parents and enables them to return to work more quickly. The BASF SE nursery LuKids is one of the largest company childcare facilities in Germany with a total of 260 places and offers demand-oriented all-day care. It is supplemented by flexibly bookable emergency childcare places via other providers and children's holiday programs. We also offer employees at other sites in Germany and North America, for example, support with childcare or childcare solutions for emergencies.

At many sites worldwide, we offer our employees professional support with stressful situations in their personal and professional lives. In Germany, this is done by the BASF Stiftung's social and life counseling service, for example, and is increasingly also offered at sites outside of Ludwigshafen.

As part of our global Corporate Health Management, we support employees in strengthening their mental and physical health and adapting their health behavior accordingly, among other things (see page 145).

For more information on BASF Stiftung, see basf.com/international_donations

1 The LTI program referred to here is aimed at management levels 2 to 4 as well as individual employees who have attained senior executive status by virtue of special expertise.

Mutual respect and open dialog

Openness is one of BASF's corporate values. That is why our stakeholder dialog is based on **honesty, respect and mutual trust**. This also applies to dialog with our employees.

Our employees have the opportunity to form, join and support legally recognized trade unions or employee representatives. These are entitled to represent employees and their interests in collective bargaining. BASF upholds these rights and has anchored this in the Group-wide guideline on compliance with international labor norms.

Trust-based cooperation with employee representatives is an important component of our corporate culture. Our open and continual dialog lays the foundation for balancing the interests of the company and its employees, even in challenging situations. In 2023, this underpinned our efforts to manage the effects of the war of aggression in Ukraine and the corresponding increases in energy prices, as well as the current restructuring programs. In the case of organizational changes or if restructuring leads to staff downsizing, for example, or in the case of other codetermination-relevant topics, we involve employee representatives at an early stage to develop socially responsible implementation measures. Our actions are aligned with the respective legal regulations and the agreements reached, as well as operational conditions.

By focusing our discussions on the local and regional situations, we aim to find tailored solutions to the different challenges and legal conditions for each site. The BASF Europa Betriebsrat (European Works Council) addresses cross-border matters in Europe. In South America, we foster continual dialog with employee representatives in the Diálogo Social.

We are also committed to social dialog with employee representatives where freedom of association is not guaranteed under national law to the same extent as in European legal systems.

For more information, see basf.com/employeerepresentation

Material topics in focus:

Inclusion of Diversity

GRI 3, 404, 405

BASF strives to foster an inclusive working environment with room for diversity and where people encounter mutual respect, trust and appreciation. We connect people with different backgrounds, views and perspectives on an equal footing. Promoting and valuing diversity across all hierarchical levels is an integral part of our strategy and is also embedded in our corporate values.

"As a global company, we promote diversity and are committed to treating one another with respect at BASF.

Dr. Martin Brudermüller
Chairman of the Board of Executive Directors

Employees should be able to contribute their individual perspectives and skills in an inclusive working environment. As a global company, we serve many different customer needs. We want to reflect, value and promote this diversity among our employees in order to increase their creativity, motivation and sense of belonging to BASF.

2030 target

Proportion of female leaders with disciplinary responsibility **30%**

Promoting diversity has positive consequences for BASF, for example through having an inclusive working environment and a more diverse workforce. Negative consequences could arise if our employees lose their sense of belonging, we are no longer perceived as an attractive employer or not all customers feel that we appeal to them. We systematically record short and long-term opportunities and risks as part of our general opportunity and risk management (see page 182 onward).

We expect our leaders to create an inclusive working environment and promote diversity. This is why it is one of our focal points in our leadership development. For example, our leaders learned about promoting openness as part of the CORE Leadership Values online training series. This training supports them in what they can specifically do to make the work environment more inclusive for all employees and how they can live up to their role model function and develop further in this respect.

In addition, we expect all employees to create an environment in which different aspects of diversity and individual strengths are valued. With the Diversity Moments format, we offer teams concise information, everyday examples and reflection exercises on the topic of diversity and inclusion. In 2023, as part of the global employee survey (see page 133), we again used the **inclusion index** as a relevant point of reference for the inclusion of our employees and provided our leaders with suggestions for follow-up measures.

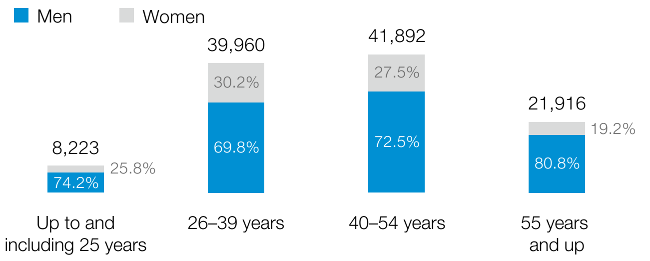
In Brazil, there is an initiative to attract, retain and include **people with disabilities** in BASF. Among other things, we are focusing on improving the accessibility of our Brazilian sites and our internal and external communication channels. With further measures as part of the initiative, we want to ensure that we consider more people with disabilities in the recruitment process and offer them specific training opportunities. The project team works closely with leaders, the HR department and the local network of employees with disabilities.

This page:
People around the world show their support for the **LGBTQI+ community** during Pride month in June. BASF also flew the rainbow flag at many of its sites in 2023, including here in Ludwigshafen, Germany, setting an example for diversity and openness.

Material topics in focus: Inclusion of Diversity

BASF Group employee age structure

(Total: 111,991, of which 26.7% women, as of December 31, 2023)



Diversity also relates to the company's **demographic profile**. Our aim is to create a suitable framework to help maintain the employability of our personnel at all stages of life and ensure the availability of qualified employees over the long term.

As we are convinced that better decisions are made by considering diverse perspectives, we set up a Shadow Board for BASF sites in Africa and the Middle East in 2023. The Shadow Board is made up of younger employees and advises the leadership team on strategic and operational topics. Using this **reverse monitoring** approach, we want to broaden and enrich the perspectives of the leadership team and bridge the gap between hierarchical levels and between generations.

We also promote diversity in the selection and development of our leaders. We have set a **global target to promote female leadership** and aim to increase the proportion of women in leadership positions to 30% by 2030. We have made important progress toward this and continually review our target. In the BASF Group, the global proportion of female leaders with disciplinary responsibility was 28.4% at the end of 2023 (2022: 27.2%).

To enable our management to monitor progress toward this target, we have developed a global dashboard that is used to regularly review the status of implementation. The systematic advancement of women is an integral part of our process for selecting senior executives and is regularly addressed in strategic dialogs with the divisions at the level of the Board of Executive Directors and in the Board's strategic talent discussions. In addition, we offer various opportunities to help female executives strengthen their network and increase their visibility at senior executive level.

Leaders and specialists in the BASF Group

	December 31, 2023	Of which women (%)
(Senior) executives[a]	9,400	28.4
Specialists/experts[b]	42,101	32.8

a With disciplinary leadership responsibility
b Without disciplinary leadership responsibility (previously "professionals")

Furthermore, we consistently take part in specific career events to specifically reach and attract female talent from various disciplines. We focus on our female employees as role models on our social media channels and with various initiatives such as career fairs and networking events aimed specifically at women.

As a signatory to the United Nations' Women's Empowerment Principles (WEPs), we are committed to promoting gender equality. We are also involved in other external initiatives to promote inclusion of diversity and equal opportunities in the workplace, such as the Business for Inclusive Growth (B4IG) initiative. In addition, we are an active member of the Charta der Vielfalt (German diversity charter), which aims to promote diversity and inclusion with a holistic approach.

For more information on diversity in the Board of Executive Directors and the Supervisory Board, see page 192 onward

For more information on diversity and inclusion, see basf.com/diversity

Stakeholder Engagement

GRI 2, 3, 413

The acceptance and support of our stakeholders is crucial for our business success. Through continuous dialog, we leverage the expertise of our stakeholders in global networks, worldwide initiatives and our own advisory bodies and actively contribute our expertise.

At a glance

- Focus in new Sustainability Lab: energy transition
- New Nature Advisory Council founded

Our continuous and open exchange on developments and joint approaches to solutions results in positive effects for BASF, such as societal support for our business activities. If we are perceived negatively by stakeholders, this can reduce our credibility and the acceptance of our business activities. We systematically record short and long-term opportunities and risks as part of our general opportunity and risk management (see page 173).

We have been a member of the U.N. Global Compact since its establishment in 2000. BASF consistently supports the **U.N. Global Compact's** 10 principles of responsible business conduct and the Sustainable Development Goals. We are active all over the world in local Global Compact networks, in some cases in a leadership role. BASF has been an active member of the **World Business Council for Sustainable Development** (WBCSD) since 1999. We cofounded the **Global Battery Alliance** (GBA) in 2017. The aim of the GBA is to develop standards and tools to steer a sustainable value chain for batteries. In 2019, we cofounded the **Alliance to End Plastic Waste** (AEPW) to drive forward solutions that reduce and avoid the disposal of plastic waste in the environment, in particular in the ocean. Together with other companies and the European CSR Europe network, we have worked on the topic of responsible social transition to climate neutrality (just transition).

Stakeholder demands and expectations of BASF

Customers

- Attractive prices
- Innovative and sustainable solutions
- Reliable partner

Investors

- Attractive dividend yield
- Strong long-term share performance
- Transparency and risk minimization

Society: politics, NGOs, media

- Jobs and taxes
- Responsible and trustworthy partner
- Production of safe products in compliance with environmental and social standards

Suppliers

- Fair and reliable business relationships
- Support in complying with our Supplier Code of Conduct (environmental and social requirements)

Community

- Safe, disruption-free operations
- Attractive jobs
- Support for local communities

Employees and management

- Attractive and fair employer
- Health protection
- Opportunities for professional development

We have contributed to both the development of a European road map and an associated toolbox.

In order to involve our stakeholders more intensively and to deepen specific sustainability topics, we use our own independent advisory bodies. In 2023, for example, we introduced the **Sustainability Lab** as a new stakeholder engagement format. This is a further development of the **Stakeholder Advisory Council** (SAC), which brought together members of the SAC and the BASF Board of Executive Directors in Ludwigshafen, Germany, for the 10th time in fall 2022.

With the Sustainability Lab, BASF is establishing a format to shed light on individual topics and issues related to sustainability from different perspectives. Around 100 external and internal experts discuss the complex challenges of climate change. At the first Sustainability Lab in Ludwigshafen, Germany, in July 2023, the participants worked on what BASF and other stakeholders can do to contribute to a successful energy transition under the title "Going Green – Fast and Fair." The outcomes were shared with relevant international stakeholders and will be taken into consideration in activities on the path to an energy transition at BASF and for other stakeholders. The Sustainability Lab will meet every two years to discuss a specific topic.

We address current and important issues regarding specific topics with councils. The trustful exchange within the **Human Rights Advisory Council** helps us to better understand our role and responsibilities, particularly in challenging situations concerning human rights (see page 155).

In 2023, BASF founded the new advisory council for topics relating to the protection of biodiversity and ecosystems, the **Nature Advisory Council** (NAC), to obtain an independent societal perspective on our activities related to nature and biodiversity topics (see page 117).

We have a particular responsibility toward our sites' neighbors. We promote continuous exchange between local residents and our site management and strengthen trust in our activities with **community**

advisory panels. Our globally binding requirements for community advisory panels are based on the grievance mechanism standards in the United Nations' Guiding Principles on Business and Human Rights. We keep track of their implementation through the existing global database of the Responsible Care Management System.

We also involve key stakeholders in the decision-making process about future investments at an early stage. For example, we are working with partners, local authorities and nongovernmental organizations to analyze whether and how we can build a refinery complex for nickel and cobalt in Indonesia in a responsible manner.

Our **political advocacy** is conducted in accordance with transparent guidelines and our publicly stated positions. The same applies to our activities in associations. Our Industry Associations Review compares the energy and climate protection positions of BASF and the most important associations of which we are a member, with explanations on our approach.

BASF does not financially support political parties, for example, through donations in cash or in kind. This is codified in a global guideline. In the United States, employees at BASF Corporation have exercised their right to establish a Political Action Committee (PAC). The BASF Corporation Employee PAC is an independent, federally registered employee association founded in 1998. It collects donations from employees for political purposes and independently decides how these are used, in accordance with U.S. law.

For more information on process safety, see page 127 onward

For more information on occupational safety and health protection, see page 143 onward

For more information on responsibility for human rights, labor and social standards, see page 154 onward

For more information on our stakeholder activities, see basf.com/en/stakeholder-engagement

For more information on our guidelines for responsible lobbying, see basf.com/responsible-lobbying

For more information on the Industry Associations Review, see basf.com/en/corporategovernance

For more information on the Human Rights Advisory Council, see basf.com/human-rights-council

Societal Engagement

GRI 203, 413

At a glance

- BASF wants to be a responsible neighbor around the world
- BASF engagement for health, skills and resources

Societal engagement is a cornerstone of our corporate responsibility and part of our sustainability management. Through our activities, we aim to strengthen the communities surrounding our sites worldwide, contribute to the achievement of the Sustainable Development Goals (SDGs) and have a long-term positive impact on the environment and society. By contributing our expertise and resources, we are pursuing three global goals: Strengthening public health, promoting skills (e.g., for economic participation and employability) and protecting natural resources. Our aim is to contribute to improving people's quality of life and make a positive contribution to society.

One example of our **contribution to public health** is the cooperation with the Swiss Tropical and Public Health Institute (Swiss TPH) and Promega. Swiss TPH is researching and developing novel insecticides to combat mosquito-borne diseases such as malaria. The collaboration began in September 2022 and is expected to span a three to five-year study. Its focus is on proteolysis-targeting chimera (PROTACs), small therapeutic molecules that degrade specific proteins within cells. This innovative approach holds great potential for effectively and cost-efficiently combating insect-borne diseases. With the support of BASF in molecular research and funding from the Bill & Melinda Gates Foundation, preliminary results from this collaboration are anticipated by 2025.

Education is key to personal success and the future viability of society. That is why BASF is committed to working with partners at numerous sites to achieve greater **educational equality**, especially for disadvantaged children and young people. Science education and education for sustainable development are particularly important to us. For 26 years now, children and young people in 45 countries have been able to take part in experiments in BASF Kids' Labs. The Virtual Lab program was expanded this year to include the ProtAct17 app. The mobile app is designed to teach children aged 8 and up to protect the environment and to take action in line with the United Nations' 17 Sustainable Development Goals. ProtAct17 imparts knowledge in an age-appropriate and interactive way, arouses curiosity and the spirit of research and addresses current and future challenges for the environment, economy and society. Above all, the app shows what – albeit small – possibilities young researchers have for taking action.

In this year's **Young Voices for a Sustainable Future** project, which BASF initiated in 2022 together with the nongovernmental organization JA Worldwide, more than 1,000 young people from eight countries were once again able to address the impacts of climate change in their communities with their ideas. Supported by more than 100 BASF employees, the young people looked at how they can tackle challenges in their communities. For example, they discussed how to reduce the risk of forest fires in Greece and how to manufacture resource-saving products from alternative raw materials in Indonesia.

We aim to create long-term value for BASF and society with new business models and cross-sector partnerships. Our intrapreneurship program, **Starting Ventures**, helps people from low-income areas to improve their economic opportunities and their quality of life. The program also provides access to new markets and partners, and contributes to reaching the SDGs. Eight new Starting Ventures projects were selected for implementation in December 2022. BASF is tackling challenges on the ground together with local partners and contributing to the SDGs with entrepreneurial ideas, technical expertise and time resources.

Postharvest losses are a huge challenge for smallholders in African countries. As part of the Highland Food Systems Starting Ventures project, project partner International Fertilizer Development Center (IFDC) is helping smallholders in Kenya store potato harvests and seeds safely. To this end, IFDC is providing the smallholders with low-cost, insulated containers with a capacity of 60 metric tons, which have been produced with the help of BASF's Elastospray LWP system. The project also aims to empower 100 women and young people to find employment or set up their own businesses.

BASF Group expenses for societal engagement activities[1]

~€37 million

At our headquarters in Ludwigshafen, Germany, we want to strengthen civil society with a number of projects, such as the LUnited project. The aim of the project is to find gaps and potential for action to further promote engagement in and around the city of Ludwigshafen. In 2023, BASF supported the German National Garden Show in Mannheim as a partner. A special experience space with an interactive exhibition illustrated BASF's contribution to sustainable solutions. Around 130,000 people took advantage of this program. We also ran experimentation programs for families and school classes on the topics of sustainability, climate and energy. The experiments gave older school classes an insight into technical professions. In an outdoor area shared with John Deere, we held 12 action and dialog days on the topic of experiencing agriculture.

In the area of international development cooperation, we support the independent charitable BASF Stiftung with donations for its international projects in cooperation with various organizations. The 2023 year-end donation campaign in favor of BASF Stiftung supported the United Nations Children's Fund, UNICEF, so that more children in Afghanistan can get access to education. BASF topped up the donations made by employees of participating German Group companies to a total of around €335,000.

In 2023, BASF also supported those affected by humanitarian disasters. Following the earthquakes in Turkey and Syria and the payment of €500,000 in emergency aid, BASF launched an employee donation campaign in which more than €844,000 was donated worldwide. BASF doubled the amount to more than €1.6 million, which is available for reconstruction in the affected regions. In addition, €300,000 in emergency aid went to the German Red Cross for people affected by the earthquake in Morocco.

For more information on Starting Ventures, see basf.com/en/starting-ventures

For more information on our societal engagement around the world, see basf.com/en/engagement

For more information on societal engagement at our sites, see ludwigshafen.basf.de/en

1 We report a total figure for our societal engagement activities. The figure includes all consolidated companies with employees, including joint operations.

“

The safety and health of all employees who work for us is our top priority – including our contractors.

Dr. Johannes Heinemann
Corporate Environmental Protection, Health, Safety and Quality

Material topics in focus:

Occupational Safety and Health Protection

GRI 2, 3, 403

We value the health and safety of people above all else. To ensure safe working conditions we rely on comprehensive preventive measures in occupational safety and health protection. Our comprehensive safety concepts are designed to provide the best possible protection for our employees and contractors.

Strategy and governance

[BASF's long-term economic success is closely linked to the health and well-being as well as the productivity of our employees. In the research and production of chemicals, some of our employees handle hazardous substances and operate complex systems and machines. Potential risks arise as a result, which we aim to minimize through comprehensive preventive measures. We systematically record opportunities and risks in the area of occupational safety and health protection as part of our general opportunity and risk management (see page 178 onward).

We set binding global standards for occupational safety and health protection. Our health and safety management covers all employees worldwide. Our sites and Group companies are responsible for implementing and complying with Group-wide requirements and local standards. They are supported in this task by global networks of experts. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center performs regular audits to ensure compliance with the requirements.

This page:
Scheduled turnarounds of our production plants harbor risks for work process-related injuries due to nonroutine work and the increased use of contractors. Special initiatives, such as the conduct-based “Consistently safe!” (“Konsequent sicher!”) program at the large-scale turnaround of the styrene plant in Ludwigshafen, Germany, reinforce safety management with holistic approaches to correctly assess risks and establish a common safety culture.

2030 target[1]

Reduce our worldwide number of High Severity Work Process Related Injuries per 200,000 working hours[a] to **≤ 0.05**

a Hours worked by BASF employees, temporary workers and contractors

We pursue ambitious targets for occupational safety as well as for health protection (see page 41). In the reporting year, we adjusted our occupational safety target and the related reporting based on a Group-wide definition and are now focusing on high-severity injuries (see “Occupational safety”).

We document and analyze accidents as well as their causes and consequences in detail at a global level to learn from them. We consider the systematic hazard assessments and the risk minimization measures derived from them an important prevention tool. With these and a culture of dealing openly with mistakes, division and site-specific safety activities, ongoing qualification measures and dialog across BASF's global network, we want to strengthen risk awareness among our employees and contractors,

1 In 2023, we adapted our safety targets.

Material topics in focus: Occupational Safety and Health Protection

share best practice examples and in this way, continually develop our safety culture.

Occupational safety

We have adjusted our targets and reporting based on the critical review of our targets and key performance indicators for occupational safety in 2022. Since 2023, we are focusing on work process-related high-severity injuries. These continue to be based on established industry standards, with a stronger focus on people.

Recordable work process-related injuries in 2023

	Employees[a]	Non-employees[b]	Contractors
Fatality rate[c]	0.00	0.00	0.01
Number of fatalities	0	0	2
Recordable work process-related injury rate[c,d]	0.81	1.00	1.04
Number of recordable work process-related injuries[d]	788	109	355
High-severity work process-related injury rate[c]	0.01	0.02	0.02
Number of days lost to work process-related injuries and fatalities	5,262	890	2,413

a Own employees
b Temporary workers
c Per 200,000 working hours
d Recordable work process-related injuries for BASF include all injuries recorded in the system

We use the number of High Severity Work Process Related Injuries (HSI) per 200,000 working hours as a target. In 2023, we achieved an HSI rate of 0.03. We have set ourselves the goal of reducing high-severity work process-related injuries to a rate of no more than 0.05 HSI per 200,000 working hours by 2030.[1] By focusing on high-severity work process-related injuries, we want to make our employees' working environment even safer.

Despite our efforts, there was one fatal work-related injury in 2023 (2022: 1), in which two people lost their lives. Two contractors suffered fatal injuries in a car accident on a business trip in Brazil. BASF is assisting the authorities in determining the circumstances and cause of the accident.

To prevent work process-related injuries, we encourage and promote risk-conscious behavior and safe working practices, learning from incidents and regular dialog. That is why we are constantly refining and enhancing our global requirements and training.

> "We encourage and promote risk-conscious and safe working practices.
>
> **Dr. Johannes Heinemann**

In addition to the legally required briefings, BASF requires new employees and contractors to complete compulsory **health and safety training**. Employees at our production sites also receive regular training on the safe handling of chemicals and the correct use of personal protective equipment.

We do everything we can to prevent injuries and use our findings to take appropriate measures to prevent these from happening again, as far as possible. These include regular campaigns and informational events to raise employees' awareness. Many events and initiatives over the course of 2023 focused on further developing the safety culture, such as a course on the safe handling of forklifts as part of the EHS Culture of Excellence initiative in North America.

Leaders play a key role in the safety culture as role models, which is why environmental protection, health and safety are discussed with newly appointed senior executives. Senior executives with particular responsibility for such topics, for example, in production, also receive specific further training to be able to meet their responsibilities.

To further improve our processes and methods, we evaluate trends in data, analyze accidents and potential incidents, and share knowledge and best practices within our global network of experts and as part of safety initiatives. We also seek dialog with government institutions and are actively involved in external occupational safety initiatives and networks around the world led, for example, by the European Chemical Industry Council (CEFIC) or national associations such as the German Chemical Industry Association and the American Chemistry Council.

For more information on process safety, see page 127 onward
For more information on occupational safety, see basf.com/occupational_safety

1 Hours worked by BASF employees, temporary workers and contractors

Material topics in focus: Occupational Safety and Health Protection

Health protection

BASF's global corporate health management serves to promote and maintain the long-term and holistic health and productivity of our employees. The BASF health checks form the foundation of our global health promotion program and are offered to employees at regular intervals.

We also systematically raise employee awareness of health topics with offerings tailored to specific target groups. One example is the Global Health Campaign. In 2023, we chose a decentralized approach in which the regions and sites could focus on locally relevant health aspects. In North America, for example, the focus was on mindfulness in the professional and private environment. The Take a Moment campaign focused, among other things, on dealing with shift work and mental health. Specific health campaigns were offered at a total of over 459 sites in 2023.

We measure our **performance in health protection** using the Health Performance Index (HPI). It comprises five components: recognized occupational diseases, medical emergency drills, first aid, preventive medicine and health promotion. Each component contributes a maximum of 0.2 to the total score, meaning that the highest possible score is 1.0. We aim to achieve a value of more than 0.9 every year. With an HPI of 0.96, we once again achieved this in 2023 (2022: 0.96).

In 2023, 44 work-related illnesses among BASF employees worldwide were documented as recognized occupational diseases (2022: 38). The main recognized occupational diseases are occupational asthma, hearing loss, skin diseases, musculoskeletal disorders and cancer.

Another focus in 2023 was on influenza prevention. BASF employees could be vaccinated against seasonal flu at many sites around the world. At the Ludwigshafen site in Germany, for example, around 3,850 employees participated in the influenza vaccination campaign.

For more information on occupational medicine, health campaigns and the HPI, see basf.com/health

Case study

New Medical Center for comprehensive medical care

In 2023, BASF opened a new Medical Center in Ludwigshafen, Germany. The aim is to secure our employees' health and ensure that they remain able to work despite the rising average age by strengthening medical care at the site in the long term.

Alongside examination and training rooms and offices, it houses state-of-the-art medical diagnostic facilities. In addition to the clinic, the Medical Center accommodates eight external specialist and medical facilities, a physiotherapy practice and a pharmacy. With the exception of the occupational and emergency medicine section reserved for BASF employees, all facilities are also available to our neighbors in the surrounding districts of Ludwigshafen.

Occupational medicine has a long history at BASF: A document from 1866 shows that the first factory doctor was employed at BASF just one year after the company was founded. This also marks the beginning of the first company medical service in the chemical industry in Germany, long before statutory obligations existed.

For more information on the Medical Center see medicalcenter.basf.com/en

Product Safety

GRI 2, 3, 416, 417

We see product safety as an integral part of all business processes, as an important element of our risk management and as an essential pillar of our commitment to Responsible Care®. We continuously work on ensuring our products pose no risk to people or the environment when they are used responsibly and in the manner intended. A thorough safety and risk assessment enables us to serve markets with safe and sustainable products that meet regulatory requirements while responding to trends.

Strategy and governance

As a chemical company, we have products in our portfolio with physicochemical, toxicological and ecotoxicological properties that may have negative effects on people and the environment if handled incorrectly. We are committed to continuously minimizing these effects and to the ongoing further development of the safety and sustainability of our products. This commitment to product safety is enshrined in our Responsible Care® charter and the initiatives of the International Council of Chemical Associations (ICCA). We aim to comply with all relevant national and international laws and regulations. At the same time, we strive to meet the requirements of our customers worldwide with our products and contribute to the development of a sustainable future in many areas (see sustainable portfolio management on page 48). We systematically record short and long-term opportunities and risks in the area of product safety as part of our general opportunity and risk management (see page 177 onward).

Our global requirements define rules, processes and responsibilities, for example, to ensure uniformly high product safety standards worldwide. Our sites and Group companies are responsible for implementing and complying with internal and legal requirements. This is regularly audited by the Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center. BASF's global network of experts shares information, insights and best practices around product safety on an ongoing basis.

Before our products are launched on the market, they undergo various tests and assessments – depending on legal requirements and their application profile. Our aim here is to identify potential hazard characteristics as well as health and environmental risks at an early stage. Based on the results, we derive precautionary and protective measures and develop recommendations for safe handling – from production to application and disposal.

We document environmental, health and safety data and the assessments thereof for all of our substances and products in a **global database**. This information is continuously updated. The database forms the basis for communicating this information in our safety data sheets, for example, which we make available to our customers in around 40 languages. These include information on the physicochemical, toxicological and ecotoxicological properties of products, potential hazards, first aid measures, measures to be taken in the case of accidental release, and disposal. Our global emergency hotline network enables us to provide information around the clock. To ensure that people who buy, sell, use, transport or dispose of our products can quickly find out about our products and the risks associated with them, we use the Globally Harmonized System (GHS) to classify and label our products around the world, provided this is legally permissible in the country concerned. We take into account any national or regional modifications within the GHS framework, such as the E.U.'s regulation on the classification, labeling and packaging of substances and mixtures (CLP Regulation, Classification, Labelling, Packaging).

If necessary, we advise our customers on product safety. We set guidelines on the safe transport of dangerous goods for our logistics service providers worldwide (see page 130). We also train our employees worldwide on the proper handling and use of selected products with particular hazard potential.

In associations and together with other manufacturers, BASF supports the establishment of voluntary global commitments to prevent the misuse of chemicals. We are also involved at national and international level in various initiatives to further develop risk assessments, such as that of the European Centre for Ecotoxicology and Toxicology of Chemicals (ECETOC).

Global chemicals regulations

Most of the products we manufacture are subject to statutory chemicals regulations. We are bound by the relevant regional and national chemicals regulations, which continue to grow in number worldwide. Examples include REACH in the E.U., UK REACH in the United Kingdom, KKDIK in Turkey, K-REACH in South Korea and TSCA in the United States. BASF Group companies work closely together with a global network of experts to ensure that BASF complies with the applicable regulations.

In Europe, the European Commission has developed a road map that will bring about far-reaching changes to the regulation of chemicals in Europe in the coming years: the European Green Deal and, as part of this, the Chemicals Strategy for Sustainability (CSS). BASF supports the objectives of the Green Deal in principle but sees a need for adjustment, greater clarity and predictability, particularly in regulatory matters. It is necessary to strike a balance between achieving the ambitions of the CSS and safeguarding the long-term competitiveness and future viability of the European chemical industry. As part of the ongoing clarification process, we therefore seek dialog with all relevant stakeholders and advocate for a science-based and innovation-driven development of the regulatory framework.

Animal welfare in environmental and toxicological testing

Before launching products on the market, we subject them to a variety of tests, including environmental and toxicological tests using state-of-the-art knowledge and technology. If these tests include animal studies, this is generally required by law and necessary to reliably evaluate the safety and efficacy of our products. If we employ animal studies, we adhere to the specifications laid down by the German Animal Welfare Act as well as the requirements of the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) – the highest standard for laboratory animals in the world. We develop and are continuously optimizing alternative methods to experimentally assess the safety and tolerance of our products without animal studies. In addition, we are involved in networks such as the European Partnership for Alternative Approaches to Animal Testing (EPAA) to further develop alternative methods across sectors.

Our aim is to replace, reduce or refine animal studies to minimize the impact on them. For example, we use an OECD-certified alternative testing strategy developed jointly with Givaudan for animal-free testing of allergic skin reactions. We also use other alternative methods wherever possible. In 2022, BASF SE's Experimental Toxicology and Ecology became the first institute in the world to be certified for Good In Vitro Method Practices (GIVIMP). GIVIMP is a standard published by the OECD. It increases the quality of data generated by in vitro test methods and confidence in newly developed nonanimal testing methods.

Management of nano- and biotechnology

Nanotechnology and biotechnology offer solutions for key societal challenges – such as environmental and climate protection and health and nutrition. For example, nanomaterials can improve battery performance and biocatalytic methods can increase process resource efficiency. We want to harness the potential of both technologies. Using them safely and responsibly is our top priority. Safe handling of nanomaterials is stipulated in our Nanotechnology Code of Conduct, for instance. With regard to the safety assessment and regulatory compliance of nano and particulate materials, BASF participated in the NanoHarmony, MACRAME and Nanomet projects funded by the European Union in 2023. The results were documented and communicated in publications with BASF's involvement. Furthermore, the findings will be incorporated into the OECD Test Guidelines Programme in order to develop valid and standardized test methods for the safety assessment of nano- and particulate materials.

For more information on NanoHarmony, see nanoharmony.eu

For more information on the Nanomet project, see oecd.org/chemicalsafety/nanomet

Quality Management

GRI 2, 418

Our quality management aims to ensure the high quality of our products, processes and services and enable our employees to best meet our customers' needs.

Strategy and governance

Our aim is to ensure the high quality of our products, processes and services in order to best meet our customers' needs and set ourselves apart from our competitors. Quality defects can have potential negative effects on people and the environment. We prevent these with our quality management. We systematically record opportunities and risks in the area of quality as part of our general opportunity and risk management (see page 177 onward).

Our quality management supports BASF's strategy and focuses on our customers by taking their needs as well as those of consumers and other stakeholders into account. Our quality management system comprises central requirements and processes along the value chain, which are defined by the Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center. Local implementation of these is the responsibility of our business units and sites. Quality management is monitored on a decentralized basis via a comprehensive internal audit system in accordance with ISO standards.

Quality Management System

Our Quality Management System is based on the plan-do-check-act approach and focuses on planning, implementation, evaluation and action. It is risk-based, process-oriented and focused on the satisfaction of our customers and stakeholders. Mandatory elements are set out in global requirements. These include requirements for core processes such as nonconformity management, handling of product recalls and change management.

Our quality management includes the consistent handling of incidents that relate to product quality. A core element in this context is accessibility for and communication with affected customers and stakeholders in order to be able to react as quickly as possible and initiate appropriate measures such as product recalls or withdrawals. In further steps, we systematically work through the incidents and identify and eliminate causes. This includes all our customers and products, in particular products with inherent hazard potential, which entail specific documentation requirements. We are committed to handling the data of our customers and suppliers with particular care. During the current reporting year, only individual product quality incidents relating to individual items or batches of items are known to us. These were addressed, processed and monitored directly by our operating divisions.

A key focus in the implementation of our quality management is on interlinking our targets and business-related requirements with the opportunities and risks identified by our operating divisions. This decentralized approach allows us to adapt our quality management to the requirements of BASF's diverse business areas in the individual operating divisions. We apply quality management methods commonly used in the chemical industry, including management of change, quality assurance and control and development processes. In addition to appropriate documentation and the systematic development of expertise through training, our approach also includes regular internal audits. The results of these audits are taken into account alongside other indicators in the continuous review of the management systems. If necessary, we revise their strategic and organizational alignment.

As part of World Quality Week, we draw our employees' attention to the importance of quality. In 2023, we offered a range of activities based on the theme "Quality: realizing your competitive potential," to exchange ideas internally and with customers, learn from each other and for levers to improve our quality performance.

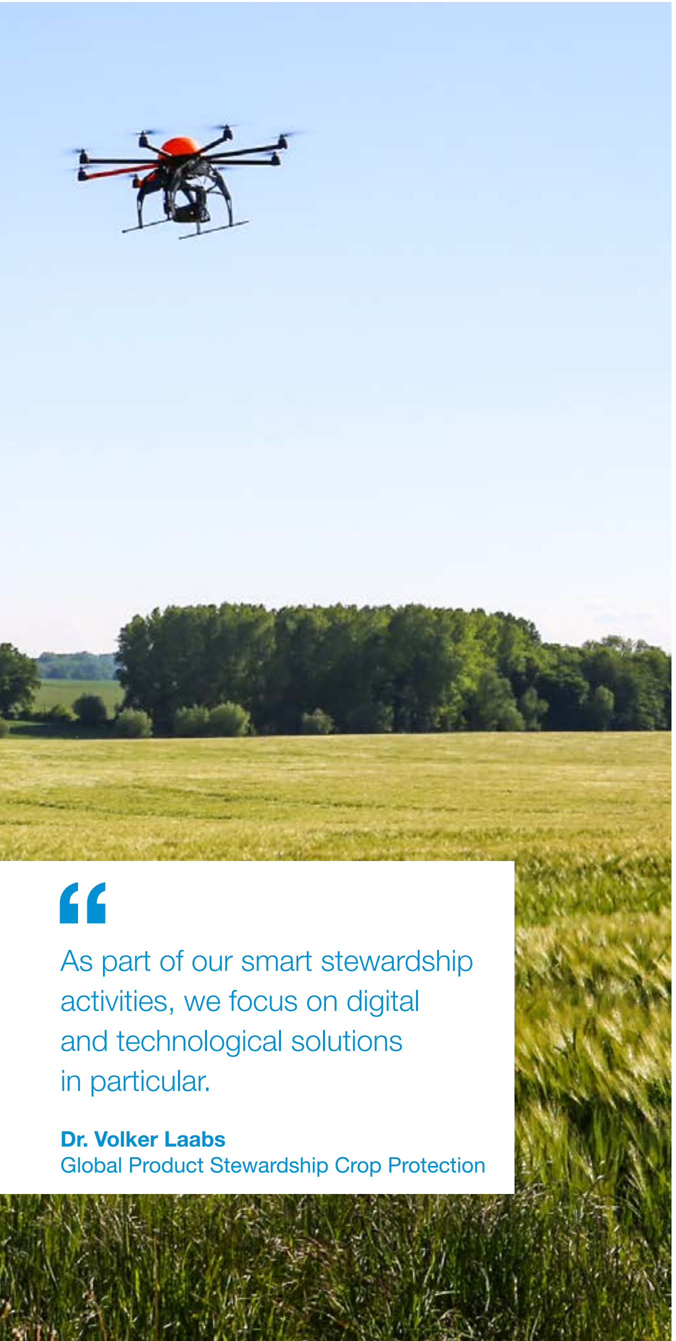
External certification

We pursue a decentralized certification approach for our business units and Group companies. This takes into account local needs, internal and legal requirements, and our customers' requirements. Our Responsible Care audit system complies with the ISO 19011 standard and is certified according to ISO 9001. Worldwide, 132 BASF production sites are partially or fully certified in accordance with ISO 14001 (2022: 132). In addition, 59 sites worldwide are partially or fully certified in accordance with ISO 45001 (2022: 59). Several BASF sites also have an ISO 17020-accredited inspection body for user inspection or an ISO 17025-accredited analytical laboratory for environmental emissions analyses. Based on our customers' requirements, Quality Management Systems at our production sites are generally certified according to external international standards such as ISO 9001, GMP, FAMI QS or IATF 16949.

Material topics in focus:

Product Stewardship for Crop Protection Products and Seeds GRI 2

Around the world, farmers are facing enormous challenges: Under changing climatic conditions, they are expected to feed a growing world population and, at the same time, reduce their carbon footprint. Our products and technologies help them master this complex task. We are committed to the responsible and ethical use of our products throughout their entire life cycle.



"As part of our smart stewardship activities, we focus on digital and technological solutions in particular.

Dr. Volker Laabs
Global Product Stewardship Crop Protection

As global demand for agricultural products and solutions grows, so does the pressure on farmers. They are expected to produce healthy and affordable food and, at the same time, reduce CO_2 emissions, minimize land use and preserve biodiversity. With our integrated solutions, we help farmers find a balance between economic, environmental and societal demands. High-performance seeds from BASF help to achieve a higher yield and improve the quality of the harvest. Our innovative crop protection products reduce crop losses caused by insect pests, weeds and fungal diseases. Our digital solutions enable, among other things, better soil management and more targeted use of fertilizers and crop protection products by taking important parameters such as plant health, weed density or weather data directly into account during application.

In 2023, we invested €900 million in research and development in the Agricultural Solutions segment, which represents 9% of segment sales. Our innovation pipeline has a peak sales potential of more than €7.5 billion for products launched by 2033. The main focus here is sustainability, with four key areas: more climate-smart farming, more sustainable solutions, digital farming and smart stewardship (see box on page 36).

This page:
Drones can be used to increase safety and productivity in agriculture. The main advantages compared with conventional backpack spraying are optimized use of crop protection products, reduced risk of product contact during spraying and high efficiency in application and collection of information. BASF supports the training of drone pilots with various programs.

Strategy

Misuse of our crop protection and seed products can have a negative impact on human health and the environment. We are therefore focusing our smart stewardship activities on education and continuously improving our solutions for farmers. Alongside aspects such as efficacy and productivity, this also includes safe use by our customers and impact on the environment. We consider the entire life cycle of our products – from research and development to their proper use and disposal.

Crop protection products and seeds are highly regulated at national and international level, which brings with it strict requirements for registering and re-registering active ingredients and crop systems. Regulatory approval is only granted after comprehensive proof has been provided showing that our products are safe for humans, animals and the environment when used in the manner intended.

As a member of the CropLife International industry association, we are committed to complying with the standards on the research, registration and distribution of crop protection products set out in the International Code of Conduct on Pesticide Management issued by the Food and Agriculture Organization (FAO). We are also

Material topics in focus: Product Stewardship for Crop Protection Products and Seeds

committed to the principles of integrated pest management (IPM) – an economically viable, environmentally sound and socially acceptable approach to crop protection in which chemical measures are only considered if they are necessary and no other effective options are available. In our use of biotechnology, we are guided by the respective code of conduct set out by CropLife International and adhere to the relevant standards and legal regulations governing production and marketing.

Potential risks of our products are assessed and minimized throughout the research, development and registration process, and on an ongoing basis following market registration. We regularly conduct scientific studies and tests, including on modes of action, (eco)toxicological properties and possible residues. This ensures that, as far as possible, our registration dossiers address all questions on potential environmental and health effects.

We adapt our portfolio to the specific requirements of regional markets as customer requirements, crops, soils, climate conditions, plant diseases and farming practices vary around the world. Consequently, product registrations differ from country to country. Distribution generally requires registration and approval of our products in accordance with the respective national regulations.

Crop protection

BASF adheres to the International Code of Conduct issued by the World Health Organization (WHO) and the Food and Agriculture Organization (FAO) for the management of crop protection products. These are only marketed once they have been approved by the competent authorities. We no longer sell WHO Class 1A or 1B products (high acute oral and dermal toxicity), even if formal approvals exist. Depending on availability, we offer our customers alternatives.

All of BASF's crop protection products can be used safely under local farming conditions if the information and directions on the label are followed. If they have any questions, complaints or issues, our customers can contact us through various channels, for example, by calling the telephone number printed on all product labels, using the contact forms on our websites or by approaching our sales employees directly.

We record all product incidents relating to health or the environment that come to our attention in a global database. If necessary, we take appropriate measures on the basis of this information to minimize preventable incidents.

> We are committed to only considering chemical measures for crop protection if they are necessary and no other effective options are available.
>
> **Dr. Volker Laabs**

These include updating the instructions for use on product labels. We communicate these changes and general recommendations on the safe use of our products through channels such as our global training and education activities.

One of the ways we meet our **commitment to product stewardship** is by offering a wide range of courses and training on the safe storage, handling, use and disposal of our products. This ranges from on-site events to handouts and digital offerings and is aimed at farmers, retailers, advisors and other users. In India, for example, BASF launched the Suraksha Hamesha program. Suraksha Hamesha means "safety all the time." The program creates a platform for educating farmers and other users of crop protection products about the nine steps of responsible use of crop protection products and personal protection. Through Suraksha Hamesha, BASF has trained over 36,000 agricultural workers in India in 2023. BASF also involves government agencies and the central government's farm extension teams to support and promote farm safety. In addition, we reached over 10 million people through digital information and training and informed them on safety in agriculture.

As part of our smart stewardship activities, we particularly make use of the possibilities offered by digital and technological solutions to enable our customers to handle our products responsibly. In Thailand, for example, 143 drone pilots were trained in the safe use of crop protection products as part of the "We make it fly" program since 2021. Approximately 20,000 switched from backpack spraying to the safe drone application in 2023.

We also work closely together with associations such as CropLife International and CropLife Europe to promote the safe and proper use of crop protection products. For example, we support stewardship initiatives of both associations and various programs on the proper disposal and recycling of product containers. Technological innovations developed together with industry partners also help to make using crop protection products easier and safer. Examples include the closed transfer systems easyconnect in Europe and the Wisdom system in South America.

Seeds

Our biotechnology activities and our research and development capabilities comprise advanced breeding techniques, analytics, technology platforms and trait validation. To offer tailor-made, more sustainable crop solutions, our gene identification work focuses on those plant characteristics that enable higher yield and better quality, disease resistance and tolerance of environmental factors such as drought. We apply state-of-the-art scientific methods such as genetic engineering and selective genome editing. Genome editing techniques such as CRISPR/Cas and other pioneering tools in modern biosciences offer numerous opportunities for innovative solutions, for example, in the fields of health, agriculture and industrial applications.

Material topics in focus: Product Stewardship for Crop Protection Products and Seeds

With these tools and our expertise in plant breeding, we can quickly and specifically modify desired plant characteristics and introduce new varieties. We want to use this technology to gain new knowledge and thus improve agricultural applications, and therefore support transparency through dialog and information sharing.

BASF is a member of Excellence Through Stewardship (ETS), a global industry initiative for seed companies. This initiative promotes the adoption of Quality Management Systems for seeds and product stewardship programs covering the entire life cycle. It also has independent auditors verify compliance with its guidelines in a multiyear audit cycle. BASF completed all required audits for the three-year cycle prior to 2023. BASF will conduct the next third-party ETS audits in 2024 as part of the next cycle.

For more information on our Agricultural Solutions segment, see page 93 onward

For more information on biodiversity, see page 116 onward

For more information on risks from litigation and claims, see Note 23 to the Consolidated Financial Statements on page 290

Corporate, Information and Cybersecurity

GRI 2, 418

Protecting our company from criminal attacks and unauthorized activities is crucial for our continued existence, our business activities and our reputation.

Strategy and governance

As a scientific, technology-intensive company, BASF is confronted with crime, terrorism, sabotage, espionage and other security risks in a rapidly changing business environment. We consider the protection of our employees, sites, plants, information and communication systems and our intellectual property against interference by third parties to be vitally important. We systematically record physical and transitory risks from corporate, information and cybersecurity as part of our general opportunity and risk management (see page 178 onward).

A global team is responsible for our **corporate security**. To ensure rapid and effective implementation of security measures, we have defined appropriate structures and processes and laid them down in binding Group-wide requirements. Our sites and Group companies are responsible for implementing and complying with these internal requirements and the legal specifications. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center conducts regular audits to monitor this.

Responsibility for **information and cybersecurity** lies with the Chief Financial Officer, who is also the Chief Digital Officer. The Chief Information Security Officer is responsible for the strategic direction. A global cybersecurity team is tasked with protecting BASF's IT (information technology) and OT (operational technology) systems against hacker attacks and ensuring information security. In order to initiate and monitor suitable security measures, the organization is structured according to a global best practice framework (Identify, Protect, Detect, Respond and Recover). Our IT security management system, which is certified in accordance with DIN EN ISO/IEC 27001:2017, is the main tool for managing information and cybersecurity in the BASF Group. It is crucial to ensure the confidentiality, integrity and availability of our data and IT infrastructure while demonstrating compliance with applicable laws and regulations. We want to use the system to meet regulatory compliance requirements for our critical infrastructure. The Environmental Protection, Health, Safety and Quality unit in the Corporate Center conducts regular audits to monitor this.

Corporate security

One cornerstone of corporate security is site security. The tasks performed by our security teams range from access controls at our sites to defense against industrial espionage. Aspects of human rights relevant to **site security** are a component of the global code of conduct and qualification requirements for our internal and external security personnel.

For investment projects and strategic plans, we analyze the potential safety and security risks, and define appropriate safety and security concepts. Our guiding principle is to identify risks for the company at an early stage, assess them and derive appropriate safeguards.

We inform business travelers and transferees about appropriate protection measures prior to and during travel in countries with elevated security risks. We continuously adjust our travel recommendations. With a globally standardized travel search system, we are able to locate and contact employees in affected areas following serious incidents.

Information and cybersecurity

Information security and cybersecurity are becoming increasingly important for our company. In addition to protecting data and IT infrastructure, they form the basis for successful digitalization and the implementation of new business models. BASF applies the "security by design" principle to critically review and optimize IT applications from a cybersecurity perspective as early as the design phase. We are continually improving our ability to prevent, detect and react to security incidents with various measures and training offers.

Around the world, we work to sensitize our employees about protecting information and know-how. In 2023, we continued to raise employees' risk awareness with regular mandatory online training for all employees and complementary offerings such as seminars, case studies and interactive training. Our global network of information protection officers comprises around 600 employees. They support the implementation of our uniform requirements and hold events and seminars on secure behaviors. Around 70,000 employees were trained on the basics of cybersecurity and information protection in 2023.

Governance

In this section:
Responsibility for Human Rights, Labor and Social Standards
Supplier Management

BASF is committed to responsible corporate governance that complies with the law, safeguards values and strengthens its reputation. The increased integration of sustainability aspects into important processes and at various levels of the Group contributes to this – with a view to the entire value chain. We see human rights due diligence as a Group-wide responsibility and we work closely with our suppliers with regard to ethical and environmental requirements.

We are committed to conducting our business activities in a responsible and respectful manner, guided by our corporate values and global standards (see page 33). Our actions are based on the applicable laws and regulations. Some of our voluntary commitments go above and beyond these. In doing so, we take internationally recognized principles into account. We respect and promote:

- The Universal Declaration of Human Rights and the two U.N. Human Rights Covenants
- The 10 principles of the U.N. Global Compact
- The core labor standards of the International Labor Organization (ILO) and the Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy
- The OECD Guidelines for Multinational Enterprises
- The Responsible Care® Global Charter
- The German Corporate Governance Code

We stipulate binding rules for our employees with our standards and guidelines that apply throughout the Group. Our aim is to prevent compliance violations from the outset through compulsory training for all employees and leaders. The Corporate Audit department continuously monitors compliance with requirements. The head of our legal and compliance organization also acts as Chief Human Rights Officer and oversees the overarching risk management.

We mainly approach our adherence to international labor and social standards using three elements: the Compliance Program including our Code of Conduct and compliance hotlines, close dialog with stakeholders, and the global management process to respect international labor norms.

We regularly assess our performance in environmental protection, health and safety as part of our Responsible Care Management System.

Our business partners are expected to comply with prevailing laws, regulations and internationally recognized principles. We have clearly defined our expectations in our Supplier Code of Conduct. Here, too, we have established appropriate monitoring systems.

We report in detail on the key elements of our corporate governance structures and our Group regulations on compliance in the Corporate Governance section from page 191 onward

For more information on our risk management, see the forecast from page 167 onward

Material topics in focus:

Responsibility for Human Rights, Labor and Social Standards

GRI 2, 3, 406, 407, 408, 409, 411, 413

BASF acknowledges its responsibility to respect internationally recognized human rights. Through our business, we are connected to a large number of people worldwide who are directly or indirectly influenced by our activities. We accept the resulting obligations and opportunities along the supply chain in accordance with our scope of influence. For many years, we have engaged in constructive dialog on human rights with other companies, nongovernmental organizations, international organizations and multistakeholder initiatives to better understand different perspectives and address conflicting goals.

"Human dignity is nonnegotiable for us.

Matthew Lepore
Chief Compliance Officer and Chief Human Rights Officer

Strategy and organization

We see human rights due diligence as a continuous, all-encompassing task that we can only perform by working together as a team throughout the entire organization. That is why we have embedded our responsibility for human rights into BASF's Code of Conduct and set this out in our Policy Statement on Human Rights. Our standards apply worldwide. All employees and leaders are responsible for ensuring that we act in accordance with our Code of Conduct and our Policy Statement on Human Rights. In everything we do, we are committed to complying with international labor and social standards.

We attach great importance to this topic and have set up our organization accordingly. The head of our legal and compliance organization also acts as **Chief Human Rights Officer** and oversees the overarching risk management. He regularly reports to the Board of Executive Directors on our human rights-related activities. Our compliance organization is responsible for the overarching governance of human rights due diligence at BASF. In addition, several specialist units are responsible for managing specific human rights topics.

At the same time, we rely on a systematic, integrated, risk-based approach and **established monitoring and management systems**. We achieve positive effects through our commitment to compliance with international standards in our cooperation with partners and through our local societal engagement. Potential negative impacts on human rights and labor and social standards arise from our global business activities, including in countries with increased risk, and from our complex supply chains. We systematically record opportunities and risks as part of our general opportunity and risk management. Specialists in the areas of international labor and social standards, environmental protection, health and safety as well as site security work in a risk-based manner to ensure that we respect the relevant human rights in our own activities. Our procurement organization has established a global risk-based management system for the upstream supply chain in order to implement our human rights due diligence processes. BASF is a founding member of the U.N. Global Compact and a

This page:
In the "Wage Improvements in Seed Hybrids" project, BASF, Syngenta and Arisa are jointly addressing the fight against child labor and the payment of an appropriate wage in India's vegetable seed industry. The project team's aim is to achieve significant changes in several key areas by 2025.

Material topics in focus: Responsibility for Human Rights, Labor and Social Standards

member of the Global Business Initiative on Human Rights (GBI). BASF is also active in initiatives such as Together for Sustainability (TfS) and Responsible Care®. We have also integrated human rights-related evaluations into our governance and decision-making processes, for example for investments, acquisitions and divestitures. In 2023, for example, we began working with partners, local authorities and nongovernmental organizations in Indonesia at an early stage, long before a potential investment decision, to analyze and evaluate in detail whether and how we could build a nickel-cobalt refining complex in a responsible manner, also taking into account the rights of indigenous peoples (see page 126).

In our **Human Rights Expert Working Group**, steered by our compliance department, experts from various areas of our company work closely together to holistically assess and refine our approach to human rights due diligence. In this way, we want to ensure that we approach our human rights responsibility in a comprehensive way and that we can continually improve our performance. The expert working group includes employees from specialist departments – Corporate Compliance, Global Procurement, Corporate Legal, Corporate Human Resources, Corporate Environmental Protection, Health, Safety and Quality, Corporate Strategy & Sustainability, Site Security, Corporate Communications and Governmental Relations – and our operating divisions. It provides support and advice in challenging and critical situations, on the development of internal processes, and on the creation of information and training offerings, among other things. In 2023, for example, a mandatory guideline with additional due diligence steps was introduced to further protect the rights of third-party workers in higher-risk countries.

International labor and social standards

Our aim of acting responsibly toward our employees is embedded in our global Code of Conduct and our Policy Statement on Human Rights through our voluntary commitment to respecting international labor and social standards. This voluntary commitment encompasses internationally recognized labor norms as stipulated in the United Nations' Universal Declaration of Human Rights, the OECD Guidelines for Multinational Enterprises, and the Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy of the International Labour Organization (ILO). In order to meet the requirement to comply with these standards worldwide, we mainly approach our adherence to international labor and social standards using three elements: the Compliance Program (including compliance hotlines), close dialog with our stakeholders (such as with employee representatives or international organizations) and the BASF guideline on compliance with international labor norms, which applies Group-wide. This guideline concretizes the topics in our global Code of Conduct under "Human rights, labor and social standards" as these relate to our employees and leaders worldwide. An additional guideline specifies that these topics must also be considered and applied when working with agency workers and freelancers. Regular training courses on these topics are held for the managing directors and employees of the BASF Group.

This forms the basis for our global, risk-based management process: We regularly monitor changes to the national law of all the countries in which BASF operates and evaluate our adherence to international labor and social standards. If the national law contains no or lower requirements, action plans are drawn up to close these gaps. If conflicts with national law or practices arise, we strive to act in accordance with our values and internationally recognized principles without violating the law of the country concerned. As part of the management process, we regularly follow up on and document the results of the comparison between national law and our guideline, as well as measures to implement the guideline. This is part of our central due diligence system.

We monitor our voluntary commitment to international labor and social standards as part of our management process. Individual elements of the guideline are also reviewed as part of internal control processes such as Responsible Care audits at BASF Group companies. In addition to these quality assurance measures, compliance with international labor and social standards is an integral part of the standard questionnaire in the compliance management audits conducted by the Corporate Audit department.

Our labor and social standards also include respect in the workplace. To promote awareness of respectful behavior at work, we launched an initiative against sexual harassment and discrimination in September 2023, initially at the Ludwigshafen site. Its aim is to draw attention to the issue in order to better investigate and prevent incidents and ensure that all employees are treated with respect. BASF strengthens cooperation between the specialist departments and with the internal advice centers.

For more information on corporate governance and compliance, see page 191 onward

For more information on labor and social standards, see basf.com/labor_social_standards

Good to know

Human Rights Advisory Council

We established a Human Rights Advisory Council in 2020 to integrate external expertise. Its members include independent international human rights experts. The trust-based dialog on human rights topics helps us to better understand different perspectives and to deal more openly with critical situations.

The meetings held in 2023 were once again attended by representatives from the Corporate Compliance and Corporate Strategy & Sustainability departments as well as other experts from the operating divisions.

The Council provided an external perspective, for example, on our internal guidelines on the responsible procurement of battery materials, on due diligence in challenging circumstances, on responsibly taking the rights of indigenous peoples into consideration and on the limits of corporate due diligence.

For more information on the Human Rights Advisory Council, see basf.com/human-rights-council

Material topics in focus: Responsibility for Human Rights, Labor and Social Standards

Human rights aspects of safety, health and environmental protection

Our measures and criteria for monitoring and respecting human rights are integrated into our **global monitoring systems for environmental protection, occupational safety, health protection and product stewardship** (see pages 101 and 131). We set up a specific risk management to ensure BASF's compliance with the specific environmental treaties covered by the German Supply Chain Due Diligence Act (Minamata, Stockholm, Basel). In addition, aspects of human rights topics are part of the global qualification requirements for security personnel and are incorporated into standard agreements with contractors.

As part of our Responsible Care Management, we aim to ensure that we also fulfill our duty of care towards local residents and that their human rights, such as the right to access clean water, are respected. To this end, we enter into dialog with residents at our sites through community advisory panels in order to promote trust in BASF's activities. Globally binding requirements for these panels are based on the grievance mechanism standards in the United Nations' Guiding Principles on Business and Human Rights (see page 140).

Cooperation along our value chains

As an international company, we are a part of society in the countries in which we operate and have business relationships with partners around the world. In our supply chains, we are confronted with risks in the areas of working conditions, environmental protection, health and safety, particularly in countries with an increased human rights risk and when purchasing higher-risk product categories.

We have trustful working relationships with our partners (suppliers, contractors, joint venture partners and customers), expect them to comply with internationally recognized human rights standards and to expect the same of their partners further along the value chain. We work to ensure that our partners meet their respective responsibilities.

We have defined these expectations as binding in our Supplier Code of Conduct, which is also part of our purchasing conditions (see page 159). We are in close contact with our business partners, especially in higher-risk areas and regions, and monitor the implementation of relevant standards and necessary measures for improvement. We use recognized assessment methods and audits to verify this. If this or other sources (e.g., media reports, compliance hotline) lead to anomalies or violations, we take this very seriously, respond and require our suppliers to implement corrective measures immediately and put an end to the violations.

For example, in March 2023, authorities in Uruguaiana, Brazil, recorded a case of unacceptable working conditions and underage labor in our supply chain. The affected workers were temporarily employed by subcontractors of BASF contractors in the fields of two rice farms that produced seeds for BASF. We deeply regret the way in which the workers of our contractors' subcontractors were treated and strongly condemn all practices that violate human rights. We immediately approached the relevant authorities and evaluated the processes. The work was stopped immediately and the contract with one of the contractual partners was terminated, as it became clear that it was not possible to work constructively on the incidents with this partner. BASF has also taken additional preventive and training measures to avoid such incidents even more effectively in the future (see page 160).

At the beginning of 2023, an internal audit of our joint venture operations in Korla, China, was carried out to verify compliance with the BASF Code of Conduct and the requirements embedded in it to respect human rights as well as key labor and social standards. This investigation, as well as past audits, did not reveal any evidence of human rights violations in the two joint ventures. We have obtained written confirmation from key suppliers, including our joint venture partners, that they accept our Supplier Code of Conduct. Nevertheless, reports from spring 2024 on the joint venture partner in Korla contain serious allegations that indicate activities that are not compatible with BASF's values. Consequently, we will accelerate the process already started at the end of 2023 to divest our shares in the two joint ventures in Korla for strategic reasons, subject to negotiations and the required approvals from the relevant authorities.

In 2023, we continued our work with our upstream supply chain, where we usually have no direct contractual relationships, less transparency and less influence. Here, we seek to increase our influence through collaboration with partners and stakeholders, and place importance on certifications such as the LBMA certificate for gold, the LPPM certificate for platinum group metals, and the Responsible Minerals Initiative's Responsible Minerals Assurance Process.

We work together with partners and civil society and we are active in cross-sector initiatives. These include the Global Battery Alliance and the Roundtable on Sustainable Palm Oil. Projects often start on the ground to build specific expertise for sustainable and responsible supply chains. The local initiatives also include the Sustainable Castor Initiative – Pragati in India, the Responsible Lithium Partnership Initiative in Chile, the Responsible Mica Initiative in India and the Cobalt for Development pilot mining project in the Democratic Republic of Congo (see page 126). In 2022, BASF, Syngenta and Arisa also worked together on a multistakeholder initiative in the vegetable seeds business in India. The initiative, WISH (Wage Improvements in Seed Hybrids), addresses the fight against child labor and the payment of an appropriate wage in the Indian vegetable seed industry. The first phase of the project examined where to start in order to improve local conditions. In the next step, the project partners will use various instruments such as training and further education, networking, the involvement of interest groups, advocacy work at local and international level and the dissemination of best practices. The project team's aim is to achieve significant changes in several key areas by 2025.

For more information on standards in our supply chain, see page 158 onward
For more information on raw materials, see page 121 onward

Information and awareness-raising measures, grievance mechanisms

Promoting awareness of human rights was once again a focus topic in 2023. Information offers on this were held in our operating divisions. In addition, managing directors of BASF's Group companies and employees in all regions were informed about and sensitized to human rights topics through presentations and discussion formats tailored to specific target groups. In Brazil, the Compliance Week was held on the theme of "Everyone for the Protection of Human Rights." The topic of human rights was also integrated even more strongly into the existing compliance training program.

Our **grievance mechanisms**, including our globally standardized hotline and reporting system, were also used intensively in 2023 (see page 203). All complaints were reviewed and forwarded to the relevant departments for in-depth investigation. If justified, appropriate measures were taken. We have not received any reports of human rights violations within the meaning of the German Supply Chain Due Diligence Act through our grievance mechanisms. We report on our global targets, monitoring systems and measures to integrate human rights topics into our business activities in publications such as this report and online.

For more information on our production standards, see page 127 and 143

For more information on the Policy Statement on Human Rights and a comprehensive report on the implementation of due diligence in human rights in accordance with the requirements of the National Action Plan developed by the German government, and in accordance with the U.N. Guiding Principles on Business and Human Rights, see basf.com/humanrights

For more information on the Human Rights Advisory Council, see basf.com/human-rights-council

Supplier Management

GRI 2, 3, 204, 308, 403, 407, 408, 409, 414

As a global company, BASF sources raw materials, energy, precursors, technical goods and services from all over the world. These raw materials and precursors are the building blocks for our value creation and thus high-quality products for our customers. Our objective is to create competitive advantages through our professional procurement structures, to establish stable and reliable supply chains, and, at the same time, meet high ethical and environmental standards. Together with our suppliers, we want to improve sustainability in the supply chain and minimize risks.

At a glance

€41 billion
Global procurement spend

89%
of relevant spend[1] covered by sustainability evaluations

- Sustainability-oriented supply chain management
- Global targets to increase sustainability in the supply chain
- Supplier Code of Conduct creates transparency
- Risk-based approach with clearly defined follow-up processes

Strategy and governance

Our procurement organization ensures a reliable supply of raw materials, energy, precursors, technical goods and services to BASF. With active supplier management, we aim to minimize purchase-related risks such as supply shortages and price fluctuations, ensure our competitiveness and seamless production processes. Alongside economic and qualitative criteria, we also take environmental, social and ethical aspects into account in the cooperation with our suppliers[2] in order to minimize risks in the supply chain and live up to our responsibility by establishing standards and initiatives. Our sustainability-oriented supply chain management is an integral part of our opportunity and risk management (see page 177 onward).

Procurement guidelines and targets are set centrally by the responsible Corporate Center unit Corporate Development and are binding for all employees with procurement responsibility worldwide. We use a multistage control process to ensure compliance with these requirements. Our expectations of our suppliers are laid down in the globally binding Supplier Code of Conduct (see "What we expect from our suppliers").

We have defined our standards in a global requirement. We are continually refining and optimizing this requirement and our structures and processes in response to changing framework conditions, such as new obligations arising from the **German Supply Chain Due Diligence Act** (GSCA), which requires large companies to conduct due diligence on human rights and certain environmental standards in their supply chains since January 1, 2023 (see page 156). In principle, this applies both to our own business operations and to direct and indirect suppliers. As part of the new statutory due diligence obligations, we have updated our purchasing conditions, adapted clauses for new contracts, revised existing contracts and proactively informed our suppliers. Our established supply chain management tools, such as our Supplier Code of Conduct or the systematic risk-oriented assessment and auditing of suppliers, remain important elements and have been updated accordingly.

Our risk-based approach aims to identify and evaluate sustainability matters in our value chains in the best possible way. We count on reliable and long-term supply relationships in order to jointly improve our sustainability performance, for example through projects (see page 122) or by helping to address shortcomings. We regularly review and document progress based on the risk level. Procurement employees receive regular training in sustainability-oriented supplier management and responsible procurement. In 2023, around 330 employees received such training, covering the requirements arising from the GSCA.

In our supplier relationships, we focus on the potential to reduce upstream, raw materials-related carbon emissions, thus contributing to our new raw materials-related climate protection target defined in 2023 (see page 102). With our Supplier CO_2 Management Program launched in 2021, we aim to increase the transparency and reduce the carbon footprint of our value chain together with our suppliers (see page 108).

In line with our strategy and our values we promote and value diversity, the sense of belonging and inclusion in our value chain. We have been involved in supplier diversity programs in North and South America for many years. We seek targeted contact with underrepresented supplier groups through interest groups and work to integrate them into our supply chain. In addition, we promote the exchange of information on sustainability topics in webinars and workshops and establish partnerships to enable dialog between customers and suppliers.

For more information on suppliers, see basf.com/suppliers

1 We understand relevant spend as procurement volumes with relevant suppliers. We define relevant suppliers as Tier 1 suppliers showing an elevated sustainability risk potential as identified by our risk matrices, our purchasers' assessments or other sources.
2 BASF considers all direct suppliers to be Tier 1 suppliers that provide services to the BASF Group in the respective business year. These are suppliers that provide us with raw materials, investment goods, consumables and services. Suppliers can be natural persons, companies or legal persons under public law.

Global targets

In 2023, we acquired raw materials, goods and services for our own production worth approximately €41 billion from our more than 70,000 suppliers. Of this, around 90% were procured locally.[1]

We actively promote sustainability in the supply chain with our ambitious targets: By 2025, we aim to have conducted sustainability evaluations for 90% of the BASF Group's relevant spend. In addition, we aim to have 80% of suppliers improve their sustainability performance upon reevaluation by 2025. In 2023, 89% of the relevant spend had been evaluated. Of the suppliers reevaluated in 2023, 82% had improved. Both global targets are embedded in the target agreements of employees responsible for procurement.

2025 targets

90%
Share of the BASF Group's relevant spend covered by sustainability evaluations

80%
Percentage of suppliers with improved sustainability performance upon reevaluation

What we expect from our suppliers

Together with our suppliers, we want to improve sustainability in the supply chain. Consequently, we require our suppliers to comply with the applicable laws in full and to adhere to internationally recognized environmental, social and governance (ESG) standards. We also expect them to make an effort to enforce these standards with their suppliers. In addition, we require our suppliers to support and comply with our Supplier Code of Conduct – or to demonstrate and ensure their commitment to the principles specified in the Code of Conduct, for example in their own code of conduct.

Our global **Supplier Code of Conduct** is founded on internationally recognized guidelines, such as the principles of the United Nations' Global Compact, the U.N. Guiding Principles on Business and Human Rights, the International Labour Organization (ILO) conventions, and the topic areas of the Responsible Care® initiative. Topics covered by the Code of Conduct include compliance with human rights, the exclusion of child and forced labor, adherence to labor and social standards, antidiscrimination and anticorruption policies, and protecting the environment. The Code of Conduct is available in the most relevant languages for our suppliers and integrated into electronic ordering systems and purchasing conditions across the Group. We expanded our Supplier Code of Conduct to include requirements from the GSCA and informed our existing suppliers of these changes in 2023. Around 5,000 new suppliers committed to the Code of Conduct in 2023.

BASF conducts audits and assessments to ensure that suppliers comply with the applicable laws, rules and standards. We reserve the right to discontinue business relationships for nonadherence to international principles. The same applies to failure to correct violations, or for displaying patterns of noncompliance with these standards. Our Code of Conduct expressly points out that potential violations of laws, rules or standards can be reported – including anonymously – to our compliance hotlines. Each case is documented and investigated, and appropriate measures are taken as necessary.

Selection and evaluation of our suppliers

New suppliers are selected and existing suppliers are evaluated not only on the basis of economic criteria, but also ESG standards in particular. As such, selection, evaluation and auditing are important parts of our sustainable supply chain and risk management. Processes and responsibilities are defined in a global requirement. Due to the large number of suppliers, they are evaluated based on risk. Both country and industry-specific risks as well as our ability to exert influence are taken into account. Observations from our employees in procurement, concerns reported through the compliance hotline and information from internal and external databases, such as Together for Sustainability (TfS) assessments (see box on page 160), are also used.

We are aware of problems in specific supply chains (see pages 122 and 125). We have suppliers with a high potential sustainability risk evaluated by third parties, either through sustainability evaluations or on-site audits. The list of suppliers to be assessed is updated every year. Sustainability evaluations and on-site audits are mainly conducted according to the TfS framework. A total of 89 raw materials supplier sites were audited on sustainability standards on our behalf in 2023. We received sustainability evaluations for 579 suppliers. We also take into account other certification systems and external audits, such as the Roundtable on Sustainable Palm Oil, when assessing our suppliers.

Audit results

We carefully analyze the results of our assessments, which are summarized in audit reports with specific plans for corrective measures, and document them in a central database. We regularly review the implementation of the measures and verify them in a follow-up audit. Over the past few years, we have identified some need for adjustment at our suppliers with respect to environmental, social and governance standards, for example in waste management, or deviations in occupational health and safety measures and standards under labor law. Follow-up audits performed in 2023 identified improvements in these areas.

In this reporting year, we recorded one case of undignified working conditions and underage labor. In March 2023, representatives of local authorities identified unacceptable working conditions on two rice farms which produced seeds for BASF in **Uruguaiana, Brazil**. The affected workers were temporarily employed by subcontractors

1 "Local" means that a supplier is located in the same region (according to BASF's definition) as the procuring company.

of BASF contractors in the fields. Immediately after becoming aware of this, we approached the relevant authorities proactively and without delay and evaluated the processes on-site. The work was stopped immediately and the contract with one of the farms was terminated as it was not possible to work constructively on the incidents with this partner. We have also strengthened our regulations and started to introduce additional preventive measures. In particular, we have reaffirmed to our seed multipliers their obligations under applicable labor laws and compliance with human rights requirements in writing, including with regard to potential subcontractors. We have strengthened our training with a focus on respect for human rights. In addition, we plan to carry out more risk-based controls of our contractors and their subcontractors, as well as training sessions.

At the beginning of 2023, an internal audit of our joint venture operations in **Korla, China,** was carried out. This investigation, as well as past audits, did not reveal any evidence of human rights violations in the two joint ventures. We have obtained written confirmation from key suppliers, including our joint venture partners, that they accept our Supplier Code of Conduct. Nevertheless, reports from spring 2024 on the joint venture partner in Korla contain serious allegations that indicate activities that are not compatible with BASF's values. Consequently, we will accelerate the process already started at the end of 2023 to divest our shares in the two joint ventures in Korla for strategic reasons, subject to negotiations and the required approvals from the relevant authorities.

As part of our due diligence, we are in regular contact with our South African platinum suppliers, including **Sibanye-Stillwater.**[1] In addition, we are in regular dialog with relevant stakeholders in order to gain a comprehensive picture of the situation at a local level and address relevant issues. Sibanye-Stillwater and the other South African platinum suppliers have agreed to conduct future audits in accordance with the Initiative for Responsible Mining Assurance (IRMA) mining standard and are in the process of conducting an IRMA self-assessment. We discuss the status and results in our regular exchanges.

We maintain dialog and a regular exchange with **Nornickel** to continuously monitor the situation and audit results, and we are in contact with civil society groups. Nornickel continues to work on implementing management systems according to internationally recognized industry standards that allow for third-party verification of mining and responsible sourcing, such as IRMA. The current conditions continue to impact our business relationship, while auditing according to the aforementioned standards is currently not possible.

Supplier development

If supplier assessments identify deviations from standards, we require suppliers to develop and implement corrective measures within a reasonable time frame in a clearly defined follow-up process. We support them in their efforts. For example, we trained 102 employees from 88 Chinese suppliers in 2023 as part of a partnership with the East China University of Science and Technology in Shanghai, China. An important part of supplier development were also the webinars on the topic of sustainability and the implementation of corrective measures held by TfS in various languages, with a total of over 2,100 participants. In addition, the new TfS Academy online learning platform is aimed at buyers and suppliers. It covers the entire spectrum of ESG topics. There are currently over 390 courses available in 11 different languages. We review our suppliers' progress according to a defined time frame based on the sustainability risk identified, or after five years at the latest. In the case of serious violations of the standards defined in our Supplier Code of Conduct or international principles, we reserve the right to impose commercial sanctions. These can go as far as the termination of the business relationship. In 2023, this happened in three cases.

Good to know

Together for Sustainability (TfS)

BASF is a founding member of Together for Sustainability. The initiative was established in 2011 to improve sustainability in the supply chain. The focus is on the standardization, simplification and mutual recognition of supplier audits and assessments. Suppliers are evaluated by independent experts in on-site audits or online assessments. The latter are conducted by EcoVadis, a ratings agency specialized in sustainability evaluations. At the end of 2023, TfS had 50 members with a combined procurement spend of around €500 billion. A total of 492 audits and 11,421 online assessments were performed in 2023. As a TfS member, BASF itself is assessed and was ranked among the top 1% companies worldwide in the sustainable procurement category.[2] As part of TfS, we are actively working on standardizing the calculation methods of Scope 3 greenhouse gas emissions in the supply chain and on a digital exchange platform for Product Carbon Footprint data (see page 109).

1 In 2012, an extended strike at a platinum mine in Marikana, South Africa, culminated in a violent confrontation between mine workers and armed South African police. Employees of the former mine operator, Lonmin, were among the fatalities. Ownership of the Marikana mine was transferred to Sibanye-Stillwater in 2019. For more information on the supplier relationship with the Sibanye-Stillwater mine, see basf.com/en/marikana
2 Based on the last evaluation (effective until October 2023)

E.U. Taxonomy

In accordance with the E.U. Taxonomy Regulation and the supplementary delegated acts, the Nonfinancial Statement includes the share of the Group's taxonomy-eligible and taxonomy-aligned sales, investments and operating expenses for 2023 relating to the environmental objectives of climate change mitigation and adaptation to climate change. In addition, in accordance with the second legal act adopted in the reporting year, we are reporting for the first time on the taxonomy-eligible economic activities for the environmental objectives of sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control and protection and restoration of biodiversity and ecosystems.

BASF activities that are not yet covered by the E.U. taxonomy, and as such, are not relevant under the taxonomy, are reported as taxonomy-non-eligible in accordance with the delegated acts. These include large parts of BASF's activities that may nevertheless be in line with the E.U.'s environmental objectives and make a considerable contribution to avoiding CO_2 emissions. We systematically analyze the sustainability performance of all BASF products using our TripleS method (see page 48).

In order to derive the financial indicators, an analysis of our product portfolio identified the following economic activities within the meaning of the E.U. taxonomy under the environmental objective of **climate change mitigation** as relevant for BASF:
– Manufacture of batteries[1]
– Manufacture of energy efficiency equipment for buildings[1]
– Manufacture of hydrogen
– Manufacture of soda ash
– Manufacture of chlorine
– Manufacture of organic basic chemicals
– Manufacture of anhydrous ammonia
– Manufacture of nitric acid
– Manufacture of plastics in primary form

The description of the economic activities by the E.U. Commission for the **four other environmental objectives not related to the climate** was published in November 2023. According to these requirements, the following economic activity under the environmental objective of pollution prevention and control will be additionally relevant for BASF for the first time from 2023 within the meaning of the E.U. Taxonomy Regulation:
– Manufacture of active pharmaceutical ingredients (API) or active substances

As the relevant activities only contribute to one environmental objective in each case, the tables supplementing the templates via footnotes in accordance with Annex II of Delegated Regulation (E.U.) 2023/2486 have been omitted.

To avoid double counting, assignment to an enabling activity is only made if a taxonomy-eligible product or project had not already been included under another activity. BASF products also enable the production of technologies for renewable energy or low-emission mobility. However, since the E.U. taxonomy focuses on the manufacture of technologies and thus excludes precursors, we have classified these activities as taxonomy-non-eligible under the E.U. taxonomy.

In addition to our core business, the production of chemical products, we have identified further activities that we have analyzed for their materiality in terms of their share of sales, investments or operating expenditures. In determining the materiality, we were guided by the materiality concept established in financial reporting and also assessed the economic activity "acquisition and ownership of buildings" as relevant in the environmental objective of climate change mitigation for the 2023 reporting year. The remaining immaterial activities neither exceed the value limit we have set for each economic activity, nor do the immaterial activities in total exceed the defined value limit for each reportable indicator (KPI). Immaterial activities include activities in the sectors forestry; water supply, sewerage, waste management and remediation; transport; information and communication; professional, scientific and technical activities; and accommodation activities. In addition, we have identified the following immaterial activities in the energy sector: Electricity generation using solar photovoltaic technology; production of heat/cool from bioenergy; production of heat/cool using waste heat; electricity generation from fossil gaseous fuels; high-efficiency cogeneration of heat/cool and power from fossil gaseous fuels; production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system. For the purposes of the templates set out in Annex XII to the Delegated Regulation 2021/2178, we would like to point out that we conduct activities in the areas of electricity generation, cogeneration of power and heat/cool, and production of heat/cool from fossil gas. As shown, these are not material in terms of sales, investments and operating expenditures. BASF does not conduct any nuclear energy activities.

Furthermore, BASF does not report any taxonomy-eligible activities under the environmental objective of **climate change adaptation**. This is firstly to avoid double counting with economic activities already recorded under the climate change mitigation objective. Secondly, in accordance with the notice issued by the E.U. Commission, a prerequisite for taxonomy eligibility under the adaptation objective is the submission of an investment plan for implementing adaptation solutions, which is not present on the part of BASF within the meaning of the E.U. Taxonomy Regulation.

1 Enabling activities within the meaning of the E.U. taxonomy

Taxonomy-eligible sales revenue, capital expenditures and operating expenditures for all six environmental objectives

We assessed the taxonomy eligibility of our sales revenue based on sales as defined and reported in the Consolidated Financial Statements of the BASF Group (see page 219). Taking into account all six environmental objectives, taxonomy-eligible sales revenue accounted for 12.2% of total sales in 2023. The largest contributions were from the activities "manufacture of plastics in primary form" and "manufacture of organic basic chemicals." Both activities are assigned to the environmental objective of climate change mitigation. Taxonomy-eligible capital expenditures (including acquisitions and excluding goodwill in accordance with the E.U. taxonomy) accounted for 23.1% of the total investments reported in the Consolidated Financial Statements. Capital expenditures on the "manufacture of organic basic chemicals" and in the "manufacture of batteries" contributed significantly here. These activities also contribute to the environmental objective of climate change mitigation. Operating expenditures include uncapitalized costs that relate to research and development,[1] maintenance and repair, and short-term lease expenses. The definition of operating expenditures follows the E.U. Taxonomy Regulation and they are not reported in the Consolidated Financial Statements in this form. All of the capital expenditures and operating expenditures of a production facility with taxonomy-eligible activity are counted as taxonomy-eligible. Taxonomy-eligible operating expenditures accounted for 12.4% of total operating expenditures. The largest contributions under the objective of climate change mitigation were from the activities "manufacture of organic basic chemicals" and "manufacture of plastics in primary form."

Taxonomy-aligned sales revenue, capital expenditures and operating expenditures with a substantial contribution to climate change mitigation

The taxonomy-eligible activities under the environmental objective of climate change mitigation identified by BASF can be classified as taxonomy-aligned if they make a substantial contribution to climate change mitigation and do no significant harm to other environmental objectives and, at the same time, ensure minimum social safeguards. As in the previous year, the contribution to climate change mitigation and harm to other environmental objectives were reviewed in a three-step process. The **first step** involved a two-part analysis based on BASF's internal product databases:

Taxonomy-eligible sales revenue, capital expenditures and operating expenditures in 2023

Million €

	Total	Taxonomy-eligible	%	Taxonomy-non-eligible	%
Sales	**68,902**	**8,421**	**12.2**	**60,481**	**87.8**
Of which climate change mitigation environmental objective		8,207	11.9		
Of which pollution prevention and control environmental objective		215	0.3		
Investments (capex)	**6,006**	**1,385**	**23.1**	**4,621**	**76.9**
Of which climate change mitigation environmental objective		1,366	22.7		
Of which pollution prevention and control environmental objective		19	0.3		
Operating expenditures (opex)	**4,645**	**577**	**12.4**	**4,068**	**87.6**
Of which climate change mitigation environmental objective		536	11.5		
Of which pollution prevention and control environmental objective		42	0.9		

- The manufacture of products was analyzed with respect to the use of critical substances in accordance with Appendix C[2] of the E.U. Commission's Delegated Regulation 2021/2139 to avoid significant harm to the environmental objective of pollution prevention or control according to the E.U. taxonomy. This also included use in the production process. The amendment to the Delegated Regulation (E.U.) 2023/2485 published by the E.U. Commission in November 2023 was also taken into account. BASF voluntarily applied the full supplement, including Annex 1, point 28, for the 2023 financial year in order to ensure a continuous conformity assessment with regard to Appendix C for years subsequent to 2024. Experts assessed and documented in each case that no other suitable alternative substances or technologies are available on the market.
- Plastics in primary form were analyzed with respect to the share of renewable raw materials in the product. They were only considered further if this share was at least 5% and thus potentially made a substantial contribution to climate change mitigation through partial or complete production from renewable raw materials. Shares allocated using mass balance approaches (see page 124) were not taken into account here because their acceptance under the E.U. taxonomy has not yet been definitively clarified. For this reason, BASF products based on chemically recycled raw materials were not considered further in the assessment either. Mechanical recycling did not play any role for BASF here.

In the **second step**, it was assessed whether the potentially taxonomy-aligned products make a substantial contribution to climate change mitigation in accordance with the activity-specific criteria. Among other things, the greenhouse gas emissions of European and non-European plants to produce soda ash, chemicals and nitric acid were compared with the average values of the most efficient plants under the E.U. emissions trading system. For the production of hydrogen, chlorine, ammonia and plastics in primary form, the comparison was against activity-specific quantitative criteria, such as the energy or emission intensity of a product. This

1 The criteria for the activity "close to market research, development and innovation" (for example, a technology readiness level of at least six) were used to determine taxonomy-eligible research and development costs.
2 Generic criteria for DNSH to pollution prevention and control regarding use and presence of chemicals

was based on a digital solution developed by BASF to determine product-specific CO_2 emissions (see page 109). For the assessment of the investment in CO_2-free hydrogen production at the Ludwigshafen, Germany, site (construction of a proton exchange membrane electrolyzer), a funding approval by the German Federal Ministry for Economic Affairs and Climate Action and a study by the German Environment Agency on greenhouse gas emissions in hydrogen production were also taken into account.

Finally, in the **third step** of the process, it was assessed whether the products identified cause significant harm to the other environmental objectives. This included an analysis of risks arising from climate change using climate risk and vulnerability assessments. At sites with material climate risk, the existence of adaptation solutions was additionally analyzed and evaluated. The avoidance of significant harm to water and marine resources[1], biodiversity and ecosystems[2], and pollution prevention and control were taken as given for production plants in Europe based on comprehensive and uniform regulatory requirements and additionally ensured through data queries. The conformity of non-European plants was assessed on a case-by-case basis. This was based on joint assessments by local and central experts using the evidence of local production requirements submitted.

The criteria for the **minimum social safeguards** as a further pillar of taxonomy alignment in accordance with Article 18 of the E.U. Taxonomy Regulation were reviewed for all activities across the BASF Group on the four core topics of human rights (including labor rights), corruption/bribery, taxation and fair competition, independent of the step-by-step process for the "contribution to climate change mitigation" and "harm to other environmental objectives" criteria. Minimum social safeguards were ensured by a systematic, integrated and risk-based approach to safeguarding our human rights due diligence obligations (see page 154), by global labor and social standards (see page 155), and by the Supplier Code of Conduct (see page 159), among other things.

Taxonomy-aligned **sales revenue** accounted for 1.6% of the total sales revenue defined and reported in the BASF Group's Consolidated Financial Statements in 2023 (see page 227). The "manufacture of batteries" made the largest contribution (1.2%). Taxonomy-aligned **capital expenditures** (including acquisitions and excluding goodwill in accordance with the E.U. taxonomy) accounted for 5.2% of the total investments reported in the Consolidated Financial Statements. At 4.1%, capital expenditures (additions to property, plant and equipment) on the "manufacture of batteries" contributed significantly here (additions to property, plant and equipment). We are also investing in a plant for the production of CO_2-free hydrogen, which will be commissioned in the coming years. This already meets the criteria for taxonomy alignment in 2023 and is accordingly recognized as an investment in accordance with Annex I, section 1.1.2.2. a) of the Delegated Regulation 2021/2178. Taxonomy-aligned **operating expenditures** accounted for 1.8% of total operating expenditures, with the largest contribution from the economic activity "manufacture of organic basic chemicals" (0.9%).

The increase in taxonomy-aligned sales revenue, capital expenditures and operating expenditures compared to the previous year was mainly due to the statutory adjustments to Appendix C of the Delegated Regulation 2021/2139, which BASF already applied in 2023 and which resulted in a taxonomy-aligned assessment of BASF's battery manufacturing activities. Due to the legal amendments to Appendix C, BASF is able to report the sustainable contribution for products in complex value chains in accordance with the E.U. taxonomy for the first time in 2023.

The taxonomy-aligned figure is, as before, significantly lower than the taxonomy-eligible figure due to various factors. Only a small proportion of plastics in primary form contain a share of renewable raw materials above the threshold value. Additionally, the proportion of taxonomy-aligned activities is reduced by the fact that many plants exceed the benchmarks used by the E.U. taxonomy. For example, the strict requirement to calculate emissions in accordance with European emissions trading means that the benefits of renewable energies were not taken into account, which is why the investment in the steam crackers at the site in Zhanjiang, China, and the investment in a demonstration plant for electrified steam cracker furnaces at the Ludwigshafen site in Germany (see page 107) had to be classified as not taxonomy-aligned despite avoiding a considerable amount of CO_2 emissions. In addition, plants that are not subject to emissions trading and thus cannot be assessed using the specified criteria were generally classified as not taxonomy-aligned.

For more information on sales revenue, see Note 7 to the Consolidated Financial Statements from page 249 onward

For more information on investments, see Note 14 to the Consolidated Financial Statements from page 264 onward

1 Protection of water and marine resources is taken as given at sites that do not use or treat water.
2 A radius of 3 km around production sites was defined for the analysis of biodiversity-sensitive areas.

E.U. taxonomy indicators: 2023 sales revenue

		2023		Substantial contribution criteria						DNSH criteria ("do no significant harm")									
Economic activities	**Code**	**Sales revenue**	**Proportion of sales revenue**	**Climate change mitigation**	**Climate change adaptation**	**Water**	**Circular economy**	**Pollution**	**Biodiversity**	**Climate change mitigation**	**Climate change adaptation**	**Water**	**Circular economy**	**Pollution**	**Biodiversity**	**Minimum safeguards**	**Proportion of taxonomy-aligned (A.1.) or taxonomy-eligible (A.2.) sales revenue 2022**	**Category: enabling activity**	**Category: transitional activity**
		Million €	In %	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	In %	E	T
A. Taxonomy-eligible activities																			
A.1. Environmentally sustainable activities (taxonomy-aligned)																			
Manufacture of batteries	CCM 3.4	847	1.2	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	-	E	-
Manufacture of energy efficiency equipment for buildings	CCM 3.5	32	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	0.1	E	-
Manufacture of soda ash	CCM 3.12	7	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.0	-	T
Manufacture of organic basic chemicals	CCM 3.14	200	0.3	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.3	-	T
Manufacture of plastics in primary form	CCM 3.17	10	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.0	-	T
Sales revenue for environmentally sustainable activities (taxonomy-aligned)		**1,095**	**1.6**	1.6%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	**0.4**		
Of which enabling activity (E)		879	1.3	1.3%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	0.1	E	
Of which transitional activity (T)		217	0.3	0.3%	-	-	-	-	-	-	Y	Y	-	Y	Y	Y	0.3		T
A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)																			
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL										
Manufacture of batteries	CCM 3.4	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL								1.6		
Manufacture of hydrogen	CCM 3.10	12	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0		
Manufacture of soda ash	CCM 3.12	6	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0		
Manufacture of chlorine	CCM 3.13	3	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0		
Manufacture of organic basic chemicals	CCM 3.14	2,157	3.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL								3.4		
Manufacture of anhydrous ammonia	CCM 3.15	162	0.2	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.3		
Manufacture of nitric acid	CCM 3.16	139	0.2	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.2		
Manufacture of plastics in primary form	CCM 3.17	4,632	6.7	EL	N/EL	N/EL	N/EL	N/EL	N/EL								7.3		
Acquisition and ownership of buildings	CCM 7.7	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL								-		
Manufacture of active pharmaceutical ingredients (API) or active substances[1]	PPC 1.1	215	0.3	N/EL	N/EL	N/EL	N/EL	EL	N/EL								-		
Sales revenue for taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)		**7,326**	**10.6**	10.3%	-	-	-	0.3%	-								**12.9**		
Total A.1. + A.2.		**8,421**	**12.2**	11.9%	-	-	-	0.3%	-								**13.3**		
B. Taxonomy-non-eligible activities																			
Sales revenue for taxonomy-non-eligible activities		**60,481**	**87.8**																
Total		**68,902**	**100.0**																

Y: Yes, taxonomy-eligible activity that is taxonomy-aligned with the relevant environmental objective
N: No, taxonomy-eligible activity that is not taxonomy-aligned with the relevant environmental objective
EL: Eligible, taxonomy-eligible activity for the respective objective
N/EL: Not eligible, taxonomy-non-eligible activity for the respective environmental objective

1 This economic activity is reported as taxonomy-eligible but not environmentally sustainable, as an assessment for taxonomy alignment will be carried out for the first time for the 2024 financial year.

E.U. taxonomy indicators: 2023 capital expenditures (capex)

		2023		Substantial contribution criteria						DNSH criteria ("do no significant harm")									
Economic activities	**Code**	**Investments (capex)**	**Proportion of capex**	**Climate change mitigation**	**Climate change adaptation**	**Water**	**Circular economy**	**Pollution**	**Biodiversity**	**Climate change mitigation**	**Climate change adaptation**	**Water**	**Circular economy**	**Pollution**	**Biodiversity**	**Minimum safeguards**	**Proportion of taxonomy-aligned (A.1.) or taxonomy-eligible (A.2.) capex 2022**	**Category: enabling activity**	**Category: transitional activity**
		Million €	In %	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	In %	E	T
A. Taxonomy-eligible activities																			
A.1. Environmentally sustainable activities (taxonomy-aligned)																			
Manufacture of batteries	CCM 3.4	244	4.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	-	E	-
Manufacture of energy efficiency equipment for buildings	CCM 3.5	1	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	0.0	E	-
Manufacture of hydrogen	CCM 3.10	39	0.7	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	-	-	-
Manufacture of soda ash	CCM 3.12	15	0.3	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.3	-	T
Manufacture of organic basic chemicals	CCM 3.14	13	0.2	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.1	-	T
Manufacture of plastics in primary form	CCM 3.17	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.1	-	T
Capex for environmentally sustainable activities (taxonomy-aligned)		**314**	**5.2**	5.2%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	**0.5**		
Of which enabling activity (E)		245	4.1	4.1%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	0.0	E	
Of which transitional activity (T)		29	0.5	0.5%	-	-	-	-	-	-	Y	Y	-	Y	Y	Y	0.5		T
A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)																			
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL										
Manufacture of batteries	CCM 3.4	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL								6.2		
Manufacture of hydrogen	CCM 3.10	17	0.3	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.6		
Manufacture of soda ash	CCM 3.12	0	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								**0.1**		
Manufacture of chlorine	CCM 3.13	52	0.9	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0		
Manufacture of organic basic chemicals	CCM 3.14	618	10.3	EL	N/EL	N/EL	N/EL	N/EL	N/EL								7.6		
Manufacture of anhydrous ammonia	CCM 3.15	28	0.5	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.1		
Manufacture of nitric acid	CCM 3.16	2	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.1		
Manufacture of plastics in primary form	CCM 3.17	188	3.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL								3.3		
Acquisition and ownership of buildings	CCM 7.7	146	2.4	EL	N/EL	N/EL	N/EL	N/EL	N/EL								-		
Manufacture of active pharmaceutical ingredients (API) or active substances[1]	PPC 1.1	19	0.3	N/EL	N/EL	N/EL	N/EL	EL	N/EL								-		
Capex for taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)		**1,071**	**17.8**	17.5%	-	-	-	0.3%	-								**18.0**		
Total A.1. + A.2.		**1,385**	**23.1**	22.7%	-	-	-	0.3%	-								**18.6**		
B. Taxonomy-non-eligible activities																			
Capex for taxonomy-non-eligible activities		**4,621**	**76.9**																
Total		**6,006**	**100.0**																

Y: Yes, taxonomy-eligible activity that is taxonomy-aligned with the relevant environmental objective
N: No, taxonomy-eligible activity that is not taxonomy-aligned with the relevant environmental objective
EL: Eligible, taxonomy-eligible activity for the respective objective
N/EL: Not eligible, taxonomy-non-eligible activity for the respective environmental objective

1 This economic activity is reported as taxonomy-eligible but not environmentally sustainable, as an assessment for taxonomy alignment will be carried out for the first time for the 2024 financial year.

E.U. taxonomy indicators: 2023 operating expenditures (opex)

		2023		Substantial contribution criteria						DNSH criteria ("do no significant harm")									
Economic activities	Code	Operating expenditures (opex)	Proportion of opex	Climate change mitigation	Climate change adaptation	Water	Circular economy	Pollution	Biodiversity	Climate change mitigation	Climate change adaptation	Water	Circular economy	Pollution	Biodiversity	Minimum safeguards	Proportion of taxonomy-aligned (A.1.) or taxonomy-eligible (A.2.) opex 2022	Category: enabling activity	Category: transitional activity
		Million €	In %	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	In %	E	T
A. Taxonomy-eligible activities																			
A.1. Environmentally sustainable activities (taxonomy-aligned)																			
Manufacture of batteries	CCM 3.4	27	0.6	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	-	E	-
Manufacture of energy efficiency equipment for buildings	CCM 3.5	3	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	0.1	E	-
Manufacture of soda ash	CCM 3.12	4	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.1	-	T
Manufacture of organic basic chemicals	CCM 3.14	41	0.9	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.3	-	T
Manufacture of plastics in primary form	CCM 3.17	7	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.5	-	T
Opex for environmentally sustainable activities (taxonomy-aligned)		**82**	**1.8**	1.8%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	**0.9**		
Of which enabling activity (E)		30	0.7	0.7%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	0.1	E	
Of which transitional activity (T)		52	1.1	1.1%	-	-	-	-	-	-	Y	Y	-	Y	Y	Y	0.9		T
A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)																			
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL										
Manufacture of batteries	CCM 3.4	0	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.3		
Manufacture of hydrogen	CCM 3.10	35	0.8	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.8		
Manufacture of soda ash	CCM 3.12	4	0.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.1		
Manufacture of chlorine	CCM 3.13	32	0.7	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.7		
Manufacture of organic basic chemicals	CCM 3.14	182	3.9	EL	N/EL	N/EL	N/EL	N/EL	N/EL								3.8		
Manufacture of anhydrous ammonia	CCM 3.15	21	0.4	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.4		
Manufacture of nitric acid	CCM 3.16	16	0.3	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.4		
Manufacture of plastics in primary form	CCM 3.17	164	3.5	EL	N/EL	N/EL	N/EL	N/EL	N/EL								2.9		
Manufacture of active pharmaceutical ingredients (API) or active substances[1]	PPC 1.1	42	0.9	N/EL	N/EL	N/EL	N/EL	EL	N/EL								-		
Opex for taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)		**495**	**10.7**	9.8%	-	-	-	0.9%	-								**9.4**		
Total A.1. + A.2.		**577**	**12.4**	11.5%	-	-	-	0.9%	-								**10.4**		
B. Taxonomy-non-eligible activities																			
Opex for taxonomy-non-eligible activities		**4,068**	**87.6**																
Total		**4,645**	**100.0**																

Y: Yes, taxonomy-eligible activity that is taxonomy-aligned with the relevant environmental objective
N: No, taxonomy-eligible activity that is not taxonomy-aligned with the relevant environmental objective
EL: Eligible, taxonomy-eligible activity for the respective objective
N/EL: Not eligible, taxonomy-non-eligible activity for the respective environmental objective

1 This economic activity is reported as taxonomy-eligible but not environmentally sustainable, as an assessment for taxonomy alignment will be carried out for the first time for the 2024 financial year.

Forecast

In this section:
Economic Environment in 2024
Outlook 2024
Opportunities and Risks

We expect the global economy to grow by 2.3% in 2024, slightly weaker than in 2023 (+2.6%). The sharp rise in interest rates over the course of 2023 is expected to dampen growth in the United States and Europe and the catch-up effects in services consumption are anticipated to weaken. We expect that the demand structure will gradually normalize and that the share of goods consumption in private consumption will rise again. We expect growth of 2.2% for global industrial production (2023: +1.4%). Following the sharp declines in many countries in the previous year, we expect slightly stronger growth of 2.7% for global chemical production (2023: +1.7%).

Economic Environment in 2024[1]

At a glance

- Continued weak growth in Europe
- Lower growth in North America and Asia
- Sideways movement in chemical production in Europe and the United States
- Further growth in chemical production in Asia

Economic momentum slowed at the end of 2023. We expect that this weak phase will continue in the first half of 2024 and that growth will only accelerate somewhat over the course of the year. Overall macroeconomic growth in the E.U. is expected to remain at a low level in the year's average. By contrast, we expect a slowdown on average over the year in North America and Asia.

Uncertainty about future developments remains high. The purchasing power of private households is on the rise due to wage increases in the previously resilient labor markets of Northwestern Europe and the United States. However, interest rates are likely to remain high despite decreasing inflation rates in the United States and Europe. This has a negative impact on growth in capital expenditures and construction investments and dampens the ability of private households to spend on interest-sensitive consumer goods. Recovery in China is extremely volatile, particularly with regard to the stability of the real estate sector and the development of the labor market. The geopolitical situation remains tense, especially in light of the wars in Ukraine and the Middle East. In our forecast, we assume that these conflicts will not escalate further in 2024, but we also do not anticipate a fundamentally positive turnaround.

Trends in the global economy in 2024

We expect GDP growth to remain largely unchanged in the **European Union (E.U.)** (2024: +0.8%, 2023: +0.5%). As catch-up effects in tourism are weakening and demand for goods is expected to stabilize, we forecast growth rates to converge more strongly in Western Europe. While Germany is expected to grow by 0.3% again in 2024 following the slight decline in GDP (2023: -0.1%), we anticipate growth in France (+0.8%) and Italy (+0.5%) to remain largely unchanged. In Spain, however, the economy is likely to cool (2024: +1.4%, 2023: +2.5%). GDP growth in the Eastern E.U. countries is expected to accelerate somewhat as the high inflation rates and interest rates should decrease noticeably (2024: +2.1%, 2023: +0.5%).

In the **United Kingdom**, we expect growth to remain weak (2024: +0.4%, 2023: +0.5%), as the higher interest rate level is increasingly reflected in mortgage interest rates for private households. In view of the high home ownership rate and shorter fixed-interest periods, this effect is generally stronger in the United Kingdom than in other European countries.

Following strong growth in 2023 (+2.5%), we expect a slowdown in the **United States** (2024: +1.8%). Here too, the persistently high level of interest rates will slow down growth in private consumption as well as capital expenditures and construction investments. Furthermore, the depletion of savings built up during the coronavirus crisis is increasingly unable to support consumption. The forbearance of student loan repayments, which was introduced during the coronavirus pandemic, ended in fall 2023 and is now placing an additional burden on private household budgets.

1 Our assumptions account for current estimates by external institutions, including economic research institutes, banks, multinational organizations and consulting firms.

We expect economic recovery in **China** to continue. Due to the higher starting point, however, growth in 2024 will slow compared with the previous year (2024: +4.5%, 2023: +5.2%). The international economic environment remains weak and exports are therefore not expected to provide any strong growth stimulus overall. Domestic demand continues to be burdened by the crisis in the real estate sector and tight public budgets at provincial level. Private household consumption is expected to grow only moderately in this environment.

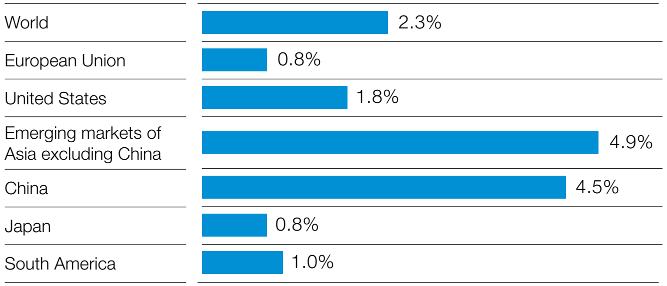
In the **other emerging markets of Asia**, we expect stable growth overall (2024: +4.9%, 2023: +4.7%) against the backdrop of largely constantly growing domestic demand and the gradual recovery in export demand from China. In India, growth momentum is expected to slow slightly, mainly due to a slowdown in investment growth in an environment of higher interest rates (2024: +6.2%, 2023: +6.5%).

We expect weaker growth in **Japan** (2024: +0.8%, 2023: +1.8%), as exports are growing more slowly now that the recovery effects in the automotive industry have come to an end and import prices for raw materials and precursors have risen due to the weaker yen. By contrast, the growth rate of private consumption should remain stable, as real incomes are rising moderately.

Growth in **South America** is expected to weaken in 2024 (2024: +1.0%, 2023: +1.4%). Growth in the region is being supported by declining inflation rates in most countries and falling interest rates in many countries. This is offset by narrower fiscal leeway. Particularly in Argentina, further consolidation measures are required to fight hyperinflation and stabilize the currency and to restructure public finances.

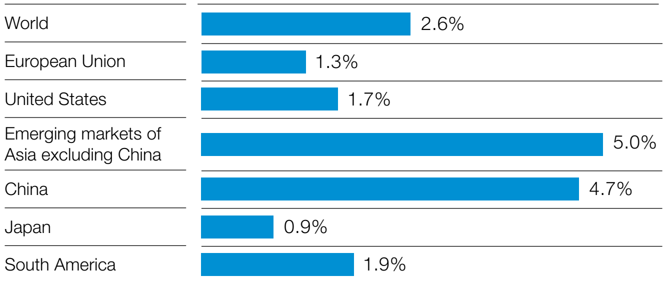
Outlook for gross domestic product 2024

Real change compared with previous year



Trends in gross domestic product 2024-2026

Average annual real change



Outlook for key customer industries

Overall, we anticipate growth of 2.2% (2023: +1.4%) in global industrial production. Industrial production is expected to grow again slightly in the advanced economies (2024: +0.4%, 2023: -0.4%). Growth in the emerging markets is expected to accelerate slightly (2024: +3.5%, 2023: +2.8%).

We are forecasting weak growth of only +1.1% for the entire **transportation industry**[1] (2023: +9.5%). We expect global production volumes of passenger cars and light commercial vehicles to only stagnate (-0.5%) after the strong growth of the previous year (+9.4%), which was impacted by catch-up effects. Global automotive production will therefore remain at a level of around 90 million vehicles. The share of battery electric vehicles (BEVs) in the total production volume is expected to increase further from around 12% in 2023 to 15% in 2024. Developments will differ from region to region: A slight overall decline is expected in Asia. While Chinese car production is expected to stagnate at a high level, declines are anticipated for Japan and South Korea. In contrast, we are forecasting further slight growth for North and South America. We expect production in the E.U. and the United Kingdom to decline. However, Western Europe also saw the strongest growth in the previous year.

The **energy and raw materials** sector is expected to grow slightly faster in 2024 than in 2023. The expected slightly higher industry growth and the associated increase in demand for energy and non-energy raw materials will contribute to this. In addition, a normalization of weather conditions after a warmer-than-average 2023 is expected to increase demand for oil and gas to heat buildings.

Growth in the **construction industry** is well below the long-term average due to high interest rates in Europe and the United States and the real estate crisis in China. While we expect a further decline in residential construction in 2024, particularly in Europe and the United States, nonresidential construction is likely to continue to grow. Investment in public and private infrastructure is likely to remain high, leading to continued dynamic growth in the infrastructure sector. Overall, we expect only slightly higher growth for the construction industry compared with the previous year.

Consumer goods production is expected to grow at around the same rate as global GDP. Wage and salary increases in Europe and the United States are leading to real income growth in many cases, which should support consumer demand, particularly in the areas of textiles and clothing, electrical household appliances and consumer

1 The transportation industry includes the production of motor vehicles, motor vehicle parts and the construction of other vehicles (especially ships and boats, trains, air and spacecraft, and two-wheelers).

goods (care products). Demand for furniture, on the other hand, is expected to stagnate. However, we do not expect the furniture industry to shrink any further after the sharp decline in 2023.

The **electronics industry** is expected to grow more strongly again in 2024 after stagnating in the previous year. While growth in traditional consumer electronics is likely to slow down, we again expect increases in computers and communication electronics due to the short product life cycles. Overall, however, the expected growth in 2024 remains below the average of previous years.

We anticipate a recovery in growth in the **health and nutrition** sector. After the decline in pharmaceutical production in Asia in 2022 and 2023, we expect a normalization in 2024. For the nutrition sector, we assume global growth in line with GDP growth. Due to the stronger growth in the pharmaceutical sector, we are forecasting slightly higher growth than GDP for the health and nutrition sector.

Production in **agriculture** will presumably grow more moderately in 2024. However, regional trends vary greatly. For Western Europe, moderate growth in agricultural production is expected again after the hot summer of 2023 if weather conditions normalize. Growth in Eastern Europe is expected to remain stable, provided that production in Ukraine can be maintained at the current level. In North America, growth is expected to increase slightly. By contrast, we expect agricultural production in South America to grow slightly slower overall. However, this varies widely by country: While growth in Brazil is expected to weaken after the strong previous year, we anticipate that it will pick up in the other countries in the region. For Asia, which accounts for 65% of global agricultural production, we are forecasting a slight slowdown in growth in the agricultural sector overall.

Outlook for the chemical industry

Global chemical production (excluding pharmaceuticals) is expected to grow by 2.7% in 2024, faster than in the previous year (2023: +1.7%). We anticipate weak growth in production in the advanced economies following the sharp decline in the previous year (2024: +0.8%, 2023: -4.9%). Growth in the emerging markets is expected to slow slightly (2024: +3.5%, 2023: +4.8%).

In **China**, the world's largest chemical market, we are forecasting lower but still high growth in chemical production of 4.0% following the strong growth in the previous year (2023: +7.5%). We expect growth stimulus to come primarily from the consumer goods and electronics industries. Following the considerable decline in chemical production in the other emerging markets of Asia, we expect a gradual recovery (2024: +3.0%, 2023: -2.4%). The main growth driver is India with expected growth of 4.5%.

We anticipate gradual stabilization in the **E.U.** Although the situation for the European chemical industry remains challenging in view of its high cost level by international standards and the weak global industrial economy, production is expected to stabilize at the current low level (2024: +0.8%) following the sharp declines of previous years (2023: -7.6%, 2022: -5.2%). This trend was already evident in the course of 2023. The considerable fall in gas prices and the slow recovery in demand for goods due to gains in purchasing power are expected to support demand for chemicals in Europe.

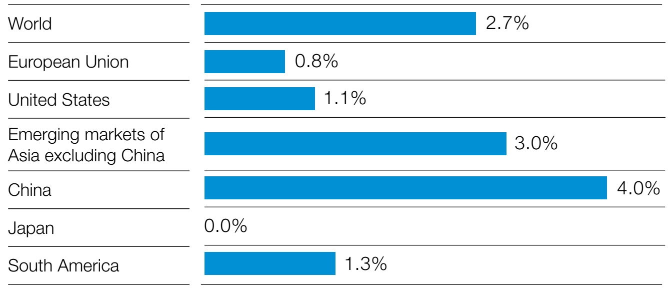
Demand for chemicals is also expected to recover slightly in the **United States** (2024: +1.1%, 2023: -1.0%) following the previous year, which was characterized by destocking and weak industrial growth. We anticipate slight growth for most customer industries in the manufacturing sector. Further growth is also expected for the automotive industry in North America. However, developments remain uncertain against the backdrop of high interest rates and the associated risk of recession, particularly with regard to the construction sector.

For **Japan**, we are forecasting stagnation in chemical production after the sharp decline in the previous year (2024: 0.0%, 2023: -6.6%). Following very strong growth in the previous year, automotive production is expected to fall. Although the other customer industries are compensating for this decline overall, they are unlikely to provide any additional growth stimulus.

In **South America**, chemical production will presumably grow slightly (2024: +1.3%; 2023: -4.7%). We expect to see slowly increasing demand from the consumer goods industries and growing automotive production. Demand for chemical products from the agricultural sector is also expected to continue to grow.

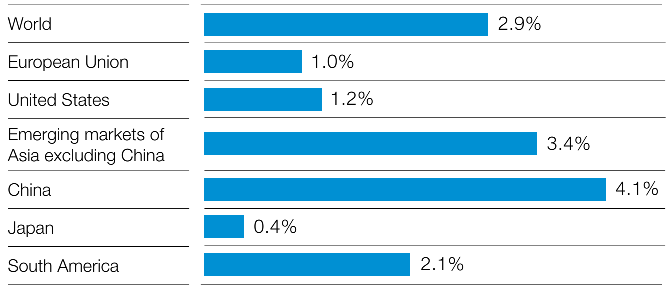
Outlook for chemical production 2024 (excluding pharmaceuticals)

Real change compared with previous year



Trends in chemical production 2024–2026 (excluding pharmaceuticals)

Average annual real change



Outlook 2024

In line with the Differentiated Steering approach that we introduced at the beginning of the year, we are reporting two new most important key performance indicators for the BASF Group at financial level, which are forecast below at Group and segment level: income from operations before depreciation and amortization and special items (EBITDA before special items) and free cash flow or the corresponding segment cash flow. In addition, we will continue to forecast Scope 1 and Scope 2 CO_2 emissions for the BASF Group.

Outlook for 2024 at a glance

- EBITDA before special items of between €8.0 billion and €8.6 billion
- Free cash flow of between €0.1 billion and €0.6 billion
- CO_2 emissions of between 16.7 million metric tons and 17.7 million metric tons
- Capital expenditures of around €6.2 billion

We expect the weakness in global economic momentum from 2023 to continue in the first half of 2024. The main reason for this will be the expected persistently high interest rates, which will continue to dampen growth in the United States and Europe. The positive trend in service consumption will no longer be a significant factor. Global economic growth is only expected to accelerate somewhat later in the year, meaning that we expect the global economy to grow by 2.3% overall in 2024 (2023: +2.6%). In Europe, the comparatively very high energy prices and unfavorable framework conditions for industrial value creation continue to slow down economic development.

We expect that demand for industrial goods will normalize only gradually and that the share of goods in private consumption will rise again only slowly. For this reason, we only expect very moderate growth in most of our customer industries. Conversely, we expect weak growth overall in the automotive industry following strong growth in 2023, which was characterized by catch-up effects. Recovery in China remains extremely uncertain, particularly with regard to the real estate sector and the development of the labor market. We do not expect any significant growth stimulus in the E.U. We are forecasting a gradual slowdown in the United States as a result of high interest rates. The geopolitical situation remains critical against the backdrop of the wars in Ukraine and the Middle East and other geopolitical tensions, particularly between the United States and China. In our forecast, we assume that these conflicts will not escalate even further in 2024, but we also do not anticipate a fundamentally positive turnaround. All in all, global industrial production will likely expand by 2.2% overall (2023: +1.4%). Global chemical production is expected to grow faster in 2024, by 2.7% (2023: +1.7%). This will be driven primarily by the expected growth in the Chinese chemical industry. Our planning assumes an average oil price of $80 for a barrel of Brent crude and an exchange rate of $1.10 per euro.

For more information on our expectations for the economic environment in 2024, see page 167 onward

For more information on the material opportunities and risks that could affect our forecast, see page 173 onward

Earnings and free cash flow forecast for the BASF Group[1]

The BASF Group's **EBITDA before special items** is expected to rise to between €8.0 billion and €8.6 billion in 2024 (2023: €7.7 billion). Volume and margin growth in all segments will contribute here. Rising fixed costs due to inflation but also in connection with the construction of our new Verbund site in China will weigh down earnings in some segments. The Nutrition & Care, Industrial Solutions and Chemicals segments are expected to considerably increase EBITDA before special items. We anticipate slight earnings growth in the Materials segment. In the Surface Technologies segment, we are forecasting earnings at the prior-year level. EBITDA before special items in the Agricultural Solutions segment will likely decrease slightly.

We forecast the BASF Group's **free cash flow** to be between €0.1 billion and €0.6 billion (2023: €2.7 billion). This is based on expected cash flows from operating activities from €6.6 billion to €7.1 billion, minus expected payments made for property, plant and equipment and intangible assets[2] in the amount of €6.5 billion. The high investment-related cash outflow is mainly due to investments in the new Verbund site in China, which will reach their absolute peak in 2024.

The BASF Group's free cash flow comprises the cash flows of the segments and additionally includes transactions that are not allocated operationally as well as adjustments of other noncash effects. For 2024, we expect a considerable decline in cash flows in all segments compared with 2023. The investment-related cash outflow for the construction of the new Verbund site in China will primarily affect the Chemicals segment. In the other segments, the expected decline in cash flows is likely to result primarily from a lower cash inflow from the reduction in working capital compared with the strong previous year.

For more information on the calculation of free cash flow and segment cash flow, see page 37

1 For EBITDA before special items and free cash flow, "slight" represents a change of 0.1%–10.0%, while "considerable" applies to changes of 10.1% and higher. "At prior-year level" indicates no change (+/-0.0%).
2 Capex plus investments in intangible assets and IT

Forecast at Group level

Million €

	2023	2024 forecast
EBITDA before special items	7,671	**€8.0 billion–€8.6 billion**

	2023	2024 forecast
Cash flows from operating activities	8,111	**€6.6 billion–€7.1 billion**
– Payments made for property, plant and equipment and intangible assets	5,395	**€6.5 billion**
Free cash flow	2,715	**€0.1 billion–€0.6 billion**

Forecast by segment

Million €

	EBITDA before special items[a]		Segment cash flow[a]	
	2023	2024 forecast	2023	2024 forecast
Chemicals	1,167	Considerable increase	-936	Considerable decrease
Materials	1,650	Slight increase	1,369	Considerable decrease
Industrial Solutions	965	Considerable increase	1,292	Considerable decrease
Surface Technologies	1,520	At prior-year level	1,488	Considerable decrease
Nutrition & Care	565	Considerable increase	503	Considerable decrease
Agricultural Solutions	2,270	Slight decrease	1,746	Considerable decrease

a For EBITDA before special items and cash flow, "slight" represents a change of 0.1%–10.0%, while "considerable" applies to changes of 10.1% and higher. "At prior-year level" indicates no change (+/-0.0%).

CO_2 emissions forecast for the BASF Group

CO_2 emissions are expected to be between 16.7 million metric tons and 17.7 million metric tons in 2024. We anticipate additional emissions compared with the previous year from higher production volumes based on rising demand. We will counteract this increase with targeted measures to reduce emissions, such as increasing energy efficiency and optimizing processes as well as continuing the shift to electricity from renewable energies through the shareholding in the Hollandse Kust Zuid offshore wind farm, for example.

Forecast for the segments

In the **Chemicals** segment, we anticipate a considerable increase in income from operations before depreciation, amortization and special items (EBITDA before special items) in 2024 despite the continued difficult environment. Expected volume growth in both divisions will contribute to this. However, higher fixed costs, mainly in connection with the construction of the new Verbund site in Zhanjiang, China, and scheduled turnarounds, will have an offsetting effect. Compared with 2023, we expect a considerable decline in the segment cash flow: This will be caused by expected turnarounds as well as higher investment expenditure.

Compared with 2023, we anticipate a slight growth in EBITDA before special items for the **Materials** segment. This will be attributable to targeted volume and margin growth in both divisions. However, in the Monomers division, EBITDA before special items is expected to decrease slightly overall. The main reason for this will be considerably higher fixed costs, as positive one-time effects from the previous year will not occur. Compared with the prior-year figure, we expect a considerable decline in the segment cash flow, particularly as a result of a lower cash inflow from working capital.

The **Industrial Solutions** segment is expected to considerably increase EBITDA before special items compared with 2023. This will be driven by higher volumes and margins in both divisions, in particular as a result of the expected global economic recovery in the second half of 2024. However, margin growth for Dispersions & Resins will be dampened by increasingly competitive market conditions. Despite the increase in earnings, segment cash flow is anticipated to be considerably below the previous year, as planned growth will lead to more cash being tied up in receivables and inventories.

The **Surface Technologies** segment's EBITDA before special items in 2024 is expected to be at the prior-year level. A slight increase in earnings in the Catalysts division as a result of expected volume growth in the battery materials business should offset the expected slight decline in earnings in the Coatings division. Cash flow in both divisions is expected to decline considerably. In the Catalysts division, planned investments and a higher amount of cash tied up in working capital, especially in the battery materials business, is expected to lead to lower cash flow. Cash flow in the Coatings division will probably decline, mainly as a result of higher expenditure on efficiency measures.

In the **Nutrition & Care** segment, we expect a considerable increase in EBITDA before special items, in particular due to higher volumes and margins. Both divisions are aiming for volume growth above the market average. Higher fixed costs, mainly as a result of the construction of our new Verbund site in China, are likely to dampen earnings development. Cash flow in both divisions is expected to be considerably below the prior-year level. In the Care Chemicals division, this will be mainly attributable to a higher amount of cash tied up in working capital compared with 2023. Cash flow in the Nutrition & Health division will decline mainly as a result of increasing investment expenditures for aroma ingredients in Ludwigshafen, Germany, and in Zhanjiang, China.

In the **Agricultural Solutions** segment, we expect EBITDA before special items to decline slightly in 2024. This will be mainly driven by higher fixed costs due to inflation as well as negative currency effects, which can only be partially offset by higher sales volumes. In addition, the receipt of a one-time payment had a positive impact on earnings in 2023. Segment cash flow is expected to be considerably lower in 2024 compared with the prior-year figure, mainly due to a higher amount of cash tied up in working capital.

Capital expenditures (Capex)

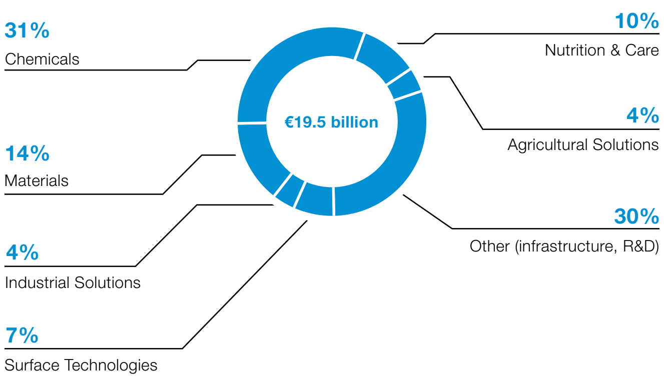
We are planning capital expenditures (additions to property, plant and equipment excluding acquisitions, IT investments, restoration obligations and right-of-use assets arising from leases) of around €6.2 billion for the BASF Group in 2024, including €3.3 billion for our growth projects, in particular the construction of the new Verbund site in China. For the period from 2024 to 2027, we are planning capital expenditures totaling €19.5 billion, including €6.8 billion for our growth projects – the new Verbund site in China, and the expansion of the battery materials business. The investment volume in the next four years will thus be considerably below that of the planning period 2023 to 2026 (€24.5 billion).

Projects currently being planned or underway include:

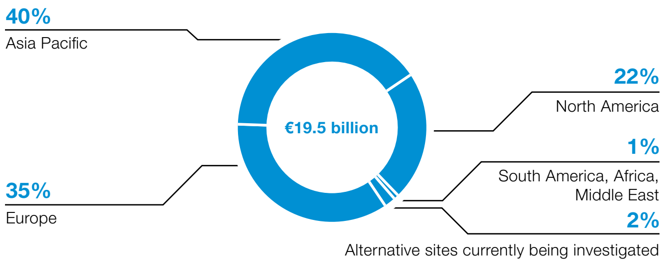
Capex: selected projects

Location	Project
Chalampé, France	Construction of a world-scale-production plant for hexamethylenediamine
Geismar, Louisiana	Capacity expansion at MDI plants
Ludwigshafen, Germany	Modernization of chloroformates and acid chlorides plant
Zhanjiang, China	Construction of an integrated Verbund site

Capex by segment 2024–2027



Capex by region 2024–2027



Dividend

We have an ambitious dividend policy and offer our shareholders an attractive dividend yield. We aim to increase our per-share dividend each year or maintain it at the prior-year level.

Information on the proposed dividend can be found on page 15

Financing

In 2024, we expect cash outflows in the equivalent amount of around €0.5 billion from the scheduled repayment of bonds. To refinance maturing bonds and to optimize our maturity profile, we continue to have medium to long-term corporate bonds and our global commercial paper program at our disposal.

Information on our financing policies can be found from page 69 onward

Events after the reporting period

There have been no significant changes in the company's situation or market environment since the beginning of the 2024 business year.

Opportunities and Risks

GRI 2, 201

The goal of BASF's risk management is to identify and evaluate opportunities and risks as early as possible and to take appropriate measures to seize opportunities and limit risks. The aim is to avoid risks that pose a threat to BASF's continued existence and to make improved managerial decisions to create value. We define opportunities as potential successes that exceed our defined goals. We understand risk to be any event that can negatively impact the achievement of our short-term operational or medium-term strategic goals.

At a glance

- Integrated process for opportunity and risk identification, assessment and reporting
- Decentralized management of specific opportunities and risks: aggregate reporting at Group level
- Material opportunities and risks for 2024 arise from overall economic developments and margin volatility

Where appropriate, we measure and manage opportunities and risks in terms of probability and economic impact in the event they occur. Where possible, we use statistical methods to aggregate opportunities and risks into risk categories. In addition, we use a qualitative evaluation scale for opportunities and risks to assess both business and sustainability aspects that cannot be quantified. In this way, we achieve an overall view of opportunities and risks, allowing us to prioritize risks at Group level and take effective risk management measures.

Overall assessment

For 2024, we anticipate that global economic growth will slow slightly as a result of higher inflation – albeit lower compared with 2023 – and persistently high interest rates. General macroeconomic uncertainty will remain exceptionally high.

A further escalation of current geopolitical conflicts could lead to disruptions in global supply chains and greater restrictions on the supply of energy, industrial raw materials and intermediates. The wars in Ukraine and the Middle East pose significant risks for market development and the supply of raw materials in Europe.

Furthermore, there are risks to demand due to high interest rates and consumers' reduced purchasing power. Opportunities will arise in particular from stronger growth in demand resulting from better macroeconomic development than assumed.

In addition to the uncertainties surrounding market growth, material opportunities and risks for our earnings arise from margin volatility. To assess the opportunities and risks arising from the volatility of market growth, margins and currencies, we switched to forward-looking market-related assumptions in 2023 in order to reflect the specific expectations of the market. In previous years, this was based on historical volatilities with a greater fluctuation range.

According to our assessment, there continue to be no significant individual risks that pose a threat to the continued existence of the BASF SE or the BASF Group. The same applies to the sum of individual risks, even in the case of a global economic crisis.

Ultimately, however, residual risks (net risks) remain in all entrepreneurial activities that cannot be ruled out, even by comprehensive risk management.

As a non-integral shareholding, income from Wintershall Dea AG, Kassel/Hamburg, Germany, is reported in net income from shareholdings. The opportunities and risks resulting from the shareholding in Wintershall Dea are therefore not included in the outlook for the EBITDA of the BASF Group. Opportunities and risks that have an impact on net income from shareholdings and cash flow from the shares in Wintershall Dea are monitored and tracked through BASF's involvement in the relevant governing bodies as a shareholder.

For more information on the nonintegral, equity-accounted shareholding in Wintershall Dea, see Note 10 to the Consolidated Financial Statements from page 253 onward

Potential short-term effects on EBITDA of key opportunity and risk factors subsequent to measures taken[a]

Possible variations related to:	Outlook - 2024	Outlook 2024 +
Business environment and sector		
Market growth	□□□■■	■■□□□
Margins	□□■■■	□□□□□
Competition	□□■■■	■□□□□
Regulation/policy	□□□■■	■□□□□
Company-specific opportunities and risks		
Procurement	□□□□■	■□□□□
Supply chain	□□□■■	□□□□□
Investments/production	□□□■■	□□□□□
Acquisitions/divestitures/cooperations	□□□□□	□□□□□
Personnel	□□□□□	□□□□□
Information technology	□□□□■	□□□□□
Compliance/legal	□□□■■	■□□□□
Tax	□□□□■	□□□□□
Financial		
Exchange rate volatility	□□□□■	■□□□□
Other financial opportunities and risks	□□□■■	■■□□□

□□□□■	< €100 million
□□□■■	≥ €100 million < €500 million
□□■■■	≥ €500 million < €1,000 million
□■■■■	≥ €1,000 million < €1,500 million
■■■■■	≥ €1,500 million < €2,000 million

a Using a 95% confidence interval per risk category based on planned values; summation is not permissible.

Risk management process and internal control system

The BASF Group's risk management process is based on the international risk management standard COSO II Enterprise Risk Management – Integrated Framework and comprises the risk management system, the internal control system and compliance management. Its key features are as follows:

Organization and responsibilities

– Risk management and the internal control system is the responsibility of the Board of Executive Directors. It defines the basic requirements and processes as well as the organization of the risk management system. It also determines the processes for approving investments, acquisitions and divestitures.

– The Board of Executive Directors is supported by the Corporate Center. Corporate Finance and Corporate Development, which are units within the Corporate Center, and the Chief Compliance Officer (CCO) coordinate the risk management process at a Group level, examine financial and sustainability-related opportunities and risks, and provide the structure and appropriate methodology. Opportunity and risk management is thus integrated into the strategy, planning and budgeting processes.

– BASF's **risk committee** reviews the BASF Group's risk portfolio at least twice a year to evaluate any adjustments to risk management measures and informs the Board of Executive Directors of these. Members of the risk committee are the president of Corporate Finance (chair), the president of Corporate Development, the president of Corporate Legal, Compliance & Insurance and the heads of the Corporate Audit, Corporate Environmental Protection, Health, Safety and Quality, Corporate Treasury, and Group Reporting & Performance Management departments.

– The **management** and control of specific opportunities and risks is largely delegated to the divisions, the service and research units and the regions, and is steered at a regional or local level. This also applies to sustainability-related topics relevant to BASF including the impact of climate change on BASF. A network of risk managers in the divisions, service and research units as well as in the regions advances the implementation of appropriate risk management practices in daily operations. Financial risks are an exception. The management of liquidity, currency and interest rate risks is conducted in the Corporate Finance department. The management of commodity price risks takes place in the Global Procurement unit or in authorized Group companies.

– The BASF Group's management is informed of **short-term** operational opportunities and risks that fall within an observation period of up to one year in the monthly Management's Report produced by Corporate Finance. In addition, Corporate Finance provides information twice a year on the aggregated opportunity/risk exposure of the BASF Group. Furthermore, any arising individual risks which have an impact of more than €10 million on earnings or risks qualitatively evaluated to have a material impact on our sustainability targets as well as reputational risks, must be reported immediately. The Supervisory Board is informed annually about short-term operational opportunities and risks as well as the risk management system and its further development.

– As part of **strategy development**, the Corporate Development unit additionally conducts strategic opportunity/risk analyses with a five-year assessment period. These analyses are annually reviewed as part of strategic controlling and are adapted if necessary. Scenarios are also developed to map possible impacts beyond the five-year horizon, for example from climate-related developments. The Board of Executive Directors and Supervisory Board are informed annually about strategic opportunities and risks.

– We also regularly consider exceptional situations at global, regional and local level – from process safety incidents and goods spillages to pandemics and cyberattacks – which are very rarely successful but can have a fundamental impact. In addition, a **crisis organization** exists to proactively create contingency plans where necessary and appropriate. The crisis management organization is activated in the event of a sudden crisis.

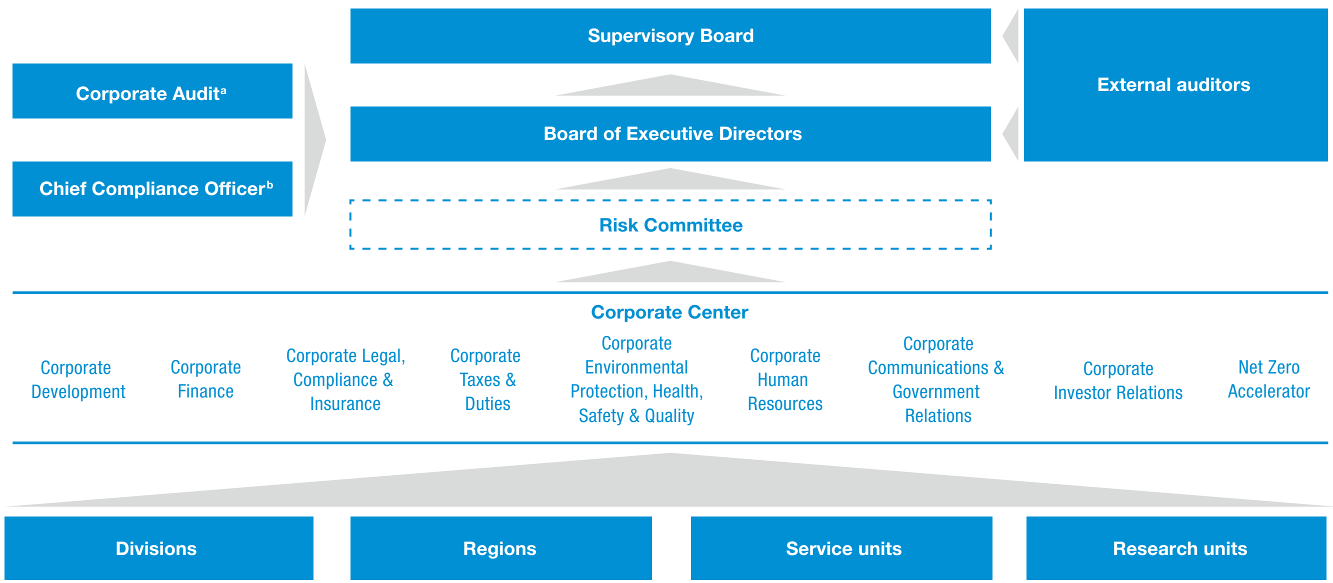
For more information on emergency response, see page 129 onward and for more information on health and safety, see page 143 onward

- BASF's CCO manages the implementation of our **Compliance Management System**, supported by additional compliance officers worldwide. The CCO regularly reports to the Board of Executive Directors on the status of implementation as well as on any significant results and provides a status report to the Supervisory Board's Audit Committee at least once a year, including any major developments. The Board of Executive Directors immediately informs the Audit Committee about significant incidents.

For more information on compliance, compliance management and monitoring adherence to our compliance principles, see page 202 onward

- Risk-specific **monitoring and control systems**, some of which are decentralized, have been set up for each area identified in the risk portfolio. The results of the monitoring processes are incorporated into regular risk reporting to the Risk Committee and the Board of Executive Directors. Compared with internal control systems in financial reporting, these monitoring and control systems in other subject areas have a lower degree of formalization. As a rule, however, they also include organizational security precautions such as compliance with the basic principles of transparency, dual control, segregation of duties and least privilege, deployment of sufficiently qualified employees and adequate IT systems. The design of internal controls depends on the subject area. It ranges from monitoring the development of specific key indicators and evaluating internal and external reports or benchmarking analyses to formalized committee meetings in which decisions are made on applications for investments or research projects, for example. In addition, the appropriateness and effectiveness of the topic-specific internal control systems is monitored by the Corporate Center units responsible for the respective topics. To this end, the individual Corporate Center units choose different approaches depending on the subject area, such as the evaluation of questionnaires for self-assessment of the effectiveness of the internal control system, sample tests to validate the implementation and effectiveness of internal controls or the monitoring of compliance-related key indicators.
- The Corporate Audit department is responsible for regularly auditing the effectiveness and appropriateness of the risk management system, internal control system and the compliance management system. In addition, the Supervisory Board's Audit Committee addresses the effectiveness and appropriateness of these systems as part of its monitoring activities. The suitability of the early risk detection system set up by the Board of Executive Directors in accordance with section 91(2) of the German Stock Corporation Act is assessed and evaluated by the auditors.

Organization of the BASF Group's risk management



a The Corporate Audit department is part of the Corporate Center.
b The Chief Compliance Officer is the head of the Corporate Legal, Compliance & Insurance unit.

Tools

- The **Governance, Risk Management, Compliance (GRC) Policy**, applicable throughout the Group, forms the framework for risk management and is implemented by the operating divisions, the service and research units and the regions according to their specific business conditions.
- A **catalog** of opportunity and risk categories helps identify all relevant financial and sustainability-related opportunities and risks relating to our targets as comprehensively as possible. We derive the sustainability-related opportunities and risks from the materiality analysis.
- The positive contributions and negative impacts of our business activities on sustainability topics along the value chain, and the impact of sustainability topics on our business are assessed in a **materiality analysis**. Opportunities and risks for our business activities that could arise from material sustainability topics, or for sustainability topics that could arise from our business activities, can only rarely be measured in specific financial terms and mainly have a medium to long-term impact. Relevant sustainability topics are systematically considered in our strategic and operational risk management through our integrated risk catalog.

For more information on our materiality analysis, see page 49 onward

- We also systematically assess opportunities and risks with effects that cannot yet be measured in monetary terms, such as climate and reputational risks. To reflect these, risks for companies in connection with the transition to a low-emission economy (transition risks) as well as physical risks as defined by the **Task Force on Climate-related Financial Disclosures (TCFD)**, among other, were added to this catalog.
- Because global climate policy ambitions and the implementation of the relevant measures play a decisive role in the ongoing growth of the chemical industry and its customer industries, we defined and quantified global **long-term scenarios** (up to 2050) with various global warming paths. To assess the impact of different global climate policy approaches on our business units, the scenarios were discussed by the business units in workshops. Feedback was incorporated into the ongoing development of the scenarios. A dataset of scenario-specific macroeconomic parameters will be provided to test the economic feasibility of investments and business strategies. Our decentralized specialists use a central decision tree to document reportable sustainability risks within the meaning of section 289b et seq. of the German Commercial Code. No reportable residual net risks within the meaning of section 289b et seq. of the German Commercial Code were identified for 2023.

For more information on our sustainability management processes, see page 48 onward

- We use standardized evaluation and reporting tools for the identification and assessment of risks. The aggregation of opportunities, risks and sensitivities at division and Group level using a Monte Carlo simulation helps us to identify effects and trends across the Group. We base our sensitivities to oil and gas prices and currency developments on forward-looking assumptions in order to reflect specific market expectations and improve the quality of our forecasts. We also aggregate qualitatively assessed risks at Group level using a risk portfolio.
- Our Group-wide Compliance Program aims to ensure adherence to legal regulations and the company's internal guidelines. Our global employee Code of Conduct firmly embeds these mandatory standards into everyday business. Members of the Board of Executive Directors are also expressly obligated to follow these principles.

For more information on our Group-wide Compliance Program, see page 202 onward

- Based on the reviews and findings of the risk management process, the Board of Executive Directors has no indication that BASF's risk management system and the internal control system are not adequate or effective in all material respects.

Significant features of the internal control and risk management system with regard to the Group financial reporting process

The Combined Management's Report and the Consolidated Financial Statements are prepared by a unit in the Corporate Finance department. The Consolidated Financial Statements are derived from the separate financial statements of the subsidiaries and joint operations, taking into account the relevant data for the joint ventures and associated companies accounted for using the equity method. The BASF Group's accounting process is based on a uniform accounting guideline that, alongside accounting policies based on the International Financial Reporting Standards applicable in the European Union, defines the significant processes and deadlines for the Group. There are binding directives for the internal reconciliations and other accounting operations within the Group. Standard software is used to carry out the accounting processes for the preparation of the individual financial statements as well as for the Consolidated Financial Statements. There are clear rules for the access rights of each participant in these processes.

Employees involved in the accounting and reporting process meet the qualitative requirements and participate in training on a regular basis. There is a clear assignment of responsibilities between the specialist units, companies and service units involved. We strictly adhere to the principles of segregation of duties and dual control, or the "four-eyes principle." Complex actuarial reports and evaluations are produced by specialized service providers or specially qualified employees.

An internal control system for financial reporting continuously monitors these principles. To this end, methods are provided to ensure that evaluation of the internal control system in financial reporting is structured and uniform across the BASF Group. They also work in accordance with the international risk management standard, COSO II Enterprise Risk Management – Integrated Framework.

Material risks for the BASF Group regarding a reliable control environment for proper financial reporting are reviewed and updated on an annual basis. Risks are compiled into a central risk catalog.

Moreover, a centralized selection process identifies companies that are exposed to particular risks, that are material to the Consolidated Financial Statements of the BASF Group, or that provide service processes. The selection process is conducted annually. Persons responsible for implementing the requirements for an effective control system in financial reporting are appointed at the relevant companies.

The process for identifying, evaluating, managing and controlling risks related to preparing the Consolidated Financial Statements as well as monitoring these processes in the selected companies comprises the following steps:

– **Evaluation of the control environment**
  Adherence to internal and external guidelines that are relevant to the maintenance of a reliable control environment for financial reporting is checked by means of a standardized questionnaire.
– **Identification and documentation of control activities**
  In order to mitigate the risks to the financial reporting processes listed in our central risk catalog, critical processes and control activities are documented.
– **Assessment of control activities**
  After documentation, a review is performed to verify whether the described controls are capable of adequately covering the risks. In the subsequent test phase, spot checks are carried out to test whether, in practice, the controls were executed as described and were effective.
– **Monitoring of control weaknesses**
  The responsible leaders receive reports on any control weaknesses identified and their resolution, and an interdisciplinary committee investigates their relevance to the BASF Group. The Board of Executive Directors and the Audit Committee are informed if control weaknesses with a considerable impact on financial reporting are identified. Only after material control weaknesses have been resolved does the company's managing director confirm the effectiveness of the internal control system.
– **Internal confirmation of the internal control system**
  All managing directors and chief financial officers of each consolidated Group company must confirm to the Board of Executive Directors of BASF SE every half-year and at the end of the annual cycle, in writing, that the internal control system is effective with regard to accounting and reporting.

Operational opportunities and risks

Market growth

The development of our sales markets is one of the strongest sources of opportunities and risks. For more details on our assumptions regarding short-term growth rates for the global economy, regions and key customer industries, such as the chemicals, automotive and construction sectors, see Economic Environment in 2024 on pages 167 to 169.

We also consider opportunities and risks caused by deviations in assumptions. Macroeconomic opportunities arise from an easing of geopolitical conflicts and the resulting increase in the supply of energy, industrial raw materials and other intermediate goods.

Increases in energy prices caused, for example, by the wars in Ukraine and the Middle East, and the even higher inflation rates resulting from this for manufacturer and consumer prices also pose a risk to the economy. Additional macroeconomic risks result from the escalation of geopolitical conflicts and a further intensification of the trade conflict between the United States, and, to some extent, the E.U. and China.

Weather-related influences can result in positive or negative effects on our business, particularly in the Agricultural Solutions segment.

Margins

Opportunities and risks for the BASF Group primarily result from higher or lower margins in the Chemicals and Materials segments in particular. Declining margins for a number of products and value chains could further increase pressure on margins. Additional shortages of raw materials could have both a negative and positive impact on margins. This would have a corresponding effect on our EBITDA.

The year's average oil price for Brent crude was \$82 per barrel in 2023, compared with \$101 per barrel in the previous year. For 2024, we anticipate an average oil price of \$80 per barrel.

Competition

We continuously enhance our products and solutions in order to remain competitive. We monitor the market and the competition, and try to take targeted advantage of opportunities. We mitigate increasing competitive risks, especially in the Agricultural Solutions division, as far as possible with suitable measures, such as increasing our competitiveness through the targeted promotion of innovations, for example in the area of sustainability, ongoing cost management and continuous process optimization.

Regulation/policy

Risks for us can arise from intensified geopolitical tensions, new trade sanctions, a lack of global coordination for stricter emission limits for production plants and stricter energy and chemicals legislation as well as a lack of acceptance of new technologies in the E.U. Furthermore, risks can also arise from regulatory delays in the expansion of capacities and infrastructure for electricity from renewable sources, low-emission hydrogen and the necessary CO_2 infrastructure.

However, political measures could also give rise to opportunities. For example, we view opportunities around the world to increase energy efficiency and reduce greenhouse gas emissions as a strategic opportunity for increased demand for products such as our insulation foams for buildings, catalysts, battery materials for electromobility, or our solutions for wind turbines.

Procurement and supply chain

Operational risks in procurement are a key topic for BASF, as they can impact the company's supply capability and therefore its competitiveness. Operational risks in procurement include disruptions and delays in the delivery of raw materials due to weather conditions, supplier insolvencies, quality concerns or geopolitical events, for example. To counter these risks, BASF relies on comprehensive risk assessment and control along the entire supply chain, on global competition and close cooperation with suppliers. We take far-reaching measures to avoid such risks or minimize their effects.

Investments/production

We try to prevent unscheduled plant shutdowns by adhering to high technical standards and by continuously improving our plants. We reduce the effects of an unscheduled shutdown on the supply of intermediate and end products through diversification within our global production Verbund.

In the event of a production outage – caused by an accident, for example – our global, regional or local emergency response plans and crisis management structures are engaged, depending on the scope of impact. Every region has crisis management teams on a local and regional level. They not only coordinate the necessary emergency response measures, they also initiate immediate measures for damage control and resumption of normal operations as quickly as possible.

Crisis management also includes dealing with extreme weather conditions such as hurricanes (for example, at the sites on the Gulf of Mexico in Freeport, Texas, and Geismar, Louisiana) or significantly elevated water temperatures in rivers due to extended heat waves, which limit the available cooling capacity. Appropriate precautions are taken at the sites in the case of a potential change in risk associated with climate change. For example, due to an increase in heat waves, we have implemented several measures at the Verbund sites in Ludwigshafen, Germany, and Geismar, Louisiana, in recent years to increase cooling capacity, such as expanding and optimizing the central recooling plants and optimizing cooling water flows. These optimization measures are designed to prevent production outages due to extreme heat waves.

Short-term risks from investments can result from, for example, technical malfunctions or schedule and budget overruns. We counter these risks with stringent project management and controlling.

Acquisitions/divestitures/cooperations

We constantly monitor the market in order to identify possible acquisition targets and develop our portfolio appropriately. In addition, we collaborate with customers and partners to jointly develop new, competitive products and applications.

Acquisitions and divestitures entail both opportunities and risks. These arise in connection with the conclusion of a transaction, or it being completed earlier or later than expected. They relate to the regular earnings contributions gained or lost as well as the realization of gains or losses from divestitures if these deviate from our planning assumptions.

For more information on opportunities and risks from agreed transactions, see page 45

Personnel

Due to BASF's worldwide compensation principles, the development of personnel expenses is partly dependent on the amount of variable compensation, which is linked to the company's success, among other factors. The correlation between variable compensation and the success of the company has the effect of minimizing risk. Another factor is the development of interest rates for discounting pension obligations. Furthermore, changes to the legal environment of a particular country can have an impact on the development of personnel expenses for the BASF Group. For countries in which BASF is active, we therefore constantly monitor the relevant developments in order to identify potential risks at an early stage and enable suitable measures to be taken.

For more information on our compensation system, see page 135
For more information on risks from pension obligations, see page 180

Information technology

BASF employs a large number of IT systems. We use technologies such as artificial intelligence, big data and the Internet of Things to develop new business models, corporate concepts and strategies and to respond appropriately to changing customer behavior. The global cybersecurity team is tasked with protecting these IT systems and the data and business processes they handle. In a connected, ever-evolving world, the challenge of protecting BASF against attackers is becoming ever greater and more complex.

The threat environment has changed in recent years, as attackers have become better organized, use more sophisticated technology and have far more resources available. This development reflects the fact that internet-based cyberattacks are extremely lucrative: A variety of vulnerabilities in software and hardware products constantly provide new incentives to develop malware, and anonymization technologies make it almost impossible to trace and punish attacks.

A successful attack can, for example, negatively affect plant availability, delivery quality or the accuracy of our financial reporting. Unauthorized access to sensitive data, such as personnel records or customer data, competition-related information or research results, can result in legal consequences or jeopardize our competitive position. This could also cause monetary losses, a potential loss of reputation and even a loss of customers' and partners' confidence in the security of our products and services.

To minimize such risks, BASF uses globally uniform processes and systems to ensure IT availability and IT security, which are based on the recognized ISO 27001 standard. These include stable and redundantly designed IT systems, backup processes, virus and access protection, encryption systems, and integrated and standardized IT infrastructure, applications and processes. The systems used for information security are constantly tested, continuously updated, and expanded if necessary. In addition, our employees receive regular training on information and data protection. IT-related risk management is conducted using Group-wide regulations for organization and application, as well as an internal control system based on these regulations.

We employ modern security concepts to keep pace with advanced attackers. These range from efficient detection and professional response to defense against attacks and minimizing their potential impact. Strong cybersecurity alliances are also crucial here. BASF works closely with security authorities and security associations, for example as a founding member of the German Cyber Security Organization (DCSO) and the Cyber Security Sharing and Analytics (CSSA) platform in Berlin, Germany.

BASF has also established an information security management system and is internationally certified according to DIN EN ISO/IEC 27001:2017.

Compliance/legal

We constantly monitor current and potential legal disputes and proceedings, and regularly report on these to the Board of Executive Directors and Supervisory Board. In order to assess the risks from current legal disputes and proceedings and any potential need to recognize provisions, we prepare our own analyses and assessments of the circumstances and claims considered. In addition, in individual cases, we consider the results of comparable proceedings and, if needed, independent legal opinions. Risk assessment is particularly based on estimates as to the probability of occurrence and the range of possible claims. These estimates are the result of close cooperation between the relevant operating and service units together with Corporate Legal and Corporate Finance. If sufficient probability of occurrence is identified, we recognize a provision for the proceeding concerned. Should a provision be unnecessary, we continue to assess whether these litigations nevertheless represent a risk for the BASF Group's EBITDA as part of general risk management.

We use our internal control system to limit risks from potential infringements of rights or laws. For example, we try to avoid patent and licensing disputes whenever possible through extensive clearance research. As part of our Group-wide Compliance Program, our employees receive regular training.

Tax

The recognized tax-related opportunities and risks only concern taxes that impact the BASF Group's EBITDA in the short term. These arise when BASF has taken a position that differs from the opinion of a competent administrative authority. If a tax payment has already been made and could be reclaimed, we present this as an opportunity. Conversely, if a potential payment is outstanding in accordance with the administrative opinion, this is a risk. We primarily evaluate opportunities and risks with regard to their probability of occurrence and, if necessary, set up a provision for the relevant risk. If a provision is not necessary, we take this into account in determining EBITDA-relevant risks for the BASF Group.

Financial opportunities and risks

Detailed guidelines and procedures exist for dealing with financial risks. Among other things, they provide for the segregation of financial instrument trading and back-office functions.

We continuously monitor activities in countries with transfer restrictions as a part of risk management. This includes, for example, regular analysis of the macroeconomic and legal environment, shareholders' equity and the business models of the operating units. The chief aim is the management of counterparty, transfer and currency risks for the BASF Group.

Exchange rate volatility

Our competitiveness on global markets is influenced by fluctuations in exchange rates. For BASF's sales, opportunities and risks arise in particular when the U.S. dollar exchange rate fluctuates. A full-year appreciation of the U.S. dollar against the euro by $0.01 would increase the BASF Group's EBITDA by around €40 million, assuming other conditions remain the same. On the production side, we counter exchange rate risks by producing in the respective currency zones.

Financial currency risks result from the translation of receivables, liabilities and other monetary items in accordance with IAS 21 at the closing rate into the functional currency of the respective Group company. In addition, we incorporate planned purchase and sales transactions in foreign currencies into our financial foreign currency risk management. If necessary, we hedge these risks using derivative instruments.

Financing costs

Financing costs are determined in particular by net debt and interest rates. Interest rate risks result from possible changes in the relevant market interest rates and credit risk premiums. These can cause a change in the fair value of fixed interest rates and fluctuations in the interest payments for variable-rate financial instruments, which would positively or negatively affect earnings. We use interest rate swaps and, in individual cases, combined interest and currency derivatives to hedge market interest rate risks. The credit risk premiums are mainly influenced by our credit rating and the market conditions at the time of issue. In the short to medium term, BASF is largely protected from the possible effects on its interest result thanks to the balanced maturity profile of its financial indebtedness.

Risks from metal and raw materials trading

Some of BASF's divisions are exposed to strong fluctuations in raw materials prices. BASF uses commodity derivatives to hedge these market price risks. In addition, BASF holds limited unhedged precious metal and oil product positions for trading on its own account. The value of these positions is exposed to market price volatility. Adverse changes in market prices negatively affect the earnings and equity of BASF. These risks are continuously monitored by a central risk management system and limited by strict guidelines.

Liquidity risks

Risks from fluctuating cash flows are recognized in a timely manner as part of our liquidity planning. We have access to extensive liquidity at any time thanks to our good ratings, our unrestricted access to the commercial paper market and committed bank credit lines.

In the short to medium term, BASF is largely protected against potential refinancing risks by the balanced maturity profile of its financial indebtedness as well as through diversification in various financial markets.

Risk of asset losses

We limit country-specific risks with measures based on country ratings, which are continuously updated to reflect changing environment conditions. We selectively use investment guarantees to limit specific country-related risks. We lower credit risks for our financial investments by engaging in transactions only with banks with good credit ratings and by adhering to fixed limits. We continuously monitor creditworthiness and adjust limits accordingly. We reduce the risk of default on receivables by continuously monitoring the creditworthiness and payment behavior of our customers and by setting appropriate credit limits. Risks are also limited through the use of individual hedging strategies, such as guarantees. Due to the global activities and diversified customer structure of the BASF Group, there are no major concentrations of credit default risk.

Risks from pension obligations

BASF grants most employees company pension benefits from either defined contribution or defined benefit plans. We predominantly finance company pension obligations externally through separate plan assets. This particularly includes BASF Pensionskasse VVaG and BASF Pensionstreuhand e.V. in Germany, in addition to the large pension plans of our Group companies in North America, the United Kingdom and Switzerland. To address the risk of underfunding due to market-related fluctuations in plan assets, we have investment strategies that align return and risk optimization to the structure of the pension obligations. Stress scenarios are also simulated regularly by means of portfolio analyses. Adjustments to the interest rates used in discounting pension obligations lead immediately to changes in equity. To limit the risks of changing financial market conditions as well as demographic developments, BASF has, for a number of years now, offered its employees almost exclusively defined contribution plans for future years of service. Some of these contribution plans include minimum interest guarantees. If the pension fund cannot generate this, it must be provided by the employer. A sustained low interest rate environment could make it necessary to recognize pension obligations and plan assets for these plans as well.

Strategic opportunities and risks

Long-term demand development

We assume that growth in chemical production (excluding pharmaceuticals) will be slightly higher than that of the global gross domestic product over the next five years and about as strong as the five-year average prior to the coronavirus pandemic. Through our market-oriented and broad portfolio, which we will continue to strengthen in the years ahead, for example, through investments in new production capacities, research and development activities or acquisitions, we aim to achieve volume growth that slightly exceeds this market growth. Should global economic growth see unexpected, considerable deceleration, for example, because of an ongoing weak period in the emerging markets, protectionist tendencies or bottlenecks in the energy markets, the expected growth rates could prove too ambitious. Additional risks arise from geopolitical tensions and outright military conflicts, which could impact supply chains and reduce efficiency in the international allocation of resources.

Moreover, the ambitions of global climate policy and its implementation will significantly impact the structure of demand from our customer industries. This is shown by a comparison of climate policy scenarios that envisage limiting global warming to below two degrees Celsius with alternative scenarios that allow for more warming. In ambitious climate policy scenarios, the structure of demand changes due to the use of alternative energy sources and raw materials, high investment in resource-conserving technologies, and changing customer preferences. By contrast, macroeconomic growth rates typically vary little compared with scenarios with pathways with higher levels of warming.

Market opportunities in such scenarios include, for example, alternative surface coatings for wind and solar modules, feedstocks that make plastics easier to recycle, stronger demand for insulation materials for buildings, increased electromobility with changed demand for plastics, insulation materials, coolants and battery materials, and more alternative proteins in agriculture. By contrast, fossil feedstocks and the production technologies and product segments based on fossil feedstocks will become less important. This requires further decarbonization of production processes and alternative sources of raw materials in order to remain competitive.

For more information on the corporate strategy, see page 27 onward

Development of competitive and customer landscape

We expect competitors from Asia, North America and the Middle East in particular to gain increasing significance in the years ahead, especially as a result of advantageous raw materials and energy prices. Furthermore, we predict that many producers in countries rich in raw materials will expand their value chains in consumer-oriented sectors. In addition, the proliferation of large-scale digital marketplaces for chemicals could impact existing customer and supplier relationships.

We expect a continuous rise in customer demand for sustainable solutions – for example, for products with a low carbon footprint, made from recycled, circular or bio-based raw materials that are biodegradable, or for products with other measurable sustainability benefits. However, an increase in customer demand for sustainable solutions is also highly dependent on regulation. Companies with a proven track record of providing more sustainable solutions will be able to achieve higher growth and profitability as a result. The expansion of sharing economy business models could have a long-term impact on demand in individual customer industries. At the same time, higher demands on product features can also create opportunities for innovation. We are therefore addressing these topics in research and investment offers for the sustainable transformation of BASF.

To strengthen our competitiveness, we are continuously improving our production processes, streamlining our administration and simplifying processes. Our research and business focus is on highly innovative businesses and differentiation through sustainability advantages to make our customers and BASF more successful.

Regulation/policy

We expect continued regulatory and societal pressure to achieve environmentally friendly energy production, emission-free energy consumption and a climate-neutral resource and raw material base. The political approaches to address these issues will vary greatly from region to region. However, particularly in Europe, we expect measures with a continuously high level of detailed regulation, including changes to chemical and industry-related regulations that have the potential to significantly impact the competitiveness of BASF's operations and product portfolio as well as that of our customers.

We see the risk of the current geopolitical shifts leading to the establishment of uncoordinated or divergent global legislative standards and regulatory systems, not just in relation to chemicals or the regulatory framework for digitalization, but also to climate, environmental, social and corporate governance criteria. We see risks but also opportunities in the setting of international standards for specific product categories or technologies.

We explain our strategy in meetings with political decision-makers and social stakeholders. In doing so, we also inform ourselves of the changes we must undergo and advocate for a favorable and stable regulatory framework at both a national and international level. BASF is in a position to make significant contributions toward achieving the U.N. Sustainable Development Goals, particularly regarding climate neutrality, through new technologies, innovative products and processes and its broad product portfolio.

Innovation

We expect the trend toward increased sustainability requirements in our customer industries to continue. Our aim is to leverage the resulting opportunities in a growing market with more sustainable innovations. The key areas are products with a lower or even net-zero carbon footprint, circular economy solutions, and safe and sustainable products. To be successful in these fields, we have launched specific research and investment opportunities for the sustainable transformation of BASF. Furthermore, in order to steer our innovation portfolio toward increased sustainability, we also began applying the Sustainable Solution Steering method, revised in 2023, to the evaluation of innovation projects and integrated it at an early stage of our research and development processes.

There are technical and commercial risks of failure associated with every single research and development project. We address this by maintaining a balanced and comprehensive project portfolio as well as through professional, milestone-based project management.

Further risks may arise from increasing state protectionism and the demand for localization of intellectual property in order to achieve technological independence. Through our Know-How Verbund in research and development, we ensure that critical intellectual property is generated and protected in countries with high intellectual property standards.

We expect that the digital disruption of established processes will lead to a considerable increase in efficiency and effectiveness in some fields through the use of artificial intelligence, among other things. BASF is therefore committed to taking a leading role in the digital transformation of the chemical industry. Possible applications of digital technologies and solutions are evaluated along the entire value chain and implemented throughout the company, for example, in production, logistics, research and development, business models and corporate governance.

For more information on innovation, see page 54 onward

Procurement and supply chain

Strategic risks in procurement are of great importance to BASF, as they can impact the company's long-term competitiveness and positioning. Strategic risks include structural changes on the global markets, climate change and political developments. Supply security for raw materials, energy and services is increasingly affected by trade disputes, protectionism, sanctions and geopolitical conflicts. To counter these risks, BASF relies on close cooperation with strategic suppliers and continuous monitoring of markets and trends.

We are also seeing an expansion of the regulatory framework affecting us and our suppliers (for example, the German Supply Chain Due Diligence Act or the E.U. Corporate Sustainability Due Diligence Directive). Potential noncompliance by our suppliers may lead to a reduced supplier base.

All risks are continuously analyzed and appropriate strategies and measures developed to avert risks or minimize the impact on BASF.

For more information on supplier management, see page 158 onward

Investments

We expect growth in chemical production in emerging markets to remain above the global average in the years to come. This will create opportunities that we want to exploit by expanding our local presence. In addition, regional value chains help mitigate risks from trade conflicts and barriers that pose a challenge to global markets and supply chains.

Decisions on the type, scope and location of our investment projects are made on the basis of established comprehensive assessment processes. They take into account long-term forecasts for the market, margin and cost development, and raw materials availability, as well as country, currency, sustainability and technology risks. Opportunities and risks arise from potential deviations in actual developments from our assumptions. Mitigation plans are in place where risks are substantial.

Investments in more sustainable technologies represent a long-term opportunity, even though they may not be competitive or profitable in the short term, depending on the market and the prevailing regulatory framework.

For more information on our investment projects, see page 172 onward

Acquisitions/divestitures/cooperations

In the future, we will continue to expand and refine our portfolio through smaller, bolt-on acquisitions that promise above-average profitable growth, are innovation-driven or offer a technological differentiation and help achieve a relevant market position, and make new, sustainable business models possible.

The evaluation of opportunities and risks plays a significant role during the assessment of acquisition targets. A detailed analysis and quantification is conducted as part of due diligence. Examples of risks include increased staff turnover, delayed realization of synergies, or the assumption of obligations that were not precisely quantifiable in advance. If our expectations in this regard are not met, risks could arise, such as a need for impairment. Opportunities could also arise, for example, from additional synergies. We are also continuing to develop our portfolio through carve-outs and divestitures. In this context, risks could arise as a result of potential warranty claims or other contractual obligations, such as long-term supply agreements.

For more information on our acquisitions and divestitures, see page 45

Personnel

BASF anticipates growing challenges in attracting and retaining qualified employees in the medium and long term. This is due to demographic change, particularly in North America and Europe. In addition, the chemical industry, which is heavily dependent on fossil raw materials, is increasingly viewed critically by the public. This increases the risk for the industry that job vacancies may not be filled or may be filled only after a delay, and therefore not enough qualified talent can be attracted, recruited and retained.

We address these risks with opportunities to strengthen our employer branding and our reputation (for example, our "Change for the climate" campaign). At local level, we are taking steps to strengthen employee engagement and we are implementing offers such as succession planning, knowledge management and initiatives to improve the balance between personal and professional life and promote healthy living. This increases BASF's appeal as an employer and retains our employees in the long term.

For more information on individual initiatives and our targets, see page 132 onward

Climate

Ongoing climate change also poses opportunities and risks for BASF. As an energy-intensive company, climate-related risks arise particularly from regulatory changes, such as in carbon prices through emissions trading systems, taxes or energy legislation. In addition, BASF's emissions footprint and intensity could lead to a negative perception and reduced appeal among external stakeholders such as customers, investors and skilled workers. We counter these risks with our carbon management measures and by transparently disclosing our positions on and contributions to climate protection, for example, in the form of political demands or through progress in the implementation of our climate strategy, in publicly accessible sources such as this annual report or on the BASF website, and in direct dialog with external stakeholders.

To assess the changing physical risks for our sites from climate change, climate data based on the latest scenarios of the Intergovernmental Panel on Climate Change (IPCC) were compiled for our sites in cooperation with an external partner. This enables the sites to assess the potential physical impact of climate change in the coming decades. Here, we focus on a climate protection scenario, supplemented by two scenarios with medium and high levels of global warming.[1] The most common potential impact is an increase in heat and drought. The sites are supported by this information in the development of their strategies. In the current reporting year, a specific analysis of physical climate risks was also carried out at selected sites. It is planned to expand this approach to all of BASF's key sites in the next few years.

In addition to climate-related risks, there are also opportunities. Our broad product portfolio includes, among other things, solutions for the circular economy and climate protection, such as insulation foams for buildings, materials for electromobility or bio-based products. Increased societal demands and the resulting regulations offer additional market opportunities for these products. We are working with numerous scientific and public organizations and initiatives on solutions for sustainable agriculture that meet economic, environmental and social demands over the long term.

For more information on our sustainability concept, see page 48 onward

For more information on energy and climate protection, see page 102 onward

For more information on opportunities and risks from energy policies, see page 177

For more information on our positions on and contributions to climate protection, see basf.com/climate_protection

1 The assessment model was based on the IPCC climate change scenario SSP1-2.6, supplemented by SSP2-4.5 (medium global warming scenario) and SSP5-8.5 (high global warming scenario).

Disclosures on BASF SE in Accordance with the German Commercial Code (HGB)

The Management's Report of BASF SE is combined with the Management's Report of the BASF Group for the first time for the 2023 business year. As the publicly listed parent company in the BASF Group, BASF SE takes a central position: Directly or indirectly, it holds the shares in the companies belonging to the BASF Group, and is also one of the largest operating companies. A complete overview of BASF SE's operating business is provided by the Consolidated Financial Statements of the BASF Group.

Corporate Structure

BASF SE operates the BASF Group's largest Verbund site in Ludwigshafen, Germany, and is therefore one the most important operating companies of the BASF Group. In addition to marketing its own production to third parties, BASF SE supplies its products to other BASF Group companies, which process them in downstream production or sell them on the local market. BASF SE also distributes products from other BASF Group companies. All divisions, with the exception of Coatings, are active within BASF SE. As the parent company, BASF SE is also responsible for various central tasks, such as Group management and large parts of the Corporate Center. In addition, extensive research activities are bundled here.

As the top parent company, BASF SE directly or indirectly holds the shares in the companies belonging to the BASF Group: This is reflected above all in the financial assets and the financial result.

Due to this distinct integration into the BASF Group, BASF SE is managed within the framework of the BASF Group's steering concept and has not implemented a separate steering concept. Income from operations is the most suitable indicator for assessing business performance and is therefore BASF SE's most important financial key performance indicator. In contrast to previous years, sales revenue is no longer a most important financial key performance indicator at BASF SE from this reporting year onward.

The Financial Statements of BASF SE are prepared in accordance with the Council Regulation (EC) No 2157/2001 of October 8, 2001, on the Statute for a European company (SE) and the applicable regulations for public limited-liability companies in the Member State in which it has its registered office, i.e., in accordance with the accounting regulations for the fiscal year ending December 31, 2023, in particular the German Commercial Code (HGB) and the German Stock Corporation Act (AktG). The Consolidated Financial Statements of the BASF Group, however, take into account the Financial Statements of BASF SE, which are prepared in accordance with International Financial Reporting Standards (IFRS).

Results of Operations of BASF SE

Statement of income
Million €

	2023	2022
Sales revenue	**22,832**	**30,558**
Cost of sales	20,070	27,524
Gross profit on sales	**2,762**	**3,034**
Selling expenses	1,807	2,217
General administrative expenses	497	618
Research expenses	1,238	1,458
Other operating income	247	274
Other operating expenses	1,531	1,011
Income from operations	**-2,064**	**-1,996**
Income from shareholdings	9,801	7,205
Interest result	30	-832
Other financial result	78	176
Financial result	**9,909**	**6,549**
Income before income taxes	**7,845**	**4,553**
Income taxes	411	704
Net income	**7,434**	**3,849**

BASF SE's **sales revenue** declined by €7,726 million year on year to €22,832 million in 2023; the expected considerable decline in sales has thus materialized. Sales decreased in the operating business due mainly to lower sales volumes. The economic environment continues to pose exceptional challenges for the chemical industry. Against this backdrop, lower plant capacity utilization, impairments on intangible assets totaling €260 million and impairments on property, plant and equipment totaling €75 million, had an impact on BASF SE's profit in 2023. **Gross profit on sales** declined by €272 million to €2,762 million.

Contrary to our prediction of a considerable increase, **income from operations** decreased by €68 million to -€2,064 million. In the reporting year, income from operations continued to be negatively impacted by a high inflation rate on pension obligations. In contrast, expenses for variable compensation decreased. Selling expenses decreased by €410 million, due in particular to lower freight and shipping costs. Administrative costs were €121 million below the prior-year level. In addition, research expenses decreased by €220 million as a result of lower expenditure in the divisions and for exploratory research. The balance of other operating income and expenses declined by €547 million compared with the previous year to -€1,284 million. Out-of-period income decreased by €45 million, primarily due to lower reversals of provisions. Furthermore, €396 million higher expenses from agreed cost transfers from Group companies were recognized. In addition, €152 million higher expenses for restructuring measures and €65 million for portfolio measures were recorded in connection with the implementation of strategic measures. By contrast, the foreign currency result improved by €33 million.

The **financial result** rose by €3,360 million compared with the previous year to €9,909 million. Dividends totaling €4,807 million from a Dutch subsidiary of BASF SE, which mainly included retained earnings, led to an increase in net income from shareholdings. This was offset by lower profit transfers, which were influenced in particular by a lower distribution of retained earnings from a Belgian Group company. The higher interest result was attributable to a positive result from plan assets and lower interest expenses from pension obligations.

Income before income taxes increased by €3,292 million year on year to €7,845 million. Income tax expenses decreased by €293 million in the reporting year. Due to deferred tax assets and liabilities, €628 million lower expenses were recorded in the reporting year. By contrast, current income tax expenses increased by €335 million.

Net income increased by €3,585 million compared with the previous year to €7,434 million in 2023.

Net Assets and Financial Position of BASF SE

Assets
Million €

	December 31, 2023	December 31, 2022
Intangible assets	1,159	1,652
Property, plant and equipment	3,403	3,365
Financial assets	22,878	22,643
Fixed assets	**27,440**	**27,660**
Inventories	**2,913**	**3,197**
Accounts receivable, trade	796	1,142
Receivables from affiliated companies	23,636	28,441
Miscellaneous receivables and other assets	657	966
Receivables and other assets	**25,089**	**30,549**
Marketable securities	–	197
Cash at bank and on hand	1,160	183
Liquid funds	**1,160**	**380**
Current assets	**29,162**	**34,126**
Prepaid expenses	**144**	**156**
Deferred tax assets	**287**	**695**
Total assets	**57,033**	**62,637**

Net assets

Total assets declined by €5,604 million compared with December 31, 2022, to €57,033 million.

Fixed assets decreased by €220 million. Intangible assets declined by €493 million. In addition to scheduled depreciation, impairments of €260 million were recognized in the Materials segment. Property, plant and equipment increased by €38 million. Overall, investments were slightly higher than scheduled depreciation. Furthermore, impairments of €88 million were recognized, which related in particular to a plant in the Materials segment. Financial assets also increased by €235 million due to capital measures at foreign subsidiaries.

Current assets and **other assets** decreased by €5,384 million. Receivables from affiliated companies declined by €4,805 million due to the repayment of financial investments within the Group, lower profit transfers and lower trade accounts receivable within the Group. The €346 million decrease in trade accounts receivable was partly attributable to the sale of accounts receivable as part of a factoring program launched in the 2023 business year. In addition, deferred taxes declined by €408 million and inventories by €284 million. This was offset by an increase of €780 million in liquid funds.

Equity and liabilities
Million €

	December 31, 2023	December 31, 2022
Subscribed capital	1,142	1,144
Capital surplus	3,172	3,170
Retained earnings	12,144	11,399
Retained profits	7,434	3,849
Equity	**23,892**	**19,562**
Special reserves	**52**	**54**
Provisions for pensions and similar obligations	1,294	1,386
Provisions for taxes	218	165
Other provisions	1,341	1,601
Provisions	**2,853**	**3,152**
Financial indebtedness	17,360	17,247
Accounts payable, trade	1,078	1,469
Liabilities to affiliated companies	10,913	20,027
Miscellaneous liabilities	650	882
Liabilities	**30,001**	**39,625**
Prepaid expenses	**235**	**244**
Total equity and liabilities	**57,033**	**62,637**

Financial position

Equity increased by €4,330 million. The net income of €7,434 million was offset by the dividend of €3,035 million paid for the 2022 reporting year, and effects amounting to €70 million from the share buyback.

Provisions decreased by a total of €299 million. Within this item, other provisions declined by €260 million, primarily as a result of lower provisions for variable compensation. Pension plan assets were offset against pension obligations, which resulted in a surplus of obligations. Overall, provisions for pensions decreased by €92 million as a result of this offsetting. The main reason for the €162 million increase in plan assets was an increase in fair values. Pension obligations increased by €70 million, in particular due to the effects of the pension adjustments. Provisions for taxes rose by €53 million.

Liabilities and **other items** decreased by €9,635 million. Within this item, liabilities to affiliated companies decreased by €9,114 million, mainly due to the repayment of intragroup borrowings. In addition, trade accounts payable decreased by €391 million.

Operating activities generated **cash** of €12,369 million in the 2023 reporting year (previous year: €903 million), in particular from BASF SE's function as the parent company of the BASF Group. At €7,434 million, net income was considerably above the prior-year level (previous year: €3,849 million). In addition, profit transfers from the previous year and inflows from operating receivables and inventories had a positive effect in the reporting year. This was partially offset by noncash expenses for deferred taxes as well as cash outflows from the decrease in operating liabilities.

Investing activities generated cash of €543 million (previous year: €3,319 million). Cash inflows from repayments of intragroup cash investments, the sale of marketable securities and capital decreases at subsidiaries exceeded cash outflows for investments in financial assets and property, plant and equipment in the reporting year. Investments in financial assets mainly related to capital increases at foreign subsidiaries.

Financing activities resulted in a cash outflow of €11,935 million (previous year: €4,576 million). This was mainly due to the repayment of financial liabilities within the Group and the dividend payment. Issuance of financial debts were offset by repayments of a comparable amount.

In total, liquid funds rose by €977 million to €1,160 million. These comprise cash on hand and balances with banks.

Forecast, Opportunities and Risks of BASF SE

Earnings forecast

In its forecast, BASF SE essentially makes the same assumptions regarding the development of global economic environment as the BASF Group.

Considering these assumptions, we expect a considerable improvement in income from operations in 2024 compared with the previous year. In 2023, income from operations was negatively impacted by lower plant capacity utilization, impairments on intangible assets and impairments on property, plant and equipment as well as a one-off cost transfer from a Group company. In addition, ongoing inflation led to high expenses for pension obligations. We do not expect the one-off effects to reoccur in 2024.

Opportunities and risks, risk management system

BASF SE is generally exposed to the same opportunities and risks as the BASF Group.

BASF SE's internal control and risk management system with regard to the financial reporting process (section 289(4) HGB) is based on a uniform accounting guideline that sets out accounting policies and the significant processes and deadlines on a Group-wide basis. There are binding directives for the internal reconciliations and other accounting operations within the Group. Standard software is used to carry out the accounting processes, and there are clear rules for the access rights of each participant in these processes. The Financial Statements and parts of the disclosures on BASF SE in accordance with the German Commercial Code (HGB) are prepared by a specialist unit in the Global Business Services division.

Nonfinancial and Other Disclosures of BASF SE

Due to the importance of BASF SE within the BASF Group, specific disclosures are required. This relates in particular to the reporting of significant nonfinancial information, which also became mandatory for the parent company of the BASF Group, BASF SE, as a result of the CSR Directive Implementation Act, which came into effect in 2017. The integrated presentation was selected in the Management's Report for the Nonfinancial Statement (NFS) to be issued in the reporting year in accordance with sections 289b to 289e of the German Commercial Code (HGB). The table on this and the following page shows the relevant nonfinancial key figures of BASF SE. All disclosures on strategy, due diligence, targets, described processes and key figures contained in the preceding statements in the Combined Management's Report apply to the BASF Group including BASF SE. No significant deviations were identified for BASF SE.

Within the scope of the audit of the annual financial statements, the auditor KPMG checked pursuant to section 317(2) sentence 4 HGB that the NFS was presented in accordance with the statutory requirements. KPMG also conducted a limited assurance of the NFS. An assurance statement of the limited assurance can be found online at basf.com/nfsaudit2023/basf-se. The audit was conducted in accordance with ISAE 3000 (Assurance Engagements other than Audits or Reviews of Historical Financial Information) and ISAE 3410 (Assurance Engagements on Greenhouse Gas Statements), the relevant international auditing standards for sustainability reporting.

Nonfinancial and other disclosures of BASF SE

		2023	2022
Employees	Employees	34,213	34,705
	of which apprentices	2,103	2,104
	of which job offer received (%)	89	91[a]
	Participants in Training Verbund (cooperation with partner companies in the RhineNeckar metropolitan region)	85	83[b]
	Training Verbund expenses (million €)	2,652	2,591
	Personnel expenses (million €)	3,899	4,607
	of which wages and salaries	3,002	3,082
	of which social security contributions and expenses for pensions and assistance	897	1,525
	of which pension expenses	413	1,035
	Participants in the "plus" employee share program	20,065	20,450
Innovation	Employees in research and development	4,029	4,229
	Research and development expenses (million €)	1,238	1,458
Procurement	Procurement spend (billion €)	8.0	11.5
Health	Influenza vaccinations received	3,617	6,200
	Participants in first aid training courses	3,582	2,900
Safety (process and occupational safety)	Fatality rate[c]		
	Employees[d]	0.0	0.0
	Nonemployees[e]	0.0	0.0
	Contractors	0.0	0.0
	Number of fatalities		
	Employees[d]	0	0
	Nonemployees[e]	0	0
	Contractors	0	0
	High-severity work process-related injury rate[c]		
	Employees[d]	0.01	0.02
	Nonemployees[e]	0.13	0.13
	Contractors	0.03	0.01
	Recordable work process-related injury rate[c,f]		
	Employees[d]	1.71	–[g]
	Nonemployees[e]	4.36	–[g]
	Contractors	2.69	–[g]
	Number of recordable work process-related injuries[f]		
	Employees[d]	411	–[g]
	Nonemployees[e]	65	–[g]
	Contractors	184	–[g]
	Number of days lost to work process-related injuries and fatalities		
	Employees[d]	2,549	2,863
	Nonemployees[e]	642	739
	Contractors	828	1,063
	Rate of high-severity work process-related injuries[c]	0.06	0.16
	Rate of process safety incidents[c]	0.42	0.39
	Rate of high-severity process safety incidents[c]	0.08	0.10
	Transportation incidents	3	4
	Incidents with spillage of more than 200 kilograms of dangerous goods	0	1
	of which with significant impact on the environment	0	0

Continued on next page

a Since the 2023 reporting year, we have reported the rate of job offers received instead of the rate of actual employment.
b In the BASF SE Report 2022, we reported the total number of participants in the Training Verbund. In the BASF Report 2023, we report the number as of the reporting date.
c Per 200,000 working hours
d Own employees
e Temporary workers
f Recordable work process-related injuries for BASF include all injuries recorded in the system
g Cannot be determined retrospectively for 2022

Continued from previous page

Nonfinancial and other disclosures of BASF SE

Emergency Response	Major incident drill	1	1
	Drills and simulations of emergency measures	221	224
	TUIS interventions	95	111
Management systems	Responsible Care audits	128	127
Environmental	Energy demand — electricity (MWh)	4,472,463	5,314,071
	Energy demand — steam (metric tons)	14,065,629	16,739,680
	Energy demand — fossil fuels in power plants (MWh)	12,439,472	14,000,999
	Waste generation (metric tons)	703,070	711,871
	of which recycled waste (%)	44.4	43.2
	of which waste disposed of (%)	55.6	56.8
	of which hazardous waste (%)	98.1	98.5
	Emissions of air pollutants (excluding CH_4); CO, NO_x, NMVOC, SO_x, dust, NH_3 / other inorganic substances (metric tons)	5,542	6,662
	Greenhouse gas emissions: CO_2, N_2O, CH_4, HFC, PFC, SF_6 (million metric tons of CO_2 equivalents)	5.13	6.27
	Water abstraction (million cubic meters)	1,143	1,142
	Water use (million cubic meters)	2,020	2,142
	Water discharge (million cubic meters)	1,044	1,020
	Emissions of organic substances to water (metric tons)	3,496	4,231
	Emissions of nitrogen to water (metric tons)	1,168	1,321
	Emissions of heavy metals to water (metric tons)	5	7
	Emissions of phosphorus to water (metric tons)	72	65
	Operating costs for environmental protection (million €)	518	674
	Investments in new and improved environmental protection plants and facilities (million €)	199	157
	Provisions for environmental protection measures and remediation (million €)	293	334

3

Corporate Governance

Corporate Governance Report

GRI 2, 3, 405

Corporate governance refers to the entire system for managing and supervising a company. This includes its organization, values, corporate principles and guidelines as well as internal and external control and monitoring mechanisms. Effective and transparent corporate governance ensures that BASF is managed and supervised responsibly with a focus on value creation and sustainability. It fosters the confidence of our investors, the financial markets, our customers and other business partners, employees, other groups affiliated with our company (stakeholders) as well as the public in BASF.

The fundamental elements of BASF SE's corporate governance system are: its two-tier management system, with a transparent and effective separation of company management and supervision between BASF's Board of Executive Directors and the Supervisory Board; the equal representation of shareholders and employee representatives on the Supervisory Board; and the shareholders' rights of coadministration and supervision at the Annual Shareholders' Meeting.

Board of Executive Directors

At a glance

- Responsible for company management and represents BASF SE in business with third parties
- Sets goals and strategic direction
- Strictly separate from the Supervisory Board

Direction and management by the Board of Executive Directors

The Board of Executive Directors is responsible for the management of the company and represents BASF SE in business undertakings with third parties. BASF's Board of Executive Directors is strictly separated from the Supervisory Board, which monitors the Board of Executive Directors' activities and decides on its composition. A member of the Board of Executive Directors cannot simultaneously be a member of the Supervisory Board. As the central duty of company management, the Board of Executive Directors defines the corporate goals and strategic direction of the BASF Group as well as its individual business areas, including the sustainability strategy. In doing so, the Board ensures that the opportunities and risks associated with social and environmental factors for our company as well as the ecological and societal impacts of BASF's activities are systematically identified and evaluated. In addition to long-term economic goals, the corporate strategy appropriately takes environmental and social objectives into account, too. The corporate planning defined on this basis comprises financial and sustainability-related goals.

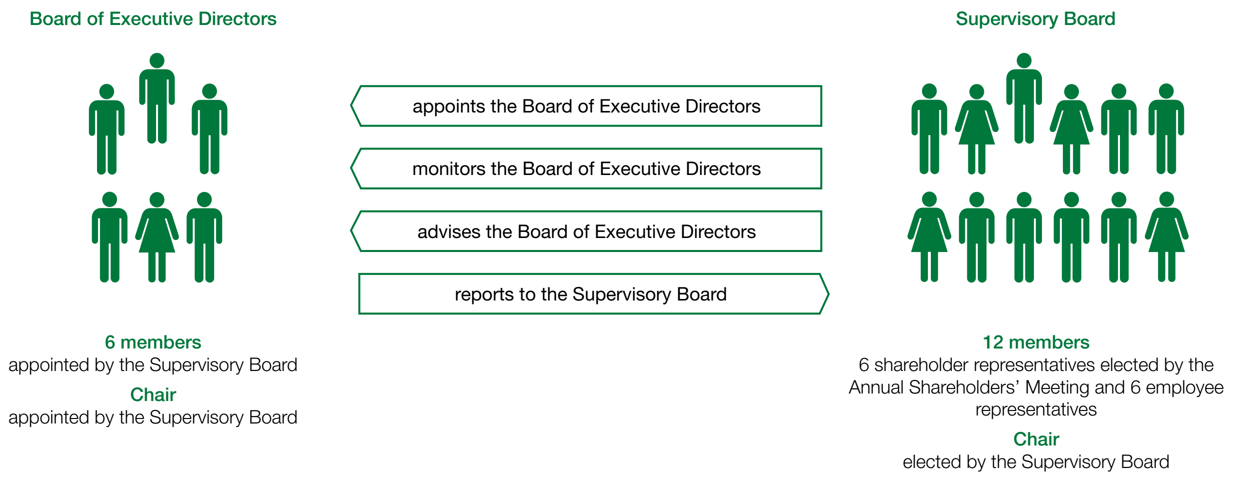
Furthermore, the Board of Executive Directors determines the company's internal organization and decides on the composition of management positions on the levels below the Board. It also manages and monitors BASF Group business by planning and setting the corporate budget, allocating resources and management capacities, monitoring and making decisions on significant individual measures, and supervising operational management.

The Board's actions and decisions are geared toward the company's best interests. It is committed to the goal of sustainably increasing the company's value and developing the company over the long term, taking into account environmental and social goals as well as economic targets. The Board's responsibilities include the preparation of the Consolidated and Separate Financial Statements of BASF SE and reporting on the company's financial and nonfinancial performance as well as half-year and quarterly reporting. Furthermore, it must ensure that the company's activities comply with the applicable legislation and regulatory requirements as well as internal corporate directives (compliance). This includes the establishment of appropriate systems for control, compliance and risk management as well as establishing a company-wide compliance culture with undisputed standards (see page 202).

Decisions that are reserved for the Board as a whole by law, through the Board of Executive Directors' Rules of Procedure or through resolutions adopted by the Board, are made and all important matters of the company are discussed at regularly held Board meetings called by the chair of the Board of Executive Directors. Board decisions are based on detailed information and analyses provided by the business areas and specialist units and, if deemed necessary, by external consultants. The chair of the Board of Executive Directors leads the Board meetings. Board decisions can generally be made via a simple majority. In the case of a tied vote, the chair of the Board of Executive Directors gives the casting vote. However, the chair of the Board of Executive Directors cannot enforce a decision against the Board of Executive Directors' majority vote. The chair of the Board also does not have the right to veto. Outside of matters that are assigned to the entire Board for consultation and decision-making, all members of the Board of Executive Directors are authorized to make decisions individually in their designated areas of responsibility.

The Board of Executive Directors can set up Board committees to consult and decide on individual issues such as proposed material acquisition or divestiture projects or to prepare decisions to be

BASF SE's two-tier management system



made by the entire Board. These must include at least three members of the Board of Executive Directors. For the preparation of important decisions, such as those on acquisitions, divestitures, investments and personnel, the Board has various commissions at the level below the Board. With the support of the specialist units and independently of the affected business area, these committees thoroughly assess the planned measures and evaluate the associated opportunities and risks. Based on this information, they report and make recommendations to the Board.

The Board of Executive Directors informs the Supervisory Board regularly, without delay and comprehensively, of all issues important to the company with regard to planning, business development, risk situation, risk management and compliance. Furthermore, the Board of Executive Directors coordinates the company's strategic orientation with the Supervisory Board.

The Statutes of BASF SE and the Supervisory Board have defined certain transactions that require the Board of Executive Directors to obtain the Supervisory Board's approval prior to their conclusion. Such cases that require approval include the acquisition and disposal of enterprises and parts of enterprises, as well as the issue of bonds or comparable financial instruments. However, this is only necessary if the acquisition or disposal price or the amount of the issue in an individual case exceeds 3% of the equity reported in the most recent approved Consolidated Financial Statements of the BASF Group.

For more information on risk management, see the Forecast report from page 173 onward

The members of the Board of Executive Directors, including their areas of responsibility and memberships in the supervisory bodies of other companies, are listed from page 205 onward.

For more information on the compensation of the Board of Executive Directors, see basf.com/compensationreport

Competence profile, diversity concept and succession planning for the Board of Executive Directors

The Supervisory Board works hand in hand with the Board of Executive Directors to ensure long-term succession planning for the composition of the Board of Executive Directors. BASF aims to fill most Board positions with leaders from within the company. It is the task of the Board of Executive Directors to propose a sufficient number of suitable individuals to the Supervisory Board.

BASF's long-term succession planning is guided by the corporate strategy. It is based on systematic management development characterized by the following:

- Early identification of suitable leaders of different professional backgrounds, nationalities and genders
- Systematic development of leaders through the successful assumption of tasks with increasing responsibility, where possible in different business areas, regions and functions
- Desire to shape strategic and operational decisions and proven success in doing so, as well as leadership skills, especially under challenging business conditions
- Role model function in putting corporate values into practice

The aim is to enable the Supervisory Board to ensure a reasonable level of diversity with respect to education and professional experience, cultural background, international representation, gender and age when appointing members of the Board of Executive Directors. Irrespective of these individual criteria, a holistic approach will determine a person's suitability for appointment to the Board of Executive Directors of BASF SE. Both systematic succession planning and the selection process aim to ensure that the Board of Executive Directors as a whole has the following profile, which serves as a diversity concept:

- Many years of leadership experience in scientific, technical and commercial fields
- International experience based on background and/or professional experience
- At least one female Board member
- A balanced age distribution to ensure the continuity of the Board's work and enable seamless succession planning

The first appointment of members of the Board of Executive Directors is for a term of no more than three years. The standard age limit for members of the Board of Executive Directors is 63. The Supervisory Board determines the number of members on the Board of Executive Directors. It is guided by insights gained by BASF as a company with an integrated leadership culture and is determined by the needs arising from cooperation within the Board of Executive Directors. The Supervisory Board considers six to be an appropriate number of Board members given the current business composition, future responsibilities associated with development and the fundamental organizational structure of the BASF Group.

The current composition of the Board of Executive Directors meets the competence profile and the requirements of the diversity concept in full.

Supervisory Board

At a glance

- Appoints, monitors and advises Board of Executive Directors
- Four Supervisory Board committees
- Composition criteria: professional and personal qualifications, diversity, and independence

Supervision of company management by the Supervisory Board

The Supervisory Board appoints the members of the Board of Executive Directors and supervises and advises the Board of Executive Directors on management issues. It must also be involved in making decisions that are of key importance for the company. This also includes the Board of Executive Directors' consideration of sustainability topics with regard to corporate governance. The Supervisory Board is also responsible for auditing BASF SE's and the Group's Annual Financial Statements. As members of the Supervisory Board may not simultaneously be on the Board of Executive Directors, a high level of independence is already structurally ensured with regard to the supervision of the Board of Executive Directors.

In addition to the SE Regulation, the relevant legal basis for the size and composition of the Supervisory Board is provided by the Statutes of BASF SE and the Agreement Concerning the Involvement of Employees in BASF SE (Employee Participation Agreement). The latter also includes the regulations applicable to BASF for implementing the statutory gender quota for the Supervisory Board. The German Codetermination Act does not apply to BASF SE as a European stock corporation (Societas Europaea, SE).

The Supervisory Board of BASF SE comprises 12 members. Six members are elected by the shareholders at the Annual Shareholders' Meeting via a simple majority. Six members are elected by the BASF Europa Betriebsrat (BASF Works Council Europe), the European employee representation body of the BASF Group. In accordance with the resolution of the Annual Shareholders' Meeting on June 18, 2020, the period of appointment for newly elected members of the Supervisory Board was reduced from five to four years; and the Statutes were amended accordingly. This ensures that the maximum membership duration of 12 years up to which a Supervisory Board member can be classified as independent in accordance with the German Corporate Governance Code corresponds to a total of three election terms.

Meetings of the Supervisory Board and its four committees are called by their respective chairs and independently, at the request of one of their members or the Board of Executive Directors. The shareholder and employee representatives of the Supervisory Board prepare for Supervisory Board meetings in separate preliminary discussions in each case. Resolutions of the Supervisory Board are passed by a simple majority vote of the participating Supervisory Board members. In the event of a tie, the vote of the chair of the Supervisory Board, who must always be a shareholder representative, shall be the casting vote. This resolution process is also applicable for the appointment and dismissal of members of the Board of Executive Directors by the Supervisory Board. Resolutions can, as needed, also be made in writing or through electronic communication outside of the meetings, as long as no Supervisory Board member objects to this form of passing a resolution. The Supervisory Board meets regularly even without the Board of Executive Directors.

The Board of Executive Directors continually informs the Supervisory Board about matters such as the course of business and expected developments, the financial position and results of operations, corporate planning, the implementation of the corporate strategy, including the sustainability strategy, business opportunities and risks, risk and compliance management and the internal control system. The Supervisory Board has embedded the main reporting requirements in an information policy. The chair of the Supervisory Board is in regular contact with the Board of Executive Directors, especially with its chair, outside of meetings as well.

A list of the members of BASF SE's Supervisory Board indicating which members are shareholder or employee representatives and their appointments to the supervisory bodies of other companies can be found from page 207 onward.

For more information on the compensation of the Supervisory Board, see basf.com/compensationreport

The Statutes of BASF SE and the Employee Participation Agreement can be found at basf.com/statutes and basf.com/en/corporategovernance

Personnel Committee

Members

Dr. Kurt Bock* (chair)
Prof. Dr. Stefan Asenkerschbaumer*
Sinischa Horvat*
Michael Vassiliadis

Duties

– Prepares the appointment of members to the Board of Executive Directors by the Supervisory Board as well as the service contracts

* Classified by the Supervisory Board as an "independent" member of the Supervisory Board (see page 197 for the criteria used to determine independence)

to be entered into with members of the Board of Executive Directors
- When making recommendations for appointments to the Board of Executive Directors, considers professional qualifications, international experience and leadership skills as well as long-term succession planning, diversity, and especially the appropriate consideration of women
- Prepares the resolutions made by the Supervisory Board with regard to the system and amount of compensation paid to members of the Board of Executive Directors

Audit Committee

Members

Dame Alison Carnwath DBE* (chair)
Tatjana Diether*
Alessandra Genco*
Michael Vassiliadis

Duties

- Prepares the negotiations and resolutions of the Supervisory Board for the approval of the Financial Statements, the Consolidated Financial Statements and the Management's Reports, including the Nonfinancial Statements and sustainability reporting and discusses the Quarterly Statements and the Half-Year Financial Report with the Board of Executive Directors prior to their publication
- Deals with monitoring the accounting process, the annual audit, including sustainability reporting and its audit, the appropriateness and effectiveness of the internal control system, the risk management system, the internal auditing system and compliance management system as well as compliance issues
- Is responsible for business relations with the company's auditor: prepares the Supervisory Board's proposal to the Annual Shareholders' Meeting regarding the selection of an auditor, monitors the auditor's independence, defines the focus areas of the audit together with the auditor, discusses the audit risk, audit strategy and audit plan with the auditor, negotiates auditing fees, evaluates the quality of the annual audit, and establishes the conditions for the provision of the auditor's nonaudit services; the chair of the Audit Committee regularly discusses this with the auditor outside of meetings as well and reports to the Committee on such discussions; the Audit Committee regularly consults with the auditor, even without the Chief Financial Officer or another member of the Board of Executive Directors
- Deals with follow-up assessments of key acquisition and investment projects
- Is responsible for monitoring the internal process of identifying related party transactions and ensuring adherence to statutory approval and disclosure requirements; grants approval of related party transactions
- Is authorized to request any information that it deems necessary from the auditor or from the Board of Executive Directors and has a direct right to information from the heads of the units of the Corporate Center such as Corporate Audit or Corporate Compliance; can also view all of BASF's business documents and examine these and all other assets belonging to BASF. The Audit Committee can also engage experts such as auditors or lawyers to carry out these inspections

Special expertise in the areas of the annual audit and accounting

The Audit Committee is comprised of two members with special knowledge and experience within the meaning of the German Corporate Governance Code (special expertise) in the areas of accounting and the annual audit. The chair of the Audit Committee, Dame Alison Carnwath DBE, has special expertise in the field of auditing, including sustainability reporting, and accounting expertise due to her studies in economics, her professional activities as an auditor and many years of work on audit committees of publicly listed and nonlisted companies. Alessandra Genco has deep expertise in accounting, including sustainability reporting, due to her studies in economics, her professional experience working for financial institutions and her current role as chief financial officer of a publicly listed international company. Both closely monitor current developments in the sustainability reporting and auditing sector and actively contribute this expertise to the Supervisory Board and Audit Committee.

Nomination Committee

Members

Dr. Kurt Bock* (chair)
Prof. Dr. Stefan Asenkerschbaumer*
Prof. Dr. Thomas Carell*
Dame Alison Carnwath DBE*
Liming Chen*
Alessandra Genco*

Duties

- Identifies suitable individuals for the Supervisory Board based on objectives for the composition decided on by the Supervisory Board
- Prepares the recommendations made by the Supervisory Board for the election of Supervisory Board members representing the shareholders by the Annual Shareholders' Meeting

Strategy Committee

Members

Dr. Kurt Bock* (chair)
Prof. Dr. Stefan Asenkerschbaumer*
Dame Alison Carnwath DBE*
Tatjana Diether*
Sinischa Horvat*
Michael Vassiliadis

* Classified by the Supervisory Board as an "independent" member of the Supervisory Board (see page 197 for the criteria used to determine independence)

Duties

– Handles the further development of the company's strategy
– Prepares resolutions of the Supervisory Board on the company's major acquisitions and divestitures

The Supervisory Board has not established a separate Sustainability Committee. The sustainability topic is of such pivotal importance to BASF with its economic success, environment and social-related aspects that the entire Supervisory Board regularly discusses it in detail as a cross-cutting issue. This also applies to the significant issue of reducing CO_2 emissions and the targeted conversion of business activities to emission-free energy supply and production processes with a lower emission rate.

Meetings and meeting attendance

In the 2023 business year, meetings were held as follows:

– The Supervisory Board met five times.
– The Personnel Committee met four times.
– The Audit Committee met five times.
– The Nomination Committee met once.
– The Strategy Committee met once.

With the exception of one meeting, at which two members were absent, all respective members attended all meetings of the Supervisory Board. With the exception of one meeting of the Audit Committee, at which one member was absent, and the meeting of the Strategy Committee, at which one member was absent, all respective members attended all meetings of the Supervisory Board's committees. During the 2023 business year, the meetings of the Supervisory Board and its committees were held almost entirely as in-person meetings with the additional option of virtual attendance via electronic communication. Only the Audit Committee held one of its five meetings as completely virtual meetings.

For more information on the Supervisory Board's activities and resolutions in the 2023 business year, see the Report of the Supervisory Board from page 209 onward

For an overview of meeting attendance, see basf.com/supervisoryboard/meetings

The Rules of Procedure for the Supervisory Board and its committees can be found at basf.com/supervisoryboard

Competence profile, diversity concept and objectives for the composition of the Supervisory Board

One important concern of good corporate governance is to ensure that seats on the responsible corporate bodies, the Board of Executive Directors and the Supervisory Board are appropriately filled. In December 2017, the Supervisory Board agreed for the first time on objectives for the composition, the competence profile and the diversity concept of the Supervisory Board. These objectives and the competence profile have since been continuously updated in the implementation of legal requirements and further developed, taking into account the recommendations of the German Corporate Governance Code. The guiding principle for the composition of the Supervisory Board is to ensure qualified supervision and guidance for the Board of Executive Directors of BASF SE. For the election of shareholder representatives to the Supervisory Board, individuals shall only be nominated to the Annual Shareholders' Meeting who can, based on their professional knowledge and experience, integrity, commitment, independence and character, successfully perform the work of a supervisory board member at an international chemical company.

Competence profile

The following requirements and objectives (as amended in December 2022) are considered essential to the composition of the Supervisory Board as a collective body:

– Leadership experience in managing companies, associations and networks
– Members' collective knowledge of the chemical sector and the related value chains
– Appropriate knowledge within the body as a whole of finance, accounting, financial reporting, risk management, law and compliance
– Appropriate expertise within the body as a whole on sustainability topics that are of key importance for BASF
– At least one member with special knowledge and experience (special expertise) in accounting, including sustainability reporting
– At least one member with special knowledge and experience (special expertise) in the annual audit, including the audit of sustainability reporting
– At least one member with in-depth experience in innovation, research and development, and technology
– At least one member with in-depth experience in the areas of digitalization, information technology, business models and start-ups
– At least one member with in-depth experience in the areas of human resources, society, communications and the media
– Specialist knowledge and experience in sectors outside of the chemical industry

The status of implementation of the Supervisory Board's competence profile is shown in the following qualifications matrix on page 197.

For more information on the Supervisory Board's competence profile, see basf.com/competence-profile/supervisoryboard

Diversity concept

The Supervisory Board strives to achieve a reasonable level of diversity with respect to character, gender, international representation, professional background, specialist knowledge and experience as well as age distribution. It takes the following composition criteria into account:

– At least 30% women and 30% men
– At least 30% of members have international experience based on their background or professional experience

* Classified by the Supervisory Board as an "independent" member of the Supervisory Board (see page 197 for the criteria used to determine independence)

The Supervisory Board's competence profile[1]

	Independence in accordance with GCGC 2022	Leadership experience in managing companies, associations and networks	Chemical sector and related value chains	Finance, accounting, financial reporting, risk management, law and compliance	Sustainability	Accounting and auditing, including sustainability reporting	Innovation, research and development and technology	Digitalization, IT, business models and startups	Human resources, society, communications and the media	Economic sectors other than the chemical industry
Dr. Kurt Bock[SR]	Yes	■	■	■	■	■		■	■	■
Prof. Dr. Stefan Asenkerschbaumer[SR]	Yes	■	■	■	■	■		■	■	■
Sinischa Horvat	Yes	■	■		■		■	■	■	
Prof. Dr. Thomas Carell [SR]	Yes		■		■		■	■	■	■
Dame Alison Carnwath DBE [SR][2]	Yes	■	■	■	■	■		■	■	■
Liming Chen[SR]	Yes	■	■		■		■	■	■	■
Tatjana Diether[ER]	Yes	■	■			■	■		■	
Alessandra Genco[SR][3]	Yes	■		■	■	■	■	■	■	■
André Matta[ER]	Yes	■	■					■	■	
Natalie Mühlenfeld[ER]	Yes	■	■	■					■	■
Michael Vassiliadis[ER]	No	■	■	■	■	■		■	■	■
Peter Zaman[ER]	Yes		■						■	

1 Based on a self-assessment by the Supervisory Board and taking into account the individual assessment of each of its members
2 Member with special knowledge of and experience in auditing, including sustainability auditing
3 Member with special knowledge of and experience in accounting and reporting, including sustainability reporting
SR = shareholder representative
ER = employee representative

– At least 50% of members have different educational backgrounds and professional experience
– At least 30% under the age of 60

Further composition objectives

– **Character and integrity:** Members of the Supervisory Board must be personally reliable and have the knowledge and experience required to diligently and independently perform the work of a supervisory board member.

– **Availability:** Each member of the Supervisory Board ensures that they invest the time needed to properly perform their role as a member of the Supervisory Board of BASF SE. The statutory limits on appointments and the recommendations of the German Corporate Governance Code must be complied with when accepting further appointments.

– **Age limit and period of membership:** Persons who have reached the age of 72 on the day of election by the Annual Shareholders' Meeting should generally not be nominated for election. Membership on the Supervisory Board should generally not exceed three regular statutory periods in office, which corresponds to 12 years.

– **Independence:** To ensure the independent monitoring and consultation of the Board of Executive Directors, the Supervisory Board should have an appropriate number of independent members on the board as a whole and an appropriate number of independent shareholder representatives. The Supervisory Board deems this to be the case if more than half of the shareholder representatives and at least eight members of the Supervisory Board as a whole can be considered independent. The Supervisory Board's assessment of independence is based on the assessment criteria in the current respective version of the German Corporate Governance Code. Among other things, this means that members of the Supervisory Board are no longer considered independent if they have been a member of the board for 12 years or longer. The Supervisory Board has additionally defined the following principles to clarify the meaning of independence: The independence of employee representatives is not compromised by their role as an employee representative or employment by BASF SE or a Group company. Prior membership of the Board of Executive Directors of BASF SE does not preclude independence following the expiry of the statutory cooling-off period of two years. Material transactions between a Supervisory Board member or a related party or undertaking of the Supervisory Board member on the one hand, and BASF SE or a BASF Group company on the other, exclude a member of the Supervisory Board from being qualified as independent. A material transaction is defined as one or more transactions in a single calendar year with a total volume of 1% or more of the sales of the companies involved in each case. In the same way, if a Supervisory Board member or a related party or undertaking of a Supervisory Board member has a personal service or consulting agreement with BASF SE or one of its Group companies with an annual compensation of over 50% of the Supervisory Board compensation, they do not qualify as independent. Furthermore, if a Supervisory Board member or a related party of a Supervisory Board member holds more than 20% of the shares in a company in which BASF SE is indirectly or directly the majority shareholder, the necessary independence is also not met.

Status of implementation

According to the Supervisory Board's own assessment, its current composition meets all of the requirements of the competence profile: 11 of the 12 current members, of which six are shareholder representatives and five are employee representatives, are considered independent based on the above criteria. Only the employee representative Michael Vassiliadis is no longer considered independent as he has been a member of the Supervisory Board since August 2004, and therefore for over 12 years.

For more information on the statutory minimum quotas for the number of women and men on the Supervisory Board, see the section on this page "Commitments to promote the participation of women in leadership positions at BASF SE"

The independent Supervisory Board members are named under Management and Supervisory Boards from page 207 onward.

Compensation of the Board of Executive Directors and the Supervisory Board

The Compensation Report in accordance with section 162 of the German Stock Corporation Act (AktG) and the assurance statement of the substantive and formal audit issued by the auditor, the effective compensation system for the Board of Executive Directors in accordance with section 87a AktG, as well as the most recent resolution of the Annual Shareholders' Meeting on the compensation of the Supervisory Board in accordance with section 113(3) AktG have been made publicly available on the BASF website at basf.com/compensationreport.

Commitments to promote the participation of women in leadership positions at BASF SE

The supervisory board of a publicly listed European stock corporation (SE) that is composed of the same number of shareholder and employee representatives must, according to section 17(2) of the SE Implementation Act, consist of at least 30% women and 30% men. Since the 2018 Annual Shareholders' Meeting, the Supervisory Board of BASF SE comprises four women, of whom two are shareholder representatives and two are employee representatives, and eight men. The Supervisory Board's composition meets the statutory requirements.

Following the entry into force of the Act to Supplement and Amend the Regulations on Equal Participation of Women and Men in Management Positions in the Private and Public Sector (FüPoG) on August 12, 2021, if the management board of a listed company consists of more than three persons, at least one woman and one man must be members of the management board (section 76 (3a) AktG). BASF met this requirement in the reporting year. With Dr. Melanie Maas-Brunner, there was one female Board member. With six members of the Board of Executive Directors, this corresponds to a 16.7 percentage of women.

In compliance with legal requirements of the FüPoG, the Board of Executive Directors decided on target figures for the proportion of women at the two management levels below the Board of Executive Directors of BASF SE. For the target-attainment period from January 1, 2022, to December 31, 2026, the Board of Executive Directors resolved as targets the quotas achieved as of December 31, 2021: 20.0% for the proportion of women in the management level directly below the Board and 23.2% for the level below that.

BASF views the further development and promotion of women as a global duty independent of individual Group companies. For this purpose, it has committed to ambitious targets on a worldwide scale. The new target is to increase the proportion of women in leadership positions worldwide to 30% by 2030. BASF will continue to work systematically on expanding the percentage of women in its leadership team. To achieve this, global measures will be implemented and enhanced continuously.

For more information on women in leadership positions in the BASF Group and on the inclusion of diversity, including promotion of women, see the Combined Management's Report from page 138 onward

For more information on women in leadership positions in the BASF Group in Germany, see basf.com/diversity_inclusion

The November 2015 Employee Participation Agreement relevant to the composition of the Supervisory Board is available at basf.com/en/corporategovernance

Shareholders' rights

At a glance

- Shareholders exercise rights of coadministration and supervision at Annual Shareholders' Meeting
- One share, one vote

Shareholders exercise their rights of coadministration and supervision at the Annual Shareholders' Meeting, which usually takes place within the first five months of the business year. The Annual Shareholders' Meeting elects half of the members of the Supervisory Board (shareholder representatives) and, in particular, resolves on the formal discharge of the Board of Executive Directors and the Supervisory Board, the distribution of profits, capital measures, the authorization of share buybacks, changes to the Statutes and the selection of the auditor.

Each BASF SE share represents one vote. All of BASF SE's shares are registered shares. Shareholders are obliged to have themselves entered with their shares into the company share register and to provide the information necessary for registration in the share register according to the German Stock Corporation Act. There are no registration restrictions and there is no limit to the number of shares that can be registered to one shareholder. Only the persons listed in the share register are entitled to vote as shareholders. Listed shareholders may exercise their voting rights at the Annual

Shareholders' Meeting either personally, through a representative of their choice or through a company-appointed proxy authorized by the shareholders to vote according to their instructions. Individual instructions are only forwarded to the company on the morning of the day of the Annual Shareholders' Meeting. Voting rights can be exercised according to shareholders' instructions by company-appointed proxies until the beginning of the voting process during the Annual Shareholders' Meeting. There are neither voting caps to limit the number of votes a shareholder may cast nor special voting rights. BASF has fully implemented the principle of "one share, one vote." All shareholders entered in the share register are entitled to participate in the Annual Shareholders' Meetings, to have their say concerning any item on the agenda and to request information about company issues insofar as this is necessary to make an informed judgment about the item on the agenda under discussion. Registered shareholders are also entitled to file motions pertaining to proposals for resolutions made by the Board of Executive Directors and Supervisory Board at the Annual Shareholders' Meeting and to contest resolutions of the meeting and have them evaluated for their lawfulness in court. Shareholders who hold at least €500,000 of the company's share capital, a quota corresponding to 390,625 shares, are furthermore entitled to request that additional items be added to the agenda of the Annual Shareholders' Meeting.

Following the COVID-19 pandemic, the 2023 Annual Shareholders' Meeting was held again for the first time as an in-person meeting, i.e., with the shareholders physically present at the meeting venue.

The 2023 Annual Shareholders' Meeting resolved a series of **amendments to the Statutes** in connection with the format of the Annual Shareholders' Meeting and the participation options. Accordingly, the Board of Executive Directors is authorized to hold the Annual Shareholders' Meeting or an Extraordinary Shareholders' Meeting as a virtual meeting without the physical presence of shareholders or their proxies at the venue of the meeting. This authorization for a period of two years is valid until May 8, 2025.

In a further resolution amending the Statutes, the 2023 Annual Shareholders' Meeting authorized the Board of Executive Directors to provide for shareholders to participate in the Annual Shareholders' Meeting or an Extraordinary Shareholders' Meeting without being present at the venue and without a proxy and to exercise all or some of their rights in whole or in part by means of electronic communication (hybrid Annual Shareholders' Meeting or Extraordinary Shareholders' Meeting). This means that shareholders can also be enabled to participate in an in-person Annual Shareholders' Meeting or Extraordinary Shareholders' Meeting online in the future.

The third resolution amending the Statutes relates to enabling members of the Supervisory Board to participate in the Annual Shareholders' Meeting or an Extraordinary Shareholders' Meeting by means of video and audio transmission in cases where they would not be able to be physically present at the venue of the meeting or only with considerable effort. This also applies if the Annual Shareholders' Meeting or an Extraordinary Shareholders' Meeting is held as a purely virtual event.

The current Statutes of BASF can be found at basf.com/en/corporategovernance

Implementation of the German Corporate Governance Code (GCGC)

BASF advocates responsible corporate governance that focuses on sustainably increasing the value of the company. BASF SE follows all of the recommendations of the German Corporate Governance Code in the version dated April 28, 2022 (Code 2022), the version in force at the time of submitting the Declaration of Conformity on December 20, 2023.In the same manner, BASF follows almost all of the nonobligatory suggestions of the German Corporate Governance Code. Only suggestion A.7, whereby the duration of the Annual Shareholders' Meeting should not exceed six hours, was not complied with by BASF in 2023 due to the large number of questions asked at the Annual Shareholders' Meeting.

The joint Declaration of Conformity 2023 by the Board of Executive Directors and Supervisory Board of BASF SE is rendered on page 217

For more information on the Declaration of Conformity 2023, the implementation of the Code's suggestions and the German Corporate Governance Code, see basf.com/en/corporategovernance

Disclosures according to sections 289a and 315a of the German Commercial Code (HGB) and explanatory report of the Board of Executive Directors according to section 176(1) sentence 1 of the German Stock Corporation Act (AktG)

Share capital and shares

As of December 31, 2023, BASF SE's subscribed capital was €1,142,428,369.92 after the redemption of 1,332,765 repurchased own company shares in July 2023 (December 31, 2022: €1,144,134,309.12), divided into 892,522,164 registered shares with no par value (December 31, 2022: 893,854,929). Each share entitles the holder to one vote at the Annual Shareholders' Meeting. Restrictions on the right to vote or transfer shares do not exist. The same rights and duties apply to all shares. According to the Statutes, shareholders are not entitled to receive share certificates (issuance of share certificates). There are neither different classes of shares nor shares with preferential voting rights.

Appointment and dismissal of members of the Board of Executive Directors

The appointment and dismissal of members of the Board of Executive Directors is legally governed by the regulations in Article 39 of the SE Council Regulation, section 16 of the SE Implementation Act and sections 84 and 85 AktG as well as Article 7 of the Statutes of BASF SE. Accordingly, the Supervisory Board determines the number of members of the Board of Executive Directors (at least two), appoints the members of the Board of Executive Directors and can nominate a chair as well as one or more vice chairs. The members of the Board of Executive Directors are appointed for a maximum of five years. The maximum initial term of appointment is three years. Reappointments are permissible. The Supervisory Board can dismiss a member of the Board of Executive Directors if there is serious cause to do so. Serious cause includes, in particular, a gross breach of the duties pertaining to the Board of Executive Directors and a vote of no confidence by the Annual Shareholders' Meeting. The Supervisory Board decides on appointments and dismissals according to its own best judgment.

Amendments to the Statutes

According to Article 59(1) of the SE Council Regulation, amendments to the Statutes of BASF SE require a resolution of the Annual Shareholders' Meeting adopted with at least a two-thirds majority of the votes cast, provided that the legal provisions applicable to German stock corporations under the German Stock Corporation Act do not stipulate or allow for larger majority requirements. In the case of amendments to the Statutes, section 179(2) of the German Stock Corporation Act requires a majority of at least three-quarters of the subscribed capital represented. Pursuant to Article 12(6) of the Statutes of BASF SE, the Supervisory Board is authorized to resolve on amendments to the Statutes that merely concern their wording. This applies in particular to the adjustment of the share capital and the number of shares after the redemption of repurchased BASF shares and after an issue of shares from authorized capital.

Authorized capital

By way of a resolution of the Annual Shareholders' Meeting on May 3, 2019, the Board of Executive Directors of BASF SE is authorized, with the consent of the Supervisory Board, to increase, until May 2, 2024, on a one-off basis or in portions on a number of occasions, the company's share capital by a total of up to €470 million by issuing new shares against contributions in cash or in kind (authorized capital). A right to subscribe to the new shares shall be granted to shareholders. This can also be achieved by a credit institution acquiring the new shares with the obligation to offer these to shareholders (indirect subscription right). The Board of Executive Directors is authorized to exclude the statutory subscription right of shareholders to a maximum amount of a total of 10% of share capital in certain exceptional cases that are defined in Article 5(8) of the BASF SE Statutes. This applies in particular if, for capital increases in return for cash contributions, the issue price of the new shares is not substantially lower than the stock market price of BASF shares and the total number of shares issued under this authorization does not exceed 10% of the shares currently in issue or, in eligible individual cases, to acquire companies or shareholdings in companies in exchange for surrendering BASF shares.

Conditional capital

By way of a resolution of the Annual Shareholders' Meeting on April 29, 2022, the share capital was increased conditionally by up to €117,565,184 by issuing up to 91,847,800 new shares. The contingent capital increase serves to grant shares to the holders of convertible bonds or warrants attached to bonds with warrants of BASF SE or a subsidiary, which the Board of Executive Directors is authorized to issue up to April 28, 2027, by way of a resolution of the Annual Shareholders' Meeting on April 29, 2022. A right to subscribe to the bonds shall be granted to shareholders. The Board of Executive Directors is authorized to exclude the shareholders' subscription right in certain exceptional cases – as defined in Article 5(9) of the BASF SE Statutes.

Authorization of share buybacks

At the Annual Shareholders' Meeting on April 29, 2022, the Board of Executive Directors was authorized to purchase up to 10% of the BASF shares in issue at the time of the resolution (10% of the company's share capital) until April 28, 2027. At the discretion of the Board of Executive Directors, the shares can be bought back via the stock exchange, via a public purchase offer addressed to all shareholders, via a public request to shareholders for the submission of offers to sell or by other means in accordance with section 53a AktG. The Board of Executive Directors is authorized to sell the repurchased company shares again (a) on a stock exchange, (b) through an offer directed to all shareholders, (c) with approval of the Supervisory Board, to third parties by means other than via the stock exchange or through an offer addressed to all shareholders in return for cash payment at a price that is not significantly lower than the stock exchange price of a BASF share at the time of the sale, or (d) with approval of the Supervisory Board, to third parties for contributions in kind, particularly in connection with the acquisition of companies, parts of companies or shares in companies (including increases in shareholdings) or within the scope of corporate mergers. In the cases specified under (c) and (d), the shareholders' subscription right is excluded. The Board of Executive Directors is furthermore authorized to retire the shares bought back and to reduce the share capital by the proportion of the share capital accounted for by the retired shares.

Share buyback program 2022/2023

Based on the authorizations granted by the Annual Shareholders' Meetings on May 12, 2017 and April 29, 2022, altogether 25,956,530 treasury shares were acquired in the period from January 11, 2022 to February 23, 2023, corresponding to 2.8% of the share capital on announcement of the commencement of the share buyback program on January 11, 2022. The purchase price for these own shares totaled around €1.4 billion. The shares were acquired by the banks commissioned by BASF SE via the stock exchange in electronic trading on the Frankfurt Stock Exchange (Xetra). On February 24, 2023, the Board of Executive Directors announced that it would terminate the share buyback program ahead of schedule in view of the profound changes in the global economy and in line with the company's priorities for the use of cash. All own shares repurchased in connection with this share buyback program in 2022 and 2023 were canceled, and the company's share capital was reduced pro rata by the amount attributable to the canceled shares.

Rights during a change of control

Bonds issued by BASF SE and its subsidiaries grant the bearer the right to request early repayment of the bonds at nominal value if, after the date of issue of the bond, one person – or several persons acting together – hold or acquire a volume of BASF SE shares that corresponds to more than 50% of the voting rights (change of control as a result of a takeover bid) and one of the rating agencies named in the bond's terms and conditions withdraws its rating of BASF SE or the bond or reduces it to a noninvestment grade rating within 120 days of the change of control event.

The compensation system for the Board of Executive Directors, which was approved by the Annual Shareholders' Meeting on June 18, 2020, does not provide for any special compensation related to a change of control should a member of the Board of Executive Directors unilaterally terminate their contract prematurely in such a case. The general rule for severance payments granted for premature terminations of appointments to the Board of Executive Directors applies, which states that the maximum severance payment may not exceed the amount of two years' compensation;

however, this may not exceed the compensation for the remaining period of the contract.

By contrast, employees of BASF SE and its subsidiaries who are classed as senior executives will still receive a severance payment if their contract of employment is terminated by BASF within 18 months of a change of control event, provided the employee has not given cause for the termination. The employee whose service contract has been terminated in such a case will receive a maximum severance payment of 1.5 times the annual salary (fixed component) depending on the number of months that have passed since the change of control event. A change of control is assumed when a shareholder informs BASF SE of a shareholding of at least 25% of the BASF shares or the increase of such a holding. The remaining specifications stipulated in sections 289a and 315a HGB refer to situations that are not applicable to BASF SE.

For more information on bonds issued by BASF SE, see basf.com/bonds

Directors' and officers' liability insurance

BASF SE has taken out liability insurance that covers the activities of members of the Board of Executive Directors and the Supervisory Board (directors' and officers' liability insurance). This insurance policy provides for the level of deductibles of 10% of damages up to 1.5 times the fixed annual compensation for the Board of Executive Directors as prescribed by section 93(2) sentence 3 AktG.

Share ownership by members of the Board of Executive Directors and the Supervisory Board

No member of the Board of Executive Directors or the Supervisory Board owns shares in BASF SE and related options or other derivatives that account for 1% or more of the share capital. Furthermore, the total volume of BASF SE shares and related financial instruments held by all members of the Board of Executive Directors and the Supervisory Board accounts for less than 1% of the shares issued by the company.

For more information on share dealings of members of the Board of Executive Directors and the Supervisory Board, see basf.com/en/directorsdealings

Share dealings of the Board of Executive Directors and Supervisory Board (Obligatory reportable and publishable directors' dealings under Article 19(1) of the E.U. Market Abuse Regulation 596/2014 (MAR))

As legally stipulated by Article 19(1) MAR, all members of the Board of Executive Directors and the Supervisory Board as well as close family relatives are required to disclose the purchase or sale of financial instruments of BASF SE (for example, shares, bonds, options, forward contracts, swaps) to the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht) and to the company if transactions within the calendar year exceed the threshold of €20,000. In 2023, a total of 11 purchases by members of the Board of Executive Directors and the Supervisory Board of BASF SE and members of their families subject to disclosure were reported as directors' dealings, involving between 800 and 3,400 BASF shares or BASF ADRs (American Depositary Receipts). The price per share was between €45.52 and €48.76. The volume of the individual transactions was between €34,134.94 and €154,779. The disclosed securities transactions are published on BASF SE's website.

For more information on securities transactions reported in 2023, see basf.com/en/directorsdealings

Information on the auditor

The Annual Shareholders' Meeting of April 27, 2023, once again elected KPMG AG Wirtschaftsprüfungsgesellschaft as the auditor of the BASF Group Consolidated Financial Statements and Separate Financial Statements of BASF SE for the 2023 business year, as well as the corresponding Management's Reports, on the recommendation of the Supervisory Board. KPMG member firms also audit the majority of BASF Group companies included in the Consolidated Financial Statements. KPMG has been the continuous auditor of BASF SE since the 2006 Financial Statements. A public call to tender was issued in 2015 to all auditors for the audit of the 2016 Consolidated and Separate Financial Statements, in line with the E.U. Regulation 537/2014 of April 16, 2014 (E.U. Statutory Audit Regulation). Based on the results of the tendering process, the Audit Committee recommended to the Supervisory Board that it once again propose KPMG for election. Owing to the German Financial Market Integrity Strengthening Act (FISG), KPMG was proposed for election by the Annual Shareholders' Meeting as BASF's auditor for the last time for the 2023 business year. Dr. Axel Thümler has been the auditor responsible for the Consolidated Financial Statements since auditing the 2022 Financial Statements. Since the 2020 Financial Statements, the auditor responsible for the Separate Financial Statements has been Dr. Stephan Kaiser. The total fee paid to KPMG and auditing firms of the KPMG group by BASF SE and other BASF Group companies for nonaudit services, in addition to the auditing fee, was €1.9 million in 2023. This represents around 7.0% of the fees for auditing the financial statements.

During its meeting on October 20, 2022, BASF SE's Supervisory Board, acting on the recommendation of the Audit Committee and after conducting a tendering process in line with the E.U. Statutory Audit Regulation, resolved to propose to the Annual Shareholders' Meeting in 2024 that Deloitte GmbH Wirtschaftsprüfungsgesellschaft be elected as auditor for BASF SE's Annual Financial Statements and Consolidated Financial Statements for the 2024 business year. It is legally required to change the auditor starting from the 2024 business year as KPMG will reach the maximum period for annual audits shortened by the Financial Market Integrity Strengthening Act when auditing the 2023 Financial Statements. The decision was preceded by a public and discrimination-free tendering process for the selection of a new auditor in line with the relevant provisions of the E.U. Statutory Audit Regulation. The selection process was conducted at an early stage in order to give the new auditor enough time to complete nonauditing services, in this way ensuring its independence and a seamless transition.

For more information, see Note 31 on page 315

Compliance

GRI 2, 3, 205, 206, 403, 406, 418

Our Group-wide Compliance Program aims to ensure adherence to legal regulations, the company's internal guidelines and ethical business practices. Our Code of Conduct firmly embeds these mandatory standards into our employees' day-to-day business. Members of the Board of Executive Directors are also expressly obligated to follow these principles.

Compliance Program and Code of Conduct

At a glance

>122,000
Participants in compliance training

64
Internal audits on adherence to our compliance standards

- Code of Conduct as the core of our Compliance Program
- Systematic further development of our compliance management system

We Care
- Our Code of Conduct
- How We Make Decisions
- We Always Speak Up
- We Lead Integrity

We Earn Trust
- Anti-Corruption
- Trade Control
- Anti-Money Laundering

We Play Fair
- Antitrust Laws
- Gifts and Entertainment
- Conflicts of Interest

We Respect
- Human Rights, Labor and Social Standards
- Environmental Protection, Health and Safety

We Protect
- Sensitive Company Information
- Personal Data
- Digital Responsibility
- Company Property
- Accurate Books and Records

BASF's Compliance Program is based on our corporate values and voluntary commitments, as well as international standards. It describes our commitment to responsible conduct and expectations around how all BASF employees interact with business partners, officials, coworkers and the community. At the core of our Compliance Program is the global, standardized **Code of Conduct**. All employees and leaders are obligated to adhere to its guidelines, which cover topics ranging from corruption and antitrust laws to human rights, labor and social standards, conflicts of interest and trade control, and protection of data privacy.

The online version of our Code of Conduct is aimed at our employees and also offers user-friendly features such as case studies, FAQs and additional references. We provide our employees worldwide with up-to-date content such as videos, links to specialist units and guidelines as well as direct contact to subject specialists on the internal online platform and the corresponding app.

Other binding governance documents (policies, corporate requirements) are provided on an internal digital platform that offers our employees an advanced search function and context-based links to further information. The managing directors of BASF Group companies can find important information and assistance on ensuring compliance in their Group companies on an intranet page set up especially for them.

Abiding by compliance standards is the foundation of responsible leadership. This has also been embedded in our corporate values. We are convinced that compliance with these standards will play a key role in securing our company's long-term success. Our efforts are principally aimed at preventing violations from the outset.

We perform a **systematic risk analysis** to identify and assess material risks of compliance violations, including corruption. This is conducted at divisional and Group company level. The regular compliance audits performed by the Corporate Audit department are another source of information for the systematic identification of risks, which are documented in the relevant risk or audit report. The same applies to specific risk minimization measures as well as the time frame for their implementation.

One key element in violation prevention is **compulsory training and workshops** held as classroom or online courses. Within a prescribed time frame, all employees are required to take part in basic training, refresher courses and special tutorials dealing with, for example, antitrust legislation, taxes or trade control regulations. Course materials and formats are constantly updated, taking into account the specific risks of individual target groups and business areas. In 2023, employees around the world were asked to test and refresh their knowledge in a new interactive online training course. More than 88,700 employees completed this roughly 40-minute-long refresher course. Additionally, more than 33,600 participants worldwide received over 37,000 hours of compliance training in the reporting year.

For more information on the BASF Code of Conduct, see basf.com/code-of-conduct

Compliance culture at BASF

For corporate compliance to be a success, there must be an active culture of living these values and commitments within the company. The **principles embedded** in our Code of Conduct are established and recognized in our day-to-day business. We expect all employees to act in line with these principles. Our leaders play a key role here – they serve as an example of and communicate our values and culture both internally and externally. That is why special workshops on integrity as a leadership task were again held in 2023 for newly appointed senior executives.

Monitoring adherence to our compliance principles

BASF's Chief Compliance Officer (CCO) reports directly to the Chairman of the Board of Executive Directors and manages the further development of our global compliance organization and our Compliance Management System. The CCO is supported in this task by the Corporate Compliance department and more than 100 compliance officers and representatives worldwide in the regions and countries as well as in the operating divisions, service units and in the Corporate Center. Material compliance topics are regularly discussed in the compliance committees established at global and regional level. The compliance organization reports to the Supervisory Board's Audit Committee in at least one of its meetings each year on the status of the Compliance Program as well as any major developments. In the event of significant incidents, the Audit Committee is immediately informed by the Board of Executive Directors.

We particularly encourage our employees to actively and promptly seek guidance if in doubt. They can consult their supervisors, specialist departments, such as the Legal department, and the compliance officers and representatives of the company. The internal platform and the corresponding app also help employees to access advice by enabling direct contact. In addition, our employees can contact our compliance hotline – including anonymously – to report potential violations of laws or company guidelines. An independent external company has been contracted to manage this global hotline so that reported cases are systematically recorded and processed worldwide in a single, uniform system. The central point of contact is a website that informs all employees worldwide about the hotline and the grievance procedure in their national language. In addition to local phone numbers, the website also offers an online contact option, which is available via PC or smartphone. The website is also available to the public. Each concern is documented according to specific criteria, properly investigated in line with standard internal procedures and answered as quickly as possible. The outcome of the investigation as well as any measures taken are documented accordingly and included in internal reports.

In 2023, 643 reports were received by our external hotlines (2022: 453). Our updated training materials and the option to contact us online have contributed to the increased use of our hotline. The information received related to all categories of our Code of Conduct, including respect in the workplace, corruption, handling of company property and environmental, health and safety issues. We carefully investigated all cases of suspected misconduct that came to our attention and, when necessary, took countermeasures on a case-by-case basis. These included, for example, improved control mechanisms, additional informational and training measures, clarification and expansion of the relevant internal regulations, as well as disciplinary measures as appropriate. Most of the justified cases related to violations of our principles on respect in the workplace and personal misconduct in connection with the protection of company property or inappropriate handling of conflicts of interests. In such isolated cases, we took disciplinary measures in accordance with uniform internal standards and also pursued claims for damages where there were sufficient prospects of success. In 2023, violations of our Code of Conduct led to termination of employment in a total of 48 cases (2022: 34). This relates to diverse employee groups, including executives.

BASF's **Corporate Audit department** monitors adherence to compliance principles, covering all areas in which compliance violations could occur. It checks that employees uphold regulations and make sure that the established processes, procedures and monitoring tools are appropriate and sufficient to minimize potential risks or preclude violations in the first place. In 2023, 64 audits of this kind were performed Group-wide (2022: 47). Our compliance management system itself is also regularly audited by the internal Corporate Audit department, most recently in December 2022. Overall, the audit results speak for the effectiveness of the compliance management system. Building on our internal Compliance Management System (CMS) policy made available in September 2022, we stipulated additional supplementary guidelines in 2023 to describe the principles, core processes and roles in our system in a dedicated manner. A particular focus of our compliance activities is to draw attention to the increasingly stringent legal regulations, such as data protection or the German Supply Chain Due Diligence Act (see page 156), and to further develop our internal systems accordingly.

We monitor our business partners in sales for potential compliance risks based on the **global Guideline on Business Partner Due Diligence** using a checklist, a questionnaire and an internet-based analysis. The results are then documented. If business partners are not prepared to answer the questionnaire, we do not enter into a business relationship with them. A dedicated global Supplier Code of Conduct applies to our suppliers, which covers compliance with environmental, social and corporate governance standards, among other requirements. As part of our trade control processes, we also check whether persons, companies or organizations appear on sanction lists due to suspicious or illegal activities and whether there are business processes with business partners from or in countries under embargo. One focus of our activities in 2023 was on the continuous monitoring and implementation of the dynamically evolving sanctions law requirements in light of the war in Ukraine.

We support the United Nations' Guiding Principles on Business and Human Rights and are constantly working to enhance our internal guidelines and processes in keeping with these principles. For example, there is an internal **guideline to respect international labor and social standards** that is applicable throughout the Group. Outside of our company, too, we support respect for human rights and the fight against corruption. We are a founding member of the United Nations Global Compact. As a member of Transparency International Deutschland and the Partnering Against Corruption Initiative (PACI) of the World Economic Forum, we assist in the implementation of these organizations' objectives.

We are committed to adhering to uniformly high standards and integrity regarding tax-related issues, as embedded in BASF's Code of Conduct and corporate values. To aid in the achievement of the U.N. SDGs and to meet our own standards for the creation of economic and social value, we contribute to public finances in accordance with legal requirements and our corporate values. In 2020, we developed and published the BASF tax principles, which are binding for all Group entities.

For more information on the Supplier Code of Conduct and supplier assessments, see page 159 onward

For more information on the Code of Conduct, see basf.com/code-of-conduct

For more information on human rights and labor and social standards, see basf.com/human_rights

For more information on tax principles, see basf.com/en/corporategovernance

Management and Supervisory Boards

GRI 2

Board of Executive Directors 2023

There were six members on the Board of Executive Directors of BASF SE as of December 31, 2023. On March 1, 2023, Dr. Stephan Kothrade succeeded Saori Dubourg, who stepped down on February 28, 2023, as a member of the Board of Executive Directors. Dr. Dirk Elvermann succeeded Dr. Hans-Ulrich Engel as Chief Financial Officer and Chief Digital Officer on conclusion of the Annual Shareholders' Meeting on April 27, 2023.

	Responsibilities (in the 2023 business year)	First appointed	Term expires	Supervisory board mandates within the meaning of section 100(2) of the German Stock Corporation Act (AktG)	Comparable German and non-German supervisory bodies
Dr. Martin Brudermüller Chairman of the Board of Executive Directors Degree: Chemistry, 62 years old 36 years at BASF	Corporate Legal, Compliance & Insurance; Corporate Development; Corporate Communications & Government Relations; Corporate Human Resources; Corporate Investor Relations, Senior Project Net Zero Accelerator	2006	2024	Mercedes-Benz Group AG[a] (member of the Supervisory Board) Mercedes-Benz AG (Mercedes-Benz Group AG group company) (member of the Supervisory Board)	–
Dr. Dirk Elvermann (since April 27, 2023) Degree: Law, 52 years old 21 years at BASF	Corporate Finance; Corporate Audit; Corporate Taxes & Duties; Global Business Services; Global Digital Services; Global Procurement	2023	2026	Wintershall Dea AG (member of the Supervisory Board)[b]	
Michael Heinz Degree: MBA, 59 years old 40 years at BASF	Agricultural Solutions; Nutrition & Health; Care Chemicals; North America; South America	2011	2026	Wintershall Dea AG (member of the Supervisory Board)[b]	–
Dr. Markus Kamieth Degree: Chemistry, 53 years old 25 years at BASF	Catalysts; Coatings; Dispersions & Resins; Performance Chemicals; Greater China; South & East Asia, ASEAN & Australia/New Zealand; Mega Projects Asia	2017	2029	–	–
Dr. Stephan Kothrade (since March 1, 2023) Degree: Chemistry, 56 years old 29 years at BASF	Monomers; Performance Materials; Petrochemicals; Intermediates; Europe	2023	2026	–	–
Dr. Melanie Maas-Brunner Degree: Chemistry, 55 years old 27 years at BASF	Corporate Environmental Protection, Health, Safety & Quality; European Site & Verbund Management; Global Engineering Services; Group Research; BASF Venture Capital	2021	2024	–	BASF Antwerpen N.V. (Chairwoman of the Supervisory Board)
Saori Dubourg (until February 28, 2023) Degree: Business, 52 years old 26 years at BASF	Monomers; Performance Materials; Petrochemicals; Intermediates; Europe	2017	2023	Wintershall Dea AG (member of the Supervisory Board, until February 28, 2023)[b]	
Dr. Hans-Ulrich Engel Vice Chairman of the Board of Executive Directors (until April 27, 2023) Degree: Law, 64 years old 35 years at BASF	Corporate Finance; Corporate Audit; Corporate Taxes & Duties; Global Business Services; Global Digital Services; Global Procurement	2008	2023	Wintershall Dea AG (Chairman of the Supervisory Board)[b] Wintershall AG (member of the Supervisory Board, until May 26, 2023)[b]	Nord Stream AG (member of the Shareholders' Committee)

a Publicly listed
b Internal membership within the meaning of section 100(2) sentence 2 of the German Stock Corporation Act (AktG)

Board of Executive Directors 2024

On December 20, 2023, the Supervisory Board of BASF SE resolved the following personnel changes on the Board of Executive Directors of BASF SE: Dr. Markus Kamieth succeeds Dr. Martin Brudermüller as Chairman of the Board of Executive Directors on conclusion of the Annual Shareholders' Meeting on April 25, 2024. Dr. Katja Scharpwinkel succeeds Dr. Melanie Maas-Brunner as a member of the Board of Executive Directors, effective as of February 1, 2024. Anup Kothari is appointed as an additional member of the Board of Executive Directors, effective as of March 1, 2024.

	Responsibilities (in the 2024 business year)	First appointed	Term expires	Supervisory board mandates within the meaning of section 100(2) of the German Stock Corporation Act (AktG)	Comparable German and non-German supervisory bodies
Dr. Martin Brudermüller Chairman of the Board of Executive Directors (until April 25, 2024) Degree: Chemistry, 62 years old 36 years at BASF	Corporate Legal, Compliance & Insurance; Corporate Development; Corporate Communications & Government Relations; Corporate Human Resources; Corporate Investor Relations, Senior Project Net Zero Accelerator	2006	2024	Mercedes-Benz Group AG[a] (member of the Supervisory Board) Mercedes-Benz AG (Mercedes-Benz Group AG group company) (member of the Supervisory Board)	Accenture plc[a] (member of the Board of Directors and the Audit Committee since January 31, 2024)
Dr. Markus Kamieth Chairman of the Board of Executive Directors (as of April 25, 2024) Degree: Chemistry, 53 years old 25 years at BASF	until February 29, 2024: Catalysts; Coatings; Dispersions & Resins; Performance Chemicals; Greater China; South & East Asia, ASEAN & Australia/New Zealand; Mega Projects Asia	2017	2029	–	
Dr. Dirk Elvermann Degree: Law, 52 years old 21 years at BASF	Corporate Finance; Corporate Audit; Corporate Taxes & Duties; Global Business Services; Global Digital Services; Global Procurement; BASF Venture Capital	2023	2026	Wintershall Dea AG (member of the Supervisory Board)[b]	
Michael Heinz Degree: MBA, 59 years old 40 years at BASF	Agricultural Solutions; Nutrition & Health; Care Chemicals; North America; South America	2011	2026	Wintershall Dea AG (member of the Supervisory Board)[b]	–
Anup Kothari (as of March 1, 2024) Degree: Chemical engineering, MBA, 55 years old 25 years at BASF	Catalysts; Coatings; Dispersions & Resins; Performance Chemicals	2024	2027	–	–
Dr. Stephan Kothrade Degree: Chemistry, 56 years old 29 years at BASF	Monomers; Performance Materials; Petrochemicals; Intermediates; Europe (until January 31, 2024); Group Research as of March 1, 2024: Greater China; South & East Asia, ASEAN & Australia/New Zealand; Mega Projects Asia	2023	2026	–	–
Dr. Katja Scharpwinkel (since February 1, 2024) Degree: Chemistry, 54 years old 13 years at BASF	Corporate Environmental Protection, Health, Safety & Quality; European Site & Verbund Management; Global Engineering Services; Europe	2024	2027	BASF Coatings GmbH (member of the Supervisory Board)[b] Wintershall Dea AG (member of the Supervisory Board since April 17, 2023)[b]	BASF Antwerpen N.V. (Chairwoman of the Supervisory Board since February 1, 2024)
Dr. Melanie Maas-Brunner (until January 31, 2024) Degree: Chemistry, 55 years old 27 years at BASF	Corporate Environmental Protection, Health, Safety & Quality; European Site & Verbund Management; Global Engineering Services	2021	2024		BASF Antwerpen N.V. (Chairwoman of the Supervisory Board until January 31, 2024)

a Publicly listed
b Internal membership within the meaning of section 100(2) sentence 2 of the German Stock Corporation Act (AktG)

Supervisory Board

In accordance with the Statutes, the Supervisory Board of BASF SE comprises 12 members. The term of office of the Supervisory Board commenced following the Annual Shareholders' Meeting on May 3, 2019, in which the shareholder representatives on the Supervisory Board were elected. In accordance with the applicable article of the Statutes as of the date of election, it terminates upon conclusion of the Annual Shareholders' Meeting that resolves on the discharge of members of the Supervisory Board for the fourth complete business year after the term of office commenced; this is the Annual Shareholders' Meeting on April 25, 2024. At its meeting on November 30, 2023, the BASF Europa Betriebsrat (European Works Council) unanimously reelected the six current employee representatives on the Supervisory Board. Their term of office commences following the Annual Shareholders' Meeting on April 25, 2024. The Supervisory Board comprises the following members (as of February 19, 2024):

	Member of the Supervisory Board since	Memberships of statutory supervisory boards in Germany	Memberships of comparable domestic and foreign supervisory bodies of commercial enterprises
Dr. Kurt Bock, Heidelberg, Germany*[1] Chairman of the Supervisory Board of BASF SE Former Chairman of the Board of Executive Directors of BASF SE (until May 2018)	June 18, 2020	Bayerische Motoren Werke Aktiengesellschaft[3] (member and Chairman of the Audit Committee)	–
Prof. Dr. Stefan Asenkerschbaumer, Stuttgart, Germany*[1] Vice Chairman of the Supervisory Board of BASF SE Managing Partner, Robert Bosch Industrietreuhand KG (RBIK) Chairman of the Supervisory Board of Robert Bosch GmbH	April 29, 2022	Robert Bosch GmbH[4] (chair)	Stadler Rail AG[3] (independent, nonexecutive member of the Board of Directors)
Sinischa Horvat, Limburgerhof, Germany*[2] Vice Chairman of the Supervisory Board of BASF SE Chairman of the Works Council of BASF SE, Ludwigshafen Site; Chairman of BASF's Joint Works Council and of the BASF Works Council Europe	May 12, 2017	–	–
Prof. Dr. Thomas Carell, Munich, Germany*[1] Professor of Organic Chemistry at Ludwig Maximilians University Munich	May 3, 2019	–	–
Dame Alison Carnwath DBE, Exeter, England*[1] Senior Advisor Evercore Partners	May 2, 2014	–	Zurich Insurance Group AG[3] (independent, nonexecutive member of the Board of Directors) Zürich Versicherungs-Gesellschaft AG (Zurich Insurance Group AG group company)[4] (independent, nonexecutive member of the Board of Directors) PACCAR Inc.[3] (independent member of the Board of Directors) Coller Capital Ltd.[4] (nonexecutive member of the Board of Directors) Asda Group Limited[4] (nonexecutive member of the Board of Directors and chair of the audit committee) EG Group Holdings Limited[4] (nonexecutive member of the Board of Directors and chair of the audit committee)
Liming Chen, Beijing, China*[1] World Economic Forum Greater China Chair	October 8, 2020	–	–

* Classified by the Supervisory Board as an "independent" member of the Supervisory Board (see page 197 for the criteria used to determine independence)
1 Shareholder representative
2 Employee representative
3 Publicly listed
4 Not publicly listed

Continued from page 207

	Member of the Supervisory Board since	Memberships of statutory supervisory boards in Germany	Memberships of comparable domestic and foreign supervisory bodies of commercial enterprises
Tatjana Diether, Limburgerhof, Germany*[2] Deputy Chairwoman of the Works Council of BASF SE, Ludwigshafen Site, and member of the BASF Works Council Europe	May 4, 2018	–	–
Alessandra Genco, Rome, Italy*[1] Chief Financial Officer of Leonardo SpA	April 29, 2022	–	Elettronica SpA[4] (controlled interest of Leonardo SpA)
André Matta, Großkarlbach, Germany*[2] Member of the Works Council of BASF SE, Ludwigshafen Site, and member of the BASF Works Council Europe	April 29, 2022	–	–
Natalie Mühlenfeld, Düsseldorf, Germany*[2] District Manager of the Mining, Chemical and Energy Industries Union for the Düsseldorf district	April 29, 2022	3M Deutschland GmbH[4] (member) Axalta Coating Systems Germany GmbH & Co. KG[4] (vice chair)	–
Michael Vassiliadis, Hannover, Germany[2] Chairman of the Mining, Chemical and Energy Industries Union	August 1, 2004	Steag GmbH[4] (member) RAG Aktiengesellschaft[4] (vice chair) Henkel AG & Co. KGaA[3] (member) Vivawest GmbH[4] (member)	–
Peter Zaman, Antwerp, Belgium*[2] Deputy Secretary of the Works Council of BASF Antwerpen N.V.	April 29, 2022	–	–

* Classified by the Supervisory Board as an “independent” member of the Supervisory Board (see page 197 for the criteria used to determine independence)
1 Shareholder representative
2 Employee representative
3 Publicly listed
4 Not publicly listed

Report of the Supervisory Board

GRI 2

Dear Shareholders,

In the past year, the work of the Supervisory Board and its committees was once again particularly characterized by the effects of the global weakness in demand and the negative impact of internationally noncompetitive electricity and gas prices on the BASF Group's German sites. At the same time, the focus was on BASF's strategic development: investments for future profitable growth, especially in Asia; further measurable progress toward the goal of climate neutrality; changes to the portfolio, first and foremost the separation from the oil and gas business; and finally, measures for the differentiated steering of the various businesses. Last but not least, decisions were made regarding the future composition of the Board of Executive Directors and its Chairman.

Sales and earnings performance remained considerably below expectations in 2023. The measures developed by the Board of Executive Directors to strengthen the competitiveness of the German sites in particular were discussed in detail. The Supervisory Board supports the measures to adjust production structures and reduce investments and personnel costs, which are also unavoidable due to the increasing tightening of regulations for the European chemical industry. Achieving an adequate return on capital and securing a good cash flow are prerequisites for achieving BASF's strategic goals.

The use of resources to invest in future growth and to further reduce greenhouse gases was also discussed against the backdrop of market changes, political uncertainties and technological change. High levels of investment in renewable energies and lower-emission production processes will continue to be necessary in the future. The path pursued by the Board of Executive Directors of playing a pioneering role in transforming the BASF Verbund and in supporting customers in achieving their own CO_2 targets is expressly supported.

Furthermore, the Supervisory Board repeatedly and extensively discussed the future of Wintershall Dea AG's exploration and production business. The contribution to Harbour Energy plc will achieve the goal of a gradual and, above all, value-retaining separation from the oil and gas business. The legal separation of the activities expropriated in Russia is currently underway. Solutions are also being developed for the remaining gas transportation activities.

The Supervisory Board places great value on good corporate governance. It fulfills all legal and other requirements with regard to its composition, competencies and independence. It proposes Tamara Weinert to the Annual Shareholders' Meeting for election as successor to Dame Alison Carnwath, who has been a member of the Supervisory Board since 2014. Alessandra Genco has been selected to succeed Dame Alison Carnwath as chair of the Audit Committee.

Last year, the Supervisory Board appointed three members to the Board of Executive Directors following intense discussions. They meet the requirements in terms of proven leadership and professional competence and strengthen the team for the successful further development of BASF. Dr. Markus Kamieth was appointed as successor to Dr. Martin Brudermüller as the new Chairman of the Board of Executive Directors.

Cooperation with the Board of Executive Directors remained intensive and constructive, characterized by the joint pursuit of the best solutions for BASF's future. The Supervisory Board would like to thank the members of the Board of Executive Directors for their energetic commitment and good management of the company in difficult times. Personally, I would like to thank Dr. Martin Brudermüller for his longstanding positive, uncomplicated and consistently solution-oriented cooperation. Finally, the Supervisory Board would like to thank the employees all over the world for their exceptional commitment in what was a challenging year for everyone.

Monitoring and consultation in an ongoing dialog with the Board of Executive Directors

In 2023, the Supervisory Board of BASF SE exercised its duties in full as required by law and the Statutes. It regularly monitored the management of the Board of Executive Directors and provided advice on the company's strategic development and important individual measures, about which the Supervisory Board was regularly and thoroughly informed by the Board of Executive Directors. This occurred both during and outside of the meetings of the Supervisory Board and its committees in the form of written and oral reports from the Board of Executive Directors on, for example, business developments including the major financial key performance indicators of the BASF Group and its segments, macroeconomic developments and the economic situation in the main sales and procurement markets, and on deviations in business developments from original plans. Furthermore, the Supervisory Board addressed fundamental questions of strategic corporate planning, including financial, investment, sales volumes and personnel planning, as well as measures for designing the future of research and development. There was a particular focus on the accelerated transformation toward CO_2 neutrality and digitalization. Regular topics of in-depth discussion with the Board of Executive Directors comprised occupational and process safety, topics relating to sustainability, the environmental and social impact of the company's activities and the challenges of climate change for the future development of BASF's business. The further development of the organization and processes to further increase the competitiveness of BASF and its individual businesses was also discussed intensely. The Supervisory Board was convinced of the lawfulness, expediency and propriety of the Board of Executive Directors' company leadership.

The Chairman of the Supervisory Board and the Chairman of the Board of Executive Directors were also in regular contact outside of Supervisory Board meetings. The Chairman of the Supervisory Board was always promptly and comprehensively informed of current developments and significant individual matters. The Supervisory Board was involved immediately at an early stage in decisions of major importance. The Supervisory Board passed resolutions on all of those individual measures taken by the Board of Executive Directors that by law or the Statutes required the approval of the Supervisory Board. Resolutions were generally passed at Supervisory Board meetings and, if necessary, by written circulation procedure.

Supervisory Board meetings

The Supervisory Board held five meetings in the 2023 business year. With the exception of one meeting, at which two members were absent, all respective members attended all meetings. The meetings were held in person with the additional option of virtual participation. One Supervisory Board member took part in two of the five meetings via video call. The members of the Supervisory Board elected by shareholders and those elected by the employees prepared for the meetings in separate preliminary discussions in each case, which were also attended by members of the Board of Executive Directors.

All members of the Board of Executive Directors attended the Supervisory Board meetings unless it was deemed appropriate that the Supervisory Board discuss individual topics – such as personnel matters relating to the Board of Executive Directors – without them being present. In addition, each Supervisory Board meeting included an agenda item that provided an opportunity for discussion without the Board of Executive Directors (executive session). These agenda items concerned either the Board of Executive Directors itself or internal Supervisory Board matters.

An overview of members' personal attendance at meetings of the Supervisory Board and its committees is available at basf.com/supervisoryboard/meetings

A significant component of all Supervisory Board meetings was the Board of Executive Directors' reports on the current business situation with detailed information on sales and earnings development, opportunities and risks for business development, the status of important investment projects and important portfolio measures (current and planned), important economic, environmental and social aspects, sustainability topics, developments in the regulatory environment, developments on the capital markets, significant managerial measures taken by the Board of Executive Directors, and innovation projects.

In all meetings held in 2023, the Supervisory Board also discussed the progress of major investments and ongoing portfolio projects, such as the construction of the new Verbund site in Southern China and the options for the oil and gas business of Wintershall Dea AG.

An important topic at all Supervisory Board meetings in the reporting period was the impact of the structurally persistently high natural gas and electricity prices on the business activities and competitiveness of our customers and on the BASF Group in Europe as well as the Verbund site in Ludwigshafen, Germany, in particular. In this regard, the Board of Executive Directors' reporting and the discussions in the Supervisory Board in particular addressed the possibilities of supplying the BASF Group's European sites with renewable energy in the future. The further development of the management and steering systems was also discussed.

About the meetings in detail: On February 22, 2023, the Supervisory Board reviewed the Financial Statements of BASF SE and the BASF Group for the 2022 business year that were submitted by the Board of Executive Directors, the corresponding Management's Reports, including the Nonfinancial Statements as well as the dividend proposal, and approved the Financial Statements. In preparation, the auditor had explained the process and results of the audit in detail the previous day and discussed them with the Supervisory Board. In addition, the Supervisory Board discussed and approved the Compensation Report in accordance with section 162 of the German Stock Corporation Act (AktG). It also discussed the agenda for the Annual Shareholders' Meeting on April 27, 2023, and adopted proposals for resolutions. Furthermore, the Supervisory Board approved the holding of the 2023 Annual Shareholders' Meeting as an in-person meeting. Other topics discussed at the meeting were general business development and the future steering of the Agricultural Solutions, the Coatings and the Battery Materials business units.

The Supervisory Board met on April 26, 2023, to prepare for the Annual Shareholders' Meeting being held the next day. The general conditions and trends in the battery materials business and the conversion of the SAP system for future business management were also discussed.

The meeting on July 25 and 26, 2023, focused on the status of the implementation of BASF's corporate strategy and the further development of the BASF Group. Key individual topics here were:

- The challenge of growth and the competitive environment of the BASF Group
- Strategic options for the further development of Wintershall Dea AG's exploration and production business
- Further development of the battery materials business
- The status of the construction of the Verbund site in Zhanjiang, China
- The status of the road map to reduce CO_2 emissions and the project portfolio to achieve the target of reducing CO_2 emissions by 25% by 2030 compared with the 2018 baseline
- Strategy and operational measures to improve performance in the Nutrition & Health division
- The concept for the future differentiated steering of the BASF Group and the resulting consequences under company law

The Supervisory Board meeting on October 25, 2023 took place in Shanghai, China. One focus of the meeting was the status of negotiations on the sale of Wintershall Dea AG's exploration and production business to U.K.-based Harbour Energy plc. The Supervisory Board also approved the recommendation of the Board of Executive Directors to hold an in-person Annual Shareholders' Meeting in 2024. The BASF Group's medium-term financial planning was also discussed. The Supervisory Board then visited the Verbund site in Zhanjiang, in the Southern Chinese province of Guangdong, which is currently under construction, and gained a detailed overview of the construction progress and the plans for the starting operations at some important plants in 2025 during a guided tour.

At its meeting on December 20, 2023, the Supervisory Board discussed operational and financial planning, including the investment budget for 2024, and, as in previous years, authorized the Board of Executive Directors to procure the necessary financing in 2024 within a set limit. In addition, the Supervisory Board dealt with leadership development and measures to achieve diversity targets. Resolutions were also passed on the future composition of the Board of Executive Directors. In addition, at the proposal of the Nomination Committee, the Supervisory Board nominated Tamara Weinert, President and Chief Executive Officer of Business Area Americas of Outokumpu, as a candidate for election as shareholder representative on the Supervisory Board at the Annual Shareholders' Meeting on April 25, 2024. Tamara Weinert is to succeed Dame Alison Carnwath, who will not stand for reelection to BASF's Supervisory Board in 2024.

Compensation and composition of the Board of Executive Directors

In several meetings over the 2023 business year, the Supervisory Board discussed and passed resolutions on the compensation of the Board of Executive Directors. In addition, four decisions on the composition of the Board of Executive Directors had to be taken.

At its meeting on February 22, 2023, the Supervisory Board deliberated and agreed on the 2023 targets for the Board of Executive Directors' short-term and long-term incentive (STI and LTI) based on the preparations of the Personnel Committee. In line with the recommendation of the Personnel Committee, the Supervisory Board also resolved to appoint Dr. Stephan Kothrade as a member of the Board of Executive Directors, succeeding Saori Dubourg, whose contract was terminated effective March 1, 2023.

At its meeting on December 20, 2023, the Supervisory Board discussed the appointment of a successor for the Chairman of the Board of Executive Directors, Dr. Martin Brudermüller, who will step down from the Board of Executive Directors as of April 25, 2024, and, in line with the recommendation made by the Personnel Committee, appointed Dr. Markus Kamieth as Chairman the Board of Executive Directors, effective from the end of the Annual Shareholders' Meeting on April 25, 2024, and until the end of the 2029 Annual Shareholders' Meeting.

Also on the recommendation of the Personnel Committee, it was resolved to appoint Dr. Katja Scharpwinkel as a member of the Board of Executive Directors effective February 1, 2024, as successor to Dr. Melanie Maas-Brunner – who left the company at her own request on January 31, 2024 – and Anrup Kothari effective March 1, 2024. Dr. Katja Scharpwinkel was also appointed as Industrial Relations Director. Following the recommendation by the Personnel Committee, it was resolved to extend the appointment of Michael Heinz by two years until the end of the 2026 Annual Shareholders' Meeting. Furthermore, at its meeting on December 20, 2023, the Supervisory Board evaluated, based on the discussions and the corresponding recommendation of the Personnel Committee, the Board of Executive Directors' performance in 2023 and set the performance factor for the short-term incentive 2023. Finally, the Supervisory Board discussed adjustments to the compensation systems for the Board of Executive Directors and Supervisory Board from the 2024 financial year onward and resolved to submit these to the Annual Shareholders' Meeting for a decision.

For more information on the compensation of the Board of Executive Directors and the Supervisory Board, see the Compensation Report, which has been made publicly available on the company's website at basf.com/compensationreport

Committees

The Supervisory Board of BASF SE had four committees during the reporting period: 1. the committee for personnel matters of the Board of Executive Directors and the granting of loans in accordance with section 89(4) of the German Stock Corporation Act (Personnel Committee); 2. the Audit Committee; 3. the Nomination Committee; and 4. the Strategy Committee. The committees prepare resolutions and topics to be discussed by the entire Supervisory Board. Following each Committee meeting, the chairs of the Committees reported in detail about the meetings and the activities of the Committees at the subsequent meeting of the Supervisory Board.

The Supervisory Board has not established a special sustainability committee. Sustainability is of such fundamental importance to the BASF Group that it is the focus of the work of the entire Supervisory Board and is discussed intensively in plenary sessions. As a material crosscutting issue, sustainability affects all the Supervisory Board's supervision activities and is therefore considered in depth by the entire Supervisory Board. Sustainability expertise is therefore broadly embedded in the Supervisory Board and has long been a very important requirement for its work.

For information on the composition of the committees and the tasks assigned to them by the Supervisory Board, see the Corporate Governance Report from page 192 onward

The **Personnel Committee** met four times during the reporting period. All meetings were held in person with the additional option of virtual participation. All committee members attended all meetings. Two committee members took part in one meeting via video call. At the meeting on February 21, 2023, the Personnel Committee prepared the proposed resolution to terminate the employment contract with Saori Dubourg and to nominate her successor. It discussed the target agreement for the Board of Executive Directors for 2023 (short-term incentive) and the targets for the long-term compensation for the Board of Executive Directors for the period 2023–2026 (long-term incentive). At its meeting on July 25, 2023, the Personnel Committee focused on the development of leadership at BASF's top levels of management below the Board of Executive Directors and long-term succession planning for the Board of Executive Directors, including potential successor candidates. The main agenda item at the meeting on October 17, 2023, was the review of the further development of the compensation system for the Board of Executive Directors. The proposals for the further development of the compensation system and their appropriateness were reviewed in advance with an external consultant, whose recommendations were also taken into account. The Personnel Committee also discussed succession planning for the Board of Executive Directors and the appointment of a successor to the Chairman of the Board of Executive Directors, Dr. Martin Brudermüller, who will step down after the end of the Annual Shareholders' Meeting on April 25, 2024. At its meeting on December 19, 2023, the Personnel Committee discussed the assessment of the Board's performance in 2023 and a proposal for the further development of the compensation system for the Board of Executive Directors. In addition, the draft resolutions for the Supervisory Board on the future composition for the Board of Executive Directors were discussed and approved.

The **Audit Committee** met five times during the reporting period. Four meetings were held in person with the additional option of virtual participation and one meeting was held as a video conference. With the exception of one meeting, which one member did not attend, all Audit Committee members attended all meetings. At two meetings, one Audit Committee member took part via video call. The Audit Committee is responsible for all the tasks listed in section 107(3) sentence 2 of the German Stock Corporation Act (AktG) and the recommendations of the German Corporate Governance Code. The Audit Committee is also responsible for monitoring the internal process for identifying related party transactions and adopting resolutions to approve related party transactions.

The auditor also attended the meetings in February, July and December. The Audit Committee also discussed matters with the auditor in a separate part of the meeting without the Board of Executive Directors present (executive session). The chair of the Audit Committee also maintains regular contact with the auditor between meetings, in particular regarding the progress of the annual audit, and reports back to the committee.

At the meeting on February 21, 2023, the auditor reported in detail on its audits of BASF SE's Separate and Consolidated Financial Statements for the 2022 business year, including the corresponding management's reports, and discussed the results of its audit with the Audit Committee. The committee's audit also included the Nonfinancial Statements of BASF SE and the BASF Group, sustainability reporting as well as the Compensation Report of BASF SE in accordance with section 162 AktG, which had been audited by the auditor. In preparation for the audit of the Nonfinancial Statements, the Audit Committee had, following a corresponding resolution by the Supervisory Board, additionally engaged KPMG to perform a limited assurance and issue an assurance report on it. KPMG also reported in detail on the focus, the procedure and the key findings of this audit.

At its meeting on April 26, 2023, the Audit Committee addressed the BASF Group's Quarterly Statement for the first quarter of 2023, which was due for publication, risk management and the internal control system, in particular with regard to financial reporting and sustainability reporting in the BASF Group.

Focus topics at the meeting on July 25, 2023, were the BASF Group's Half-Year Financial Report, the internal audit system and key findings of the internal audit, on which the head of the Corporate Audit department reported.

At the meeting on July 25, 2023, the Audit Committee engaged KPMG AG Wirtschaftsprüfungsgesellschaft – the auditor elected by the Annual Shareholders' Meeting on April 27, 2023 – with the audit for the 2023 reporting year and auditing fees were agreed upon. The focus areas and scope of the annual audit were discussed and defined together with the auditor.

On October 20, 2023, the Audit Committee discussed the BASF Group's Quarterly Statement for the third quarter of 2023 and addressed the post-audit on major acquisitions and divestitures. The meeting also addressed the reporting on related party transactions as well as the Committee's annual self-assessment of the effectiveness and efficiency of its work.

At the meeting on December 19, 2023, the auditors reported on the status of the annual audit, as well as the focus areas and the most important individual items. The Audit Committee also received reports on the internal control system for financial reporting and the appropriateness and effectiveness of the internal control system and the risk management system. Furthermore, the head of the Corporate Compliance unit reported on compliance topics. In this context, the Audit Committee dealt with the implementation of the German Supply Chain Due Diligence Act, which has been in force since January 1, 2023.

At all meetings, the Audit Committee addressed the main pending accounting issues and risks arising from threatened or pending litigation.

The **Nomination Committee** is responsible for preparing candidate proposals for the Supervisory Board members to be elected by the Annual Shareholders' Meeting. The Nomination Committee is guided by the objectives for the composition of the Supervisory Board adopted by the Supervisory Board as well as the competence profile and diversity concept for the Supervisory Board. The Nomination Committee met once during the reporting period in the form of an in-person meeting. Its work focused on preparing the Supervisory Board's proposals for the election of shareholder representatives to the Supervisory Board for the 2024 Annual Shareholders' Meeting. By resolution of the shareholder representatives, an external consultant was commissioned to support this process. On this basis, the Nomination Committee decided at its meeting on December 19, 2023, to propose Tamara Weinert as a candidate for election as shareholder representative on the Supervisory Board at the Annual Shareholders' Meeting on April 25, 2024. All members are standing for reelection in the 2024 scheduled elections of shareholder representatives, with the exception of Dame Alison Carnwath, who is stepping down.

For the objectives for the composition of the Supervisory Board as well as the competence profile and diversity concept for the Supervisory Board, see the Corporate Governance Report on page 196

The **Strategy Committee**, which was established to discuss strategic options for the further development of the BASF Group addressed the sale of Wintershall Dea AG's exploration and production business to Harbour Energy plc at its meeting on October 4, 2023. The committee was informed in detail about the status of the negotiations by the Chairman of the Board of Executive Directors and the Chief Financial Officer and approved the next steps.

Corporate governance and Declaration of Conformity

In 2023, the Supervisory Board was once again intensely occupied with the corporate governance standards practiced in the company and the implementation of the recommendations and suggestions of the German Corporate Governance Code in the version dated April 28, 2022 (GCGC 2022).

In accordance with the recommendations of the German Corporate Governance Code and the guiding principles for the dialog between investors and German supervisory boards, the Chairman of the Supervisory Board again sought dialog with investors where appropriate in 2023.

Special onboarding events are held for the new members of the Supervisory Board to familiarize them with the basics of corporate governance at BASF, the organization and internal structures of the BASF Group, and the composition of its businesses and their strategies. Above and beyond this, the company also supports the members of the Supervisory Board with training for their activities on the Supervisory Board, whether through external offerings such as topic-specific seminars or internal information offerings such as site and plant visits to give them an insight into the portfolio as well as production and manufacturing methods.

At its meeting on December 20, 2023, the Supervisory Board approved the joint Declaration of Conformity by the Supervisory Board and the Board of Executive Directors in accordance with section 161 of the German Stock Corporation Act (AktG). BASF complies with all recommendations of the GCGC 2022. The Corporate Governance Report provides extensive information on the BASF Group's corporate governance.

The full Declaration of Conformity is rendered on page 217 and is available at basf.com/en/corporategovernance

Independence and efficiency review

An important aspect of good corporate governance is the independence of Supervisory Board members and their freedom from conflicts of interest. The Supervisory Board bases the assessment of the independence of its members on the recommendations of the German Corporate Governance Code and the additional criteria for assessing the independence of Supervisory Board members contained in the Rules of Procedure of the Supervisory Board. The criteria used to assess independence are presented in the Corporate Governance Report on page 197. Based on these criteria, the Supervisory Board came to the conclusion that all of the six shareholder representatives and five of the six employee representatives – 11 of the 12 members of the Supervisory Board in total – are considered to be independent as of the end of 2023. Employee representative Michael Vassiliadis was formally classified as nonindependent due to the length of his membership on the Supervisory Board, which exceeds 12 years. Above and beyond this, the Supervisory Board does not see any indications that the Supervisory Board role is not performed completely independently. In cases where Supervisory Board members hold supervisory or management positions at companies with which BASF has business relations, we see no impairment of their independence. The scope of these businesses is not material and furthermore, they are conducted at arm's length.

The Supervisory Board regularly reviews the efficiency of its activities in the form of a self-assessment. To this end, the Chairman of the Supervisory Board most recently conducted a written survey of all Supervisory Board members in the fourth quarter of 2022 on the basis of a detailed questionnaire covering the entire range of relevant Supervisory Board topics, supplemented by individual discussions. In 2023, individual discussions were held between members of the Supervisory Board and the Chairman of the Supervisory Board. These discussions confirmed that the Supervisory Board works together professionally and with a high degree of trust. The composition and structure of the Supervisory Board continue to be regarded as effective and efficient.

The Audit Committee conducted a detailed self-assessment of its activities in 2023. This was based on a questionnaire sent to all members of the Audit Committee, the results and detailed suggestions of which were discussed in depth by the Audit Committee at its meeting on October 20, 2023. Material subjects were the organization and content of meetings, meeting documents and reports, participants and quality of discussions at meetings, reporting to the Supervisory Board on the work of the Audit Committee, access to external and internal auditors, cooperation with management and the appropriateness of the Audit Committee's performance of its duties in accordance with the Statutes and the Rules of Procedure. On this basis, the members judged the Audit Committee's work to be efficient and appropriate. There was no fundamental need for improvement. As a suggestion, sustainable finance will be addressed and implemented as an additional topic in 2024.

Separate and Consolidated Financial Statements; Compensation Report

KPMG AG Wirtschaftsprüfungsgesellschaft, the auditor elected by the Annual Shareholders' Meeting for the 2023 reporting year, has audited the Financial Statements of BASF SE and the BASF Group Consolidated Financial Statements, which were prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union, and the additional requirements that must be applied in accordance with section 315e(1) of the German Commercial Code (HGB), including the Combined Management's Report and the accounting records from which they were prepared, and have approved them free of qualification. Furthermore, the auditor certified that the Board of Executive Directors had taken the measures incumbent on it under section 91(2) of the German Stock Corporation Act (AktG) in an appropriate manner. In particular, it had instituted an appropriate early risk detection system that fulfilled the requirements of the company and is suitable for the early identification of developments that could pose a risk to the continued existence of the BASF Group. The results of the audit as well as the procedure and material findings of the audit of the financial statements are presented in the Auditor's Report.

The Auditor's Report is rendered from page 221 onward

For more information on the auditor, see the Corporate Governance Report on page 201

Beyond the statutory audit of the Financial Statements, KPMG conducted, on behalf of the Supervisory Board, a limited assurance of the Nonfinancial Statements (NFSs) for BASF SE and the BASF Group, which are integral parts of the Combined Management's Report. On the basis of its audit, KPMG did not raise any objections to reporting and the satisfaction of the relevant statutory requirements. The auditor also audited the Compensation Report for the 2023 reporting year established in accordance with section 162 AktG, including the related disclosures.

The assurance report issued by KPMG on the substantive audit of the NFS can be found at basf.com/nfs-audit-2023

The assurance report issued by KPMG on the audit of the Compensation Report can be found at basf.com/compensationreport

The auditor's reports were sent in a timely manner to every member of the Supervisory Board. The auditor attended the accounts review meeting of the Audit Committee on February 20, 2024, as well as the accounts meeting of the Supervisory Board on February 21, 2024, and reported on the procedure and material findings of its audit, including the key audit matters described in the Auditor's Report. The auditor also provided the Supervisory Board with detailed explanations of the reports on the day before the accounts meeting.

The Audit Committee reviewed the Separate and Consolidated Financial Statements of BASF SE, the Combined Management's Report and the Compensation Report at its meeting on February 20, 2024, including the reports prepared by the auditor and the key audit matters specified in the Auditor's Report, and discussed them in detail with the auditor. The chair of the Audit Committee gave a detailed account of this preliminary review at the Supervisory Board meeting on February 21, 2024. On this basis, the Supervisory Board examined the Financial Statements of BASF SE for 2023, the proposal by the Board of Executive Directors for the appropriation of profit, and the 2023 Consolidated Financial Statements and Combined Management's Report for the BASF Group and BASF SE. The results of the preliminary review by the Audit Committee and the results of the Supervisory Board's own examination fully concur with those of the audit. The Supervisory Board sees no grounds for objection to the management or the reports submitted.

At its accounts meeting on February 21, 2024, the Supervisory Board approved the Financial Statements of BASF SE and the Consolidated Financial Statements of the BASF Group prepared by the Board of Executive Directors making the 2023 Financial Statements of BASF SE final. The Supervisory Board concurred with the proposal of the Board of Executive Directors regarding the appropriation of profit and the payment of a dividend of €3.40 per share.

Also at the meeting on February 21, 2024, the Supervisory Board discussed with the Board of Executive Directors the joint Compensation Report of the Board of Executive Directors and the Supervisory Board in accordance with section 162 AktG and approved it.

The Compensation Report is available at basf.com/compensationreport

Composition of the Supervisory Board

The composition of the Supervisory Board did not change in 2023. The mandates of all current Supervisory Board members run until the end of the current Supervisory Board period, that is, until the Annual Shareholders' Meeting 2024. At its meeting on November 30, 2023, the BASF Europa Betriebsrat (European Works Council) unanimously reelected the six current employee representatives from the Supervisory Board. Their new term of office begins at the end of the Annual Shareholders' Meeting on April 25, 2024, and ends at the end of the Annual Shareholders' Meeting in 2028.

According to the Supervisory Board's assessment, the current members meet the objectives for the composition of the Supervisory Board in full with respect to the competence profile and the diversity concept. This also applies to the expertise on the sustainability topics important to BASF.

Ludwigshafen, February 21, 2024

The Supervisory Board

Dr. Kurt Bock
Chairman of the Supervisory Board

Declaration of Conformity Pursuant to Section 161 AktG

Declaration of Conformity 2023 of the Board of Executive Directors and the Supervisory Board of BASF SE

The Board of Executive Directors and the Supervisory Board of BASF SE hereby declare pursuant to section 161 AktG (German Stock Corporation Act)

The recommendations of the Government Commission on the German Corporate Governance Code as amended on April 28, 2022, published by the Federal Ministry of Justice on June 27, 2022, in the official section of the Federal Gazette are complied with and have been complied with since the submission of the last Declaration of Conformity of December 2022.

Ludwigshafen, December 2023

The Supervisory Board
of BASF SE

The Board of Executive Directors
of BASF SE

Declaration of Corporate Governance

Declaration of Corporate Governance in accordance with sections 289f HGB and 315d HGB

The Combined Declarations of Corporate Governance of BASF SE and the BASF Group, pursuant to sections 289f HGB and 315d HGB, comprise the subchapters Corporate Governance Report including the description of the diversity concept for the composition of the Board of Executive Directors and the Supervisory Board (except for the disclosures pursuant to section 315a HGB), Compliance and Declaration of Conformity as per section 161 of the German Stock Corporation Act (AktG) in the Corporate Governance chapter. They are a component of the Combined Management's Report.

Pursuant to section 317(2) sentence 6 HGB, the auditor checked that the disclosures according to section 315d HGB in conjunction with section 289f(2) HGB were made.

4 Consolidated Financial Statements

Statement by the Board of Executive Directors

and assurance pursuant to sections 297(2) and 315(1) of the German Commercial Code (HGB)

The Board of Executive Directors of BASF SE is responsible for preparing the Consolidated Financial Statements and Combined Management's Report of the BASF Group.

The BASF Group Consolidated Financial Statements for 2023 were prepared according to the International Financial Reporting Standards (IFRS), as adopted by the European Union, as well as the IFRSs in the version adopted by the International Accounting Standards Board (IASB), London.

We have established effective internal control and steering systems in order to ensure that the BASF Group's Combined Management's Report and Consolidated Financial Statements comply with applicable accounting rules and to ensure proper corporate reporting.

The internal control and risk management system we have set up is specifically designed to enable the Board of Executive Directors to identify material risks early on and take appropriate defensive measures as necessary. The appropriateness and effectiveness of the internal control and risk management system are continually audited throughout the Group by our Corporate Audit department.

To the best of our knowledge, and in accordance with the applicable reporting rules, the Consolidated Financial Statements of the BASF Group give a true and fair view of the net assets, financial position and results of operations of the Group, and the Combined Management's Report of the BASF Group includes a fair review of the development and performance of the business as well as position of the BASF Group, together with a description of the principal opportunities and risks associated with the expected development of the BASF Group.

Ludwigshafen am Rhein, February 21, 2024

Dr. Martin Brudermüller
Chairman of the Board of Executive Directors

Dr. Dirk Elvermann
Chief Financial Officer

Michael Heinz

Dr. Markus Kamieth

Dr. Stephan Kothrade

Dr. Katja Scharpwinkel

Independent Auditor's Report[1]

To BASF SE, Ludwigshafen am Rhein

Report on the Audit of the Consolidated Financial Statements and the Combined Management Report

Opinions

We have audited the consolidated financial statements of BASF SE, Ludwigshafen am Rhein, and its subsidiaries (the Group), which comprise the statement of income, statement of income and expense recognized in equity, balance sheet, statement of cash flows and statement of changes in equity for the financial year from January 1 to December 31, 2023, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the management report of the Company and the Group (combined management report) of BASF SE for the financial year from January 1 to December 31, 2023.

In accordance with German legal requirements, we have not audited the content of those components of the combined management report specified in the "Other Information" section of our auditor's report.

The combined management report includes cross-references, marked as unaudited, that are not provided for by law. In accordance with German legal requirements, we have not audited the cross-references and the information to which the cross-references refer.

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, as well as the IFRSs in the version adopted by the International Accounting Standards Board and the additional requirements of German commercial law pursuant to Section 315e (1) HGB [Handelsgesetzbuch: German Commercial Code], and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as of December 31, 2023, and of its financial performance for the financial year from January 1 to December 31, 2023, and
- the accompanying combined management report as a whole provides an appropriate view of the Group's position. In all material respects, this combined management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the combined management report does not cover the content of the combined management report specified in the "Other Information" section of the auditor's report. The combined management report includes cross-references, marked as unaudited, that are not provided for by law. Our audit opinion does not extend to the cross-references and the information to which the cross-references refer.

Pursuant to Section 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 combined management report.

Basis for the Opinions

We conducted our audit of the consolidated financial statements and of the combined management report in accordance with Section 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). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined Management Report" section of our auditor's report. We are independent of the group entities 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 Article 10 (2)(f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the combined 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 financial year from January 1 to December 31, 2023. 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.

Recoverability of goodwill

For information on the accounting principles applied, the underlying assumptions used in the measurement and the disclosure on the impairment tests performed please refer to Note 14 to the consolidated financial statements from page 264.

[1] This is a translation of the German original. Solely the original text in German language is authoritative.

The financial statement risk

Intangible assets in the consolidated financial statements of BASF SE include goodwill in the amount of EUR 7,499 million. Goodwill accounts for 9.7 % of total assets and thus has a material impact on the Parent Company’s net assets.

Goodwill is tested for impairment annually, irrespective of any indication of impairment. If any indications of impairment arise during the financial year, an event-driven goodwill impairment test is also carried out during the year. As a result of impairments on assets, an additional event-driven test was carried out on the battery materials cash-generating unit as at December 31, 2023.

The goodwill impairment test involves the carrying amount being compared with the recoverable amount of each cash-generating unit. If the carrying amount exceeds the recoverable amount, an impairment loss must be recognized. The recoverable amount is the higher amount of fair value less costs to sell and value in use of the cash-generating unit.

Impairment testing of goodwill is complex and based on a number of assumptions requiring judgment. These include the forecasts for future cash inflows in the detailed planning period, the assumed growth rate for subsequent periods and the cost of capital. These assumptions have a material impact on the recoverability of goodwill. The growth forecasts of the Board of Executive Directors are associated with risks and can be revised in light of volatile raw materials prices and an unstable macroeconomic environment.

Based on the impairment tests conducted, the Company did not identify any need to recognize impairment losses. However, the Group’s sensitivity analysis showed for the cash-generating unit Battery Materials and Catalysts (excluding Battery Materials) that a possible change in the cost of capital, the EBITDA margin of the last detailed planning year would reduce the respective value to the recoverable amount.

There is the risk for the consolidated financial statements that any existing impairment as at the reporting date was not identified. In addition, there is a risk that the disclosures in the notes on the key assumptions are not appropriate.

Our audit approach

With the involvement of our valuation specialists, we assessed, among other things, the appropriateness of the key assumptions as well as the Group’s methods of calculation for both the event-driven and the annual impairment test.

For cash-generating units selected from a risk-oriented perspective, we examined the forecast for the expected business and earnings development and the resulting cash flows in the detailed planning period, in particular with respect to whether the expected development of the relevant sales markets was given appropriate consideration and was consistent with the current budgets approved by management. We compared internal growth forecasts with industry expectations and those of significant competitors and we assessed whether the assumptions contained in the planning regarding the future development of margins and the amount of investments were appropriate. Our review of the appropriateness of the budgets approved by management also included a comparison of planning in past business years with the results actually achieved. For selected cash-generating units, we examined whether reasons for not reaching budgeted figures in the past were given appropriate consideration in current planning, to the extent that this was relevant.

We assessed the appropriateness of the assumed growth rate for the period following the detailed planning period on the basis of industry-specific and macroeconomic studies. We evaluated the methodological appropriateness of the calculation and the appropriateness of the weighted average cost of capital. To this end, we calculated our own expected values for the assumptions and data underlying the weighted cost of capital rates and compared these with the assumptions and data used.

For the cash-generating units battery materials and catalysts (excluding battery materials), we used our own calculations to assess the methodologically and mathematically appropriate implementation of the valuation method and analysed deviations.

In order to take forecast uncertainty into account, we examined the impact of potential changes in the cost of capital, the EBITDA margin of the last detailed planning year on the recoverable amount by evaluating alternative scenarios as calculated by the Company (sensitivity analysis).

Finally, we assessed whether the disclosures in the notes on the key assumptions are appropriate. This also included an assessment of the appropriateness of the disclosures pursuant to IAS 36.134(f) on sensitivities in the event of a reasonably possible change in key assumptions underlying the evaluation.

Our observations

The calculation method underlying both the event-driven and the annual impairment test of goodwill is appropriate and in line with the accounting policies to be applied.

The assumptions and data of the Board of Executive Directors underlying the measurement are appropriate overall.

The disclosures in the notes on the key assumptions are appropriate.

Other Information

The Board of Executive Directors and Supervisory Board are responsible for the other information. The other information comprises the following components of the combined management report, whose content was not audited:

- the components of the integrated combined non-financial statement of the Company and the Group, which are marked as unaudited,
- the combined corporate governance statement for the Company and Group, which is included in the Corporate Governance section of the combined management report, and
- information extraneous to management reports and marked as unaudited.

The other information also includes the remaining parts of the annual report. The other information does not include the consolidated financial statements, the combined management report information audited for content and our auditor's report thereon.

Our opinions on the consolidated financial statements and on the combined 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 combined management report information audited for content 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 Board of Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Combined Management Report

The Board of Executive Directors is responsible for the preparation of consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU, as well as the IFRSs in the version adopted by the International Accounting Standards Board and the additional requirements of German commercial law pursuant to Section 315e (1) HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, the Board of Executive Directors is responsible for such internal control as it has 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 Board of Executive Directors is 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 Board of Executive Directors is responsible for the preparation of the combined 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 Board of Executive Directors is responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a combined 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 combined 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 combined management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined 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 combined 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 combined management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) 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 combined 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 combined 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 controls.
- 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 combined 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 Board of Executive Directors and the reasonableness of estimates made by the Board of Executive Directors and related disclosures.
- Conclude on the appropriateness of the Board of 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 combined 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 assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU, as well as the IFRSs in the version adopted by the International Accounting Standards Board and the additional requirements of German commercial law pursuant to Section 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 combined management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.
- Evaluate the consistency of the combined 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 Board of Executive Directors in the combined management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the Board of 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 actions taken or safeguards applied to eliminate independence threats.

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 Combined Management Report Prepared for Publication Purposes in Accordance with Section 317 (3a) HGB

We have performed assurance work in accordance with Section 317 (3a) HGB to obtain reasonable assurance about whether the rendering of the consolidated financial statements and the combined management report (hereinafter the “ESEF documents”) contained in the electronic file “basf-gruppe-2023-12-31-de.zip” (SHA256-hash value: d488d5a7220ffaaa614b1e7b5fdab69a946b4ffce872996c614dafbf7d012aab) made available and prepared for publication purposes complies in all material respects with the requirements of Section 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 combined management report into the ESEF format and therefore relates neither to the information contained in 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 combined management report contained in the electronic file made available, identified above and prepared for publication purposes complies, in all material respects, with the requirements of Section 328 (1) HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinion on the accompanying consolidated financial statements and the accompanying combined management report for the financial year from January 1 to December 31, 2023, contained in the “Report on the Audit of the Consolidated Financial Statements and the Combined 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.

We conducted our assurance work on the rendering of the consolidated financial statements and the combined management report contained in the file made available and identified above in accordance with Section 317 (3a) HGB and the IDW Assurance Standard: Assurance Work on the Electronic Rendering of Financial Statements and Management Reports Prepared for Publication Purposes in Accordance with Section 317 (3a) HGB (IDW AsS 410 (06.2022)). Our responsibility in accordance therewith is further described below. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in Audit Firms (IDW QMS 1) (09.2022)).

The Company’s Board of Executive Directors is responsible for the preparation of the ESEF documents including the electronic rendering of the consolidated financial statements and the combined management report in accordance with Section 328 (1) sentence 4 item 1 HGB and for the tagging of the consolidated financial statements in accordance with Section 328 (1) sentence 4 item 2 HGB.

In addition, the Company’s Board of Executive Directors is responsible for such internal control that they have considered necessary to enable the preparation of ESEF documents that are free from material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB for the electronic reporting format.

The Supervisory Board is responsible for overseeing the process of preparing the ESEF documents as part of the financial reporting process.

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 Section 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 Section 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 made available containing the ESEF documents meets the requirements of the Commission Delegated Regulation (EU) 2019/815, as amended as of the reporting date, on the technical specification for this electronic file.
- Evaluate whether the ESEF documents provide an XHTML rendering with content equivalent to the audited consolidated financial statements and the audited combined management report.
- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) in accordance with the requirements of Articles 4 and 6 of the Commission Delegated Regulation (EU) 2019/815, as amended as of the reporting date, enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor at the Annual General Meeting on April 27, 2023. We were engaged by the Chairperson of the Audit Committee on October 26, 2023. We have been the group auditor of BASF SE without interruption since financial year 2006.

We declare that the opinions expressed in this auditor’s report are consistent with the additional report to the Audit Committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

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 combined management report as well as the examined ESEF documents. The consolidated financial statements and combined management report converted to the ESEF format – including the versions to be entered in the German Company Register [Unternehmensregister] – are merely electronic renderings of the audited consolidated financial statements and the audited combined 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 examined ESEF documents made available in electronic form.

German Public Auditor Responsible for the Engagement

The German Public Auditor responsible for the engagement is Dr. Axel Thümler.

Frankfurt am Main, February 20, 2024

KPMG AG
Wirtschaftsprüfungsgesellschaft

[signature] **Kneisel**
Wirtschaftsprüfer
[German Public Auditor]

[signature] **Dr. Thümler**
Wirtschaftsprüfer
[German Public Auditor]

Statement of Income

BASF Group

Statement of income

Million €

	Explanations in Note	2023	2022
Sales revenue	**[7]**	**68,902**	**87,327**
Cost of sales	[8]	-52,200	-66,260
Gross profit on sales		**16,702**	**21,067**
Selling expenses	[8]	-8,788	-9,613
General administrative expenses	[8]	-1,506	-1,520
Research and development expenses	[8]	-2,130	-2,298
Other operating income	[9]	1,990	1,808
Other operating expenses	[9]	-4,221	-3,283
Income from integral companies accounted for using the equity method	[10]	192	386
Income from operations	**[5]**	**2,240**	**6,548**
Income from non-integral companies accounted for using the equity method		-114	-4,885
Income from other shareholdings		55	34
Expenses from other shareholdings		-141	-89
Net income from shareholdings	**[10]**	**-200**	**-4,939**
Interest income		322	196
Interest expenses		-860	-629
Interest result		**-538**	**-433**
Other financial income		199	182
Other financial expenses		-281	-168
Other financial result		**-82**	**15**
Financial result	**[11]**	**-620**	**-418**
Income before income taxes		**1,420**	**1,190**
Income taxes	[12]	-1,041	-1,581
Income after taxes		**379**	**-391**
of which attributable to shareholders of BASF SE (net income)		225	-627
attributable to noncontrolling interests	[13]	154	236
Earnings per share (€)	**[6]**	**0.25**	**-0.70**
Dilution effect (€)	[6]	–	–
Diluted earnings per share (€)	**[6]**	**0.25**	**-0.70**

Statement of Income and Expense Recognized in Equity

BASF Group

Statement of comprehensive income[a]

Million €

	2023	2022
Income after taxes	**379**	**-391**
Remeasurement of defined benefit plans[b]	-674	3,758
Deferred taxes on the remeasurement of defined benefit plans	100	-1,256
Investments accounted for using the equity method – share of nonreclassifiable gains/losses (after taxes)	-196	83
Nonreclassifiable gains/losses	**-771**	**2,586**
Unrealized gains/losses from debt instruments measured at fair value through other comprehensive income	11	–
Unrealized gains/losses in connection with cash flow hedges	-78	510
Reclassification of realized gains/losses recognized in the statement of income in connection with cash flow hedges	-13	-455
Unrealized gains/losses from currency translation	-1,072	565
Deferred taxes on reclassifiable gains/losses	18	-15
Investments accounted for using the equity method – share of reclassifiable gains/losses (after taxes)	354	604
Reclassifiable gains/losses	**-780**	**1,209**
Other comprehensive income after taxes	**-1,551**	**3,794**
of which attributable to shareholders of BASF SE	-1,477	3,788
attributable to noncontrolling interests	-74	6
Comprehensive income	**-1,172**	**3,403**
of which attributable to shareholders of BASF SE	-1,252	3,161
attributable to noncontrolling interests	80	242

a For more information on other comprehensive income, see Note 19 on page 279 of the Notes
b For more information on the remeasurement of defined benefit plans, see Note 21 from page 282 onward

Balance Sheet

BASF Group

Assets

Million €

	Explanations in Note	December 31, 2023	December 31, 2022
Intangible assets	[14]	12,216	13,273
Property, plant and equipment	[14]	24,080	22,967
Integral investments accounted for using the equity method	[10]	2,054	2,356
Non-integral investments accounted for using the equity method	[10]	4,518	4,645
Other financial assets	[10]	1,099	1,120
Deferred tax assets	[12]	617	880
Other receivables and miscellaneous assets	[17]	1,339	1,810
Noncurrent assets		**45,923**	**47,050**
Inventories	[16]	13,876	16,028
Accounts receivable, trade	[17]	10,414	12,055
Other receivables and miscellaneous assets	[17]	4,504	6,591
Marketable securities		53	232
Cash and cash equivalents	[26]	2,624	2,516
Current assets		**31,472**	**37,422**
Total assets		**77,395**	**84,472**

Equity and liabilities

Million €

	Explanations in Note	December 31, 2023	December 31, 2022
Subscribed capital	[18]	1,142	1,144
Capital reserves	[18]	3,139	3,147
Retained earnings	[18]	32,517	35,453
Other comprehensive income	[19]	-1,521	-171
Equity attributable to shareholders of BASF SE		**35,277**	**39,573**
Noncontrolling interests	[13]	1,368	1,350
Equity		**36,646**	**40,923**
Provisions for pensions and similar obligations	[21]	2,896	2,810
Deferred tax liabilities	[12]	1,140	1,543
Tax provisions		335	330
Other provisions	[22]	1,684	1,650
Financial indebtedness	[20]	17,085	15,171
Other liabilities	[20]	1,739	1,606
Noncurrent liabilities		**24,879**	**23,110**
Accounts payable, trade	[20]	6,741	8,434
Provisions	[22]	3,214	3,799
Tax liabilities	[12]	801	995
Financial indebtedness	[20]	2,182	3,844
Other liabilities	[20]	2,931	3,368
Current liabilities		**15,871**	**20,440**
Total equity and liabilities		**77,395**	**84,472**

Statement of Cash Flows

BASF Group

Statement of cash flows[a]

Million €

	2023	2022
Net income	225	-627
Depreciation and amortization of property, plant and equipment and intangible assets	4,941	4,200
Equity-accounted income	-78	4,499
Other noncash items	3	58
Gains (–) / losses (+) from the disposal of noncurrent assets and securities	-103	-1
Dividends received from equity-accounted investments	622	1,629
Changes in inventories	1,896	-1,991
Changes in accounts receivable, trade	1,443	219
Changes in accounts payable, trade	-1,544	451
Changes in provisions	-484	-542
Changes in other operating assets	1,918	297
Changes in other operating liabilities and pension provisions	-730	-484
Cash flows from operating activities	**8,111**	**7,709**
Payments made for property, plant and equipment and intangible assets	-5,395	-4,375
Payments made for financial assets and securities	-1,099	-1,273
Payments made for acquisitions	-5	-13
Payments received for divestitures	32	691
Payments received from the disposal of noncurrent assets and securities	1,476	1,192
Cash flows from investing activities	**-4,991**	**-3,778**
Capital increases/repayments and other equity transactions	-70	-1,331
Additions to financial and similar liabilities	9,503	10,896
Repayment of financial and similar liabilities	-9,244	-10,330
Dividends paid	-3,094	-3,248
Cash flows from financing activities	**-2,905**	**-4,013**
Cash-effective changes in cash and cash equivalents	**215**	**-83**
Changes in cash and cash equivalents from foreign exchange rates and changes in the scope of consolidation	-106	-25
Cash and cash equivalents at the beginning of the year	**2,516**	**2,624**
Cash and cash equivalents at the end of the year	**2,624**	**2,516**

a The statement of cash flows is explained in the Combined Management's Report (Financial Position) on page 70.

Statement of Changes in Equity

BASF Group

Statement of changes in equity[a]

Million €

	Subscribed capital	Capital reserves	Retained earnings	*Remeasurement of defined benefit plans*	*Currency translation*	*Measurement of securities at fair value*	*Cash flow hedges*	Other comprehensive income[b]	Equity attributable to shareholders of BASF SE	Non-controlling interests	Equity
As of January 1, 2023	**1,144**	**3,147**	**35,453**	***-1,207***	***1,540***	***0***	***-504***	**-171**	**39,573**	**1,350**	**40,923**
Treasury shares	-2	2	-70	–	–	–	–	–	**-70**	–	**-70**
Dividends paid	–	–	-3,035	–	–	–	–	–	**-3,035**	-60[b]	**-3,095**
Income after taxes	–	–	225	–	–	–	–	–	**225**	154	**379**
Other comprehensive income after taxes	–	–	–	*-591*	*-1,220*	*-172*	*506*	-1,477	**-1,477**	-74	**-1,551**
Gains and losses on cash flow hedges and hedging costs, eliminated from other comprehensive income not affecting profit and loss	–	–	–	–	–	–	*64*	64	**64**	–	**64**
Changes in scope of consolidation and other changes	–	-9	-58	*59*	–	*5*	–	64	**-3**	–	**-3**
As of December 31, 2023	**1,142**	**3,139**	**32,517**	***-1,739***	***320***	***-167***	***65***	**-1,521**	**35,277**	**1,368**	**36,646**

a For more information on the items relating to equity, see Notes 18 and 19 from page 277 onward
b Including profit and loss transfers

Statement of changes in equity[a]

Million €

	Subscribed capital	Capital reserves	Retained earnings	*Remeasurement of defined benefit plans*	*Currency translation*	*Measurement of securities at fair value*	*Cash flow hedges*	Other comprehensive income[b]	Equity attributable to shareholders of BASF SE	Non-controlling interests	Equity
As of January 1, 2022	**1,176**	**3,106**	**40,365**	***-3,793***	***406***	***5***	***-472***	**-3,855**	**40,792**	**1,289**	**42,081**
Treasury shares	-32	32	-1,325	–	–	–	–	–	**-1,325**	0	**-1,325**
Dividends paid	–	–	-3,072	–	–	–	–	–	**-3,072**	-176[b]	**-3,248**
Income after taxes	–	–	-627	–	–	–	–	–	**-627**	236	**-391**
Other comprehensive income after taxes	–	–	–	*2,586*	*1,135*	*-16*	*84*	3,788	**3,788**	6	**3,794**
Gains and losses on cash flow hedges and hedging costs, eliminated from other comprehensive income not affecting profit and loss	–	–	–	–	–	–	*-116*	-116	**-116**	–	**-116**
Changes in scope of consolidation and other changes	–	9	113	–	–	*12*	–	12	**134**	-6	**128**
As of December 31, 2022	**1,144**	**3,147**	**35,453**	***-1,207***	***1,540***	***0***	***-504***	**-171**	**39,573**	**1,350**	**40,923**

a For more information on the items relating to equity, see Notes 18 and 19 from page 277 onward
b Including profit and loss transfers

Notes

1 Summary of accounting policies

1.1 General information

BASF SE (registered at the district trade register, or Amtsgericht, for Ludwigshafen am Rhein, number HRB 6000) is a publicly listed corporation headquartered in Ludwigshafen am Rhein, Germany. Its official address is Carl-Bosch-Str. 38, 67056 Ludwigshafen am Rhein, Germany.

The Consolidated Financial Statements of BASF SE as of December 31, 2023, have been prepared in accordance with the International Financial Reporting Standards (IFRS) of the International Accounting Standards Board (IASB), and section 315e (1) of the German Commercial Code (HGB). IFRSs are generally only applied after they have been endorsed by the European Union. For the 2023 fiscal year, all of the binding IFRSs and pronouncements of the International Financial Reporting Interpretations Committee (IFRIC) were applied. The Consolidated Financial Statements are for the period from January 1, 2023 to December 31, 2023, and are presented in euros. They are written in German and translated into English. All amounts, including the figures for previous years, are given in million euros unless otherwise indicated.

Due to rounding, individual figures in this report may not add up to the totals shown and percentages may not correspond exactly to the figures shown.

The individual financial statements of the consolidated companies are prepared as of the balance sheet date of the Consolidated Financial Statements. Business continuity is assumed. The accounting policies applied are largely the same as those used in 2022.

For more information, see Note 1.3 from page 236 onward and Note 10 from page 253 onward

On February 19, 2024, the Board of Executive Directors prepared the Consolidated Financial Statements, submitted them to the Supervisory Board for review and approval, and released them for publication.

1.2 Changes in accounting principles

Accounting policies applied for the first time in 2023

The amendments presented in the following table had no material effect on the Consolidated Financial Statements of BASF SE. Especially transactions within the scope of application of IFRS 17 were identified for BASF to a minor extent only.

Accounting policies applied for the first time in 2023

Standard/interpretation	Name of standard/interpretation or amendments	Date of publication	Date of endorsement by the E.U.
Introduction of IFRS 17	Insurance Contracts (Including Amendments to the Standard)	May 18, 2017 June 25, 2020	November 19, 2021
Amendments to IFRS 17	Insurance Contracts (Initial Application of IFRS 17 and IFRS 9 – Comparative Information)	December 9, 2021	September 8, 2022
Amendments to IAS 1 and IFRS Practice Statement 2	Presentation of Financial Statements and Making Materiality Judgements (Disclosure of Key Accounting Policies)	February 12, 2021	March 2, 2022
Amendments to IAS 8	Accounting Policies, Changes in Accounting Estimates and Errors (Definition of Changes in Accounting Policies and Accounting Estimates)	February 12, 2021	March 2, 2022
Amendments to IAS 12	Income Taxes (Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction)	May 7, 2021	August 11, 2022
Amendments to IAS 12	Income Taxes (International Tax Reform – Guidelines on Global Minimum Taxation (Pillar Two Model Rules))	May 23, 2023	November 8, 2023

IFRSs and IFRICs not yet to be considered but already endorsed by the E.U.

The effects on the BASF Group financial statements of the IFRSs and IFRICs not yet in force in 2023 but already endorsed by the European Union were reviewed. The amendments to IFRS 16 and IAS 1 are unlikely to have a material impact on the reporting of BASF and were not adopted early.

IFRSs and IFRICs not yet to be considered but already endorsed by the E.U.

Standard/interpretation	Name of standard/interpretation or amendments	Date of publication	Date of endorsement by the E.U.	Mandatory date of initial application
Amendments to IFRS 16	Leases (Accounting of a Lease Liability in a Sale and Leaseback)	September 22, 2022	November 20, 2023	January 1, 2024
Amendments to IAS 1	Presentation of Financial Statements – Classification of Liabilities as Current or Noncurrent – Deferral of Effective Date – Classification of Noncurrent Liabilities with Covenants	 January 23, 2020 July 15, 2020 October 31, 2022	December 19, 2023	January 1, 2024

IFRSs and IFRICs not yet to be considered and not yet endorsed by the E.U.

The IASB issued further amendments to standards and interpretations which are still subject to E.U. endorsement and whose application is not yet mandatory. These amendments are not likely to have a material impact on BASF's reporting. BASF does not plan on early adoption of these amendments.

IFRSs and IFRICs not yet to be considered and not yet endorsed by the E.U.

Standard/interpretation	Name of standard/interpretation or amendments	Date of publication	Expected date of initial application
Amendments to IAS 7 and IFRS 7	Statement of Cash Flows/Financial Instruments: Disclosures (Disclosure requirements in connection with supplier finance arrangements)	May 25, 2023	January 1, 2024
Amendments to IAS 21	The Effects of Changes in Foreign Exchange Rates (Determination of Exchange Rates in the Event of Lack of Exchangeability)	August 15, 2023	January 1, 2025

1.3 Group accounting principles

Scope of consolidation: The scope of consolidation is based on the application of the standards IFRS 10 and 11.

According to IFRS 10, a group consists of a parent entity and the subsidiaries controlled by the parent. “Control” of an investee assumes the simultaneous fulfillment of the following three criteria:

- The parent company holds decision-making power over the relevant activities of the investee
- The parent company has rights to variable returns from the investee
- The parent company can use its decision-making power to affect the variable returns

Fulfillment of these three criteria is analyzed based on the corporate governance structure of the companies.

According to IFRS 11, which regulates the accounting of joint arrangements, a distinction must be made between joint ventures and joint operations. In the case of a joint venture, the parties that have joint control of a legally independent company have rights to the net assets of that arrangement. In joint operations, the parties that have joint control have direct rights to the assets and obligations for the liabilities relating to the arrangement. This requirement is particularly fulfilled if the production output of the joint arrangement is almost entirely transferred to the partners, through which the partners guarantee the joint arrangements’ ongoing financing.

Companies whose corporate governance structures classify them as joint arrangements are analyzed to determine if they meet the criteria for joint ventures or joint operations in accordance with IFRS 11. Should the arrangement be structured through a separate vehicle, its legal form, contractual arrangements and all other facts and circumstances are reviewed.

In addition to BASF SE, the Consolidated Financial Statements include all material subsidiaries on a fully consolidated and all material joint operations on a proportionally consolidated basis. Companies of minor importance for the presentation of a true and fair view of the net assets, financial position and results of operations, are not consolidated, but rather are reported under other shareholdings. These companies are carried at amortized cost and are written down in the case of an impairment. The aggregate assets and equity of these companies amount to less than 1% of the corresponding value at Group level.

Joint ventures and associated companies are accounted for using the equity method in the Consolidated Financial Statements. Associated companies are entities that are not subsidiaries, joint ventures or joint operations, and over whose operating and financial policies significant influence can be exercised. In general, this applies to companies in which BASF has an investment of between 20% and 50%. Associated companies and joint ventures that are fully or predominantly allocated to operating divisions are classified as integral because they are integrated into the value chain of the respective division; are controlled by the divisions; and they generate their income in close cooperation with the other assets of the BASF Group and/or of these divisions. Equity-accounted income from integral joint ventures or associated companies is reported as part of income from operations (EBIT). Equity-accounted income from non-integral associated companies is reported in net income from shareholdings.

For more information, see Note 10 from page 253 onward

Consolidation methods: Assets and liabilities of consolidated companies are uniformly recognized and measured in accordance with the principles described herein. For companies accounted for using the equity method, material deviations in measurement resulting from the application of other accounting principles than those applied by BASF are adjusted.

Transactions between consolidated companies as well as intercompany profits resulting from trade between consolidated companies are eliminated in full. Sales and material other balances and transactions between joint operations and fully consolidated Group companies are also eliminated. Material intercompany profits related to companies accounted for using the equity method are eliminated.

Capital consolidation is conducted at the acquisition date according to the purchase method. Initially, all assets, liabilities and additional intangible assets that are to be capitalized are measured at fair value regardless of the scope of any noncontrolling interests. Subsequently, the cost of acquiring the company is compared with the proportional share of the fair value of the net assets acquired. The resulting positive differences are capitalized as goodwill. Negative differences are reviewed once more, then recognized directly in the income statement.

Non-controlling interests are measured at fair value on the date of acquisition proportional to the assets acquired and liabilities assumed (partial goodwill method).

The incidental acquisition costs of a business combination are recognized in the income statement under other operating expenses.

For more information, see Note 13 on page 263

Foreign currency translation: The cost of assets acquired in foreign currencies and revenue from sales in foreign currencies are determined by the exchange rate on the date the transaction is recognized. Foreign currency receivables and liabilities are valued at the exchange rates on the balance sheet date. Changes in assets and liabilities arising from foreign currency translation are recognized in the income statement. They are then reported under other operating income or expenses, other financial result, and, in the case of financial assets measured at fair value through other comprehensive income, in other comprehensive income.

Translation of foreign currency financial statements: The translation of foreign currency financial statements depends on the functional currency of the consolidated companies. For companies whose functional currency is not the euro, translation into the reporting currency is based on the closing rate method: Balance sheet items are translated into euros using closing rates on the balance sheet date; expenses and income are translated into euros at monthly average rates and accumulated for the year. The difference between a company's equity translated at historical rates at the time of acquisition or retention and its equity translated at closing rates on the balance sheet date is reported under other comprehensive income (translation adjustments) and is recognized in the income statement only upon the disposal of the company or a foreign business.

For certain companies outside the eurozone or U.S. dollar zone, the euro or U.S. dollar is the functional currency (among others, BASF Tuerk Kimya Sanayi ve Ticaret Ltd. Sti., Istanbul, Turkey, and BASF Argentina S.A., Buenos Aires, Argentina). In such cases, financial statements prepared in the local currency are translated into the functional currency using the temporal method: All nonmonetary assets and related depreciation and amortization as well as equity are translated at the exchange rate applying to the respective transactions. All other balance sheet items are translated using closing rates on the balance sheet date; other expenses and income are translated at monthly average rates. The resulting translation differences are recognized in the income statement under other operating income or expenses. If necessary, financial statements in the functional currency are translated into the presentation currency according to the closing rate method.

Selected exchange rates

EUR 1 equals

	Closing rates		Average rates	
	Dec. 31, 2023	Dec. 31, 2022	2023	2022
Brazil (BRL)	5.36	5.64	5.40	5.44
China (CNY)	7.85	7.36	7.66	7.08
Japan (JPY)	156.33	140.66	151.99	138.03
Malaysia (MYR)	5.08	4.70	4.93	4.63
Mexico (MXN)	18.72	20.86	19.18	21.19
Switzerland (CHF)	0.93	0.98	0.97	1.00
South Korea (KRW)	1,433.66	1,344.09	1,412.88	1,358.07
United States (USD)	1.11	1.07	1.08	1.05
United Kingdom (GBP)	0.87	0.89	0.87	0.85

1.4 Accounting policies

The accounting policies for the individual items in the balance sheet and the income statement are presented in the respective sections of the Notes.

Business combinations: In business combinations, the acquired assets and liabilities are recognized at fair value on the date the acquirer effectively obtains control. The fair value of acquired assets and assumed liabilities at the date of acquisition, as well as the useful lives of the acquired assets, are largely based on projected cash flows. Actual cash flows can deviate significantly from those. Independent external appraisals are typically used for the purchase price allocation of material business combinations. Valuations in the course of business combinations are based on existing information as of the acquisition date.

Use of estimates and assumptions in preparing the Consolidated Financial Statements

The carrying amount of assets, liabilities and provisions, contingent liabilities and other financial obligations reported in the Consolidated Financial Statements depends on the use of estimates, assumptions and discretionary scope. Specific estimates or assumptions used in individual accounting or valuation methods are disclosed in their respective sections of the Notes to the Consolidated Financial Statements. They are based on the circumstances and estimates on the balance sheet date and thus affect the amounts of income and expenses shown for the reporting periods presented. These assumptions primarily relate to the determination of discounted cash flows in the context of impairment tests and purchase price allocations; the useful lives of depreciable property, plant and equipment and intangible assets; the carrying amount of shareholdings; and the measurement of provisions for items such as employee benefits, warranties, trade discounts, environmental protection or the extent of recognition of assets, liabilities and provisions for taxes. Although uncertainty is appropriately incorporated in the valuation factors, actual results can differ from these estimates. Furthermore, extraordinary challenges resulting from current geopolitical and economic developments are also considered. Current inflation developments were taken into account both in the measurement of pension provisions and other provisions as well as in the fixed asset impairment tests.

Climate and sustainability-related developments: The chemical industry is resource-intensive. BASF is committed to the Paris Climate Agreement: Using resources as efficiently and responsibly as possible and the concept of a circular economy are firmly embedded in BASF's strategy and its actions. BASF pursues clearly defined goals to reduce CO_2 as well regarding the use of renewable and recycled raw materials. In this context, BASF always strives to employ raw materials more efficiently and improve production processes as well as to continually seek ways to use non-fossil, renewable or recycled feedstocks. Despite the current global political situation, the path to climate neutrality is resolutely being pursued. For this reason, current developments and measures relating to climate change and sustainability do not lead to fundamentally changed expectations with regard to useful lives or recoverability of the majority of noncurrent assets. There is also no material need for adjustments to provisions for environmental and restoration obligations. In individual cases, however, plants may be shut down if necessary for reasons of environmental protection. Climate policies are also causing fundamental changes in the automotive industry, one of BASF's key customer industries. The transition to electromobility will have a long-term negative impact on the emissions catalyst business. This development was reflected in a negative long-term growth rate used in the goodwill impairment test for the Catalysts (excluding battery materials) cash-generating unit without leading to an impairment. Other BASF businesses will benefit from this transformation; for example, demand for innovative lightweight components and battery materials will grow.

2 Scope of consolidation

Scope of consolidation

Number of companies

	Europe	Of which Germany	North America	Asia Pacific	South America, Africa, Middle East	2023	2022
As of January 1	**133**	**44**	**33**	**70**	**21**	**257**	**267**
of which proportionally consolidated	7	–	–	2	–	9	9
First-time consolidations[a]	7	2	3	3	2	15	1
of which proportionally consolidated	–	–	–	–	–	–	–
Deconsolidations[b]	2	2	–	–	1	3	11
of which proportionally consolidated	–	–	–	–	–	–	–
As of December 31	**138**	**44**	**36**	**73**	**22**	**269**	**257**
of which proportionally consolidated	7	–	–	2	–	9	9

a Acquisitions, newly established companies, or reclassification due to increased importance
b Divestitures, mergers, liquidations, or downgrades due to decreased importance

In 2023, eleven companies were included in the scope of consolidation for the first time in connection with the carve-out of the BASF Environmental Catalyst and Metal Solutions business unit. Of these companies, four were in Europe (one of those in Germany), three in North America, two in South America, Africa, Middle East and two in Asia Pacific. Three companies with headquarters in Europe (one of those in Germany) were added to the scope of consolidation in connection with the expansion of the battery materials business. One company with headquarters in Asia Pacific was included for the first time due to its increased importance.

Three companies, two of which with headquarters in Germany and one in South America, Africa, Middle East, merged.

Overview of impact of changes in the scope of consolidation (excluding acquisitions and divestitures)

	2023		2022	
	Million €	%[a]	Million €	%[a]
Sales	**–**	**–**	**-46**	**0.0**
Noncurrent assets	-2	0.0	191	0.4
of which property, plant and equipment	–	–	-1	0.0
Current assets	0	0.0	11	0.0
of which cash and cash equivalents	2	0.1	5	0.2
Assets	**-2**	**0.0**	**202**	**0.2**
Equity	1	0.0	124	0.3
Noncurrent liabilities	–	–	128	0.6
of which financial indebtedness	–	–	–	–
Current liabilities	-3	0.0	-50	-0.2
of which financial indebtedness	–	–	–	–
Total equity and liabilities	**-2**	**0.0**	**202**	**0.2**
Other financial obligations	–	–	–	–

a Proportional share in relation to the BASF Group

The proportionally consolidated joint operations include, in particular:

- Ellba C.V., Rotterdam, Netherlands, which is jointly operated with Shell for the production of propylene oxide and styrene monomer
- BASF DOW HPPO Production BVBA, Antwerp, Belgium, which is jointly operated with Dow for the production of propylene oxide
- Butachimie SNC, Chalampé, France, which is jointly operated with Invista for the production of adiponitrile (ADN) and hexamethylenediamine (HMD)
- Alsachimie S.A.S., Chalampé, France, which is jointly operated with Domo Chemicals for the production of adipic acid

In addition to the fully and proportionally consolidated companies, 21 joint ventures and/or associated companies (2022: 23) were consolidated using the equity method as of December 31, 2023.

A list of the companies included in the Consolidated Financial Statements and of all companies in which BASF SE has a shareholding as required by section 313(2) of the German Commercial Code (HGB) is provided in the list of shares held.

For more information, see Note 4 on page 241

For more information, see basf.com/en/corporategovernance

3 Acquisitions and divestitures

Acquisitions

No material activities were acquired in 2023 or 2022.

The compensation component agreed as part of the establishment of BASF Shanshan Battery Materials Co., Ltd., Changsha, China, in 2021 was realized in the amount of €18 million in 2023 and 2022 respectively.

A purchase price adjustment for the polyamide business acquired in 2020 led to a payment of €5 million in 2023 (2022: €13 million).

Divestitures

In 2023, BASF sold the following activity:

– On August 31, 2023, BASF completed the sale of its production site in De Meern, Netherlands, to IQatalyst B.V., Luxembourg, a subsidiary of ASC Investment Sarl, Luxembourg. The transaction mainly covered facilities for the production of nickel-based catalysts, including the associated infrastructure and inventories. The production site was part of the Catalysts division. The purchase price was €13 million, and the after-tax disposal loss was €4 million.

BASF sold the following activities in 2022:

– On April 12, 2022, BASF completed the sale of a 51% share in HKZ Investor Holding B.V., Arnhem, Netherlands, the holding company for the investment in the Hollandse Kust Zuid (HKZ) wind farm, to Allianz Capital Partners, Luxembourg, acting as party to the contract on behalf of Allianz Insurance Companies. Since then, BASF's remaining shares in HKZ Investor Holding B.V. have been accounted for using the equity method. The proportional net income was presented in the BASF Group's income from operations. The integral investment is not allocated to any division but reported under Other. The disposal group of the wind farm investment was derecognized in April 2022 when the shares were sold. The disposal gain included the gain from the transition from full consolidation to the equity method and was likewise presented in income from operations.
– On September 30, 2022, BASF closed the divestiture of its kaolin minerals business to KaMin, a global performance minerals company headquartered in Macon, Georgia. The divestiture comprised the production hub with sites in Daveyville, Toddville, Edgar, Gordon and related mines, reserves and mills in Toomsboro and Sandersville in Georgia. The refinery catalysts production located at the same site remained part of BASF operations and was not included in the divestiture. The kaolin minerals business was allocated to the Performance Chemicals division. The disposal group of the kaolin minerals business was derecognized in September 2022 when the transaction closed. The adjustment of the disposed net assets led to a €6 million increase in disposal loss after taxes in 2023.
– On October 31, 2022, BASF completed the sale of its production site in Quincy, Florida, and the associated attapulgite business in the Dispersions & Resins division to Clariant Corporation, Louisville, Kentucky. The Quincy site employed around 75 employees and manufactured clay-based mineral products used in a variety of industrial applications. The purchase price was $60 million.

The following overview shows the effects of the divestitures in 2023 and 2022 on the Consolidated Financial Statements. The sales line item shows the year-on-year decline resulting from divestitures. The impact on equity related mainly to gains and losses from divestitures. Payments received from divestitures amounted to €32 million and related to various smaller transactions as well as to payments received in connection with outstanding purchase price receivables and the purchase price adjustment for a transaction from previous years.

Effects of divestitures

	2023		2022	
	Million €	%[a]	Million €	%[a]
Sales	**-212**	**-0.2**	**-564**	**-0.6**
Noncurrent assets	**-30**	**-0.1**	**310**	**0.7**
of which property, plant and equipment	-21	-0.1	-32	-0.1
Current assets	**-12**	**0.0**	**-994**	**-2.7**
of which cash and cash equivalents[b]	–	–	-21	0.0
Assets	**-42**	**-0.1**	**-684**	**-0.8**
Equity	**-8**	**0.0**	**256**	**0.6**
Noncurrent liabilities	**-1**	**0.0**	**-15**	**-0.1**
of which financial indebtedness	–	–	–	–
Current liabilities	**-1**	**0.0**	**-213**	**-1.0**
of which financial indebtedness	–	–	–	–
Total equity and liabilities	**-9**	**0.0**	**28**	**0.0**
Payments received from divestitures	**32**		**712**	
Further effects in connection with divestitures[c]	–		-21	
Payments received from divestitures according to statement of cash flows	**32**		**691**	

a Proportional share in relation to the BASF Group
b Includes €21 million from the divested disposal group of the wind farm share in 2022
c Includes disposals from cash and cash equivalents in 2022

Agreed transactions

On December 21, 2023, BASF, LetterOne and Harbour Energy plc (Harbour), London, United Kingdom, signed an agreement to combine the businesses of Wintershall Dea and Harbour. According to the agreement, Wintershall Dea's E&P business, consisting of its producing and development assets as well as exploration rights in Norway, Argentina, Germany, Mexico, Algeria, Libya (excluding Wintershall AG), Egypt and Denmark (excluding Ravn), as well as Wintershall Dea's carbon storage (CCS) licenses will be transferred to Harbour. Upon completion of the transaction, which is targeted for the fourth quarter of 2024, subject to further antitrust approvals and regulatory approvals for foreign investments in various countries, Wintershall Dea shareholders will receive a cash consideration totaling $2.15 billion (BASF share: $1.56 billion) and new shares to be issued by Harbour equating a total shareholding of 54.5% in the enlarged Harbour (BASF share: 39.6%). As a non-integral shareholding, Wintershall Dea is accounted for using the equity method.

For more information, see Non-integral oil and gas business on page 97

4 BASF Group list of shares held pursuant to section 313(2) of the German Commercial Code (HGB)

The list of consolidated companies and the complete list of all companies in which BASF SE holds shares as required by section 313(2) HGB as well as information on the exemption of subsidiaries from accounting and disclosure obligations are an integral component of the audited Consolidated Financial Statements submitted to the electronic Federal Gazette (Bundesanzeiger). The list of shares held is also published online.

For more information, see basf.com/en/corporategovernance

5 Reporting by segment and region

Accounting policies

The divisions are allocated to the segments based on their business models and according to their focal points, customer groups, the focus of their innovations, their investment relevance and sustainability aspects. Activities that are not allocated to any of the divisions are recorded under Other.

The same accounting rules are used for segment reporting as those used for the Group, which are presented in these Notes. Transfers between the segments are generally executed at adjusted market-based prices, taking into account the higher cost efficiency and lower risk of intragroup transactions. Assets, as well as their depreciation and amortization, are allocated to the segments based on economic control. Assets used by more than one segment are allocated according to the percentage of usage.

Income from operations (EBIT) before special items was used for the internal steering of the segments and to complement the key performance indicator, return on capital employed (ROCE), up to and including 2023. It is determined based on EBIT, which is calculated from gross profit on sales, selling expenses, general administrative expenses, research and development expenses, other operating income and expenses, and income from integral companies accounted for using the equity method. To calculate EBIT before special items, this figure is then adjusted for special items. Special items arise from the integration of acquired businesses, restructuring costs, impairments and reversals of impairments, gains or losses on divestitures and sales of integral investments accounted for using the equity method, as well as other expenses and income that arise outside of ordinary business activities. EBIT and EBIT before special items as well as EBITDA and EBITDA before special items are alternative performance measures that are not defined under IFRS and are to be considered complementary to the indicators defined by IFRS.

For more information on changes in the steering concept, see the Combined Management's Report from page 37 onward

Explanation of segments

The BASF Group's business is run by 11 divisions, structured in six segments:
- **Chemicals:** Petrochemicals, Intermediates
- **Materials:** Performance Materials, Monomers
- **Industrial Solutions:** Dispersions & Resins, Performance Chemicals
- **Surface Technologies:** Catalysts, Coatings
- **Nutrition & Care:** Care Chemicals, Nutrition & Health
- **Agricultural Solutions:** Agricultural Solutions

The **Chemicals** segment comprises the Petrochemicals and Intermediates divisions and is the cornerstone of BASF's Verbund structure. It supplies the other segments with basic chemicals and intermediates, thereby contributing to the organic growth of the BASF Group. In addition to internal transfers, the segment mainly serves customers in downstream industries, especially in the chemical and plastics industries. The segment's competitiveness is strengthened by technological leadership and operational excellence, process and product innovations as well as the development of sustainable technologies.

The **Materials** segment is composed of the Performance Materials and the Monomers divisions. The segment offers advanced materials and their precursors for new applications and systems. Its product portfolio includes isocyanates and polyamides as well as inorganic basic products and specialties for plastics and plastics processing. In addition to specific technological knowledge, industry expertise and customer proximity, particularly products that contribute to the circular economy as well as sustainable production methods help differentiate BASF from its competitors in this segment.

The **Industrial Solutions** segment consists of the Dispersions & Resins and the Performance Chemicals divisions. This segment develops and markets ingredients and additives for industrial applications, such as polymer dispersions, resins, electronic materials, antioxidants and additives. As part of the sustainability strategy, this segment's focus is on the creation of more efficient production structures and processes that better conserve resources. Its customers come from key industries such as automotive, plastics and electronics.

The **Surface Technologies** segment bundles chemical solutions for surfaces in the Catalysts and Coatings divisions. Its portfolio range serves the automotive and chemical industries and includes catalysts, battery materials, automotive OEM and refinish coatings, surface treatment, and precious and base metal services. Innovations and solutions customized in collaboration with its customers in the field of sustainable mobility are growth drivers for this segment.

The **Nutrition & Care** segment comprises the Care Chemicals division and the Nutrition & Health division. This segment produces ingredients for consumer applications in the areas of nutrition, home and personal care. Its customers include food and feed producers as well as the pharmaceutical, cosmetics, and the detergent and cleaner industries. The segment's competitiveness is strengthened, among other things, by focusing on trends in digitalized business models and sustainability in the consumer goods markets. An example of the latter is the expansion of the portfolio with bio-based and biodegradable products.

The **Agricultural Solutions** segment consists of the division of the same name. As an integrated provider, its portfolio comprises fungicides, herbicides, insecticides and biological crop protection products, as well as seeds and seed treatment products. Furthermore, Agricultural Solutions offers farmers innovative and sustainable solutions based on digital technologies combined with practical advice.

Other is comprised of the remaining businesses. These include commodity trading, engineering and other services, as well as rental income and leases. Discontinued operations and certain activities remaining after divestitures are also reported here.

The following activities are also presented under Other:

– The steering of the BASF Group by corporate headquarters.
– Cross-divisional corporate research, which includes plant biotechnology research, works on long-term topics of strategic importance to the BASF Group. Furthermore, it focuses on the development of specific key technologies, which are of overriding importance for the divisions.
– Trade with renewable energies as well as the activities of the Net Zero Accelerator unit, which bundles cross-company projects to achieve climate protection targets.
– Foreign currency results not allocated to the segments and measurement effects from the hedging of raw materials price and foreign currency exchange risks; as well as gains and losses from the long-term incentive programs (LTI programs).
– Remanent fixed costs resulting from organizational changes or restructuring that are not allocated to a division; idle capacity costs from internal human resource platforms; and consolidation effects that cannot be allocated to a division.

Income from operations (EBIT) of Other

Million €

	2023	2022
Costs for cross-divisional corporate research	-250	-326
Costs of corporate headquarters	-222	-258
Other businesses	38	-46
Foreign currency results, hedging and other measurement effects	-29	33
Miscellaneous income and expenses	-315	74
Income from operations of Other	**-778**	**-523**

Income from operations of Other decreased by €256 million year on year to -€778 million. This resulted mainly from miscellaneous income and expenses, which in the previous year had included special income from the disposal of shares in the Hollandse Kust Zuid offshore wind farm. A special charge in the amount of €110 million arose in the current reporting year primarily for severance payments in connection with restructuring. Foreign currency results, hedging and other measurement effects were down by €62 million year on year, due mainly to lower gains on the valuation of commodity derivatives as well as expenses from the long-term incentive programs, following gains in the previous year. Improved income from other businesses as well as lower costs for corporate research had an offsetting effect.

Reconciliation of the assets of Other to the assets of the BASF Group

Million €

	December 31, 2023	December 31, 2022
Segment assets	**63,002**	**67,670**
Assets of businesses included in Other	2,252	2,713
Other financial assets and non-integral investments accounted for using the equity method	5,617	5,765
Deferred tax assets	617	880
Cash and cash equivalents / marketable securities	2,678	2,748
Defined benefit assets	170	792
Other receivables / prepaid expenses	3,060	3,906
Assets of Other	**14,393**	**16,803**
Assets of the BASF Group	**77,395**	**84,472**

Reconciliation of segment income to income before income taxes

Million €

	2023	2022
EBIT before special items of the segments	4,420	7,627
EBIT before special items of Other	-614	-749
EBIT before special items	**3,806**	**6,878**
Special items of the segments	-1,402	-556
Special items of Other	-164	226
Special items	**-1,566**	**-330**
EBIT of the segments	3,018	7,070
EBIT of Other	-778	-523
EBIT	**2,240**	**6,548**
Net income from shareholdings	-200	-4,939
Financial result	-620	-418
Income before income taxes	**1,420**	**1,190**

Segments 2023

Million €

	Chemicals	Materials	Industrial Solutions	Surface Technologies	Nutrition & Care	Agricultural Solutions	Other	BASF Group
Sales	10,369	14,149	8,010	16,204	6,858	10,092	3,220	68,902
Intersegment transfers	3,606	864	436	176	429	36	102	5,649
Sales including transfers	13,975	15,013	8,445	16,381	7,286	10,128	3,323	74,551
Income from integral companies accounted for using the equity method	92	14	12	80	3	–	-9	192
Income from operations before depreciation and amortization (EBITDA)	1,167	1,523	1,010	1,351	578	2,177	-626	7,180
Income from operations (EBIT)	364	378	660	366	119	1,131	-778	2,240
Assets	11,468	9,716	5,576	12,657	7,496	16,089	14,393	77,395
of which goodwill	204	191	629	2,319	858	3,236	62	7,499
other intangible assets	64	243	111	897	281	3,079	42	4,717
property, plant and equipment	7,251	4,950	1,919	3,560	3,264	2,145	991	24,080
integral investments accounted for using the equity method	890	201	12	504	35	–	413	2,054
Liabilities	2,798	3,730	1,755	2,685	2,296	3,462	24,024	40,750
Research and development expenses	83	185	150	304	150	900	356	2,130
Additions to property, plant and equipment and intangible assets (including acquisitions)	2,706	1,083	285	621	765	353	195	6,006
Depreciation and amortization of property, plant and equipment and intangible assets	803	1,146	349	986	459	1,046	153	4,941
of which impairments	23	337	13	411	5	354	6	1,149
reversals of impairments	6	1	0	0	–	–	–	6

Segments 2022

Million €

	Chemicals	Materials	Industrial Solutions	Surface Technologies	Nutrition & Care	Agricultural Solutions	Other	BASF Group
Sales	14,895	18,443	9,992	21,283	8,066	10,280	4,368	87,327
Intersegment transfers	4,860	1,742	507	198	588	40	139	8,074
Sales including transfers	19,754	20,186	10,499	21,481	8,654	10,320	4,508	95,401
Income from integral companies accounted for using the equity method	269	25	6	91	8	–	-14	386
Income from operations before depreciation and amortization (EBITDA)	2,771	2,660	1,443	1,264	1,055	1,922	-368	10,748
Income from operations (EBIT)	1,758	1,776	1,097	612	605	1,221	-523	6,548
Assets	10,481	10,864	6,318	14,899	8,038	17,071	16,803	84,472
of which goodwill	210	196	635	2,404	883	3,299	68	7,696
other intangible assets	64	565	142	1,024	322	3,414	45	5,577
property, plant and equipment	5,520	4,833	1,998	3,977	2,996	2,658	986	22,967
integral investments accounted for using the equity method	1,094	214	15	537	40	–	455	2,356
Liabilities	3,228	3,979	2,140	3,860	2,751	3,975	23,618	43,550
Research and development expenses	93	201	172	335	172	944	381	2,298
Additions to property, plant and equipment and intangible assets (including acquisitions)	1,701	880	322	740	642	414	268	4,967
Depreciation and amortization of property, plant and equipment and intangible assets	1,013	884	346	651	450	701	155	4,200
of which impairments	214	47	3	103	11	10	7	393
reversals of impairments	0	0	1	–	1	16	3	20

Regions 2023

Million €

		Europe	Of which Germany	North America	Asia Pacific	South America, Africa, Middle East	BASF Group
Location of customer							
Sales		26,022	6,833	18,833	17,520	6,527	68,902
Share	%	37.8	9.9	27.3	25.4	9.5	100.0
Location of company							
Sales		27,631	11,449	19,003	17,142	5,126	68,902
Assets		36,019	22,498	19,236	17,617	4,524	77,395
of which intangible assets		5,303	2,786	5,393	1,243	277	12,216
property, plant and equipment		10,289	6,306	5,419	7,692	680	24,080
integral investments accounted for using the equity method		448	13	122	1,485	–	2,054
Additions to property, plant and equipment and intangible assets (including acquisitions)		2,367	1,463	934	2,580	125	6,006
Depreciation and amortization of property, plant and equipment and intangible assets including impairments and reversals of impairments		2,904	1,674	1,196	694	146	4,941

In the United States, sales to third parties in 2023 amounted to €16,128 million (2022: €21,319 million) according to location of companies and €15,764 million (2022: €20,585 million) according to location of customers. On December 31, 2023, the carrying amounts of intangible assets, property, plant and equipment, and investments accounted for using the equity method amounted to €10,362 million (2022: €10,937 million) in the United States.

In China, sales to third parties in 2023 amounted to €8,950 million (2022: €11,216 million) according to location of companies and €8,893 million (2022: €11,022 million) according to location of customers. On December 31, 2023, the carrying amounts of intangible assets, property, plant and equipment, and investments accounted for using the equity method amounted to €7,802 million (2022: €6,457 million) in China.

Regions 2022

Million €

		Europe	Of which Germany	North America	Asia Pacific	South America, Africa, Middle East	BASF Group
Location of customer							
Sales		33,922	8,977	23,869	21,823	7,712	87,327
Share	%	38.8	10.3	27.3	25.0	8.8	100.0
Location of company							
Sales		35,821	15,170	24,343	21,309	5,854	87,327
Assets		40,343	25,296	20,600	18,689	4,841	84,472
of which intangible assets		5,910	3,041	5,697	1,371	295	13,273
property, plant and equipment		10,427	6,405	5,702	6,168	670	22,967
integral investments accounted for using the equity method		479	10	130	1,747	–	2,356
Additions to property, plant and equipment and intangible assets (including acquisitions)		2,173	1,321	1,032	1,621	141	4,967
Depreciation and amortization of property, plant and equipment and intangible assets including impairments and reversals of impairments		2,133	1,407	1,208	728	132	4,200

6 Earnings per share

Earnings per share

		2023	2022
Income after taxes	Million €	379	-391
of which noncontrolling interests	Million €	154	236
Net income	**Million €**	**225**	**-627**
Weighted average number of outstanding shares	1,000	892,641	901,754
Dilution effect from BASF’s “plus” incentive share program	1,000	2,436	1,573
Weighted average number of shares for diluted earnings per share	**1,000**	**895,077**	**903,327**
Earnings per share			
Basic	€	0.25	-0.70
Diluted	€	0.25	-0.70

In accordance with IAS 33, earnings per share are determined by dividing earnings attributable to shareholders of BASF SE by the weighted average of outstanding shares. Pursuant to IAS 33, a potential dilutive effect must be considered in the **diluted earnings per share** for those BASF shares that will be granted in the future as part of BASF’s “plus” share program. This applies regardless of the fact that the necessary shares are acquired on the market by third parties on behalf of BASF and that there are no plans to issue new shares.

The average number of outstanding shares declined compared with 2022 due to the share buyback program in effect until February 24, 2023. No dilutive effect arose from the issue of “plus” shares in 2023 or 2022.

For more information on the share buyback program, see Note 18 from page 277 onward and on page 200 in the Corporate Governance Report

7 Sales revenue

Accounting policies

Sales revenue from contracts with customers is recognized in the amount of the consideration BASF expects to receive in exchange for the goods or services when the customer obtains control of the goods or services. Control is considered to be transferred when the customer can direct the use of the goods or services and can obtain all substantial remaining benefits from them.

BASF primarily generates income from the sale of goods. Because the customer obtains control of the goods at a specific point in time, the corresponding sales revenue is recognized based on a given point in time. Determination of this point in time occurs in the context of an overall assessment of the circumstances which considers the existence of a present claim to payment, the legal title to the goods, actual physical possession of the goods, the transfer of risks and rewards as well as customer acceptance. The transfer of risks and rewards takes into account the underlying terms of delivery (especially Incoterms) and is of particular practical significance. According to these principles, sales revenue from the sale of goods is generally recognized upon delivery. If products are delivered to a consignment warehouse, BASF normally retains control of the goods. Accordingly, sales revenue is not recognized until the customer collects the goods from the consignment warehouse. Long-term supply agreements usually contain variable prices, which depend, among other factors, on the development of raw materials prices, and variable volumes.

Services rendered to customers by BASF are invoiced according to work completed and recognized as revenue accordingly.

BASF generates a portion of its sales revenue from license agreements. Sales revenue from license agreements is recognized based on a point in time or a period of time depending on whether the licensee is being granted a right to use (revenue recognized at a point in time) or a right to access (revenue recognized over time) the intellectual property of BASF. Revenues from sales and usage-based royalties are recognized when the underlying sale or usage occurs.

Sales revenue from the sale of precious metals to industrial customers is recognized on delivery and the corresponding purchase prices are recorded as cost of sales. In the trading of precious metals and their derivatives with traders, where there is usually no physical delivery, revenues are netted against the corresponding costs. Commodity swaps that do not lead to a transfer of economic control are eliminated.

If a consideration that is contractually agreed upon by a customer includes variable components, BASF estimates the amount of the consideration. Variable components are recognized as revenue only to the extent that it is highly probable that previously recognized sales revenue will not have to be cancelled as soon as there is no longer uncertainty about the actual amount of the consideration. Primarily rebates and other discounts are recognized as a reduction in revenue in accordance with the principle of individual measurement. BASF grants customers rebates, among other things, if the goods purchased by the customer exceed a contractually defined threshold within the period specified. Rebates are usually deducted from amounts payable by the customer. Taking into account the specific terms of the underlying contract, BASF uses the expected value method or the most likely amount to estimate a variable consideration amount. The method is selected based primarily on number of possible results such as the number of volume thresholds with rebates. All available information, particularly historical values, is used for making estimates.

In some contracts, BASF grants the customer the right to return goods within a specific period of time, even if they meet the agreed specifications (sale with right of return). The actual expected amount of the consideration BASF is entitled to receive in this case is estimated using the expected value method. Refund liabilities are recognized in the amount of considerations paid by the customer for goods that are expected to be returned.

BASF opts to apply the practical expedient in IFRS 15.63 to not adjust the amount of the agreed consideration for the effects of a material financing component if, at the beginning of a contract, no more than one year is expected to lapse between the transfer of control of the goods or services and payment by the customer.

BASF also applies the practical expedient in IFRS 15.121 of not reporting information on remaining performance obligations resulting from a contract with a maximum expected original term of one year. Furthermore, information on performance obligations is not reported if the resulting revenue is recognized in accordance with IFRS 15.B16.

Explanation of sales revenue

Sales by division and by indication and sector

Million €

	2023	2022
Petrochemicals	7,418	10,546
Intermediates	2,951	4,349
Chemicals	**10,369**	**14,895**
Performance Materials	7,244	8,567
Monomers	6,905	9,877
Materials	**14,149**	**18,443**
Dispersions & Resins	4,921	6,019
Performance Chemicals	3,088	3,973
Industrial Solutions	**8,010**	**9,992**
Catalysts	11,818	17,062
Coatings	4,387	4,220
Surface Technologies	**16,204**	**21,283**
Care Chemicals	4,721	5,619
Nutrition & Health	2,137	2,447
Nutrition & Care	**6,858**	**8,066**
Fungicides	3,047	2,977
Herbicides	3,380	3,568
Insecticides	1,041	1,057
Seed Treatment	662	806
Seeds & Traits	1,962	1,872
Agricultural Solutions	**10,092**	**10,280**
Other	**3,220**	**4,368**
BASF Group	**68,902**	**87,327**

Sales revenue of €44 million, that was included in contract liabilities as of January 1, 2023, was recognized in 2023 (2022: €43 million).

Sales revenue for the 2023 fiscal year includes €238 million from performance obligations satisfied in prior periods (2022: €175 million). This relates in particular to adjustments for sales and usage-based royalties as well as the reversal of over accruals for rebates and product returns from the previous year.

8 Functional costs

Under the cost of sales method, functional costs incurred by the operating functions are determined on the basis of cost center accounting. The functional costs particularly contain the personnel costs, depreciation and amortization accumulated on the underlying final cost centers as well as allocated costs within the cost accounting cycle. Operating expenses that cannot be allocated to the functional costs are reported as other operating expenses.

For more information on other operating expenses, see Note 9 from page 251 onward

Cost of sales

Cost of sales includes all production and purchase costs of the company's own products as well as merchandise that has been sold in the period, particularly plant, energy and personnel costs.

Selling expenses

Selling expenses primarily include marketing and advertising costs, freight costs, packaging costs, distribution management costs, commissions and licensing costs.

General administrative expenses

General administrative expenses include the costs of the Corporate Center, of general management, the Board of Executive Directors and the Supervisory Board. They also include the costs of managing operating divisions and business units as well as the costs of the supporting services in departments such as accounting, legal, taxes and controlling.

Research and development expenses

Research and development expenses include the costs resulting from research projects as well as the necessary license fees for research activities.

For more information on research and development expenses by segment, see Note 5 from page 242 onward

9 Other operating income and expenses

Other operating income

Million €

	2023	2022
Income from the adjustment and release of provisions recognized in other operating expenses	130	141
Revenue from miscellaneous other activities	248	180
Income from hedging transactions and LTI programs	90	177
Income from foreign currency transactions and the translation of financial statements in foreign currencies	66	58
Gains on divestitures and the disposal of noncurrent assets	116	301
Reversals of impairment losses on noncurrent assets	6	18
Income from the reversal of valuation allowances for business-related receivables	101	36
Gains/losses from precious metal trading	254	282
Income from refunds and government grants[a]	292	169
Other	686	447
Other operating income	**1,990**	**1,808**

a Income from refunds and government grants previously included in Other was reported separately for the first time. The prior-year figures have been restated accordingly.

Income from the adjustment and release of provisions recognized in other operating expenses resulted in 2023 from the release of provisions for environmental measures in North America. As in the previous year, additional income resulted from release of provisions in connection with the restructuring of the Global Business Services unit. In addition, income resulted in both years from the adjustment to provisions for risks from lawsuits and damage claims, closures and restructuring measures, employee obligations, and various other individual items as part of the normal course of business. Provisions were reversed or adjusted if, based on the circumstances on the balance sheet date, utilization was no longer expected, or expected to a lesser extent.

In both years, **revenue from miscellaneous other activities** primarily included income from rentals, catering operations, cultural events and logistics services. The rise in revenue over the previous year was largely compensated by higher production costs.

In 2023, **income from hedging transactions and LTI programs** mainly included income from the valuation of virtual and physical power purchase agreements in North America. A decline in income from hedging transactions for the procurement of natural gas was attributable to lower prices. Moreover, this item in the previous year had included income from the release of provisions for the long-term incentive (LTI) programs in the amount of €24 million. In 2023, by contrast, expenses were incurred for additions to these provisions.

Income from foreign currency transactions and the translation of financial statements in foreign currencies related to the translation of receivables and liabilities in foreign currencies and included income from the translation of companies' financial statements whose local currency is different from the functional currency.

Gains on divestitures and the disposal of noncurrent assets in 2023 were mainly from the sale of an office building in Europe and the divestiture of some smaller businesses. In 2022, this item primarily consisted of gains on the sale of 51% of shares in the company holding the interest in the Hollandse Kust Zuid wind farm and the sale of the production site in Quincy, Florida.

For more information, see Note 3 from page 240 onward

The rise in **income from the reversal of valuation allowances for business-related receivables** was particularly due to the reversal of valuation allowances relating to a transaction tax in Brazil.

In both years, **income from refunds and government grants** was mainly attributable to grants for regional business developments in China and other funding measures in various countries. Additionally, reimbursements from the government in connection with a plant closure in 2019 occurred in 2023.

Other income included income from the sale of CO_2 certificates in the amount of €185 million in 2023. Income in both years related to gains from the sale of precious metals as well as multiple other items.

Other operating expenses

Million €

	2023	2022
Restructuring and integration measures	628	486
Environmental protection and safety measures, costs of demolition and removal, and project costs not subject to mandatory capitalization	530	411
Depreciation, amortization and impairments of noncurrent assets and of the disposal groups	1,163	409
Costs from miscellaneous revenue-generating activities	222	171
Expenses from hedging transactions and LTI programs	117	61
Losses from foreign currency transactions and the translation of financial statements in foreign currencies	366	326
Losses from divestitures and the disposal of noncurrent assets	73	51
Expenses from the addition of valuation allowances on business-related receivables	31	31
Expenses for derecognition of obsolete inventory	306	437
Other	785	901
Other operating expenses	**4,221**	**3,283**

In 2023, **expenses from restructuring and integration measures** related mainly to restructuring measures in connection with the cost savings program focusing on Europe, adjustments to production structures at the Verbund site in Ludwigshafen, Germany, and, as in the previous year, the carve-out of the BASF Environmental Catalyst and Metal Solutions unit within the Catalysts division. In both years, additional expenses were largely attributable to restructuring measures to improve competitiveness in various operating divisions and site closures in Europe and North America. Expenses also resulted in 2022 from the adjustment of business activities in Russia. In both years, expenses from integration measures related almost entirely to the integration of the battery materials business, which had been acquired in 2021.

Environmental protection and safety measures, costs of demolition and removal, and project costs not subject to mandatory capitalization were expensed if requirements for mandatory capitalization pursuant to IFRS were not met. Expenses for demolition, removal, and project planning totaled €407 million in 2023 and €352 million in 2022, and related mainly to the site in Ludwigshafen, Germany, and the development of the new Verbund site in China in both years. Expenses for the battery materials business in Schwarzheide, Germany and Finland were also included in both years. Additionally, expenses of €123 million in 2023 and €59 million in 2022 arose from additions to environmental provisions which mainly concerned several discontinued sites in North America in both years.

Depreciation, amortization and impairments of noncurrent assets and of the disposal groups in 2023 included impairments in the amount of €1,149 million. These comprised impairments on property, plant and equipment in the Surface Technologies segment, especially in the battery materials business, on plants in the Agricultural Solutions segment and on property, plant and equipment and intangible assets in the Materials segment. In 2022, impairments amounted to €393 million relating primarily to plants in Ludwigshafen, Germany, and De Meern, Netherlands. Impairments to construction in progress from discontinued investment projects were also included in both years.

For more information, see Note 14 from page 264 onward

Costs from miscellaneous revenue-generating activities relate to the corresponding items presented in other operating income.

Expenses from hedging transactions and LTI programs in 2023 included expenses of €83 million and in 2022 of €61 million from hedging transactions, primarily attributable in both years to expenses for option premiums used to hedge natural gas purchases. Furthermore, expenses arose from changes in the fair value of currency derivatives and other hedging transactions. LTI programs led to expenses in the amount of €35 million in 2023. In the previous year, income resulted from the reversal of provisions for LTI programs.

In both years, **losses from divestitures and the disposal of noncurrent assets** were mainly in connection with the divestiture of the site in De Meern, Netherlands. Additional expenses in 2023 resulted from purchase price adjustments for divestitures in previous years as well as consulting costs.

In both years, **other expenses** included expenses for litigation, for REACH, for the provision of services and for warranties. Furthermore, other expenses for societal engagement arose in both years.

10 Investments accounted for using the equity method and other financial assets

Accounting policies

Joint ventures and associated companies are accounted for using the equity method. The carrying amounts of shareholdings are adjusted annually based on the pro rata share of net income, dividends and other changes in equity. Should there be indications of a reduction in the value of an investment, an impairment test is conducted and, if necessary, an impairment is recognized in the income statement. In the case of publicly listed associated companies, share prices are included in the impairment test and form the basis of valuation if there is an indication for permanent impairment or reversal of an impairment. Furthermore, earnings and the carrying amount are adjusted when accounting policies deviate or as a result of purchase price allocations, which primarily affects Wintershall Dea AG, Kassel/Hamburg, Germany.

Exploration and development expenses in the oil and gas business, for which the equity method is applied, are accounted for using the successful efforts method. Under this method, costs of successful exploratory drilling as well as successful and dry development wells are capitalized.

10.1 Integral companies accounted for using the equity method

Income from integral companies accounted for using the equity method

Million €

	2023	2022
Proportional income after taxes	196	388
of which joint ventures	180	362
associated companies	16	26
Other adjustments to income and expenses	-4	-2
of which joint ventures	-3	-2
associated companies	-1	0
Income from integral companies accounted for using the equity method	**192**	**386**

The material equity-accounted shareholding that is classified as integral is BASF-YPC Company Ltd., Nanjing, China, in which BASF and Sinopec each hold 50%, and which operates the Verbund site in Nanjing, China.

Income from integral companies accounted for using the equity method decreased by €194 million in 2023. Of the decrease, €175 million related to the shareholding in BASF-YPC Company Ltd. (joint venture) and €28 million to Markor Meiou Chemical (Xinjiang) Co., Ltd., Korla, China (associated company), primarily due to lower sales prices and volumes. Lucura Versicherungs AG, Ludwigshafen am Rhein, Germany (associated company), which made a negative contribution to earnings in the previous year due to losses from the valuation of securities, has been fully consolidated since December 31, 2022.

Reconciliation of the carrying amounts of integral shareholdings accounted for using the equity method

Million €

	Joint ventures		Associated companies	
	2023	2022	2023	2022
Carrying amounts according to the equity method as of the beginning of the year	**2,107**	**1,839**	**249**	**701**
Proportional income after taxes and other adjustments to income and expenses	177	360	15	26
Proportional changes in other comprehensive income	-134	57	-11	-15
Total comprehensive income	**43**	**417**	**4**	**11**
Changes in the scope of consolidation and disposals	-10	–	-7	-363
Additions	–	382	–	40
Transfers	-297	-531	-34	-140
Carrying amounts according to the equity method as of the end of the year	**1,842**	**2,107**	**212**	**249**

Proportional changes in other comprehensive income included income and expense recognized directly in equity and related, in addition to currency effects, to changes in the fair value of derivatives in connection with long-term power supply agreements, particularly at the HKZ Investor Holding B.V. joint venture in Arnhem, Netherlands. The company holds shares in the Hollandse Kust Zuid offshore wind farm and manages the power supply agreements with the wind farm.

Changes in the scope of consolidation and disposals in 2023 resulted from the reclassification of Changchun Chemetall Chemicals Co., Ltd., Changchun, China, and in the previous year from Lucura Versicherungs AG, which has been fully consolidated since December 31, 2022. In addition, disposals in 2023 and 2022 included decreases in capital of the associated company, Yara Freeport LLC, Freeport, Texas.

Additions in 2022 mainly related to the shareholding in the HKZ Investor Holding B.V. joint venture.

Transfers primarily included dividend payments by BASF-YPC Company Ltd. (joint venture), Southeast Texas Pipelines LLC, Houston, Texas (joint venture), Heesung Catalysts Corporation, Seoul, South Korea (joint venture), and Markor Meiou Chemical (Xinjiang) Co., Ltd. (associated company) in both 2023 and 2022.

Additional information on the BASF-YPC Company Ltd. material integral investment accounted for using the equity method

Financial information on BASF-YPC Company Ltd., Nanjing, China (100%)

Million €

	December 31, 2023	December 31, 2022
Balance sheet		
Noncurrent assets	911	969
Current assets	838	1,224
of which marketable securities, cash and cash equivalents	261	416
Assets	**1,749**	**2,193**
Equity	1,492	1,874
Noncurrent liabilities	5	4
of which financial indebtedness	–	–
Current liabilities	252	315
of which financial indebtedness	–	–
Total equity and liabilities	**1,749**	**2,193**
Statement of income	**2023**	**2022**
Sales revenue	2,537	3,554
Amortization/impairment and reversals of impairments	-142	-143
Interest income	9	17
Interest expenses	–	-1
Income taxes	-25	-142
Income after taxes and other adjustments to income and expenses	76	428
Changes in other comprehensive income	-115	-49

Reconciliation of the carrying amount of the shareholding in BASF-YPC Company Ltd.

Million €

		2023	2022
BASF interest	%	50	50
Carrying amount as of the beginning of the year		**938**	**1,148**
Proportional income after taxes and other adjustments to income and expenses		38	213
Proportional changes in other comprehensive income		-58	-25
Capital increase		–	31
Dividends received		-172	-429
Carrying amount as of the end of the year		**746**	**938**

10.2 Non-integral companies accounted for using the equity method

Income from non-integral companies accounted for using the equity method

Million €

	2023	2022
Proportional income after taxes	-66	-3,514
Other adjustments to income and expenses	-48	-1,371
Income from non-integral companies accounted for using the equity method	**-114**	**-4,885**

The non-integral companies accounted for using the equity method are exclusively associated companies. The material non-integral shareholding is the Wintershall Dea AG oil and gas company, in which BASF holds a 72.7% share. The remaining shares are held by LetterOne. Wintershall Dea is classified as an associated company because, in addition to BASF and LetterOne, independent members are also represented in the board responsible for decisions about relevant activities and BASF can thus only exercise significant influence.

Stahl Lux 2 S.A., Luxembourg (BASF interest: 16.32%), and CIMO Compagnie industrielle de Monthey S.A., Monthey, Switzerland (BASF interest: 15%), are classified as associated companies as BASF is represented in the relevant boards and can thus exercise significant influence over the companies.

Income from non-integral companies accounted for using the equity method increased by €4,771 million in 2023 due primarily to a lower burden on earnings from Wintershall Dea AG. In 2022, expenses from the deconsolidation of Wintershall Dea shareholdings in Russia and impairments of assets primarily related to Russia were recognized in the total amount of €6,517 million (BASF interest after taxes). In 2023, however, income was negatively impacted by the addition of restructuring provisions and the depreciation of the Argentine peso.

Values in use were determined in the impairment test in December 2023 for the assets held by Wintershall Dea for which purchase price adjustments exist at BASF level. The assumptions applied for production and cost trends as well as the price assumptions largely correspond with Wintershall Dea's. This did not lead to any material impairments or reversals of impairments.

The agreement with Harbour Energy plc (Harbour), London, United Kingdom, was reflected in the impairment test of the shareholding in Wintershall Dea: The value of the agreed consideration (39.6% of shares in Harbour and $1.56 billion in cash) was taken into account with regard to the assets and liabilities to be transferred to Harbour. The value contribution of the remaining activities is derived based mainly on the expected compensation values for the expropriated assets in Russia (considering various possible but not unlikely scenarios regarding reimbursement scope and payment timing), the anticipated gain on the sale of the shareholding in WIGA Transport Beteiligungs-GmbH & Co. KG, planned costs for the downsizing and ultimate closure of Wintershall Dea's head offices, and the cash position.

For more information on Wintershall Dea, see the chapter on Non-Integral Oil and Gas Business in the Combined Management's Report from page 97 onward

Reconciliation of the carrying amounts of non-integral associated companies accounted for using the equity method

Million €

	Associated companies	
	2023	2022
Carrying amounts according to the equity method as of the beginning of the year	**4,645**	**9,843**
Proportional income after taxes and other adjustments to income and expenses	-120	-4,885
Proportional changes in other comprehensive income	307	645
Total comprehensive income	**187**	**-4,240**
Changes in the scope of consolidation and disposals	-24	–
Additions	–	–
Transfers	-291	-958
Carrying amounts according to the equity method as of the end of the year	**4,518**	**4,645**

The **proportional changes of other comprehensive income** in 2023 included changes in the fair value of derivatives used to hedge gas prices and impairments of shareholdings in Russian companies which, pursuant to IFRS 9, were measured at fair value through other comprehensive income. Currency effects particularly arose in 2022 at Wintershall Dea. With the deconsolidation of the Russian shareholdings held by Wintershall Dea, total differences arising from currency translation of €868 million were reclassified as earnings to the income statement in 2022.

Changes in the scope of consolidation and disposals in 2023 resulted from adjustments to the scope of consolidation at Wintershall Dea and the sale of the shareholding in Quantafuel ASA, Oslo, Norway. In addition, disposals in 2023 included decreases in capital of the associated company, Stahl Lux 2 S.A., Luxembourg.

Transfers comprised Wintershall Dea's dividend payments in both years.

Additional information on the Wintershall Dea material non-integral investment accounted for using the equity method

The following table contains financial information on the Wintershall Dea material non-integral shareholding accounted for using the equity method, including adjustments for fair value made at initial recognition and the resulting effects on earnings.

Financial information on Wintershall Dea, Kassel/Hamburg, Germany (100%)

Million €

	December 31, 2023	December 31, 2022
Balance sheet		
Noncurrent assets[a]	236	15,697
Current assets	1,199	5,690
of which marketable securities, cash and cash equivalents	987	3,089
Assets of disposal groups	16,767	–
of which marketable securities, cash and cash equivalents	221	–
Assets	**18,202**	**21,387**
Equity attributable to shareholders of Wintershall Dea AG	2,670	2,832
Subordinate bonds issued by Wintershall Dea	1,525	1,525
Equity	**4,195**	**4,357**
Noncurrent liabilities	473	9,473
of which financial indebtedness	26	3,067
Current liabilities	574	7,557
of which financial indebtedness	176	1,356
Liabilities of disposal groups	12,960	–
of which financial indebtedness	3,126	–
Total equity and liabilities	**18,202**	**21,387**
Statement of income[b]	**2023**	**2022**
Sales revenue	3,292	11,223
Depreciation and amortization/impairment and reversals of impairments	480	-1,571
Interest income	103	149
Interest expenses	-27	-7
Income taxes	-200	-352
Income after taxes and other adjustments to income and expenses from continuing operations	2	-6,382
Income after taxes and other adjustments to income and expenses from discontinued operations	-182	-293
Changes in other comprehensive income	424	882

a The goodwill from fair value adjustments is reported in reconciliation of the carrying amount of the shareholding in Wintershall Dea.
b The prior-year figures have been adjusted.

Reconciliation of the carrying amount of the shareholding in Wintershall Dea

Million €

		2023	2022
BASF interest in equity attributable to shareholders of Wintershall Dea AG	%	72.7	72.7
Carrying amount as of the beginning of the year		**4,364**	**9,583**
of which proportional goodwill from fair value adjustments		2,306	1,992
Proportional income after taxes and other adjustments to income and expenses		-130	-4,853
Proportional changes in other comprehensive income		308	641
Dividends received		-291	-1,007
Carrying amount as of the end of the year		**4,251**	**4,364**
of which proportional goodwill from fair value adjustments		**2,310**	**2,306**

10.3 Other shareholding and financial assets

Net income from other shareholdings

Million €

	2023	2022
Dividends and similar income	44	26
Income from the disposal of / write-up of shareholdings	9	7
Income from profit transfer agreements / tax allocation to shareholdings	3	1
Income from other shareholdings	**55**	**34**
Expenses from loss transfer agreements	-68	-79
Write-downs on / losses from the sale of shareholdings	-73	-10
Expenses from other shareholdings	**-141**	**-89**
Net income from other shareholdings	**-86**	**-55**

Net income from other shareholdings in 2023 decreased year on year by €31 million due primarily to higher expenses from the measurement of shareholdings at fair value.

Carrying amounts of other financial assets

Million €

	Dec. 31, 2023	Dec. 31, 2022
Other shareholdings	536	539
Long-term securities	563	581
Other financial assets	**1,099**	**1,120**

The decline in **long-term securities** in 2023 resulted mainly from the sale of financial assets at Lucura Versicherungs AG, Ludwigshafen am Rhein, Germany.

11 Financial result

Financial result

Million €

	2023	2022
Interest income from cash and cash equivalents	299	186
Interest and dividend income from securities and loans	23	10
Interest income	**322**	**196**
Interest expenses	**-860**	**-629**
Interest result	**-538**	**-433**
Reversals of write-downs on / income from securities and loans	40	6
Net interest income from other long-term personnel obligations	–	13
Income from the capitalization of borrowing costs	80	40
Interest income on income taxes	76	124
Miscellaneous financial income	3	0
Other financial income	**199**	**182**
Write-downs on / losses from securities and loans	-11	-24
Net interest expense from underfunded pension plans and similar obligations	-85	-81
Unwinding the discount on other noncurrent liabilities	-18	-9
Interest expenses on income taxes	-8	-2
Miscellaneous financial expenses	-159	-52
Other financial expenses	**-281**	**-168**
Other financial result	**-82**	**15**
Financial result	**-620**	**-418**

Interest expenses rose primarily because of increased interest rates and the higher balance of financial indebtedness.

The rise in **reversals of write-downs on / income from securities and loans** resulted from the higher fair value measurement of securities.

Income from the capitalization of borrowing costs rose due to the higher borrowing cost rate and increased volume mainly from construction of the new Verbund site in Zhanjiang, China.

The rise in **other financial expenses** was primarily due to higher net expenses associated with the translation of bonds and the measurement of the corresponding hedging instruments against interest and currency risks.

12 Income taxes

Accounting policies

In Germany, a uniform corporate income tax rate of 15.0% as well as a solidarity surcharge of 5.5% thereon are levied on all distributed and retained earnings. In addition to corporate income tax, income generated in Germany is subject to a trade tax. It varies depending on the municipality in which the company is represented. The weighted average tax rate was 14.6% in 2023 (2022: 14.6%). The 30% rate used to calculate deferred taxes for German Group companies remained unchanged in 2023. The income of foreign Group companies is assessed using the tax rates applicable in their respective countries.

Deferred taxes are recorded for temporary differences between the carrying amount of assets and liabilities in the financial statements according to IFRS and the carrying amounts for tax purposes as well as for tax loss carryforwards and unused tax credits. These also comprise temporary differences arising from business combinations, with the exception of goodwill. Deferred tax assets and liabilities are calculated using the respective country-specific tax rates applicable for the period in which the asset or liability is realized or settled. Tax rate changes enacted or substantively enacted on or before the balance sheet date are taken into consideration.

Deferred tax assets are offset against deferred tax liabilities provided they are related to the same taxation authority. Surpluses of deferred tax assets are only recognized provided that the tax benefits are likely to be realized. The valuation of deferred tax assets is based on the assessment of the ability to utilize tax loss carryforwards and unused tax credits. This depends on whether future taxable profits will exist during the period in which temporary differences are reversed and in which tax loss carryforwards and unused tax credits can be claimed. The assessment of recoverability of deferred tax assets is based on internal projections of the future earnings of the particular Group company.

Changes in deferred taxes in the balance sheet are recorded as deferred tax expense or income unless the underlying transaction is recognized directly in equity or in income and expenses recognized in equity. For those effects which have been recognized in equity, changes to deferred tax assets and tax liabilities are also recognized directly in equity.

Deferred tax liabilities are recognized for differences between the proportional IFRS equity and the tax base of the investment in a consolidated subsidiary if a reversal of these differences is expected in the foreseeable future. Deferred tax liabilities are recognized for dividend distributions planned for the following year if these distributions lead to a reversal of temporary differences.

Provisions for German trade tax, corporate income tax and similar income taxes are calculated and recognized based on the expected taxable income of the consolidated companies less any prepayments that have been made. Provisions are set up for interest accrued. This interest is reported under other financial result, not tax expense. Other taxes to be assessed are considered accordingly.

IFRIC 23 clarifies the application of the recognition and measurement policies from IAS 12 when there is uncertainty regarding income tax-related treatment of individual transactions. They are accounted for with the assumption that tax authorities will examine the questionable transaction and have all relevant information. The amount of risk provisions is calculated and reviewed with consideration for the results of past tax audits as well as the legal assessment of not yet audited transactions and the risk of a deviating tax-related interpretation by the tax authorities. The most probable value of the individual risks is recognized.

BASF falls within the scope of the OECD Pillar Two Model Rules. The relevant Pillar Two legislation was enacted in Germany and will be applicable in the fiscal year beginning January 1, 2024. BASF expects the application of the OECD Pillar Two Model Rules to result in an increase in taxes on income and earnings by a low to mid double-digit million euro amount since the relevant tax rate is under 15% in a small number of jurisdictions. The actual impact may differ from this projection.

BASF applies the exception in IAS 12 whereby no deferred tax assets or liabilities are recognized in connection with Pillar Two income taxes under the OECD Model Rules; nor are any disclosures made on the matter.

Tax expense and tax rate

The BASF Group tax rate amounted to 73.3% in 2023. It was impacted by non-recognition of deferred tax assets, especially in Germany. The higher tax rate from the previous year of 132.9% resulted mainly from non-tax-effective impairments of Wintershall Dea AG, which is accounted for using the equity method, particularly from the deconsolidation of its Russian exploration and production activities.

The tax effects of various underlying matters are presented in the following reconciliation of income taxes and the effective tax rate. This reconciliation was changed with respect to the expected tax rate from the previous 15% (the applicable corporate income tax rate in Germany) to 30% (a tax rate combining corporate income and trade tax). This is intended to better illustrate the effects of not recognizing deferred tax assets, because otherwise only the amounts relevant to corporate income tax would be included in the corresponding line. This change made a separate disclosure of trade tax and the solidarity surcharge superfluous. The prior-year figures were adjusted accordingly.

Tax expense

Million €

	2023	2022
Current tax expense	**1,102**	**1,280**
Corporate income tax, solidarity surcharge and trade taxes (Germany)	3	2
Foreign income tax	1,187	1,519
Taxes for prior years	-87	-240
Deferred tax expense (+) / income (-)	**-61**	**300**
From changes in temporary differences	-306	181
From changes in tax loss carryforwards/unused tax credits	-27	15
From changes in the tax rate	-1	0
From valuation allowances of deferred tax assets	273	105
Income taxes	**1,041**	**1,580**

Reconciliation of income taxes and the effective tax rate

	2023		2022	
	Million €	%	Million €	%
Income before income taxes	1,420		1,190	
Expected tax based on German tax rate (30%)	426	30.0	357	30.0
Foreign tax rate differential	-332	-23.3	-489	-41.1
Tax-exempt income	-128	-9.0	-194	-16.3
Nondeductible expenses	291	20.5	238	20.0
Income of companies accounted for using the equity method (income after taxes)	-23	-1.6	1,350	113.5
Taxes for prior years (current and deferred taxes)	-212	-14.9	-151	-12.7
Deferred tax liabilities for the future reversal of temporary differences associated with shares in participating interests	19	1.4	-55	-4.6
Changes in the tax rate	-1	-0.1	1	0.1
Non-recognition / valuation allowance of deferred tax assets	865	60.9	399	33.5
Other	135	9.5	124	10.5
Income taxes / effective tax rate	**1,041**	**73.3**	**1,580**	**132.9**

Deferred taxes are shown in the following table based on the corresponding balance sheet items.

Deferred taxes

Deferred tax assets and liabilities 2023

Million €

	January 1, 2023, net	Effects recognized in income	Effects recognized in equity (OCI)	Business combinations	Other	December 31, 2023, net	Deferred tax assets	Deferred tax liabilities
Intangible assets	-742	101	-35	0	-1	-678	67	-745
Property, plant and equipment	-1,377	-45	57	2	0	-1,363	147	-1,510
Financial assets	-21	44	-7	–	2	18	16	2
Inventories and accounts receivable	-672	33	38	-1	0	-602	365	-967
Provisions for pensions and similar obligations	789	-19	94	–	-1	862	992	-130
Other provisions and liabilities	976	165	-19	0	-1	1,122	1,390	-268
Tax loss carryforwards	370	-203	-4	0	0	163	163	–
Other	15	-20	-39	–	1	-43	9	-54
Deferred tax assets (liabilities) before netting	**-663**	**56**	**84**	**0**	**0**	**-522**	**3,149**	**-3,671**
Netting	–	–	–	–	–	–	-2,531	2,531
Deferred tax assets (liabilities) after netting	**-663**	**56**	**84**	**0**	**0**	**-522**	**617**	**-1,140**

Deferred tax assets and liabilities 2022

Million €

	January 1, 2022, net	Effects recognized in income	Effects recognized in equity (OCI)	Business combinations	Other	December 31, 2022, net	Deferred tax assets	Deferred tax liabilities
Intangible assets	-983	184	-9	1	66	-742	190	-932
Property, plant and equipment	-1,230	-46	-56	0	-45	-1,377	153	-1,530
Financial assets	-97	110	-4	–	-30	-21	19	-41
Inventories and accounts receivable	-333	-253	-23	–	-63	-672	246	-918
Provisions for pensions and similar obligations	2,075	-45	-1,244	–	2	789	1,141	-353
Other provisions and liabilities	1,081	-87	27	0	-45	976	1,258	-282
Tax loss carryforwards	580	-116	-6	-1	-87	370	370	–
Other	10	-47	-4	–	56	15	54	-39
Deferred tax assets (liabilities) before netting	**1,101**	**-300**	**-1,319**	**0**	**-146**	**-663**	**3,431**	**-4,094**
Netting	–	–	–	–	–	–	-2,551	2,551
Deferred tax assets (liabilities) after netting	**1,101**	**-300**	**-1,319**	**0**	**-146**	**-663**	**880**	**-1,543**

Deferred tax assets on deductible temporary differences in the amount of €1,057 million were not recognized in 2023 (2022: €466 million), as their utilization at reversal was not reasonably certain.

Undistributed earnings of subsidiaries resulted in temporary differences of €5,015 million in 2023 (2022: €8,699 million) for which deferred tax liabilities were not recognized, as they are either not subject to taxation on payout or they are expected to be reinvested for an indefinite period of time.

Tax loss carryforwards

No deferred tax assets were recognized for tax loss carryforwards of €9,062 million (of which €4,113 million relate to German corporate income tax and €4,376 million to German trade tax) in 2023 (2022: €3,260 million). Of these, €2 million will expire in 2024, €0 million in 2025, €0 million in 2026, €56 million in 2027, €135 million in 2028, and €5 million in 2029 and thereafter. The remaining €8,863 million will not expire.

Net surpluses of deferred tax assets for companies that reported tax losses in 2023 or 2022 totaled €254 million as of December 31, 2023 (December 31, 2022: €376 million). Deferred taxes were recognized because, due to planned earnings, the use of temporary differences or loss carryforwards is expected.

Tax liabilities

Tax liabilities primarily include assessed income taxes and other taxes as well as estimated income taxes not yet assessed for the current year.

13 Noncontrolling interests

Noncontrolling interests in profits and losses

Million €

	2023	2022
Noncontrolling interests in profits	186	250
Noncontrolling interests in losses	-32	-14
Total	**154**	**236**

In 2023, **noncontrolling interests in profits** were lower and **noncontrolling interests in losses** were higher compared with the previous year, primarily at the BASF Shanshan companies in China due to the higher cost of raw materials.

Income and expenses recognized in equity that were attributable to noncontrolling interests totaled -€74 million in 2023 and €6 million in 2022. These effects mainly resulted from currency translation in both years.

Noncontrolling interests

		December 31, 2023		December 31, 2022	
		Equity interest		Equity interest	
Group company	**Partner**	**%**	**Million €**	**%**	**Million €**
BASF India Limited, Mumbai, India	Free float	26.67	90	26.67	81
BASF PETRONAS Chemicals Sdn. Bhd., Kuala Lumpur, Malaysia	PETRONAS Chemicals Group Berhad, Kuala Lumpur, Malaysia	40.00	226	40.00	215
BASF Shanghai Coatings Co., Ltd., Shanghai, China	Shanghai Huayi Fine Chemical Co., Ltd, Shanghai, China	40.00	111	40.00	103
BASF TODA Battery Materials, LLC, Yamaguchi, Japan	TODA KOGYO CORP., Hiroshima, Japan	34.00	38	34.00	38
BASF TotalEnergies Petrochemicals LLC, Houston, Texas	TotalEnergies Petrochemicals & Refining USA, Inc., Houston, Texas	40.00	268	40.00	242
BASF Shanshan Battery Materials Co., Ltd., Changsha, China	Ningbo Yongxiang Investment Co., Ltd., Ningbo, China	49.00	288	49.00	325
Shanghai BASF Polyurethane Company Ltd., Shanghai, China	Shanghai Hua Yi (Group) Co (SHYG), Shanghai, China, and Sinopec Shanghai Gaoqiao Petrochemical Company Limited, Beijing, China	30.00	148	30.00	132
Other			199		214
Total			**1,368**		**1,350**

14 Fixed assets

Accounting policies

Intangible assets

Goodwill is only written down in the case of an impairment. Impairment testing for goodwill is performed once a year and whenever there is an indication of impairment. Goodwill impairments are not reversed.

Acquired intangible assets (excluding goodwill) with defined useful lives are generally measured at cost less straight-line amortization and impairments. The useful life is determined using the period of the underlying contract or the period of time over which the intangible asset can be expected to be used.

Intangible assets with indefinite useful lives are trade names and trademarks that have been acquired as part of acquisitions. These are measured at cost and tested for impairment annually, or if there is an indication that their value has declined.

Internally generated intangible assets primarily comprise internally developed software. Such software and other internally generated intangible assets are measured at cost and amortized over their estimated useful lives. Impairments are recognized if the carrying amount of an asset exceeds the recoverable amount. In addition to those costs directly attributable to the asset, costs of internally generated intangible assets also include an appropriate portion of overhead costs.

The expected useful lives and amortization methods of intangible assets are based on historical values, plans and estimates.

Emission rights: Emission certificates, which are granted free of charge by the German Emissions Trading Authority (Deutsche Emissionshandelsstelle) or a similar authority in other countries, are recognized in the balance sheet with a value of zero. Emission rights purchased on the market are capitalized at cost and were reported as intangible fixed assets in 2022. Emission rights purchased on the market have been recognized under other receivables and miscellaneous assets since 2023. Emissions generated create an obligation to surrender the emission certificates. Intangible assets purchased on the market are subsequently measured at amortized cost. If the fair value is lower than the carrying amount on the balance sheet date, the emission rights are impaired.

Depending on the type of intangible asset, amortization is reported under cost of sales, selling expenses, research and development expenses or other operating expenses.

Property, plant and equipment

Property, plant and equipment are measured at cost less depreciation and impairment over their useful lives. The revaluation method is not applied. Low-value assets are fully expensed in the year of acquisition.

The cost of self-constructed plants includes direct costs, appropriate allocations of material and production overhead costs, and a share of the general administrative costs of the divisions involved in the construction of the plants.

Expenses related to the scheduled maintenance of large-scale plants are capitalized separately and depreciated using the straight-line method over the period until the next planned turnaround. Costs for the replacement of components are recognized as assets if an additional future benefit is expected. The carrying amount of the replaced components is derecognized. Costs for maintenance and repair as part of normal business operations are recognized as an expense.

Investment properties held to realize capital gains or rental income are immaterial. They are valued at the lower of fair value or cost less depreciation.

The estimated useful lives and depreciation methods of property, plant and equipment are based on historical values, plans and estimates. The depreciation methods, useful lives and residual values are reviewed at each balance sheet date. Movable and immovable property, plant and equipment are principally depreciated using the straight-line method.

Borrowing costs: If borrowing costs are directly incurred as part of the acquisition, construction or production of a qualifying asset, they are capitalized as part of the acquisition or production cost of that asset. A qualifying asset is an asset for which the process necessary to make it ready for its intended use or sale is longer than one year. Borrowing costs are capitalized up to the date the asset is ready for its intended use. Borrowing costs were calculated based on a rate of 1.75% (previous year: 1.25%) and adjusted on a country-specific basis, if necessary. All other borrowing costs are recognized as an expense in the period in which they are incurred.

Government grants: Government grants for the acquisition or construction of property, plant and equipment reduce the acquisition or construction cost of the respective assets. Other government grants or government assistance are recognized immediately as other operating income or treated as deferred income and released over the underlying period.

Impairment tests

Impairment tests are carried out on intangible assets, property, plant and equipment, and goodwill whenever certain triggering events indicate potential impairment. External triggering events include, for example, changes in customer industries, technologies used and economic downturns. Internal triggering events for an impairment test include lower product profitability, planned restructuring measures or physical damage to assets. In addition, goodwill is tested for impairment annually.

Impairment tests entail a comparison of the carrying amount and the recoverable amount. The recoverable amount is the higher of fair value less costs to sell and the value in use. As a rule, value in use is determined using the discounted cash flow method. The estimation of cash flows and the assumptions used consider all information available on the respective balance sheet date about the future development of the operating business. Actual future developments may vary. Impairment testing relies upon the cash-generating unit's long-term earnings forecasts, which are based on macroeconomic trends.

The weighted average cost of capital (WACC) after taxes based on the capital asset pricing model, which is used in calculating the discount for cash flows, plays an important role in impairment testing. It comprises a risk-free interest rate, the market risk premium and an industry-specific spread for the credit risk. Additional important assumptions are the forecasts for the detailed planning period and the terminal growth rates used.

An impairment of assets (excluding goodwill) is recognized if the recoverable amount of the asset is lower than the carrying amount. An impairment is recognized for the difference between the carrying amount and the recoverable amount. If the reasons for impairment of an asset (excluding goodwill) no longer exist, the write-downs are reversed up to the value of the asset, had an impairment not been recognized. Impairments and reversals of impairments are reported in other operating income and expenses.

The goodwill impairment test is based on cash-generating units. At BASF, these largely correspond to the business units, or in individual cases the divisions. If there is a need for impairment, the existing goodwill is, if necessary, completely written off as a first step. If there is further need for impairment, this is allocated to the remaining assets of the cash-generating unit. Goodwill impairments are reported under other operating expenses.

The respective recoverable amounts were determined using the value in use. Plans approved by company management and their respective cash flows for the next five years were used. For the period thereafter, a terminal value was calculated using a forward projection from the last detailed planning year as a perpetual annuity. Planning is based on experience, current performance and management's best possible estimates on the future development of individual parameters. These include sales revenue (excluding precious metals), contribution margins, fixed costs and investments from which income from operations before depreciation and amortization and, based on this, the EBITDA margin are determined. Market assumptions regarding, for example, gas and raw materials prices, exchange rates, economic development, inflation expectations and market growth of the respective customer industries are included based on external macroeconomic and industry-specific sources.

In addition, planning is also based on the strategies of the individual strategic business units which comprise the respective cash-generating units. The digitalization and sustainability trends identified in the strategies are thus taken into account in the respective impairment tests.

For more information on strategy and identified digitalization and sustainability trends in the Combined Management's Report, see page 30 onward and page 48 onward

14.1 Explanation of intangible assets

The weighted average amortization periods of intangible assets were as follows:

Weighted average amortization in years

	2023	2022
Distribution and similar rights	14	13
Product rights, licenses and trademarks	18	18
Know-how, patents and production technologies	16	15
Internally generated intangible assets	6	6
Other rights and values	7	9

The following table shows the development of intangible assets.

Development of intangible assets 2023

Million €

	Distribution and similar rights	Product rights, licenses and trademarks	Know-how, patents and production technologies	Internally generated intangible assets	Other rights and values[a]	Goodwill	Total
Cost							
As of January 1, 2023	2,441	1,346	4,435	296	898	8,490	17,904
Changes in the scope of consolidation	–	–	–	–	–	–	–
Additions	2	2	66	40	33	–	142
Additions from acquisitions	–	–	–	–	–	–	–
Disposals	-129	-18	-102	-13	-37	-8	-307
Transfers	–	–	-16	–	10	–	-6
Transfers to disposal groups	–	–	–	–	–	–	–
Currency effects	-69	-20	-86	–	-6	-214	-396
As of December 31, 2023	2,244	1,309	4,296	323	898	8,269	17,338
Accumulated depreciation							
As of January 1, 2023	1,301	279	1,636	180	442	794	4,632
Changes in the scope of consolidation	–	–	–	–	–	–	–
Additions	168	62	265	29	354	–	879
of which impairments	–	–	1	–	266	–	267
Disposals	-129	-18	-96	-13	-27	–	-283
Transfers	–	–	-1	–	1	–	–
Transfers to disposal groups	–	–	–	–	–	–	–
Currency effects	-37	-5	-35	–	-4	-24	-105
As of December 31, 2023	1,303	319	1,770	196	765	769	5,122
Net carrying amount as of December 31, 2023	**940**	**990**	**2,526**	**127**	**132**	**7,499**	**12,216**

a Including licenses to such rights and values

Additions in 2023 related primarily to acquired know-how in the Agricultural Solutions division, acquired software licenses in the Chemicals segment, as well as internally developed software with no segment allocation.

Disposals of intangible assets with a gross carrying amount of €307 million primarily concerned fully amortized assets.

In 2023, additions to **accumulated amortization** contained impairments of €267 million. These related mainly to other rights in the Materials segment and resulted from changed market conditions which meant that the economic advantage of access to a precursor no longer applied. The cost of capital after taxes used to determine the relevant value in use was 8.60%, which is 10.08% before taxes.

Development of intangible assets 2022

Million €

	Distribution and similar rights	Product rights, licenses and trademarks	Know-how, patents and production technologies	Internally generated intangible assets	Other rights and values[a]	Goodwill	Total
Cost							
As of January 1, 2022	2,547	1,419	4,304	268	949	8,314	17,802
Changes in the scope of consolidation	-1	–	–	–	0	–	-1
Additions	–	1	61	32	31	–	125
Additions from acquisitions	–	–	–	–	–	–	–
Disposals	-151	-107	-39	-11	-99	-13	-421
Transfers	0	0	-12	7	6	–	1
Transfers to disposal groups	–	–	–	–	0	-2	-2
Currency effects	45	32	120	0	11	191	400
As of December 31, 2022	2,441	1,346	4,435	296	898	8,490	17,904
Accumulated depreciation							
As of January 1, 2022	1,243	316	1,356	164	430	794	4,303
Changes in the scope of consolidation	0	–	–	–	0	–	0
Additions	188	64	284	27	88	–	652
of which impairments	1	–	2	–	0	–	4
Disposals	-151	-107	-37	-11	-83	-4	-393
Transfers	0	0	0	–	0	–	0
Transfers to disposal groups	–	–	–	–	–	–	–
Currency effects	21	5	34	0	6	3	70
As of December 31, 2022	1,301	279	1,636	180	442	794	4,632
Net carrying amount as of December 31, 2022	**1,140**	**1,067**	**2,799**	**116**	**456**	**7,696**	**13,273**

a Including licenses to such rights and values

In both years, BASF's **goodwill** was allocated to 20 cash-generating units, which are defined either on the basis of business units or at a higher level.

The fundamental transformation of the automotive industry will have a significant impact on the emissions catalyst business, which belongs to the Catalysts (excluding battery materials) cash-generating unit. Because there were no material changes in planning assumptions from the previous year, the growth rate for perpetual annuity remained unchanged at -0.7%. In the planning period, the demand for catalysts is still expected to remain stable as a result of higher environmental standards. In the medium term, the transition from combustion engines to electromobility will lead to a steady decline in demand.

Increased volatility in gas and raw materials prices can be expected during the year due to geopolitical conflicts. Average gas and raw materials prices are however expected to remain stable over the next three years. These and other macroeconomic factors such as the high, albeit declining, level of inflation in industrial countries will be accounted for in future business expectations.

Goodwill of cash-generating units

Million €

	2023			2022		
Cash-generating unit	**Goodwill**	**Weighted cost of capital after taxes**	**Growth rate[a]**	**Goodwill**	**Weighted cost of capital after taxes**	**Growth rate[a]**
Agricultural Solutions division	3,236	6.52%	2.0%	3,299	5.97%	2.0%
Catalysts division (excluding battery materials)	1,297	8.14%	-0.7%	1,340	7.75%	-0.7%
Catalysts division (battery materials)	317	8.36%	2.0%	336	7.49%	2.0%
Personal Care Ingredients in the Care Chemicals division	504	7.06%	2.0%	516	6.53%	2.0%
Surface Treatment in the Coatings division	688	8.14%	2.0%	711	7.75%	2.0%
Performance Chemicals division	347	8.03%	2.0%	355	7.42%	2.0%
Other cash-generating units	1,109	6.47%–8.56%	0.0%–2.0%	1,139	6.53%–7.61%	0.0%–2.0%
Goodwill as of December 31	**7,499**			**7,696**		

a Growth rates used in impairment tests to determine terminal values in accordance with IAS 36

The annual impairment tests of the 20 cash-generating units were performed in the fourth quarter of 2023. The calculation also takes into account capital structure and the beta factor of the respective peer group as well as the average tax rate of each cash-generating unit. Impairment tests were performed on the units assuming a weighted average cost of capital rate after taxes of between 6.47% and 8.56% (2022: between 5.97% and 7.75%). This corresponds to a weighted average cost of capital rate before taxes of between 8.12% and 11.33% (2022: between 6.96% and 10.80%).

An additional impairment test triggered by impairments recognized on plants was performed for the battery materials cash-generating unit on December 31, 2023, It did not lead to any impairments.

After determining the recoverable amounts for the cash-generating units, the conclusion was that reasonable possible deviations from the key assumptions would not lead to the carrying amount of any significant unit exceeding the respective recoverable amounts except in the two units in the Catalysts division, which is allocated to the Surface Technologies segment.

The recoverable amount for the Catalysts (excluding battery materials) cash-generating unit exceeded the carrying amount by €598 million in 2023. A weighted cost of capital after taxes of 8.14% (2022: 7.75%) and an EBITDA margin in the last detailed planning year were used as the basis for calculating the final value of 29.09% (2022: 29.60%) for the impairment test. The recoverable amount would be equal to the unit's carrying amount if the weighted average cost of capital rose by 1.06 percentage points or the EBITDA margin in the last detailed planning year as the basis for calculating the final value were 3.87 percentage points lower.

A weighted cost of capital after taxes of 8.36% (2022: 7.49%) and an EBITDA margin in the last detailed planning year as the basis for calculating the final value of 11.84% (2022: 10.15%) were used for the annual impairment test of the battery materials cash-generating unit. The recoverable amount for this unit exceeded the carrying amount by €397 million. The recoverable amount would be equal to the unit's carrying amount if the weighted average cost of capital rose by 1.01 percentage points, the growth rate were 1.64 percentage points lower, or the EBITDA margin in the last detailed planning year as the basis for calculating the final value were 1.74 percentage points lower.

14.2 Explanation of property, plant and equipment

The weighted average depreciation periods were as follows:

Weighted average depreciation in years

	2023	2022
Buildings and structural installations	18	17
Machinery and technical equipment	11	11
Miscellaneous equipment and fixtures	7	7

The following table shows the development of property, plant and equipment including right-of-use assets recognized by BASF as lessee.

Development of property, plant and equipment including right-of-use assets arising from leases in 2023

Million €

	Land	Right-of-use land	Buildings	Right-of-use buildings	Machinery and technical equipment	Right-of-use machinery and technical equipment	Miscellaneous equipment and fixtures	Right-of-use miscellaneous equipment and fixtures	Advance payments and construction in progress	Total
Cost										
As of January 1, 2023	939	732	11,855	1,036	48,559	736	5,268	886	5,135	75,145
Changes in the scope of consolidation	–	–	–	–	–	–	0	–	–	0
Additions	1	2	187	169	808	84	180	353	4,080	5,864
Disposals	-35	-4	-183	-53	-995	-40	-241	-118	-100	-1,769
Transfers	1	–	477	–	1,604	-4	168	–	-2,251	-5
Transfers to disposal groups	–	–	–	–	–	–	–	–	–	–
Currency effects	-27	-34	-200	-23	-793	-18	-84	-10	-162	-1,352
As of December 31, 2023	878	695	12,136	1,129	49,184	759	5,291	1,112	6,701	77,884
Accumulated depreciation										
As of January 1, 2023	61	146	7,399	433	39,115	402	4,032	515	76	52,179
Changes in the scope of consolidation	–	–	–	–	–	–	0	0	–	–
Additions	2	35	525	172	2,372	97	394	185	280	4,063
of which impairments	1	13	149	46	355	4	27	2	280	877
Disposals	-13	-2	-157	-47	-961	-35	-231	-108	-85	-1,639
Transfers	0	0	3	0	4	-2	5	0	-10	0
Transfers to disposal groups	–	–	–	–	–	–	–	–	–	–
Currency effects	-1	-7	-105	-14	-593	-10	-62	-6	-1	-797
As of December 31, 2023	49	173	7,665	544	39,936	453	4,138	586	260	53,804
Net carrying amount as of December 31, 2023	**829**	**522**	**4,471**	**585**	**9,247**	**306**	**1,153**	**526**	**6,440**	**24,080**

For more information on leases, see Note 15 from page 272 onward

Additions to property, plant and equipment arising from investment projects (excluding leases) amounted to €5,255 million in 2023. Investments were made at the following sites in particular: Zhanjiang, China; Ludwigshafen, Germany; Geismar, Louisiana; Antwerp, Belgium; Schwarzheide, Germany; and Chalampé, France. Material investments included the development of infrastructure and technical equipment at the new Verbund site in Zhanjiang, China, construction of the hexamethylenediamine plant in Chalampé, France, construction of infrastructure and production plants for battery materials in Schwarzheide, Germany, as well as modification and capacity expansion of the phosgene plant in Geismar, Louisiana. Investments also included modernization and expansion of the heating oil plant as well as modification of the acid chlorides and chloroformates plant in Ludwigshafen, Germany and construction and expansion of the ethylene oxide and polyethylene oxide production plants in Antwerp, Belgium. Government grants for funding investment measures reduced asset additions by €48 million.

In 2023, **impairments** of €883 million and reversals of impairments of €6 million were included in accumulated depreciation.

Impairments of €370 million were recognized for construction in progress und buildings (including right-of-use assets from buildings) as well as for technical equipment in the Surface Technologies segment. These impairments were due in particular to the delayed startup of production plants, as well as additional official requirements, and affected two sites in Europe, one of which was fully impaired. The value in use of the remaining partially impaired plants was €448 million. A cost of capital rate after taxes of 8.36% was used in this impairment test. This corresponds to a cost of capital rate before taxes of 11.94%. Resulting from a deteriorated competitive situation, technical equipment at two sites in Europe in the Agricultural Solutions segment was written off in full in the amount of €334 million. Technical equipment in Europe allocated to the Materials segment was written off in full in the amount of €69 million due to reduced expected capacity utilization. Furthermore, an impairment relating primarily to buildings in the Surface Technologies segment was recognized in the amount of €26 million due to the planned closure of a site in North America. The fair value of a building was used in the calculation.

Impairments to construction in progress in the amount of €33 million mainly related to discontinued investment projects.

Reversals of impairments in the amount of €6 million resulted primarily from the sale of a plant impaired at a site in Asia in 2020.

Transfers related mainly to the reclassification of operation-ready assets from construction in progress to other asset categories.

Currency effects reduced property, plant and equipment by €555 million and resulted especially from depreciation of the Chinese renminbi and the U.S. dollar against the euro.

Development of property, plant and equipment including right-of-use assets arising from leases in 2022

Million €

	Land	Right-of-use land	Buildings	Right-of-use buildings	Machinery and technical equipment	Right-of-use machinery and technical equipment	Miscellaneous equipment and fixtures	Right-of-use miscellaneous equipment and fixtures	Advance payments and construction in progress	Advance payments for right-of-use assets	Total
Cost											
As of January 1, 2022	905	544	11,495	982	46,781	624	5,058	756	3,735	150	71,030
Changes in the scope of consolidation	0	0	-17	-1	-3	0	-2	-1	0	–	-24
Additions	46	49	168	184	793	112	237	236	3,017	–	4,842
Disposals	-19	-2	-260	-153	-961	-23	-245	-117	-26	–	-1,805
Transfers	2	150	319	-8	1,153	0	143	0	-1,609	-150	0
Transfers to disposal groups	-4	–	-3	–	-7	–	-1	–	10	–	-5
Currency effects	9	-9	153	30	804	23	78	12	8	–	1,108
As of December 31, 2022	939	732	11,855	1,036	48,559	736	5,268	886	5,135	–	75,145
Accumulated depreciation											
As of January 1, 2022	54	125	7,115	408	37,138	316	3,833	435	53	–	49,477
Changes in the scope of consolidation	0	0	-16	-1	-3	–	-2	0	–	–	-22
Additions	12	23	416	133	2,258	96	377	177	57	–	3,549
of which impairments	11	–	36	2	257	0	7	–	57	–	369
Disposals	-8	-2	-219	-121	-922	-19	-230	-104	-22	–	-1,647
Transfers	0	0	6	-6	13	0	0	0	-13	–	0
Transfers to disposal groups	-1	–	0	–	0	–	0	–	–	–	-1
Currency effects	3	0	96	18	631	10	54	9	1	–	823
As of December 31, 2022	61	146	7,399	433	39,115	402	4,032	515	76	–	52,179
Net carrying amount as of December 31, 2022	**878**	**585**	**4,456**	**603**	**9,444**	**333**	**1,236**	**371**	**5,059**	**–**	**22,967**

15 Leases

Accounting policies

A lease is an agreement that conveys the right to control the use of identified asset for a defined period of time in return for a payment.

Leases can be embedded within other contracts. If separation is required under IFRS, the embedded lease is recorded separately from its host contract and each component of the contract is accounted and measured in accordance with the applicable regulations.

Leases in which BASF is a lessee mainly relate to real estate and transportation and technical equipment.

As lessee, BASF accounts for all leases, recognizing right-of-use assets for leased assets and liabilities for lease agreements subject to the following principles:

– BASF exercises the exemption for lease agreements with a maximum term of 12 months from the date of provision and low-value assets. Low-value assets are generally defined as leased assets worth a maximum of €5,000.
– Lease liabilities are measured at the present value of the remaining lease payments, taking into account the incremental borrowing rate.
– As a general rule, BASF separates non-lease components, such as services, from lease payments.
– A right-of-use asset is generally recognized at the same amount as the lease liability. Differences may arise from the lease payments made prior to the provision of the leased asset, less any lease incentives received.
– After capitalization the right-of-use asset is generally depreciated over the lease term using the straight-line method.
– A number of leases, particularly for real estate and barges, include extension and termination options. Extension and termination options are taken into account on recognition of the lease liability only if BASF is reasonably certain that these options will be exercised in the future. When contract terms are being determined, consideration is given to all facts and circumstances that offer an economic incentive for exercising extension options or not exercising termination options. Changes in lease terms arising from the exercise of an extension option or non-exercise of a termination option are only considered if sufficient certainty exists. Estimates and expectations which are asserted at the commencement date of the lease liability and the right-of-use asset and pertain to future payments not yet determined on the date of provision are assessed continuously during the lease term. If subsequently improved or changed knowledge influences the expected payment profile over time, the lease liability is remeasured.
– If an existing lease contract is modified, the lease liability and right-of-use asset must be remeasured, provided the modification changes the payment profile (pursuant to the interest and principal plan) or the scope (either quantitatively or time-related) of use of the asset.

Explanation of leases

BASF as lessee

Lease liabilities

Million €

	December 31, 2023			December 31, 2022		
	Lease liabilities	Interest portion	Future lease payments	Lease liabilities	Interest portion	Future lease payments
Following year 1	350	51	401	330	43	373
Following year 2	234	39	273	222	36	258
Following year 3	171	32	203	150	30	180
Following year 4	134	29	163	111	26	137
Following year 5	106	26	132	85	23	108
Over 5 years	654	174	828	591	171	762
Total	**1,649**	**351**	**2,000**	**1,489**	**329**	**1,818**

Expenses and income in the statement of income from leases for BASF as lessee

Million €

	2023	2022
Interest expenses for lease liabilities	-53	-40
Expenses for variable lease payments not included in the measurement of lease liabilities	-13	-33
Income from sublease agreements	2	20
Expenses for short-term leases	-151	-156
Expenses for leases for low-value assets	-35	-22
Total	**-250**	**-231**

There were no significant sale and leaseback transactions in 2023. BASF entered a five-year rental agreement for a building with the sale of the site in Tarrytown, New York, in 2022. The lease liabilities for this sale-and-leaseback transaction amounted to €9 million as of December 31, 2023.

BASF as lessor

BASF acts as a lessor for finance leases to a minor extent only. Receivables on finance leases were €33 million in 2023 (2022: €35 million). The leased assets pertained primarily to buildings and production facilities.

Claims arising from operating leases amounted to €254 million in 2023 (2022: €268 million). As in the previous year, there were no material operating leases for property, plant and equipment.

Future lease payments to BASF from operating lease contracts

Million €

	Dec. 31, 2023	Dec. 31, 2022
Following year 1	49	46
Following year 2	40	39
Following year 3	38	39
Following year 4	37	38
Following year 5	36	37
Over 5 years	54	69
Total	**254**	**268**

Income from leases for BASF as lessor

Million €

	2023	2022
Income from finance leases	2	2
of which financial income from net investments	2	2
Income from operating leases	46	46
of which income from variable lease payments not dependent upon an index or interest rate	1	–
Total	**48**	**48**

16 Inventories

Accounting policies

Inventories are measured at acquisition cost or cost of conversion based on the weighted average method. If the sales products' market price or fair value based on net realizable value is lower, the sales products are written down to this lower value. The net realizable value is the estimated price in the ordinary course of business less the estimated costs of completion and the estimated selling costs. Inventories may be impaired if the prices of the sales products decline, or in cases of a high rate of days sales of inventory (DSI). Write-downs on inventories are reversed if the reasons for them no longer apply.

In addition to direct costs, cost of conversion includes an appropriate allocation of production overhead costs based on normal utilization rates of the production plants, provided that they are related to the production process. Pensions, social services and voluntary social benefits are also included, as well as allocations for administrative costs, provided they relate to the production. Borrowing costs are not included in cost of conversion.

The exception made by IAS 2 for traders is applied to the measurement of precious metals. Accordingly, inventories held for trading purposes are measured at fair value less costs to sell and recognized in the precious metal trading item under miscellaneous current assets. All changes in value are immediately recognized in the statement of income.

Explanation of inventories

Inventories
Million €

	Dec. 31, 2023	Dec. 31, 2022
Raw materials and factory supplies	4,543	5,255
Work in progress, finished goods and merchandise	9,257	10,686
Advance payments and services in progress	75	87
Inventories	**13,876**	**16,028**

Work in progress, finished goods and merchandise are combined into one item due to production conditions in the chemical industry. Services in progress mainly relate to services not invoiced as of the balance sheet date.

Cost of sales included inventories recognized as an expense amounting to €37,222 million in 2023, and €48,836 million in 2022.

Write-downs on inventory were recognized in the amount of €5 million in 2023, and in the amount of €84 million in 2022.

The carrying amount of precious metal inventories held for trading purposes was €1,139 million as of December 31, 2023 (December 31, 2022: €1,939 million).

17 Receivables and miscellaneous assets

Other receivables and miscellaneous assets

Million €

	December 31, 2023		December 31, 2022	
	Noncurrent	Current	Noncurrent	Current
Loans and interest receivables	57	182	45	103
Derivatives with positive fair values	472	580	395	952
Receivables from finance leases	30	3	32	2
Receivables from capital equipment of nonconsolidated subsidiaries	45	142	43	153
Receivables from bank acceptance drafts	–	273	–	401
Other	327	292	298	391
Other receivables and assets that qualify as financial instruments	**931**	**1,472**	**814**	**2,002**
Prepaid expenses	76	225	44	285
Defined benefit assets	170	–	792	–
Receivables for income taxes	134	1,317	133	1,908
Employee receivables	0	29	0	24
Precious metal trading items	–	1,139	–	1,939
Other	28	322	27	434
Other receivables and assets that do not qualify as financial instruments	**408**	**3,032**	**996**	**4,589**
Other receivables and miscellaneous assets	**1,339**	**4,504**	**1,810**	**6,591**

The rise in noncurrent **derivatives with positive fair values** related primarily to power purchase agreements. The change in current derivatives with positive fair market values was largely attributable to the decline in fair values of precious metals commodity derivatives.

Bank acceptance drafts are used as an alternative form of payment in China. Bank acceptance drafts are issued at a discount from their par value. They can be held to maturity, traded or redeemed prematurely at a discount. If BASF discounts a bank acceptance draft with recourse, a liability toward the credit institution is recognized in the amount of the payment received.

Prepaid expenses in 2023 mainly included prepayments of €38 million related to operating activities compared with €45 million in 2022, as well as €72 million in prepayments for insurance in 2023 compared with €77 million in 2022. Prepayments for license costs increased from €55 million in 2022 to €59 million in 2023.

As in the previous year, **defined benefit assets** were recognized in 2023 mainly at Group companies in Switzerland and the United Kingdom. An asset ceiling was in effect in 2023 and in the previous year for the pension plans in Switzerland.

For more information on plan assets, see Note 21 from page 282 onward

The change in current **receivables for income taxes** was largely attributable to the decline in receivables for income tax refunds.

Precious metal trading items primarily comprise physical items, precious metal accounts as well as long positions in precious metals, most of which were hedged through forward sales or derivatives.

The decline in current **other receivables and assets, which do not represent financial instruments,** was due to lower advance payments.

The table below presents the gross values and credit risks for trade accounts receivable other than trade accounts receivable measured at fair value through profit or loss as of December 31, 2023.

Accounts receivable, trade

Million €

Creditworthiness as of December 31, 2023	Equivalence to external rating[a]	Gross carrying amounts
High/medium credit rating	from AAA to BBB–	6,436
Low credit rating	from BB– to D	3,930

a Standard & Poor's rating

There are currently no significant credit risks (or a concentration thereof) associated with other financial instruments.

Valuation allowances on receivables (financial instruments) 2023

Million €

	As of January 1, 2023	Additions	Releases	Reclassification between stages	Translation effect	As of December 31, 2023
Accounts receivable, trade	**319**	**134**	**181**	**1**	**-4**	**269**
of which stage 2	44	61	66	1	-2	38
stage 3	275	73	115	–	-2	231
Other receivables	**118**	**58**	**-18**	**–**	**-1**	**157**
of which stage 1	4	5	-2	–	0	7
stage 2	1	0	-1	–	0	0
stage 3	113	53	-15	–	-1	150
Total	**437**	**192**	**163**	**1**	**-5**	**426**

Payment terms are generally agreed upon individually with customers and, as a rule, are within 90 days. In 2023, valuation allowances of €134 million (2022: €130 million) were added for trade accounts receivable, and valuation allowances of €181 million (2022: €124 million) were reversed.

In 2023, valuation allowances of €58 million were recognized for **other receivables** representing financial instruments, and valuation allowances of €18 million were reversed. In the previous year, valuation allowances of €24 million were recognized and valuation allowances of €19 million were reversed.

For more information on valuation allowances on receivables, see Note 25 from page 291 onward

18 Capital, reserves and retained earnings

Subscribed capital

BASF SE has only issued fully paid-up registered shares with no par value. There are no preferential rights or other restrictions.

The subscribed capital of BASF SE as of December 31, 2023, was €1,142 million, divided into 892,522,164 qualifying shares with no par value. The share capital and the number of shares decreased in 2023 due to the redemption of acquired treasury shares in connection with the share buyback program; the subscribed capital as of December 31, 2022, was €1,144 million, divided into 893,854,929 shares.

Share buyback / treasury shares

By way of a resolution of the Annual Shareholders' Meeting of May 29, 2022, the Board of Executive Directors was authorized to buy back shares until May 28, 2027, in accordance with section 71(1) no. 8 of the German Stock Corporation Act (AktG).

The buyback may not exceed 10% of the company's share capital at the time the resolution was passed and can take place via the stock exchange, a public purchase offer addressed to all shareholders, or a public invitation to the shareholders to submit sales offers.

The Board of Executive Directors is authorized to redeem the shares bought back without a further resolution of the Annual Shareholders' Meeting and to reduce the share capital by the proportion of the share capital accounted for by the redeemed shares. The Board of Executive Directors can also redeem the shares without reducing the share capital so that the proportion of the other shares in relation to the share capital is increased through the redemption. In that event, the Board of Executive Directors is authorized to adjust the number of shares in the Statutes.

Through buyback authorizations in 2023, BASF purchased a total of 1,332,765 shares (2022: 24,623,765 shares) or 0.15% (2022: 2.68%) of the share capital at an average price of €52.56 per share (2022: €53.83 per share) up to the end of the share buyback program on February 24, 2023. All repurchased shares were redeemed and the share capital was reduced accordingly. BASF did not hold any treasury shares as of the balance sheet date or December 31, 2022.

BASF's expenditure in 2023 for the share buyback totaled €70 million. The amount was taken from other retained earnings and also reduced subscribed capital by €2 million. This reduction was reclassified to capital reserves.

Authorized capital

In accordance with the resolution of the Annual Shareholders' Meeting on May 3, 2019, the Board of Executive Directors was authorized, with the consent of the Supervisory Board, to increase, until May 2, 2024, on a one-off basis or in portions on a number of occasions, the company's share capital by a total of up to €470 million by issuing new shares against contributions in cash or in kind. In principle, shareholders are entitled to a subscription right. However, the Board of Executive Directors is authorized, with the approval of the Supervisory Board, to exclude shareholders' statutory subscription rights in the cases specified in the authorizing resolution. The Board of Executive Directors is authorized, with the consent of the Supervisory Board, to lay down the further contents of the share rights and the details of the execution of the capital increase. The total shares issued on the basis of the above authorization with the exclusion of the shareholders' subscription right in the case of capital increases in return for contributions in cash or in kind must not exceed 10% of the share capital at the time that this authorization comes into effect or – if this value is lower – at the time of its exercise. The proportionate amount of the share capital of those shares that are to be issued on the basis of conversion or option bonds granted during the term of this authorization under the exclusion of the subscription right, must be credited against the aforementioned ceiling of 10%. This authorization had not been exercised as of the end of the 2023 fiscal year.

Conditional capital

At the Annual Shareholders' Meeting on April 29, 2022, the Board of Executive Directors was authorized, with the approval of the Supervisory Board, up to April 28, 2027, on a one-off basis or in portions on more than one occasion to issue bearer or registered convertible bonds and/or bonds with warrants or a combination of these instruments with or without maturity limitations with a total nominal value of up to €10 billion and to grant or impose holders and/or creditors of these debt instruments conversion or option rights for up to 91,847,800 registered shares in the company with a pro rata amount of share capital of up to €117,565,184 subject to the respective terms and conditions of the debt instruments. The debt instruments can be issued in exchange for contributions in cash, but also for contributions in kind, particularly shareholdings in other companies.

To hedge the subscription right to conversion and option rights issued under the authorization, the share capital was increased conditionally by up to €117,565,184 with the option of issuing a maximum of 91,847,800 new registered BASF shares. The conditional capital increase shall only be carried out to the extent to which holders of convertible bonds or warrants attached to bonds with warrants issued by the company or one of its subsidiaries up to April 28, 2027, under the authorization granted to the Board of Executive Directors, exercise their conversion or option rights and/or fulfill their conversion or option obligations, and provided that no other forms of fulfillment of delivery are used. The new BASF shares shall be issued at the conversion or option prices determined in each case in the terms and conditions of the debt instruments and/or the warrants in accordance with the above-mentioned authorization. The new BASF shares issued under this provision shall participate in profits from the beginning of the financial year in which they are issued. This authorization had not been exercised as of the end of the 2023 fiscal year.

Capital reserves

Capital reserves include effects from BASF's share program, premiums from capital increases and consideration for warrants and negative goodwill from the capital consolidation resulting from acquisitions of subsidiaries in exchange for the issue of BASF SE shares at par value. In 2023, the valuation of BASF shares in connection with the BASF "plus" share program led to a decline in capital reserves of €9 million, compared with an increase of €9 million in the previous year.

The proportion of share capital accounted for by the redeemed treasury shares in 2023 was reclassified to capital reserves in 2023.

Retained earnings

Retained earnings include earnings generated in the past and in 2023 by companies included in the Consolidated Financial Statements.

The acquisition of shares in companies that BASF already controls or that are included in the Consolidated Financial Statements as a joint arrangement is treated as a transaction between shareholders, as long as this does not lead to a change in the consolidation method. There were no material transactions of this type in 2023, as in the previous year.

In connection with the share buyback, the amount in excess of the nominal value was deducted from retained earnings. Upon redemption of the shares, the previously openly deducted amounts were offset against share capital and retained earnings. Additionally, the value of share capital accounted for by the redeemed shares was reclassified from retained earnings to capital reserves. This resulted in a total reduction of retained earnings of €70 million in 2023 and €1,325 million in 2022.

Retained earnings

Million €

	Dec. 31, 2023	Dec. 31, 2022
Legal reserves	1,066	1,032
Other retained earnings	31,450	34,422
Retained earnings	**32,517**	**35,453**

Legal reserves rose by €35 million in 2023 and by €74 million in 2022 due to reclassifications from retained earnings.

In 2023, the amount of €59 million from the remeasurement of defined benefit plans was reclassified to retained earnings.

Payment of dividends

In accordance with the resolution of the Annual Shareholders' Meeting on April 27, 2023, BASF SE paid a dividend of €3.40 per qualifying share from the retained profit of the 2022 fiscal year. With 892,522,164 qualifying shares as of the Annual Shareholders' Meeting, this represented total dividends of €3,034,575,357.60. The remaining €814,148,142.03 in retained profits was allocated to retained earnings.

19 Other comprehensive income

Accounting policies

The expenses and income shown in other comprehensive income are divided into two categories: Items that will be recognized in the income statement in the future (known as “recycling”) and items that will not be reclassified to the income statement in the future. The first category includes gains and losses from currency translation, the measurement of certain securities classified as debt instruments, and changes in the fair value of derivatives held to hedge future cash flows. Items that will not be reclassified to the income statement at a future date include effects from the remeasurement of defined benefit plans.

Remeasurement of defined benefit plans

In 2023, changes in the value of defined benefit plans led to a decrease in other comprehensive income of €591 million (after taxes) of which €16 million related to investments accounted for using the equity method. In the previous year, there was a rise of €2,586 million (after taxes); of that amount, €83 million related to investments accounted for using the equity method. Deferred taxes amounted to €100 million in 2023 and to -€1,256 million in 2022.

For more information on the remeasurement of defined benefit plans, see Note 21 from page 282 onward

Currency translation

Differences resulting from currency translation led to a decrease in equity by a total of €1,220 million in 2023; of that amount, €234 million related to investments accounted for using the equity method. In the previous year, an increase resulted in the amount of €1,135 million; of that amount, €583 million related to investments accounted for using the equity method. These amounts included €12 million in deferred taxes in 2023 (2022: -€7 million). In 2023, the difference resulted mainly from the depreciation of the Chinese renminbi and the U.S. dollar, and, in 2022, from the appreciation of the U.S. dollar and the Brazilian real relative to the euro.

With the deconsolidation of the Russian shareholdings held by Wintershall Dea AG, Kassel/Hamburg, Germany, total differences arising from currency translation of €868 million were reclassified as earnings to the income statement in 2022.

Measurement of securities at fair value

Measurement of securities at fair value in 2023 led to a decrease in other comprehensive income of €172 million (2022: -€16 million). This was due to impairments of equity instruments measured at fair value through other comprehensive income pursuant to IFRS 9 in the amount of €180 million at Wintershall Dea AG, Kassel/Hamburg, Germany, which is accounted for using the equity method.

Cash flow hedges

Changes in the fair value of derivatives designated in hedging relationships (cash flow hedges) adjusted for deferred taxes in the amount of €8 million (2022: -€8 million) increased equity by a total of €570 million (2022: -€33 million). In 2023, €588 million (2022: €37 million) was attributable to the hedging of future cash flows at shareholdings accounted for using the equity method.

For more information on cash flow hedge accounting, see Note 25.5 from page 303 onward

20 Liabilities

Financial indebtedness

Million €

		Currency	Nominal value (million, currency of issue)	Effective interest rate	Carrying amounts based on effective interest method: December 31, 2023	Carrying amounts based on effective interest method: December 31, 2022
BASF SE						
Commercial paper		USD	700		–	654
0.925%	Bond 2017/2023	USD	850	0.83%	–	795
0.101%	Bond 2020/2023	EUR	1,000	0.14%	–	1,000
0.875%	Bond 2016/2023	GBP	250	1.06%	–	281
2.500%	Bond 2014/2024	EUR	500	2.60%	500	499
1.750%	Bond 2017/2025	GBP	300	1.87%	345	337
0.875%	Bond 2018/2025	EUR	750	0.97%	749	748
3.675%	Bond 2013/2025	NOK	1,450	3.70%	129	138
0.750%	Bond 2022/2026	EUR	1,000	0.82%	999	998
0.250%	Bond 2020/2027	EUR	1,000	0.32%	998	997
0.875%	Bond 2017/2027	EUR	1,000	1.04%	994	992
3.125%	Bond 2022/2028	EUR	750	3.27%	746	745
2.670%	Bond 2017/2029	NOK	1,600	2.69%	142	152
0.875%	Bond 2019/2029	EUR	250	1.01%	248	248
4.000%	Bond 2023/2029	EUR	500	4.08%	498	–
1.500%	Bond 2018/2030	EUR	500	1.63%	496	496
1.500%	Bond 2016/2031	EUR	200	1.58%	199	199
1.500%	Bond 2022/2031	EUR	1,000	1.53%	998	997
0.875%	Bond 2016/2031	EUR	500	1.01%	495	495
2.370%	Bond 2016/2031	HKD	1,300	2.37%	151	156
4.250%	Bond 2023/2032	EUR	500	4.30%	498	–
3.750%	Bond 2022/2032	EUR	750	3.85%	745	744
1.450%	Bond 2017/2032	EUR	300	1.57%	297	297
3.000%	Bond 2013/2033	EUR	500	3.15%	494	494
2.875%	Bond 2013/2033	EUR	200	2.96%	199	198
4.000%	Bond 2018/2033	AUD	160	4.24%	97	100
4.500%	Bond 2023/2035	EUR	500	4.54%	498	–
1.625%	Bond 2017/2037	EUR	750	1.73%	740	739
3.250%	Bond 2013/2043	EUR	200	3.27%	200	200
1.025%	Bond 2018/2048	JPY	10,000	1.03%	64	71

Continued on next page

Continued from previous page

Financial indebtedness

Million €

		Currency	Nominal value (million, currency of issue)	Effective interest rate	Carrying amounts based on effective interest method: December 31, 2023	Carrying amounts based on effective interest method: December 31, 2022
3.890%	U.S. private placement series A 2013/2025	USD	250	3.92%	226	234
4.090%	U.S. private placement series B 2013/2028	USD	700	4.11%	633	655
4.430%	U.S. private placement series C 2013/2034	USD	300	4.45%	271	281
BASF Finance Europe N.V.						
3.625%	Bond 2018/2025	USD	200	3.69%	181	187
0.750%	Bond 2016/2026	EUR	500	0.88%	498	497
Other bonds					**112**	**116**
Bonds and other liabilities to the capital market					**14,438**	**15,743**
Liabilities to credit institutions					4,830	3,273
Financial indebtedness					**19,268**	**19,016**

Breakdown of financial indebtedness by currency

Million €

	Dec. 31, 2023	Dec. 31, 2022
Euro	15,408	13,790
U.S. dollar	1,735	3,258
Chinese renminbi	424	57
Pound sterling	345	619
Norwegian krone	271	290
Japanese yen	221	102
Hong Kong dollar	151	156
Australian dollar	97	100
South African rand	80	63
Brazilian real	64	85
Turkish lira	60	74
Indian rupee	60	176
Indonesian rupiah	48	52
Thai baht	39	51
Argentine peso	7	128
Other currencies	260	15
Total	**19,268**	**19,016**

Maturities of financial indebtedness

Million €

	Dec. 31, 2023	Dec. 31, 2022
Following year 1	2,182	3,844
Following year 2	1,904	1,300
Following year 3	2,681	1,918
Following year 4	2,383	2,177
Following year 5	1,818	2,381
Following year 6 and maturities beyond this year	8,300	7,395
Total	**19,268**	**19,016**

Other bonds

Other bonds consisted of a bond issued by BASF Corporation that was used to finance investments in the United States. Both the nominal interest rate and effective interest rate of this bond were 6.95% in 2023. Its remaining term to maturity is 54 months.

Liabilities to credit institutions

Liabilities to credit institutions increased from €3,273 million as of December 31, 2022, to €4,830 million as of December 31, 2023. The weighted average interest rate on loans amounted to 4.2% in 2023, compared with 5.7% in 2022.

Unused credit lines

BASF SE had committed and unused credit lines, when drawn with variable interest rates, amounting to €6,000 million as of December 31, 2023 (2022: €9,350 million). In 2023, BASF Integrated Site (Guangdong) Co. Ltd., China, signed a 40 billion Chinese renminbi syndicated bank term loan facility with a maturity of 15 years for its Verbund site in Zhanjiang, and had utilized an amount of 1 billion Chinese renminbi (€127 million) as of December 31, 2023. When drawn, the interest rate is variable.

Other liabilities

Million €

	December 31, 2023		December 31, 2022	
	Noncurrent	Current	Noncurrent	Current
Derivatives with negative fair values	135	192	93	294
Liabilities from leases	1,299	350	1,159	329
Loan and interest liabilities	16	415	21	425
Advances received on orders	–	779	–	926
Miscellaneous liabilities	45	560	52	781
Other liabilities that qualify as financial instruments	**1,496**	**2,297**	**1,325**	**2,756**
Liabilities related to social security	39	100	49	100
Employee liabilities	23	335	22	297
Liabilities from precious metal trading positions	–	43	–	56
Contract liabilities	141	36	176	37
Deferred income	19	38	16	53
Miscellaneous liabilities	21	82	18	70
Other liabilities that do not qualify as financial instruments	**243**	**635**	**282**	**612**
Other liabilities	**1,739**	**2,931**	**1,606**	**3,368**

Other liabilities

The majority of **contract liabilities** have terms of up to five years. Of the contract liabilities reported as of December 31, 2023, €36 million are expected to be recognized as revenue in 2024.

For more information on financial risks and derivative instruments, see Note 25 from page 291 onward

For more information on liabilities arising from leases, see Note 15 from page 272 onward

Carrying amounts of assets used to secure liabilities

Million €

	Dec. 31, 2023	Dec. 31, 2022
To secure		
liabilities to credit institutions	13	15
accounts payable, trade	4	3
other liabilities	41	51
Carrying amounts of assets used	**58**	**69**

Liabilities to credit institutions were secured primarily with registered land charges. Secured **other liabilities** relate primarily to derivatives with negative fair values that are secured with other receivables and miscellaneous assets.

21 Provisions for pensions and similar obligations

Economic and legal environment of the plans

In addition to state pension plans, most employees are granted company pension benefits from either defined contribution or defined benefit plans. Benefits generally depend on years of service, contributions or compensation, and take into consideration the legal framework of labor, tax and social security laws of the countries where the companies are located. To limit the risks of changing financial market conditions as well as demographic developments, employees have, for a number of years now, been almost exclusively offered defined contribution plans for future years of service.

The Group Pension Committee monitors the risks of all pension plans of the Group with regard to the financing of pension commitments and the portfolio structure of existing plan assets. The organization, responsibilities, strategy, implementation and reporting requirements are documented for the units involved.

In some countries – especially in Germany, in the United States, in the United Kingdom and in Switzerland – there are pension obligations subject to government supervision or similar legal restrictions. For example, there are minimum funding requirements to cover pension obligations, which are based on actuarial assumptions that differ from those pursuant to IAS 19. Furthermore, there are qualitative and quantitative restrictions on allocating plan assets to certain asset categories. This could result in annual fluctuations in employer contributions, financing measures and the assumption of obligations in favor of the pension funds to comply with regulatory requirements.

The obligations and the plan assets used to fund the obligations are exposed to demographic, legal and economic risks. Economic risks are primarily due to unforeseen developments on commodity and capital markets. They affect, for example, pension adjustments based on the level of inflation in Germany and in the United Kingdom, as well as the impact of discount rates on the amount of the defined benefit obligation.

The strategy of the BASF Group with regard to financing pension commitments takes into account country-specific supervisory and tax regulations.

In some countries, pension benefits were granted for which the employer has a subsidiary liability. Pension benefits in a number of countries include minimum interest guarantees to a limited extent. If the pension fund cannot generate the income needed to provide the minimum guarantee, this guarantee must be provided by the employer under the subsidiary liability. To the extent that recourse to the employer is unlikely based on the structure and execution of the pension benefits as well as the asset situation of the pension fund, these plans are treated as defined contribution plans.

Accounting policies

With regard to pensions and similar obligations, a distinction is made between defined benefit and defined contribution plans. In the case of defined contribution plans, current contributions are recognized as an expense.

In the case of defined benefit obligations, provisions for pensions are calculated on an actuarial basis in accordance with the projected unit credit method. Assumptions relating to the following valuation parameters, among others are used: future developments in compensation, pensions and inflation, employee turnover, and the life expectancy of beneficiaries. Actuarial reports are used to calculate the amount of pension provisions. Obligations are discounted based on the market yields on high-quality corporate fixed-rate bonds. Pension provisions are recognized as a net defined benefit liability if the discounted benefit obligation exceeds the plan assets used to cover it.

A plan asset surplus exists if a defined benefit plan's assets exceed the plan's obligations. IAS 19 requires the employer to test any such surplus for impairment. If no economic benefit (for example, reduced contributions or a refund) to the company is present, an asset ceiling must be reported. Such an asset ceiling was applied to the BASF Group's Swiss pension plans in 2022 and 2023.

Similar obligations, especially those arising from commitments by North American Group companies to pay the healthcare costs and life insurance premiums of retired staff and their dependents, are reported under provisions for similar obligations.

The assumptions used to ascertain the defined benefit obligation as of December 31 are used in the following year to determine the expenses for pension plans.

Actuarial gains and losses from changes in estimates relating to the actuarial assumptions used to calculate defined benefit obligations, the difference between standardized and actual returns on plan assets, as well as the effects of the asset ceiling are recognized directly in equity as other comprehensive income.

The interest on the net defined benefit liability at the beginning of the year is recognized in the financial result. This is the difference between the interest cost of the defined benefit obligation and the standardized return on plan assets as well as the interest cost for the asset ceiling. Net interest expense of the respective fiscal year is based on the discount rate and the defined benefit obligation at the beginning of the year. The expected contribution payments and benefits paid over the course of the fiscal year are taken into account when determining net interest.

The standardized return on plan assets is calculated by multiplying plan assets at the beginning of the year with the discount rate used for existing defined benefit obligations at the beginning of the year, taking into account benefit and contribution payments to be made during the year.

Description of the defined benefit plans

The following section describes the typical plan structure in the individual countries. Different arrangements may exist, in particular due to the assumption of plans as part of acquisitions; however, these do not have any material impact on the description of plans in the individual countries.

Germany
For BASF SE and German Group companies, a basic level of benefits is provided by BASF Pensionskasse VVaG, a legally independent plan, which is financed by employer and employee contributions as well as the return on plan assets. BASF SE ensures the necessary contributions to adequately finance the benefits promised by BASF Pensionskasse VVaG. Some of the benefits financed via BASF Pensionskasse VVaG are subject to adjustments that must be borne by its member companies to the extent that these cannot be borne by BASF Pensionskasse VVaG due to the regulations imposed by the German supervisory authority. In 2004, the basic benefit plan was closed for newly hired employees at German BASF companies and replaced by a defined contribution plan. A new defined contribution plan was introduced as of July 1, 2021, for new hires in the German BASF companies. At BASF SE, occupational pension promises that exceed the basic level of benefits are financed under a contractual trust arrangement by BASF Pensionstreuhand e.V.; at German Group companies, these benefits are financed primarily via pension provisions. As of 2022, new employees receive a securities-based pension award while other employees are granted benefits primarily based on cash balance plans. Furthermore, employees are given the option of participating in various deferred compensation schemes.

United States
Employees are granted benefits based on defined contribution plans.

Effective 2010, the existing defined benefit plans were closed to further increases in benefits based on future years of service, and benefits earned in the past were frozen. There is no entitlement to pension adjustments to compensate for cost-of-living increases.

The legal and regulatory frameworks governing the plans are based on the U.S. Employee Retirement Income Security Act (ERISA), which requires the plan sponsor to ensure a minimum funding level. Any employer contributions necessary to meet the minimum funding level are based on the results of an actuarial valuation. Furthermore, there are unfunded pension plans that are not subject to ERISA requirements.

Additional similar obligations arise from plans that assume the healthcare costs and life insurance premiums of retired employees and their dependents. Such plans have been closed to new entrants since 2007. In addition, the amount of the benefits for such plans has been frozen.

Switzerland
The employees of the BASF Group in Switzerland receive a company pension, which is financed through a pension fund by employer and employee contributions as well as the return on plan assets. The pension plans are accounted for as defined benefit plans, as the obligatory minimum pension guaranteed by law under the Swiss Pension Fund Act (BVG) is included in the scheme. All benefits vest immediately. According to government regulations, the employer is obligated to make contributions, so that the pension funds are able to grant the minimum benefits guaranteed by law. The pension funds are managed by boards, where employer and employees are equally represented, which steer and monitor the benefit plans and asset allocation.

United Kingdom
Employees are granted benefits based on a defined contribution plan.

The BASF Group also maintains defined benefit plans in the United Kingdom, which have been closed for further increases based on future years of service. Adjustments to compensate for increases in the cost of living until the beginning of retirement are legally required for beneficiaries of defined benefit plans.

The financing of the pension plans is determined by the provisions of the regulatory authority for pensions and the relevant social and labor law requirements. The defined benefit plans are administered by a trust company, whose Board of Trustees, according to the trustee agreement and law, represents the interests of the beneficiaries and ensures that the benefits can be paid in the future. The required funding is determined using technical valuations according to local regulations every three years.

Other countries
For Group companies in other countries, defined benefits are covered in some cases by pension provisions, but mainly by external insurance companies or pension funds.

Actuarial assumptions

The valuation of the defined benefit obligation is based on the following key assumptions:

Actuarial assumptions

%

	Assumptions used to determine the defined benefit obligation as of December 31								Assumptions used to determine expenses for pension benefits in the respective business year							
	Germany		United States		Switzerland		United Kingdom		Germany		United States		Switzerland		United Kingdom	
	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
Discount rate	3.20	3.70	5.00	5.30	1.30	2.20	4.50	4.80	3.70	1.10	5.30	2.70	2.20	0.40	4.80	2.00
Projected pension increase	2.20	2.20	–	–	–	–	3.20	3.40	2.20	1.60	–	–	–	–	3.40	3.50

The determination of discount rates for material pension obligations in Germany, the United States, Switzerland and the United Kingdom is based on a standard model, the Willis Towers Watson RATE:Link model.

The majority of domestic pension obligations are subject to legally required regular adjustments to current pension payments based on interim inflation developments. The last pension adjustment was on January 1, 2022. As of December 31, 2023, a cumulative inflation rate of 15.00% since the last pension adjustment was assumed (December 31, 2022: 10.00%). The long-term inflation assumption was adjusted in 2022 from 1.60% to 2.20% and left unchanged in 2023.

The valuation of the defined benefit obligation is generally performed using the most recent actuarial mortality tables as of December 31 of the respective business year; these were last updated in 2019 for the pension obligations in Germany and in 2021 for the pension obligations in Switzerland. The actuarial mortality tables for the pension obligations in United States were adjusted in 2022.

Actuarial mortality tables (significant countries) as of December 31, 2023

Germany	Heubeck Richttafeln 2018G (modified)
United States	Pri-2012 base mortality tables with Scale MP-2021 projection
Switzerland	BVG 2020 generational with CMI 2018 mortality improvement
United Kingdom	S2PxA (standard actuarial mortality tables for self-administered plans (SAPS))

Sensitivity analysis

A change in the material actuarial assumptions would have the following effects on the defined benefit obligation:

Sensitivity of the defined benefit obligation as of December 31

Million €

	Increase by 0.5 percentage points		Decrease by 0.5 percentage points	
	2023	2022	2023	2022
Discount rate	-1,303	-1,305	1,459	1,477
Projected pension increase	1,026	985	-867	-846

An alternative valuation of the defined benefit obligation was performed to determine how changes in the underlying assumptions influence the amount of the defined benefit obligation. A linear extrapolation of these amounts based on alternative changes in the assumptions as well as an addition of combined changes in the individual assumptions is not possible.

Explanation of the amounts in the statement of income and balance sheet

Composition of expenses for pension benefits

Million €

	2023	2022
Expenses for defined benefit plans	235	357
Expenses for defined contribution plans	330	344
Expenses for pension benefits (recognized in income from operations)	**565**	**701**
Net interest expense from underfunded pension plans and similar obligations	136	102
Net interest income from overfunded pension plans	-65	-21
Unwinding the discount on asset ceiling	10	–
Expenses for pension benefits (recognized in the financial result)	**81**	**81**

Development of defined benefit obligations

Million €

	2023	2022
Defined benefit obligation as of January 1	21,670	28,629
Current service cost	235	373
Past service cost	0	2
Settlements / plan adjustments	-16	-12
Interest cost	811	379
Benefits paid	-1,118	-1,126
Employee contributions	36	37
Actuarial gains/losses	1,415	-6,800
of which adjustments relating to financial assumptions	1,291	-7,712
adjustments relating to demographic assumptions	-28	-12
experience adjustments	152	924
Addition of defined benefit plans that so far have been accounted for as defined contribution plans	156	–
Other changes	0	-4
Currency effects	24	192
Defined benefit obligation as of December 31	**23,213**	**21,670**

Effects from **plan settlements** resulted in 2023 primarily from the transfer of benefit entitlements and the corresponding assets from the pension plan in Canada to an external insurer. In 2022, effects from **plan adjustments** were based on the conversion of a final salary plan to a defined contribution plan for future years of service in the Netherlands.

As of December 31, 2023, the weighted average duration of the defined benefit obligation amounted to 12.9 years (previous year: 13.2 years).

Development of plan assets

Million €

	2023	2022
Plan assets as of January 1	20,083	23,130
Standardized return on plan assets	740	300
Deviation between actual and standardized return on plan assets	670	-2,641
Employer contributions	140	144
Employee contributions	36	37
Benefits paid	-995	-1,009
Settlements / plan adjustments	-17	–
Addition of defined benefit plans that so far have been accounted for as defined contribution plans	155	–
Other changes	-10	-21
Currency effects	79	143
Plan assets as of December 31	**20,880**	**20,083**

Through continuous monitoring of financing requirements of its pension plans, BASF strives to achieve the necessary yields to fill financing gaps over the course of time. Company contributions for 2024 are currently expected to be around €200 million. In 2023, two plans previously recognized as defined contribution plans at Belgian Group companies were included in the calculation of the defined benefit obligation and plan assets due to the fact that recourse to the employer was no longer unlikely. The resulting additional net obligation of €1 million is immaterial.

Development of net defined benefit liability

Million €

	2023	2022
Net defined benefit liability as of January 1	-2,018	-5,499
Current service cost	-235	-373
Past service cost	–	-2
Settlements / plan adjustments	-1	12
Interest cost	-811	-379
Standardized return on plan assets	740	300
Deviation between actual and standardized return on plan assets	670	-2,641
Actuarial gains/losses of the defined benefit obligation	-1,415	6,800
Benefits paid by unfunded plans	123	117
Employer contributions	140	144
Addition of defined benefit plans that so far have been accounted for as defined contribution plans	-1	–
Other changes	-10	-17
Currency effects	54	-49
Change of asset ceiling for plan assets	38	-431
Net defined benefit liability as of December 31	**-2,726**	**-2,018**
of which defined benefit assets	170	792
provisions for pensions and similar obligations	2,896	2,810

Regional allocation of defined benefit plans as of December 31

Million €

	Pension obligations		Plan assets		Asset ceiling		Net defined benefit liability	
	2023	2022	2023	2022	2023	2022	2023	2022
Germany	16,563	15,219	14,687	14,108	–	–	-1,876	-1,111
United States	2,726	2,876	1,853	1,977	–	–	-873	-899
Switzerland	1,738	1,561	2,140	2,007	-393	-431	9	15
United Kingdom	1,296	1,260	1,409	1,368	–	–	113	108
Other	890	754	791	623	–	–	-99	-131
Total	**23,213**	**21,670**	**20,880**	**20,083**	**-393**	**-431**	**-2,726**	**-2,018**

Explanations regarding plan assets

The target asset allocation has been defined by using asset liability studies and is reviewed regularly. Accordingly, plan assets are aligned with the long-term development of the obligations, taking into consideration the risks associated with the specific asset classes and the regulations relating to the investment of plan assets. The existing portfolio structure is based on the target asset allocation. In addition, current market assessments are taken into consideration. In order to mitigate risks and maximize returns, a widely spread global portfolio of individual assets is held.

Liability-driven investment (LDI) techniques, such as hedging the risk of changes in interest rates and inflation, are used in some pension plans, especially in U.K. and U.S. plans, and as of 2023, in Germany as well.

Structure of plan assets

%

	2023	2022
Equities	19	21
Debt instruments	45	42
of which for government debtors	19	16
for other debtors	26	26
Real estate	8	7
Alternative investments	27	29
Cash and cash equivalents	1	1
Total	**100**	**100**

The asset class **debt instruments** comprises promissory notes and debentures (Pfandbriefe) as well as corporate and government bonds. Government bonds primarily relate to bonds from countries with very high credit ratings, such as the United States, the United Kingdom, Germany, France and Switzerland. Government bonds from emerging countries are also held to a limited extent. Corporate bonds mainly comprise bonds from creditworthy debtors, although particular high-yield bonds are also held to a limited extent. In connection with the continuous monitoring of default risk based on a given risk budget and on the observation of the development of the creditworthiness of issuers, the plan asset allocation may be adjusted in the case of a revised market assessment. **Alternative investments** largely comprise investments in private and infrastructure equity, absolute return funds and senior secured loans.

Almost all of the **equities** are priced on active markets. The category **debt instruments** includes promissory notes and debentures (Pfandbriefe) acquired through private placements with a market value in the amount of €262 million as of December 31, 2023, and €138 million as of December 31, 2022. For such securities, especially those held by domestic pension plans, there is no active market. There is also no fungible market price for the additional amount of €4,380 million, especially in the category of **alternative investments** and **real estate**. The capital market compensates for this lack of fungibility with yield premiums depending on the maturity.

Plan assets as of the balance sheet date did not include any significant volumes of securities issued by BASF Group companies in 2023 or 2022. The market value of the properties of legally independent pension funds rented to BASF Group companies was €115 million as in the previous year.

The retrospective initial fund loan BASF SE temporarily provided to BASF Pensionskasse VVaG in 2021 was increased by €100 million to a nominal value of €320 million in 2022.

The funding of the plans was as follows:

Current funding situation of the pension plans as of December 31

Million €

	2023		2022	
	Defined benefit obligation	Plan assets	Defined benefit obligation	Plan assets
Unfunded pension plans	1,954	–	1,963	–
Funded pension plans	21,259	20,880	19,707	20,083
Asset ceiling	–	-393	–	-431
Total	**23,213**	**20,487**	**21,670**	**19,652**

Asset ceiling

As in the previous year, an asset ceiling was applied to pension plans in Switzerland in 2023 in accordance with IAS 19.64 in the amount of €393 million.

Development of asset ceiling

Million €

	2023	2022
Limit on plan assets on January 1	431	–
Interest expense on unrecognized portion of plan assets	10	–
Change in limit excluding interest cost (remeasurement)	-69	431
Currency translation	21	–
Limit on plan assets on December 31	**393**	**431**

Defined contribution plans and government pensions

The contributions to defined contribution plans recognized in income from operations amounted to €330 million in 2023 and €344 million in 2022.

Contributions to government pension plans were €612 million in 2023 and €601 million in 2022.

22 Other provisions

Accounting policies

Other provisions are recognized when there is a present obligation as a result of a past event and when there is a probable outflow of resources whose amount can be reliably estimated. Provisions are recognized at the probable settlement value.

The probable amount required to settle noncurrent provisions is discounted if the effect of discounting is material. In this case, the provision is recognized at present value. Financing costs related to unwinding the discount of provisions in subsequent periods are shown in other financial result.

Provisions for **restoration obligations** include expected costs for dismantling existing plants and buildings. If BASF is the only responsible party that can be identified, the provision covers the entire expected obligation. At sites operated together with one or more partners, the provision generally covers only BASF's share of the expected obligation. The amount of the provision is determined based on the available technical information on the site, the technology used, legal regulations, and official requirements. The calculation accounts for expected significant changes in obligations.

Provisions for **environmental protection and remediation costs** are recognized for expected costs for rehabilitating contaminated sites, recultivating landfills, removal of environmental contamination at existing production or storage sites, and for similar measures as well as for obligations to surrender emission certificates.

Provisions for **employee obligations** primarily consist of variable compensation including associated social security contributions, as well as obligations for granting long-service bonuses. The latter are predominantly calculated based on actuarial principles.

Provisions for **obligations from sales and purchase contracts** largely comprise obligations arising from rebates granted and other price discounts in the Agricultural Solutions segment, warranties and product liabilities, sales commissions and losses from onerous contracts.

Provisions for **restructuring measures** include severance payments to departing employees or similar personnel expenses as well as expected costs for site closures, including costs for demolition and similar measures. Provisions are recognized for these expenses when the relevant measures have been planned and announced by management.

Provisions for **litigation, damage claims and similar obligations** contain anticipated expenses from lawsuits in which BASF is the defendant party, as well as obligations under damage claims against BASF and fines. In order to determine the amount of the provisions, the company takes into consideration the facts related to each case, the size of the claim, compensation awarded in similar cases and independent expert advice as well as assumptions regarding the probability of a successful claim and the range of possible claims. Actual costs can deviate from these estimates.

For more information, see Note 23 on page 290

Noncurrent provisions were discounted at a rate between 2.2% and 3.5% (2022: between 1.0% and 2.2%).

Explanation of other provisions

Other provisions

Million €

	December 31, 2023		December 31, 2022	
		Of which current		Of which current
Restoration obligations	125	3	158	16
Environmental protection and remediation costs	948	135	946	135
Employee obligations	1,299	844	1,945	1,522
Obligations from sales and purchase contracts	1,793	1,731	1,658	1,618
Restructuring measures	92	83	144	121
Litigation, damage claims, and similar obligations	173	77	125	56
Other	467	342	473	331
Total	**4,898**	**3,214**	**5,448**	**3,799**

The decrease in provisions for **employee obligations** was mainly attributable to lower accruals for variable compensation components.

The increase in provisions for **obligations from sales and purchase contracts** resulted from higher accruals for rebate programs.

The decrease in provisions for **restructuring measures** was mainly attributable to lower accruals for severance payments.

Other includes interest on noncurrent tax provisions, as well as various other items.

The following table shows the development of other provisions by category. Other changes include changes in the scope of consolidation, acquisitions, divestitures, currency effects and the reclassification of obligations to liabilities when the amount and timing of these obligations become known.

Development of other provisions in 2023

Million €

	January 1, 2023	Additions	Unwinding of discount	Utilization	Releases	Other changes	December 31, 2023
Restoration obligations	158	2	3	-6	-30	-3	125
Environmental protection and remediation costs	946	123	11	-80	-39	-13	948
Employee obligations	1,945	949	4	-1,458	-109	-32	1,299
Obligations from sales and purchase contracts	1,658	1,643	–	-1,314	-130	-64	1,793
Restructuring measures	144	53	–	-81	-23	-1	92
Litigation, damage claims and similar obligations	125	90	0	-30	-34	21	173
Other	473	255	2	-208	-56	2	467
Total	**5,448**	**3,115**	**21**	**-3,176**	**-421**	**-90**	**4,898**

23 Risks from litigation and claims

Since August 2019, BASF Corporation has been served in various U.S. federal and state lawsuits alleging property and resource damages and personal injuries from possible exposure to per- and polyflouroalkyl substances (PFAS). In December 2018, a multi-district litigation was created to coordinate claims brought against manufacturers, distributors and suppliers of aqueous film forming foam (AFFF) in particular, which plaintiffs allege contains toxic levels of certain PFAS compounds including perfluorooctanoic acid and perfluorooctane sulfonate. Plaintiffs typically allege that exposure to AFFF has caused loss of use and enjoyment of property, diminished property value, remediation costs, and personal injuries including various types of cancers. The complaints name BASF as a defendant in connection with its 2009 acquisition of Ciba Specialty Chemicals Inc. and the legacy Ciba/ BASF Lodyne fluorochemical product lines. BASF is a defendant in over 4,200 lawsuits as of January 2024 and is defending against these claims.

At this time, BASF cannot predict the outcome of resolving these matters or what potential actions may be taken by regulatory agencies. An adverse outcome could be material to BASF's financial results.

Furthermore, BASF SE and its affiliated companies are defendants in or parties to a variety of legal or regulatory proceedings on a recurring basis. To our current knowledge, none of these proceedings will have a material effect on the economic situation of BASF.

24 Other financial obligations

The figures listed below are stated at nominal value:

Other financial obligations

Million €

	Dec. 31, 2023	Dec. 31, 2022
Bills of exchange	1	5
Guarantees	30	41
Warranties	30	33
Collateral granted on behalf of third-party liabilities	–	1
Initiated investment projects	11,064	13,982
of which purchase commitments	4,474	5,019
for the purchase of intangible assets	9	10
Payment and loan commitments and other financial obligations	301	293

BASF SE provides a guarantee to Abu Dhabi National Oil Corporation covering all obligations of Wintershall Dea Middle East GmbH related to the Ghasha concession in the United Arab Emirates. Furthermore, BASF SE assumed guarantees to the Danish Energy Agency covering all obligations of Wintershall Dea International GmbH and Wintershall Noordzee B.V. related to licenses for exploration and production of hydrocarbons in the Danish concession area. The guarantees do not stipulate a maximum amount. The risk of a claim being exercised against the guarantees is classified as low.

Obligations arising from purchase contracts

Obligations from purchase contracts resulted primarily from long-term purchase obligations for raw materials as well as supply agreements for energy from renewable sources.

For more information on long-term energy supply agreements, see the chapter on Energy and climate protection in the Combined Management's Report from page 102 onward

Obligations arising from purchase contracts

Million €

	Dec. 31, 2023	Dec. 31, 2022
Following year 1	7,726	9,353
Following year 2	4,088	2,703
Following year 3	3,195	2,150
Following year 4	3,084	2,058
Following year 5	1,968	1,975
Following year 6 and maturities beyond this year	9,621	8,876
Total	**29,681**	**27,116**

25 Supplementary information on financial instruments

25.1 Accounting policies

Financial assets and financial liabilities are recognized in the consolidated balance sheet when the BASF Group becomes a party to a financial instrument. Financial assets are derecognized when BASF no longer has a contractual right to the cash flows from the financial asset or when the financial asset is transferred together with all material risks and rewards of ownership and BASF does not have control of the financial asset after it has been transferred. For example, receivables are derecognized when they are definitively found to be uncollectible such as in the event of concluded insolvency proceedings. Financial liabilities are derecognized when the contractual obligations expire, are discharged or cancelled. Regular-way purchases and sales of financial instruments are accounted for using the settlement date; in precious metal trading, the trade date is used.

The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. If pricing on an active market is available, for example in the form of exchange prices, these are used as the basis for the measurement. Otherwise, the measurement is based on either internal measurement models using current market parameters or external measurements, for example, from banks. These internal measurements rely predominantly on the net present value method and option pricing models. These models incorporate, for example, expected future cash flows as well as discount factors adjusted for term and, potentially, risk. Depending on the availability of market parameters, BASF assigns financial instruments' market values one of the three levels of the fair value hierarchy pursuant to IFRS 13. Reassignment to a different level during a fiscal year is only carried out if the availability of observable market parameters for identical or similar items changes.

If the level 3 fair values calculated at the time of initial recognition using a valuation model, differ from the transaction price, the differences are deferred and reported in the balance sheet together with the positive or negative fair value of the respective financial instrument according to the valuation model. The differences are amortized over the terms of the contracts using the straight-line method.

The classification and measurement of financial assets is based on the one hand on the cash flow condition (the "solely payments of principal and interest" criterion), that is, the contractual cash flow characteristics of an individual financial asset. On the other hand, it also depends on the business model used for managing financial asset portfolios. Based on these two criteria, BASF uses the following measurement categories for financial assets:

– **Financial assets measured at fair value through profit or loss** include all financial assets whose cash flows are not solely payments of principal and interest in accordance with the cash flow condition established in IFRS 9. At BASF, derivatives, for example, are allocated to this measurement category. In general, BASF does not exercise the fair value option in IFRS 9, which permits the allocation of financial instruments not to be measured at fair value through profit or loss on the basis of the cash flow condition or the business model criterion to the above category under certain circumstances.

- **Financial assets measured at amortized cost** include all assets with contractual terms that give rise to cash flows on specific dates, provided that these cash flows are solely payments of principal and interest on the principal amount outstanding in accordance with the cash flow condition in IFRS 9, to the extent that the asset is held with the intention of collecting the expected contractual cash flows over its term. At BASF, this measurement category includes trade accounts receivable, as well as receivables reported under other receivables and miscellaneous assets and certain securities.
  Initial measurement of these assets is generally at fair value, which usually corresponds to the transaction price at the time of acquisition or, in the case of trade accounts receivable, to the transaction price pursuant to IFRS 15. Subsequent measurement effects are recognized in income using the effective interest method.
  Impairments are recognized for expected credit losses at both initial and subsequent measurement, even before the occurrence of any default event. Counterparties are generally considered to default when they become insolvent, become a debtor in a creditor protection program or are in a finance-related legal dispute with BASF, or more than half of BASF's receivables portfolio with them is more than 90 days overdue. In these cases, individual impairments are recognized for the financial assets measured at amortized cost that are then considered to be credit impaired.
  The extent of expected credit losses is determined based on the credit risk of a financial asset, as well as any changes to this credit risk: If the credit risk of a financial asset has increased significantly since initial recognition, expected credit losses are generally recognized over the lifetime of the asset. If, however, the credit risk has not increased significantly in this period, impairments are generally only recognized as 12-month expected credit losses. By contrast, under the simplified approach for determining expected credit losses permitted by IFRS 9, impairments for receivables such as lease receivables and trade accounts receivable always cover the lifetime expected credit losses of the receivable concerned.
  At BASF, the credit risk of a financial asset is assessed using both internal information and external rating information on the respective counterparty. A significant increase in the counterparty's credit risk is assumed if its rating is lowered by a certain number of notches. It is generally assumed that the credit risk for a counterparty with a high credit rating will not have increased significantly.
  Regional and, in certain circumstances, industry-specific factors and expectations are taken into account when assessing the extent of impairment as part of the calculation of expected credit losses and individual impairments. In addition, BASF uses internal and external ratings and the assessments of debt collection agencies and credit insurers, when available. Individual impairments are also based on experience relating to customer solvency and customer-specific risks. Factors such as credit insurance, which covers a portion of receivables measured at amortized cost, are likewise considered when calculating impairments. Bank guarantees and letters of credit are used to an immaterial extent. Expected credit losses and individual impairments are only calculated for those receivables that are not covered by insurance or other collateral. Impairments on receivables whose insurance includes a deductible are not recognized in excess of the amount of the deductible.
  A decrease in impairment due, for example, to a reduction in the credit risk of a counterparty or an objective event occurring after the impairment is recorded in profit or loss. Reversals of impairments may not exceed amortized cost, less any expected future credit losses.
- **Financial assets measured at fair value through other comprehensive income** include all assets with contractual terms that give rise to cash flows on specified dates that are solely payments of principal and interest on the principal amount outstanding, in accordance with the cash flow condition in IFRS 9. Furthermore, the assets in this measurement category may not just be held with the intention of collecting the expected contractual cash flows over their term, but also generating cash flows from their sale. At BASF, trade accounts receivable that are available for sale as part of a factoring agreement are allocated to this category. Additionally, certain securities that are reported as other financial assets or marketable securities are allocated to this category. BASF does not exercise the option to subsequently measure equity instruments through other comprehensive income. Assets measured at fair value through other comprehensive income are initially measured at fair value, which usually corresponds to the transaction price of the receivables and securities allocated to this category at the time of acquisition. Subsequent measurement is likewise at fair value. Changes in the fair value are recognized in other comprehensive income and reclassified to the statement of income when the asset is disposed of. Impairments on financial assets measured at fair value through other comprehensive income are calculated in the same way as impairments on financial assets measured at amortized cost and recognized in profit or loss.

The following measurement categories are used for financial liabilities:
- **Financial liabilities measured at amortized cost** generally include all financial liabilities, provided these do not represent derivatives. They are generally measured at fair value at the time of initial recognition, which usually corresponds to the value of the consideration received. Subsequent measurement is recognized in profit or loss at amortized cost using the effective interest method. At BASF, for example, bonds and liabilities to banks reported under financial indebtedness are measured at amortized cost.
- **Financial liabilities measured at fair value through profit or loss** contain derivative financial liabilities. These are likewise measured at the value of the consideration received as the fair value of the liability on the date of initial recognition. Fair value is also applied as a measurement basis for these liabilities in subsequent measurement. The option to subsequently measure non-derivative financial liabilities at fair value is not exercised. Derivative financial instruments can be embedded within other contracts, creating a hybrid financial instrument. If IFRS policies require separation, the embedded derivative is accounted for separately from its host contract and measured at fair value. If IFRS 9 does not provide for separation, the hybrid instrument is accounted for at fair value in its entirety.

Financial guarantees of the BASF Group are contracts that require compensation payments to be made to the guarantee holder if a debtor fails to make payment when due under the terms of a transaction entered into with the holder of the guarantee. Financial guarantees issued by BASF are measured at fair value upon initial recognition. In subsequent periods, these financial guarantees are carried at the higher of amortized cost or the best estimate of the present obligation as of the reporting date.

In **cash flow hedges,** future cash flows and the related income and expenses are hedged against the risk of changes in value. To this end, future underlying transactions and the corresponding hedging instruments are designated in a cash flow hedge accounting relationship for accounting purposes. The effective portion of the change in fair value of the hedging instrument, which often meets the definition of a derivative, and the cost of hedging are recognized directly in equity under other comprehensive income over the term of the hedge, taking deferred taxes into account. The ineffective portion is recognized immediately in the income statement. In the case of future transactions that lead to recognition of a nonfinancial asset or a nonfinancial liability, the cumulative fair value changes of the hedge in equity are generally charged against the cost of the hedged item on its initial recognition. For hedges based on financial assets, financial liabilities or future transactions, cumulative fair value changes of the hedges are transferred from equity to the income statement in the reporting period in which the hedged item is recognized in the income statement. The maturity of the hedging instrument is aligned with the effective date of the future transaction.

When **fair value hedge** accounting is used, the asset or liability recognized is hedged against the risk of a change in fair value. The hedging instruments used, which often take the form of a derivative, are measured at fair value and changes in fair value are recognized in the statement of income. The carrying amounts of the assets or liabilities designated as the underlying transaction are also measured at fair value through the statement of income.

25.2 Financial risks

Market risks

Foreign currency risks: Changes in exchange rates could lead to losses in the value of financial instruments and adverse changes in future cash flows from planned transactions. Foreign currency risks from financial instruments result from the translation at the closing rate of financial receivables, loans, securities, cash and financial liabilities into the functional currency of the respective Group company. Foreign currency contracts in various currencies are used to hedge foreign exchange risks from nonderivative financial instruments and planned transactions.

The foreign currency risk exposure corresponds to the net amount of the nominal volume of the primary and the derivative financial instruments that are exposed to currency risks. In addition, planned purchase and sales transactions of the respective following year are included if they fall under the currency risk management system. Long and short positions in the same currency are offset against each other.

The sensitivity analysis was conducted by simulating a 5% and 10% appreciation of the respective functional currency against the other currencies. A 5% appreciation of the respective functional currency would have reduced BASF’s income before income taxes by €165 million as of December 31, 2023. A 10% appreciation of the respective functional currency would have resulted in a negative effect on BASF’s income before income taxes in the amount of €310 million. A 5% appreciation of the respective functional currency would have resulted in a negative effect on BASF’s income before income taxes in the amount of €156 million (-€293 million applying 10% appreciation) as of December 31, 2022. The effect from the items designated under hedge accounting would have reduced shareholders’ equity before income taxes by €3 million applying 5% appreciation to the functional currency and by €2 million applying 10% appreciation to the functional currency as of December 31, 2023 (2022: increase of €15 million applying 5% appreciation to the functional currency and increase of €32 million applying 10% appreciation to the functional currency). This only refers to transactions in U.S. dollars in both years.

Exposure and sensitivity by currency

Million €

	December 31, 2023			December 31, 2022		
	Exposure	Sensitivity		Exposure	Sensitivity	
		+5%	+10%		+5%	+10%
USD	1,872	-124	-229	1,643	-93	-170
Other	924	-44	-84	987	-47	-90
Total	**2,796**	**-168**	**-313**	**2,630**	**-141**	**-260**

Due to the use of options to hedge currency risks, the sensitivity analysis is not a linear function of the assumed changes in exchange rates.

Interest rate risks: Interest rate risks arise from changes in prevailing market interest rates, which can lead to changes in the fair value of fixed-rate instruments and in interest payments for variable-rate instruments. Interest rate swaps and combined interest rate and currency derivatives are used in individual cases to hedge these risks. The derivatives are presented in Note 25.5. Interest rate risks are relevant to BASF's financing activities but are not of material significance for BASF's operating activities.

The variable interest risk exposure, which also includes fixed rate bonds maturing in the following year, amounted to -€427 million as of December 31, 2023 (2022: -€2,441 million). An increase in all relevant interest rates by one half of a percentage point would have raised income before income taxes by €2 million as of December 31, 2023. An increase in all relevant interest rates by one percentage point would have raised income before income taxes by €3 million as of the same date. An increase in all relevant interest rates by one half of a percentage point would have lowered income before income taxes by €7 million as of December 31, 2022 (an increase of one percentage point would have lowered income before income taxes by €15 million).

Because no interest derivatives were designated in hedge accounting relationships as of December 31, 2023, a change in interest rates would not have had an effect on shareholders' equity. There were also no interest derivatives designated in a hedge accounting relationship as of December 31, 2022.

Carrying amounts of nonderivative interest-bearing financial instruments

Million €

	December 31, 2023		December 31, 2022	
	Fixed interest rate	Variable interest rate	Fixed interest rate	Variable interest rate
Loans	158	108	75	92
Securities	367	19	155	208
Financial indebtedness	17,116	2,152[a]	16,428	2,588[a]

a Including fixed rate bonds maturing in the following year

Nominal and fair values of combined interest rate and currency swaps

Million €

	December 31, 2023		December 31, 2022	
	Nominal value	Fair value	Nominal value	Fair value
Combined interest rate and currency swaps	**3,960**	**157**	**3,427**	**265**
of which fixed rate	3,960	157	3,427	265

Central benchmark interest rates were comprehensively revised as part of what is known as the IBOR reform. Accordingly, the interest rates affected by the reform were phased out and replaced by new ones. Publication of all GBP, EUR, CHF and JPY LIBORs as well as USD LIBORs with maturities of one week and two months was discontinued as of December 31, 2021. Publication of the remaining USD LIBORs was discontinued in 2023.

With the discontinuation of publication of the remaining USD LIBORs, no financial liabilities or financial assets associated with contracts yet to be adjusted were identified as of December 31, 2023. As of December 31, 2022, financial liabilities in the amount of €61 million and financial assets in the amount of €43 million associated with contracts yet to be adjusted were identified. No derivatives were identified that are associated with contracts yet to be adjusted in either year.

Commodity price risks: Some of BASF's divisions are exposed to strong fluctuations in raw materials prices. These result primarily from raw materials (for example naphtha, benzene, natural gas, LPG condensate) as well as from metals. BASF takes the following measures to reduce price risks associated with the purchase of raw materials:

– BASF uses derivatives to hedge the risks of raw materials prices. These are primarily options on crude oil, oil products and natural gas.
– The Catalysts division enters into both short-term and long-term purchase contracts with precious and battery metal producers. It also buys metals on spot markets from various business partners. The price risk from metals purchased to be sold on to third parties, or for use in the production of catalysts and battery materials, is hedged using derivative instruments. This is mainly performed using forward contracts, which are settled by either entering into offsetting contracts or by delivering the metal.
– In the Agricultural Solutions division, the sales prices of products are sometimes pegged to the price of certain agricultural commodities. To hedge the resulting risks, derivatives on agricultural commodities are concluded.

In addition, BASF holds limited unhedged precious metal and oil product positions, which can also include derivatives, for trading on its own account. The value of these positions is exposed to market price volatility and is subject to constant monitoring.

By holding commodity derivatives and precious metal trading positions and unhedged oil product positions, BASF is exposed to price risks. The valuation of commodity derivatives and precious metal trading positions at fair value means that adverse changes in market prices could negatively affect the earnings and equity of BASF.

BASF holds several physical power purchase agreements (physical PPAs) with terms of up to 25 years. Under the physical PPAs, BASF procures electricity and associated green electricity certificates, known as guarantees of origin (GoOs). If BASF can consume in full the electricity provided through the physical PPAs, these fall under the own use exemption and are therefore not recognized as derivatives in the balance sheet even when electricity and green electricity certificates are purchased at a fixed price. Additionally, BASF also holds physical PPAs in the USA and Asia; the electricity from these PPAs cannot be consumed in full due to major deviations between supply profiles and consumption patterns. The electricity forward agreements embedded in them are not eligible for the own use exemption and are recognized as derivatives at fair value through profit or loss if electricity is purchased at a fixed price. In contrast to electricity, green electricity certificates obtained from physical PPAs recognized as derivatives can be stored and consumed at a later date. Thus, they continue to fall under the own use exemption even if purchased at a fixed price. In the event of adverse changes in energy market prices, valuation of the electricity forward agreements for physical PPAs can lead to negative effects on BASF's earnings.

Furthermore, BASF holds several virtual power purchase agreements (virtual PPAs) in the United States with terms of up to 15 years. The electricity forward agreements embedded in virtual PPAs are recognized separately as derivatives at fair value through profit or loss. In the event of adverse changes in energy market prices, measurement of electricity forward agreements at fair value can lead to negative effects on BASF's earnings.

BASF performs value-at-risk analyses for all commodity derivatives and precious metal trading positions. Value at risk continuously measures the market price risk and quantifies the loss that is not exceeded by a specific confidence level during a defined holding period. BASF bases the value-at-risk calculation on a confidence interval of 95% and a holding period of one day. BASF applies the variance-covariance method to calculate value at risk.

BASF uses value at risk in conjunction with other risk management tools. Besides value at risk, BASF sets volume-based limits as well as exposure and stop-loss limits.

Risk positions from commodity derivatives not eligible for the own use exemption

Million €

	December 31, 2023		December 31, 2022	
	Exposure	Value at Risk	Exposure	Value at Risk
Crude oil, oil products and natural gas	129	15	388	23
Precious metals	94	1	46	2
Agricultural commodities	76	0	87	0
Electricity and green electricity certificates	918	28	228	4

The exposure corresponds to the net amount of all long and short positions of the respective commodity category.

For more information on BASF's financial risks and risk management, see Opportunities and Risks from page 173 onward

Default and credit risk

Default and credit risks arise when customers and debtors do not fulfill their contractual obligations. BASF regularly analyzes the creditworthiness of the counterparties and grants credit limits on the basis of this analysis. Due to the global activities and diversified customer structure of the BASF Group, there is no significant concentration of default risk. The carrying amount of all receivables, loans and interest-bearing securities plus the nominal value of financial obligations stemming from contingent liabilities not to be recognized represents the maximum default risk for BASF.

For more information on credit risks, see Note 17 from page 275 onward

Liquidity risks

BASF promptly recognizes any risks from cash flow fluctuations as part of liquidity planning. BASF has ready access to sufficient liquid funds from the ongoing commercial paper program and confirmed lines of credit from banks.

25.3 Maturity analysis

The interest and principal payments as well as other payments for derivative financial instruments are relevant for the presentation of the maturities of the contractual cash flows from financial liabilities. Future cash flows are not discounted here.

Derivatives are included using their net cash flows, provided they have negative fair values and therefore represent a liability. Derivatives with positive fair values are assets and are therefore not taken into account.

Maturities of contractual cash flows from financial liabilities as of December 31, 2023

Million €

	Bonds and other liabilities to the capital market	Liabilities to credit institutions	Accounts payable, trade	Derivative liabilities	Miscellaneous liabilities	Total
2024	816	1,775	6,738	361	736	10,428
2025	1,935	345	1	95	277	2,654
2026	1,771	1,239	2	4	203	3,220
2027	2,260	437	–	1	163	2,861
2028	1,740	366	–	1	132	2,239
2029 and thereafter	8,264	1,095	–	95	830	10,283
Total	**16,786**	**5,258**	**6,741**	**557**	**2,341**	**31,684**

Maturities of contractual cash flows from financial liabilities as of December 31, 2022

Million €

	Bonds and other liabilities to the capital market	Liabilities to credit institutions	Accounts payable, trade	Derivative liabilities	Miscellaneous liabilities	Total
2023	3,058	1,143	8,429	295	700	13,625
2024	821	817	2	29	262	1,931
2025	1,956	280	3	65	180	2,484
2026	1,783	908	–	1	137	2,829
2027	2,271	585	–	1	108	2,965
2028 and thereafter	10,211	305	–	14	763	11,293
Total	**20,100**	**4,038**	**8,434**	**405**	**2,150**	**35,127**

25.4 Classes and categories of financial instruments

Carrying amounts and fair values of financial instruments as of December 31, 2023

Million €

	Carrying amount	Total carrying amount within scope of application of IFRS 7	Valuation category in accordance with IFRS 9[b]	Fair Value	Of which fair value level 1[c]	Of which fair value level 2[d]	Of which fair value level 3[e]
Shareholdings[a]	536	536	FVTPL	0	–	0	–
Receivables from finance leases	33	33	n. a.	33	–	–	–
Accounts receivable, trade	9,817	9,817	AC	9,817	–	–	–
Accounts receivable, trade	286	286	FVTOCI	286	–	286	–
Accounts receivable, trade	312	312	FVTPL	312	–	312	–
Derivatives – no hedge accounting	810	810	FVTPL	955	5	752	198[g]
Derivatives – hedge accounting	242	242	n. a.	242	–	242	–
Other receivables and miscellaneous assets[f]	4,669	1,229	AC	1,229	–	–	–
Other receivables and miscellaneous assets[f]	89	89	FVTPL	89	–	89	–
Securities	39	39	AC	39	–	–	–
Securities	325	325	FVTOCI	325	234	91	–
Securities	253	253	FVTPL	253	252	1	–
Cash equivalents	20	20	FVTPL	20	20	–	–
Cash and cash equivalents	2,605	2,605	AC	2,605	–	–	–
Total assets	**20,035**	**16,595**		**16,204**	**510**	**1,773**	**198**
Bonds	14,438	14,438	AC	13,876	12,468	1,407	–
Commercial paper	–	–	AC	–	–	–	–
Liabilities to credit institutions	4,830	4,830	AC	4,582	–	4,582	–
Liabilities from leases	1,649	1,649	n. a.	1,649	–	–	–
Accounts payable, trade	6,741	6,741	AC	6,741	–	–	–
Derivatives – no hedge accounting	309	309	FVTPL	251	11	288	-48[h]
Derivatives – hedge accounting	18	18	n. a.	18	–	18	–
Other liabilities[f]	2,694	1,816	AC	1,816	–	–	–
Total liabilities	**30,679**	**29,801**		**28,933**	**12,479**	**6,295**	**-48**

a In general, only significant shareholdings are measured at fair value. All insignificant shareholdings are measured at cost (carrying amount: €536 million). Fair value level 1 is applied to publicly listed shareholdings. Level 2 is applied to shareholdings for which valuation is based on parameters observable in the market to the greatest extent possible. These may be adjusted to reflect valuation-relevant characteristics of the respective shareholding in the fair value.
b AC: amortized cost; FVTOCI: fair value through other comprehensive income; FVTPL: fair value through profit or loss; a more detailed description of the categories can be found in Note 25.1 from page 291 onward.
c Fair value was determined based on quoted, unadjusted prices on active markets.
d Fair value was determined based on parameters for which directly or indirectly quoted prices on active markets were available.
e Fair value was determined based on parameters for which there was no observable market data.
f Does not include separately shown derivatives or receivables and liabilities from finance leases. If miscellaneous receivables are valued at fair value through profit or loss, their valuation is generally based on parameters observable on the market. These are adjusted to reflect valuation-relevant characteristics of the respective assets in the fair value.
g The carrying amount of the electricity forward agreements reported in the balance sheet under other receivables and miscellaneous assets is €53 million after subtracting the differences of €145 million described on page 300.
h The carrying amount of the electricity forward agreements reported in the balance sheet under other liabilities is €10 million after subtracting the differences of €58 million described on page 300.

Carrying amounts and fair values of financial instruments as of December 31, 2022

Million €

	Carrying amount	Total carrying amount within scope of application of IFRS 7	Valuation category in accordance with IFRS 9[b]	Fair Value	Of which fair value level 1[c]	Of which fair value level 2[d]	Of which fair value level 3[e]
Shareholdings[a]	539	539	FVTPL	0	–	0	–
Receivables from finance leases	34	34	n. a.	34	–	–	–
Accounts receivable, trade	11,787	11,787	AC	11,787	–	–	–
Accounts receivable, trade	268	268	FVTPL	268	–	268	–
Derivatives – no hedge accounting	1,030	1,030	FVTPL	1,054	1	1,021	32[g]
Derivatives – hedge accounting	317	317	n. a.	317	–	317	–
Other receivables and miscellaneous assets[f]	6,931	1,346	AC	1,346	–	–	–
Other receivables and miscellaneous assets[f]	89	89	FVTPL	89	–	89	–
Securities	25	25	AC	25	–	–	–
Securities	120	120	FVTOCI	120	42	78	–
Securities	668	668	FVTPL	668	204	464	–
Cash equivalents	447	447	FVTPL	447	447	–	–
Cash and cash equivalents	2,069	2,069	AC	2,069	–	–	–
Total assets	**24,324**	**18,739**		**18,224**	**694**	**2,237**	**32**
Bonds	15,088	15,088	AC	13,946	12,533	1,413	–
Commercial paper	654	654	AC	654	–	–	–
Liabilities to credit institutions	3,273	3,273	AC	3,175	–	3,175	–
Liabilities from leases	1,488	1,488	n. a.	1,488	–	–	–
Accounts payable, trade	8,434	8,434	AC	8,434	–	–	–
Derivatives – no hedge accounting	386	386	FVTPL	340	10	359	-29[h]
Derivatives – hedge accounting	1	1	n. a.	1	–	1	–
Other liabilities[f]	3,099	2,205	AC	2,205	–	–	–
Total liabilities	**32,423**	**31,529**		**30,243**	**12,543**	**4,948**	**-29**

a In general, only significant shareholdings are measured at fair value. All insignificant shareholdings are measured at cost (carrying amount: €539 million). Fair value level 1 is applied to publicly listed shareholdings. Level 2 is applied to shareholdings for which valuation is based on parameters observable in the market to the greatest extent possible. These may be adjusted to reflect valuation-relevant characteristics of the respective shareholding in the fair value.
b AC: amortized cost; FVTOCI: fair value through other comprehensive income; FVTPL: fair value through profit or loss; a more detailed description of the categories can be found in Note 25.1 from page 291 onward.
c Fair value was determined based on quoted, unadjusted prices on active markets.
d Fair value was determined based on parameters for which directly or indirectly quoted prices on active markets were available.
e Fair value was determined based on parameters for which there was no observable market data.
f Does not include separately shown derivatives or receivables and liabilities from finance leases. If miscellaneous receivables are valued at fair value through profit or loss, their valuation is generally based on parameters observable on the market. These are adjusted to reflect valuation-relevant characteristics of the respective assets in the fair value.
g The carrying amount of the electricity forward agreements reported in the balance sheet under other receivables and miscellaneous assets is €8 million after subtracting the differences of €24 million.
h The carrying amount of the electricity forward agreements reported in the balance sheet under other liabilities is €17 million after subtracting the differences of €46 million.

Financial assets measured at fair value – valuation methods and input factors

Million €

Financial Instrument	Fair Value Level	Description	Valuation method	Key input factors to determine fair value	Dec. 31, 2023	Dec. 31, 2022
Accounts receivable, trade	Level 2	Receivables with embedded commodity derivatives	Discounting of expected future cash flows	Observable commodity price quotations, yield curves, credit default premiums	312	268
	Level 2	Receivables available for sale under a factoring agreement	Valuation using nominal values	Nominal values	286	–
Derivatives with positive fair values	Level 1	Exchange-traded commodity derivatives	Price quotation on an active market for identical assets	Market price on the balance sheet date	5	1
	Level 2	OTC currency, interest rate and commodity derivatives	Discounting of expected future cash flows, option pricing models	Exchange rate quotations, observable yield curves, commodity price quotations, currency and commodity price volatility, credit default premiums	995	1,338
	Level 3	Electricity forward agreements	Discounting of expected future cash flows	Electricity price quotations, long-term electricity price forecasts,[a] expected electricity volumes,[a] estimated startup date,[a] yield curves, credit default premiums	198[b]	32[c]
Other receivables and miscellaneous assets	Level 2	Performance-based interest-bearing loan to BASF Pensionskasse	Discounting of expected future cash flows	Expected cash flows from the investment portfolio, discount factors	80	80
	Level 2	Surrender values for insurance policies	Surrender values according to contractual agreement	Surrender values on the balance sheet date	9	9
Securities	Level 1	Publicly traded fund shares	Price quotation on an active market for identical assets	Market price on the balance sheet date	234	204
	Level 1	Publicly traded bonds	Price quotation on an active market for identical assets	Market price on the balance sheet date	251	42
	Level 2	Bonds not publicly traded	Issuer pricing based on recognized valuation methods	Yield curves, credit default premiums	91	78
	Level 2	Fund shares not publicly traded	Consideration of the fair value of the equity and debt instruments in which funds are invested	Market price on the balance sheet date, yield curves, credit default premiums, net asset value of fund investments	1	464
Cash and cash equivalents	Level 1	Publicly traded money market funds	Price quotation on an active market for identical assets	Market price on the balance sheet date	20	447
Derivatives with negative fair values	Level 1	Exchange-traded commodity derivatives	Price quotation on an active market for identical liabilities	Market price on the balance sheet date	10	10
	Level 2	OTC currency, interest rate and commodity derivatives	Discounting of expected future cash flows, option pricing models	Exchange rate quotations, observable yield curves, commodity price quotations, currency and commodity price volatility, credit default premiums	306	360
	Level 3	Electricity forward agreements	Discounting of expected future cash flows	Electricity price quotations, long-term electricity price forecasts,[a] expected electricity volumes,[a] estimated startup date,[a] yield curves, credit default premiums	-48[d]	-29[e]

a Unobservable level 3 input factors
b The carrying amount of the electricity forward agreements reported in the balance sheet under other receivables and miscellaneous assets is €53 million after subtracting the differences of €145 million described on page 300.
c The carrying amount of the electricity forward agreements reported in the balance sheet under other receivables and miscellaneous assets is €8 million after subtracting the differences of €24 million described on page 300.
d The carrying amount of the electricity forward agreements reported in the balance sheet under other liabilities is €10 million after subtracting the differences of €58 million described on page 300.
e The carrying amount of the contract for difference for electricity prices reported in the balance sheet under other liabilities is €17 million after subtracting the differences of €46 million on page 300.

For trade accounts receivable, other receivables and miscellaneous assets, cash and cash equivalents, as well as trade accounts payable and other liabilities, the carrying amount approximates the fair value.

The electricity forward agreements presented in the previous table are derivatives embedded in virtual and physical power purchase agreements (PPAs) that are not eligible for own use exemption. A change in the key valuation parameters as of December 31, 2023, would have affected the fair value of electricity forward agreements as follows:

Sensitivities of electricity forward agreements

Million €

2023						2022					
Change in expected electricity prices		Change in expected production volumes		Date of startup[a]		Change in expected electricity prices		Change in expected production volumes		Date of startup[a]	
+10%	-10%	+10%	-10%	3 months later than expected	3 months earlier than expected	+10%	-10%	+10%	-10%	3 months later than expected	3 months earlier than expected
91	-91	29	-29	0	-1	22	-22	6	-6	-3	3

a Due to differing forward prices for electricity in the relevant months and the seasonality of solar power generation, linear extrapolation of the values is not possible.

At the time of initial recognition, the fair values of the electricity forward agreements, which were calculated using a valuation model, were higher than the respective transaction prices of zero. Development of the differences is presented in the table below.

Development of differences yet to be amortized of electricity forward agreements

Million €

	2023	2022
Differences yet to be amortized through profit or loss as of January 1	70	12
Additions in the reporting period	147	62
Amounts recognized in profit or loss in the current reporting period	-6	-3
Currency translation	-7	0
Disposals in the reporting period	–	–
Differences yet to be amortized through profit or loss as of December 31	**204**	**70**

Development of assets and liabilities measured at level 3 fair value

Million €

	Electricity forward agreements	
	2023	2022
Carrying amounts as of January 1[a]	61	11
Purchases	147	62
Sales	–	–
Reclassification to or from level 3	–	–
Gains and losses recognized in other operating result	47	-12
of which unrealized gains and losses attributable to assets and liabilities held at the end of the reporting period	47	-12
Currency translation	-8	0
Other	–	–
Carrying amounts as of December 31[a]	**246**	**61**

a Carrying amounts before subtracting differences presented in the table "Development of differences yet to be amortized of electricity forward agreements."

The changes in carrying amounts were recognized in the income statement as other operating income or other operating expenses.

No reclassifications arose between fair value levels 1, 2 and 3 for financial assets or liabilities recognized at fair value in the reporting period.

Offsetting of derivative assets and liabilities as of December 31, 2023

Million €

	Offset amounts			Potential netting volume		
	Gross amount	Amount offset	Net amount	Due to global netting agreements	Relating to financial collateral	Potential net amount
Derivatives with positive fair values	482	-22	460	-114	-161	185
Derivatives with negative fair values	195	-22	173	-114	-13	47

Offsetting of derivative assets and liabilities as of December 31, 2022

Million €

	Offset amounts			Potential netting volume		
	Gross amount	Amount offset	Net amount	Due to global netting agreements	Relating to financial collateral	Potential net amount
Derivatives with positive fair values	727	-18	708	-141	-288	279
Derivatives with negative fair values	275	-18	257	-141	-21	94

The table “Offsetting of derivative assets and liabilities” shows the extent to which assets and liabilities were offset in the balance sheet, as well as potential effects from the offsetting of derivatives subject to a legally enforceable global netting agreement (primarily in the form of an ISDA agreement) or similar agreement. For positive fair values of combined interest rate and currency swaps, the respective counterparties provided cash collaterals in an amount comparable to the outstanding fair values.

Deviations from the derivatives with positive fair values and derivatives with negative fair values reported in other receivables and other liabilities at the end of 2023 and 2022 arose from derivatives not subject to any netting agreements. These are not included in the table above.

In addition to the offsetting of derivatives presented in the table above, trade accounts receivable in 2023 were offset against trade accounts payable and advance payments received on orders, which were included in current other liabilities, provided specific netting agreements with customers existed. As a result, trade accounts receivable were reduced by €1.029 million. The reduction in trade accounts payable was €72 million and the reduction in advance payments received on orders was €957 million. Accordingly, the net amount for trade accounts receivable was €10,414 million (gross amount before offsetting: €11,443 million). The resulting net amount for trade accounts payable was €6,741 million (gross amount before offsetting: €6,813 million). The net amount for advance payments received on orders was €779 million (gross amount before offsetting: €1,736 million). In 2022, trade accounts receivable were also offset against trade accounts payable and the advance payments received on orders included in current other liabilities. This reduced trade accounts receivable by €992 million. The reduction in trade accounts payable was €103 million and the reduction in advance payments received on orders was €889 million. Accordingly, the net amount for trade accounts receivable was €12,055 million (gross amount before offsetting: €13,047 million). The resulting net amount for trade accounts payable was €8,434 million (gross amount before offsetting: €8,537 million). The net amount for advance payments received on orders was €926 million (gross amount before offsetting: €1,815 million).

The net gains and losses from financial instruments shown in the following table comprise the results of valuations, the amortization of discounts, the recognition and reversal of impairments, results from the translation of foreign currencies as well as interest, dividends and all other effects on the earnings resulting from financial instruments. The line item financial instruments at fair value through profit or loss contains only gains and losses from instruments that are not designated as hedging instruments in a hedging relationship in accordance with IFRS 9.

Gains and losses from the valuation of securities recognized in equity are shown in development of income and expense recognized in equity attributable to shareholders of BASF SE on page 228.

For more information, see the Statement of Changes in Equity on page 232

Net gains and losses from financial instruments

Million €

	2023	2022
Financial assets measured at amortized cost	-648	85
of which interest result	127	53
Financial instruments measured at fair value through profit or loss	111	289
of which interest result	46	59
Financial assets measured at fair value through other comprehensive income	9	3
of which interest result	9	3
Financial liabilities measured at amortized cost	181	-701
of which interest result	-624	-461

25.5 Derivative financial instruments and hedging relationships

The use of derivative financial instruments

BASF is exposed to foreign currency, interest rate and commodity price risks during the normal course of business. These risks are hedged using derivative instruments as necessary in accordance with a centrally determined strategy. Hedging is employed for existing underlying transactions from the product business, cash investments and financing as well as for planned sales, raw materials purchases and capital measures. Furthermore, hedging may also be used for cash flows from acquisitions and divestitures. The risks from the hedged items and the derivatives are continually monitored. Where derivatives have a positive market value, BASF is exposed to credit risks from derivative transactions in the event of nonperformance of the other party. To minimize the default risk on derivatives with positive market values, transactions are exclusively conducted with creditworthy banks and partners and are subject to predefined credit limits.

To ensure efficient risk management, risk positions are centralized at BASF SE and certain Group companies. The contracting and execution of derivative financial instruments for hedging purposes are conducted according to internal guidelines, and subject to strict control mechanisms.

Fair value of derivative instruments

Million €

	December 31, 2023	December 31, 2022
Foreign currency forward contracts	38	165
Foreign currency options	5	19
Foreign currency derivatives	**43**	**184**
of which designated hedging instruments as defined by IFRS 9 (hedge accounting)	7	16
Combined interest rate and currency swaps	157	265
of which designated hedging instruments as defined by IFRS 9 (hedge accounting)	228	256
Interest derivatives	**157**	**265**
Commodity derivatives	**525**	**511**
of which designated hedging instruments as defined by IFRS 9 (hedge accounting)	-10	45
Derivative financial instruments	**725**	**960**

Hedge accounting

BASF is exposed to commodity price risks in the context of procuring naphtha. Some of the planned purchases of naphtha are hedged using options on oil and oil products. The main contractual elements of these items are aligned with the characteristics of the hedged item. Cash flow hedge accounting was employed for a portion of these hedging relationships in 2023 and 2022. The average exercise price of the designated options was $684.51 per metric ton as of December 31, 2023 (December 31, 2022: $737.71 per metric ton). Cash flows from designated hedging instruments and hedged transactions occur in the following year and are also recognized in profit or loss for that year.

Furthermore, cash flow hedge accounting continued to be employed to a minor extent for procuring natural gas, which is likewise exposed to commodity price risks. Commodity price-based options as well as swaps serve as hedging instruments, for which contract terms are defined to reflect the risks of the hedged item. Depending on where trading took place, the average exercise price of the designated options was €72.00 per MWh or $4.02 per mmBtu as of December 31, 2023. The average hedged exercise price of the designated swaps was €48.31 per MWh as of December 31, 2023. The average exercise price of the designated options was €71.36 per MWh or $5.00 per mmBtu as of December 31, 2022. Cash flows from not yet realized hedging and underlying transactions are generally recognized in profit or loss in 2024 and 2025.

The change in the options' time value is recognized separately in equity as costs of transaction-related hedging and, in the year during which the hedged items mature, it is initially derecognized against the carrying amount of the procured assets and recognized in profit or loss when the assets are consumed. In 2023, a decrease in fair value of €63 million was recognized in equity, and €64 million was initially derecognized against the carrying amount of the inventories procured and then recognized upon consumption in profit or loss. In 2022, a decrease in fair value of €60 million was recognized as a reduction in equity, and €49 million was derecognized against the carrying amount of the acquired assets.

Due to planned sales in U.S. dollars, BASF is exposed to foreign currency risks, which are partially hedged with currency options and designated in a cash flow hedge accounting relationship. The hedged transaction – the designated share of expected sales in U.S. dollars – is calculated based on internal thresholds. The hedged volume is always below the total amount of expected sales in U.S. dollars for the following fiscal year. The average hedged rate was $1.0863 per euro as of December 31, 2023, and $1.0255 per euro in the previous year. The impact on earnings from designated transactions in 2023 will be recognized in the following year. The decrease in the options' time value component arising in the amount of €9 million in 2023 was recognized separately in equity as the cost of hedging and resulted in a reduction in equity. Due to the maturity of hedged items, accumulated changes in the options' time values were reclassified as a reduction in earnings in the amount of €12 million. In the previous year, €8 million was recognized as a change in the options' time value component, thereby reducing equity; and €9 million was reclassified as a reduction in earnings.

BASF SE's fixed-rate U.S. private placement of $1.25 billion, issued in 2013, was converted to euros using cross-currency swaps, as the private placement exposes BASF to a combined interest rate and currency risk. BASF is also exposed to a combined interest rate and currency risk associated with the issue of several tranches of a fixed-interest U.S. private placement it committed to for 2024. The resulting currency risks were hedged with currency swaps in 2023. These hedges were designated as cash flow hedges. No ineffectiveness was recognized in 2023 or 2022. The hedged interest rate was 3.66% in 2023 (2022: 3.12%). The hedged foreign exchange rate was $1.2052 per euro in 2023 (2022: $1.3589 per euro). For U.S. private placements hedged in 2023, changes in value in the forward component totaling €14 million were recognized separately in equity as hedging costs in 2023, leading to an increase in equity.

Furthermore, BASF was exposed to foreign currency risks in 2023 through U.S. dollar-denominated commercial paper. These risks were hedged with foreign currency forward contracts and designated in a cash flow hedge accounting relationship. The changes in value in the amount of €30 million resulting from the change in the forward rate were recognized separately in equity as hedging costs, leading to an increase in equity (2022: €30 million). Because all underlying transactions and hedging instruments had expired by December 31, 2023, the amount of €30 million, which was initially recognized in equity, was reclassified in full as an increase in earnings (2022: €30 million). There was no ineffectiveness at any time during the year.

In connection with construction of the new Verbund site in Zhanjiang, China, BASF is exposed to foreign currency risks especially from expenditures in euros that were hedged with foreign currency forward contracts and designated in cash flow hedge accounting relationships. The hedged exchange rate was ¥7.5738 per euro in 2023. The expenditures in euros hedged with foreign currency forward contracts are firm commitments. In 2023, €3 million was derecognized from the cash flow hedge reserve and included in acquisition or production costs of property, plant and equipment. Hedging results are recognized in profit or loss upon depreciation of property, plant and equipment.

Furthermore, BASF was exposed to a combined interest rate and currency risk in 2023 from a fixed-interest loan in Polish zloty, which was converted to euros through currency swaps. This hedge was designated as a cash flow hedge. The hedged exchange rate was zł4.7065 per euro and the hedged interest rate was 3.20%. In 2023, the changes in value in the amount of €7 million resulting from the forward component's changed market rate were recognized separately in equity as hedging costs, leading to an increase in equity. There was no ineffectiveness at any time during the year.

The effects of the hedging relationships on the balance sheet, the cash flow hedge reserve, hedged nominal value and ineffectiveness to be determined are presented in the following tables by fiscal year.

Cash flow hedge accounting effects in 2023

Million €

	Carrying amount of hedging instruments				Cash flow hedge reserve				Change in fair values for assessing ineffectiveness		Recognized ineffectiveness	
	Financial assets	Financial liabilities	Balance sheet item	Nominal value	Accumulated amounts for continuing hedging relationships	Hedging effects recognized in other comprehensive income	Amounts reclassified to profit or loss for realized hedging transactions	Income statement item for recognition of reclassification	Hedging instrument	Hedged transaction	Ineffectiveness amount	Income statement item
Foreign currency risks	10	-2	Other receivables and miscellaneous assets / other liabilities	611	6	16	-17[a]	Other operating income	6	6	–	n. a.
Interest risks	–	–	n/a	–	–	–	–	Other operating income	–	–	–	n. a.
Combined interest / foreign currency risks	228	–	Other receivables and miscellaneous assets	2,525	-23	-48	23	Other financial income	207	239	–	n. a.
Commodity price risks	5	-15	Other receivables and miscellaneous assets	376	-17	-24	–[b]	Other operating income	-17	-17	–	n. a.
Total	**242**	**-18**		**3,512**	**-34**	**-56**	**6**		**196**	**228**	**–**	

a €3 million was derecognized from the cash flow hedge reserve, reducing the cost of inventories, and recognized in profit or loss upon consumption.
b €3 million was derecognized from the cash flow hedge reserve, increasing the cost of inventories, and recognized in profit or loss upon consumption.

Cash flow hedge accounting effects in 2022

Million €

	Carrying amount of hedging instruments				Cash flow hedge reserve				Change in fair values for assessing ineffectiveness		Recognized ineffectiveness	
	Financial assets	Financial liabilities	Balance sheet item	Nominal value	Accumulated amounts for continuing hedging relationships	Hedging effects recognized in other comprehensive income	Amounts reclassified to profit or loss for realized hedging transactions	Income statement item for recognition of reclassification	Hedging instrument	Hedged transaction	Ineffectiveness amount	Income statement item
Foreign currency risks	17	1	Other receivables and miscellaneous assets / other liabilities	1,215	11	304	-294	Other operating income	10	10	–	n. a.
Interest risks	–	–	n/a	–	–	-15	15	Other operating income	–	–	–	n. a.
Combined interest / foreign currency risks	256	–	Other receivables and miscellaneous assets	920	2	76	-68	Other financial income	256	259	–	n. a.
Commodity price risks	45	–	Other receivables and miscellaneous assets / assets of disposal groups / other liabilities	296	4	181	-111[a]	n/a	4	4	–	n. a.
Total	**318**	**1**		**2,431**	**17**	**546**	**-458**		**270**	**273**	**–**	

a €166 million was derecognized from the cash flow hedge reserve, reducing the cost of inventories, and recognized in profit or loss upon consumption

The occurrence of all forecasted transactions was considered to be highly probable at all times during fiscal years 2023 and 2022. Amounts accumulated in the cash flow hedge reserve for commodity price risks are derecognized against the carrying amount of acquired assets once the hedged transaction occurs. Thus, there is no immediate reclassification of the amounts recognized in the cash flow hedge reserve to profit or loss in these cases.

26 Capital structure management and statement of cash flows

26.1 Capital structure management

The aim of capital structure management is to maintain the financial flexibility needed to further develop BASF's business portfolio and take advantage of strategic opportunities. The objectives of the company's financing policy are to ensure solvency, limit financial risks and optimize the cost of capital.

Capital structure management focuses on meeting the requirements needed to ensure unrestricted access to the capital market and a solid A rating. The capital structure is managed using selected financial ratios, such as dynamic debt ratios, as part of the company's financial planning.

The equity of the BASF Group as reported in the balance sheet amounted to €36,646 million as of December 31, 2023 (December 31, 2022: €40,923 million); the equity ratio was 47.3% on December 31, 2023 (December 31, 2022: 48.4%).

BASF prefers to access external financing on the capital markets and, when advantageous, via bank loans. A commercial paper program is used for short-term financing, while corporate bonds are used for financing in the medium and long term. These are issued in euros and other currencies with different maturities. The goal is to create a balanced maturity profile, achieve a diverse range of investors and optimize BASF's debt capital financing conditions. Since 2020, BASF has employed green corporate bonds to finance the development of sustainable products and projects with a clear environmental benefit.

BASF currently has the following ratings, which were most recently confirmed by Fitch on November 8, 2023, and by Moody's on September 4, 2023. Standard & Poor's adjusted BASF's A rating to A- and its outlook from negative to stable on August 2, 2023.

Ratings as of December 31, 2023

	Noncurrent financial indebtedness	Current financial indebtedness	Outlook
Fitch	A	F1	stable
Moody's	A3	P-2	stable
Standard & Poor's	A-	A-2	stable

Ratings as of December 31, 2022

	Noncurrent financial indebtedness	Current financial indebtedness	Outlook
Fitch	A	F1	stable
Moody's	A3	P-2	stable
Standard & Poor's	A	A-1	negative

BASF continues to strive for a solid A rating, which ensures unrestricted access to financial and capital markets.

For more information on BASF's financing policy, see the Combined Management's Report from page 69 onward

26.2 Statement of cash flows

Accounting policies

Cash flows from operating activities are determined using the indirect method whereby changes in balance sheet items are adjusted for currency translation effects and changes in the scope of consolidation and thus cannot be derived directly from the consolidated balance sheet.

BASF reports interest paid and dividends received in cash flows from operating activities. Income tax payments from ongoing business are also allocated to cash flows from operating activities. In the case of material transactions, however, these are reported in the corresponding section of the statement of cash flows.

Cash flows from financing activities include payments for leases in which BASF is lessee as well as dividend payments.

Other financing-related liabilities primarily comprise liabilities from accounts used for cash pooling with BASF companies not included in the Consolidated Financial Statements. They are reported in miscellaneous liabilities within the balance sheet item other liabilities that qualify as financial instruments.

Assets/liabilities from hedging transactions included in cash flows from financing activities form part of the balance sheet items derivatives with positive and negative fair values respectively and include only those transactions which hedge risks arising from financial indebtedness and financing-related liabilities secured by micro hedges.

For more information on receivables and miscellaneous assets, see Note 17 from page 275 onward
For more information on liabilities, see Note 20 from page 280 onward
For more information on the statement of cash flows, see the Combined Management's Report from page 70 onward

Payments are netted in cash flows from investing activities and cash flows from financing activities if they are items with a high turnover rate, represent large amounts and have short-term maturities.

Explanation of the statement of cash flows

To improve the understanding and interpretation of the statement of cash flows, the presentation of cash flows from operating activities was modified in the 2023 fiscal year. In the future, effects from equity-accounted companies will be presented more transparently; changes in net working capital, consisting of inventories, trade accounts receivable and payable, as well as changes in other operating assets and liabilities will be structured more clearly. The prior-year figures were adjusted accordingly.

Cash flows from operating activities contained the following payments:

Statement of cash flows
Million €

	2023	2022
Income taxes	-760	-1,514
of which income tax refunds	282	358
income tax payments	-1,042	-1,872
Interest payments	-413	-353
of which interest received	235	191
interest paid	-648	-544
Dividends received	668	1,657

In order to optimize precious metal stocks, the Group sells precious metals and concurrently enters into agreements to repurchase them at a set price. Cash flows resulting from the sale and repurchase in the amount of -€447 million (2022: €502 million) were reported in cash flows from operating activities.

Factoring agreements in the amount of €560 million had a positive impact on cash flows from operating activities in 2023 (2022: €266 million).

In 2023, cash flows from investing activities included €5 million in payments made for acquisitions. As in the previous year, these related to an adjusted purchase price payment for Solvay's polyamide business (2022: €13 million).

Payments received from divestitures amounted to €32 million and related solely to immaterial transactions. In the previous year, payments received resulted from the sale of shares in the Hollandse Kust Zuid wind farm in the amount of €382 million, the sale of the kaolin minerals business in the amount of €225 million, and the sale of the production site in Quincy, Florida, and associated attapulgite business in the amount of €60 million.

For more information on acquisitions and divestitures, see Note 3 from page 240 onward

Payments made for property, plant and equipment and intangible assets amounted to €5,395 million, €1,020 million higher than in the previous year. This also includes capitalized interest in the amount of €80 million (2022: €40 million).

Cash and cash equivalents in the amount of €2,624 million consist primarily of cash on hand and bank balances with maturities of less than three months. As in the previous year, these were not subject to any utilization restrictions in 2023. However, the repayment of funds from Russia is currently only possible to a limited extent. These amounted to €21 million as of December 31, 2023 (2022: €99 million).

The **reconciliation according to IAS 7** breaks down the changes in financial and similar liabilities and their hedging transactions into cash-effective and non-cash-effective changes. The cash-effective changes presented on the left correspond to the figures in cash flows from financing activities.

Reconciliation according to IAS 7 for 2023

Million €

	Dec. 31, 2022		Non-cash-effective changes					Dec. 31, 2023
		Cash effective in cash flows from financing activities	Acquisitions/ divestitures/ changes in the scope of consolidation	Currency effects	Additions from lease contracts	Other effects	Changes in fair value	
Financial indebtedness	19,016	470	–	-235	–	17	–	19,268
Loan liabilities	322	-45	–	-2	–	-16	–	259
Lease liabilities	1,489	-401[a]	-1	-26	609	-20[b]	–	1,649
Other financing-related liabilities	250	-52	-3	–	–	-10	–	185
Financial and similar liabilities	**21,077**	**-28**	**-5**	**-263**	**609**	**-28**	**–**	**21,362**
Assets/liabilities from hedging transactions	-155	245	–	–	–	–	-138	-47
Total	**20,922**	**217**	**-5**	**-263**	**609**	**-28**	**-138**	**21,314**

a Lease payments totaled €455 million in 2023. The principal component in the amount of €401 million is presented in cash flows from financing activities. BASF reports interest payments in cash flows from operating activities; these items amounted to €54 million.
b Includes mainly disposals from lease contracts.

Reconciliation according to IAS 7 for 2022

Million €

	Dec. 31, 2021[a]				Non-cash-effective changes			Dec. 31, 2022
		Cash effective in cash flows from financing activities	Acquisitions/ divestitures/ changes in the scope of consolidation	Currency effects	Additions from lease contracts	Other effects	Changes in fair value	
Financial indebtedness	17,184	1,473	–	332	–	27	–	19,016
Loan liabilities	441	-114	–	-1	–	-4	–	322
Lease liabilities	1,414	-453[b]	-4	35	583	-86[c]	–	1,489
Other financing-related liabilities	342	-52	-70	2	–	28	–	250
Financial and similar liabilities	**19,381**	**854**	**-74**	**368**	**583**	**-35**	**–**	**21,077**
Assets/liabilities from hedging transactions	5	-288	–	–	–	–	128	-155
Total	**19,386**	**566**	**-74**	**368**	**583**	**-35**	**128**	**20,922**

a Balances as of December 31, 2021, also include amounts reclassified to the disposal groups and therefore deviate from balance sheet values.
b Lease payments totaled €495 million in 2022. The principal component in the amount of €453 million is presented in cash flows from financing activities. BASF reports interest payments in cash flows from operating activities; these items amounted to €42 million.
c Includes mainly disposals from lease contracts.

27 Personnel expenses and employees

Personnel expenses

Expenses for wages and salaries, social security contributions and assistance, as well as for pensions totaled €10,950 million in 2023. In the previous year, these amounted to €11,400 million. The decline was mainly due to the lower additions of bonus provisions, currency effects, particularly from the U.S. dollar and the Argentine peso, as well as lower pension expenses. A higher wage and salary level as well as a higher average number of employees had an offsetting effect.

Personnel expenses

Million €

	2023	2022
Wages and salaries	8,773	9,102
Social security contributions and assistance expenses	1,612	1,598
Pension expenses	565	701
Personnel expenses	**10,950**	**11,400**

Number of employees

As of December 31, 2023, the number of employees increased to 111,991 employees compared with 111,481 employees as of December 31, 2022. The rise was primarily due to staff increases in Asia Pacific, especially for the new Verbund site in Zhanjiang, China. This was partially offset by retirements and departures due to dormant employment as well as measures in connection with the cost savings program focusing on Europe.

Employees of joint operations are included in the number of employees relative to BASF's share in the company. As of December 31, 2023, a total of 1,210 employees worked at joint operations (December 31, 2022: 1,196 employees).

The development of the number of employees in the BASF Group was distributed over the regions as follows:

Number of employees as of December 31

	2023	2022
Europe	67,562	67,958
of which Germany	51,406	51,703
North America	16,060	16,036
Asia Pacific	21,193	20,452
South America, Africa, Middle East	7,176	7,035
BASF Group	**111,991**	**111,481**
of which apprentices and trainees	3,045	3,049
temporary staff	2,305	2,468

The average number of employees was distributed over the regions as follows:

Average number of employees

	2023	2022
Europe	67,617	67,621
of which Germany	51,369	51,174
North America	16,077	16,452
Asia Pacific	20,822	20,036
South America, Africa, Middle East	7,075	6,914
BASF Group	**111,590**	**111,023**
of which apprentices and trainees	2,715	2,711
temporary staff	2,452	2,642

The average number of employees increased to 111,590 employees in 2023 (2022: 111,023 employees).

The reasons for the development of the number of employees as described above are also decisive to the rise in average number of employees. Moreover, the divestiture of the kaolin minerals business as of September 30, 2022, and the suspension of business activities in Russia in the previous year had an offsetting impact.

For more information on acquisitions and divestitures, see Note 3 from page 240 onward

On average, 1,202 employees worked at joint operations (2022: 1,188 employees).

28 Share price-based compensation programs and BASF incentive share program

Share price-based compensation programs

The BASF Group's share price-based compensation programs, or long-term incentive (LTI) programs, are cash-settled programs. If vested, the cash-settlement obligation is measured at fair value on every balance sheet date and recognized as a provision.

In 2023, the BASF Group continued offering its share price-based compensation program (LTI program), known as Strive!, which was launched in 2020. The share price-based compensation program known as "BOP" (BASF Option Program), which had existed since 1999, was offered for the last time in 2020. All option rights granted during the BOP program years remain valid until the end of their respective exercise periods.

Generally, members of the Board of Executive Directors and all senior executives are entitled to participate in the LTI programs.

Strive!

Strive! is based on a performance share plan and takes into account the achievement of strategic goals and the development of the BASF share and dividend (total shareholder return) over a period of four years.

Participation in Strive! is voluntary for senior executives and is linked to a share ownership obligation. Strive! offers rolling eligibility, without a deadline for participation. In 2023, 684 people were eligible to participate in Strive!. About 93% of eligible senior executives and Members of the Board of Executive Directors participated. Unlike for senior executives, participation is not voluntary for the members of the Board of Executive Directors and is outlined in their service contracts. The same plan conditions generally apply to members of the Board of Executive Directors.

A Strive! plan includes a four-year performance period with a fixed disbursement date. A target amount is determined at the beginning of each new Strive! plan for every participant. This target amount is converted into a preliminary number of virtual performance share units (PSUs) by dividing it by the average BASF share price in the fourth quarter of the previous year. The number of PSUs that are ultimately paid out at the end of the performance periods depends on the achievement of the three strategic targets: growth (volume growth compared with global chemical production), profitability (increase in EBITDA before special items) and sustainability (CO_2 emissions).

Achievement of each strategic target is calculated for each year of the four-year performance period. Upon conclusion of the performance period, the average degree of target achievement for each strategic goal is equal to the arithmetic mean of the degrees of target achievement for the four years. The total target achievement for the respective Strive! plan is determined by adding the target achievement degree for the three strategic targets after having multiplied each by the corresponding weighting factor. To calculate the final number of PSUs, this weighted target achievement is multiplied by the preliminary number of PSUs. The payment amount upon conclusion of the four-year performance period is calculated by multiplying the final number of PSUs by the average BASF share price for the fourth quarter of the last year of the performance period, plus the accumulated dividend payments in the four fiscal years. The payment occurs in May of the following year and is capped at 200% of the target amount. The payment amount therefore not only reflects achievement of the strategic targets, but performance of BASF's dividend and share price as well.

A personal investment in BASF shares is the prerequisite for participation in Strive!. Participants are required to own BASF shares amounting to a predetermined percentage of their base salary for the duration of the performance period. A set-up phase applies to first-time participants. During this period, they are required to hold a percentage of shares as their predetermined personal investment. The set-up phase for the 2023 Strive! program ends on December 31, 2026. The 2023 Strive! program has the same fundamental structure as the Strive! programs in previous years.

Fair value of PSUs and parameters used as of December 31, 2023

		Strive! program of the year			
		2023	2022	2021	2020
Number of PSUs granted		1,106,496	763,140	746,244	625,033
Number of PSUs vested		276,624	381,570	559,683	625,033
Fair value including fluctuation / PSU	€	43.25	40.50	69.57	68.69
Fair value excluding fluctuation / PSU	€	48.88	43.94	72.47	68.69
Weighted target achievement	%	100.00	79.91	126.42	119.80
Base price	€	46.45	61.82	57.15	67.85

PSUs vested by the deadline were measured at fair value. Fair value is determined based on the BASF share price of €48.78 on the balance sheet date plus expected dividend payments during the term of the program and taking into account the weighted target achievement rate of the respective Strive! plan. A fluctuation rate of 4% is assumed for the fair value of senior executives' PSUs.

The LTI provision for Strive! rose from €71 million as of December 31, 2022, to €118 million as of December 31, 2023, due to the increased number of vested PSUs. The expense from the addition of provisions totaled €47 million in 2023 and €23 million in 2022. On the basis of preliminary degrees of target achievement, a payment amount of €43 million was recognized in current provisions for the fully vested 2020 program year.

BASF Option Program (BOP)

The "BOP" LTI program last offered in 2020, grants virtual option rights. When exercised, the option rights are settled in cash.

Participation in BOP was voluntary. In order to take part in the program, a participant had to make a personal investment: Participants were required to hold BASF shares representing between 10% and 30% of their respective variable compensation for a two-year period from the granting of the option (holding period). The number of shares to be held was determined by the amount of variable compensation and the volume-weighted average share price on the first trading day after the Annual Shareholders' Meeting.

Participants received four option rights per invested share. Each option consists of two parts, right A and right B, which may be exercised if defined thresholds have been met: The threshold of right A is met if the price of the BASF share has increased by more than 30% in comparison with the base price on the option grant date (absolute threshold). The value of right A is the difference between the market price of BASF shares on the exercise date and the base price; it is limited to 100% of the base price. Right B may be exercised (relative threshold) if the cumulative percentage performance of BASF shares exceeds the percentage performance of the MSCI World Chemicals IndexSM (MSCI Chemicals). The value of right B is the base price of the option multiplied by twice the percentage by which the BASF share outperforms the MSCI Chemicals Index on the exercise date. It is limited to the closing price on the date of exercise less the calculated nominal value of the BASF share. Right B may only be exercised if the price of the BASF share equals at least the base price. When a two-year vesting period is over, options granted can be exercised until the end of the respective exercise period. When a two-year vesting period is over, options granted can be exercised until the end of the respective exercise period. During the exercise period, there are certain times (closed periods) during which the options may not be exercised. Each option can only be exercised in full, and one of the thresholds must be exceeded. If the other threshold is not exceeded, the other option right lapses. A participant's maximum gain from exercising an option is limited to five times the original individual investment. Option rights are nontransferable and are forfeited if the option holders no longer work for the BASF Group or have sold part of their individual investment before the expiry of the two-year vesting period. They remain valid in the case of retirement. For the members of the Board of Executive Directors, the long-term orientation of the program has been strengthened significantly compared with the conditions applying to the other participants. Members of the Board of Executive Directors were required to participate in the BOP program with at least 10% of their actual annual variable compensation. In view of this binding personal investment (in the form of BASF shares), an extended holding period of four years applies. Members of the Board of Executive Directors may only exercise their option rights four years after they have been granted at the earliest (vesting period).

As a result of a resolution by the Board of Executive Directors in 2002 to settle option rights in cash, all outstanding option rights under the 2016 to 2020 programs were valued at fair value as of December 31, 2023. A proportionate provision was recognized for programs in the vesting period.

The number of outstanding options declined from 9,328,238 in 2022 to 7,731,844 in 2023, due mainly to the expiration of options from the 2015 BOP program.

The exercisable options had no intrinsic value as of December 31, 2023, or December 31, 2022.

The models used in the valuation of the option plans are based on the arbitrage-free valuation model according to Black-Scholes. The fair values of the options are determined using the binomial model. Volatility is determined on the basis of the monthly closing prices over a historical period corresponding to the remaining term of the options.

The LTI provision for BOP decreased from €64 million as of December 31, 2022, to €50 million as of December 31, 2023, due to lower fair values and a lower number of outstanding option rights. In 2022, the amount of €1 million was utilized due to senior executives leaving the company, whereas in 2023, less than €1 million was utilized due to senior executives leaving the company. Income from the reduction in provisions totaled €13 million in 2023 and €46 million in 2022.

BASF “Plus” Incentive Share Program

The “plus” incentive share program was introduced in 1999 and is currently available to employees in Germany, other European countries and Mexico. Simultaneous participation in both the “plus” program and an LTI program is not permitted.

Employees who participate in BASF’s “plus” incentive share program and acquire shares in BASF as a personal investment from their variable compensation. For every 10 BASF shares purchased in the program, a participant receives one BASF share at no cost after one, three, five, seven and 10 years of holding these shares. As a rule, the first and second block of 10 shares entitles the participant to receive one BASF share at no extra cost in each of the next 10 years.

The right to receive free BASF shares lapses if a participant sells the individual investment in BASF shares, if the participant stops working for a Group company or one year after retirement. The number of free shares to be granted has developed as follows:

Number of free shares to be granted

Shares

	2023	2022
As of January 1	2,497,355	3,079,123
Newly acquired entitlements	1,239,700	1,239,700
Bonus shares issued	-665,428	-478,925
Lapsed entitlements	849,211	-1,342,543
As of December 31	3,920,838	2,497,355

The free shares to be provided by the company are measured at the fair value on the grant date. Fair value is determined on the basis of the BASF share price, taking into account the present value of dividends, which are not paid during the term of the program. The weighted-average fair value on the grant date amounted to €45.88 for the 2023 program, and €47.74 for the 2022 program.

The fair value of the free shares to be granted is recognized as an expense with a corresponding increase in capital reserves over the term of the program.

Personnel expenses for BASF’s “plus” incentive share program totaled €26 million in 2023 and €20 million in 2022.

29 Compensation of the Board of Executive Directors and Supervisory Board

Compensation of the Board of Executive Directors and Supervisory Board

Million €

	2023	2022
Non-performance-related and performance-related cash compensation of the Board of Executive Directors[a]	28.7	18.5
Fair value of performance share units allocated to the Board of Executive Directors in the fiscal year as of allocation date	8.6	10.0
Total compensation of the Board of Executive Directors	**37.3**	**28.5**
Service costs for members of the Board of Executive Directors	3.3	3.7
Compensation of the Supervisory Board	3.3	3.3
Total compensation of former members of the Board of Executive Directors and their surviving dependents	15.3	9.1
Pension provisions for former members of the Board of Executive Directors and their surviving dependents	172.8	160.4
Guarantees assumed for members of the Board of Executive Directors and the Supervisory Board	–	–

a In 2023, this included, among other items, a severance payment of €7.5 million and a securities-based pension award payment of €2.2 million to members of the Board of Executive Directors who left in 2023.

The STI performance bonus is based on the performance of the Board of Executive Directors as a whole and the return on capital employed (ROCE) of the BASF Group. Subject to certain conditions, ROCE is adjusted for special items from acquisitions and divestitures. The conditions for a ROCE adjustment were not met in 2023.

Market valuation of the option rights of active and former members of the Board of Executive Directors led to expenses totaling €0.7 million in 2023, following income in the amount of €2.3 million in the previous year.

In 2023, members of the Board of Executive Directors were allocated 214,253 performance share units (PSUs) under the LTI performance share program (2022: 166,001 PSUs). Market valuation of the PSUs of members of the Board of Executive Directors resulted in an expense totaling €11.7 million in 2023 (2022: €6.7 million).

The Compensation Report is available at basf.com/compensationreport

30 Related party transactions

Related parties are legal or natural entities that can exert influence on the BASF Group or over which the BASF Group exercises control or joint control, or a significant influence. These primarily include nonconsolidated subsidiaries, joint ventures and associated companies.

The following tables show the volume of business with related parties that are included in the Consolidated Financial Statements at amortized cost or accounted for using the equity method.

Sales and trade accounts receivable from and trade accounts payable to related parties mainly included business with own products and merchandise, agency and licensing businesses, and other operating businesses.

Other receivables and liabilities primarily arose from financing activities, from accounts used for cash pooling, outstanding dividend payments, profit and loss transfer agreements, and other finance-related and operating activities and transactions.

The decrease in other receivables from nonconsolidated subsidiaries as well as the increase from associated companies resulted primarily from other finance-related receivables.

The decline in other liabilities to nonconsolidated subsidiaries as well as associated companies resulted from other finance-related liabilities and contract liabilities.

Balances outstanding to related parties were generally not hedged and were settled in cash.

The balance of valuation allowances on other receivables from nonconsolidated subsidiaries rose from €99 million as of December 31, 2022, to €136 million as of December 31, 2023. The addition to valuation allowances with respect to nonconsolidated subsidiaries was recognized as an expense in the amount of €42 million.

The balance of valuation allowances on trade accounts receivable from nonconsolidated subsidiaries remained equal to the previous year at €3 million as of December 31, 2023; from joint ventures, it declined from €3 million as of December 31, 2022, to €2 million as of December 31, 2023.

BASF had obligations from guarantees and other financial obligations in favor of nonconsolidated subsidiaries in the amount of €15 million as of December 31, 2023, and €8 million as of December 31, 2022, in favor of joint ventures in the amount of €19million as of December 31, 2023, and €39 million as of December 31, 2022, and in favor of associated companies in the amount of €1 million as of December 31, 2023, and likewise €1 million as of December 31, 2022.

Obligations arising from purchase contracts with joint ventures amounted to €3,071 million as of December 31, 2023, and €5 million as of December 31, 2022. The increase was primarily due to power purchase agreements.

Annual minimum rental payments for an office building including a parking area payable by BASF SE to BASF Pensionskasse VVaG for the nonterminable basic rental period until 2029 amounted to €7 million.

BASF SE had other finance-related receivables from BASF Pensionskasse VVaG in the amount of €80 million as of December 31, 2023, and as of December 31, 2022.

Sales to related parties

Million €

	Services rendered		Services received	
	2023	2022	2023	2022
Nonconsolidated subsidiaries	1,116	1,276	357	370
Joint ventures	824	1,381	1,241	1,643
Associated companies	193	222	1,137	2,778

Trade accounts receivable from / trade accounts payable to related parties

Million €

	Accounts receivable, trade		Accounts payable, trade	
	December 31, 2023	December 31, 2022	December 31, 2023	December 31, 2022
Nonconsolidated subsidiaries	358	400	142	159
Joint ventures	136	305	113	178
Associated companies	29	47	67	229

Other receivables from / liabilities to related parties

Million €

	Other receivables		Other liabilities	
	December 31, 2023	December 31, 2022	December 31, 2023	December 31, 2022
Nonconsolidated subsidiaries	207	242	162	189
Joint ventures	24	27	23	27
Associated companies	15	7	13	21

There were no reportable related party transactions with members of the Board of Executive Directors or the Supervisory Board and their related parties in 2023.

For more information on subsidiaries, joint ventures and associated companies, see the 2023 BASF Group list of shares held on page 241

For more information on defined benefit plans, the division of risk between Group companies, see Provisions for pensions and similar obligations from page 282 onward

The Compensation Report is available at basf.com/compensationreport

31 Services provided by the external auditor

BASF Group companies used the following services from KPMG:

Services provided by the external auditor

Million €

	2023	2022
Annual audit	25.7	22.9
of which domestic	8.9	8.1
Audit-related services	1.6	0.7
of which domestic	1.3	0.5
Tax consultation services	0.2	0.2
of which domestic	–	–
Other services	0.1	0.0
of which domestic	0.0	0.0
Total	**27.5**	**23.8**

The services provided by the external auditor mainly include services for the annual audit and, to a lesser extent, audit-related services (including project-related audits of IT migrations) and tax consultation services. The services attributable to domestic were rendered by KPMG AG Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, Germany.

The line item annual audit relates to expenses for the audit of the Consolidated Financial Statements of the BASF Group, the legally required financial statements of BASF SE and of the subsidiaries and joint operations included in the Consolidated Financial Statements as well as the review of subgroups. Fees for audit-related services primarily include audits in connection with regulatory obligations as well as other confirmation services.

32 Declaration of Conformity with the German Corporate Governance Code

Declaration pursuant to section 161 of the German Stock Corporation Act (AktG)

The annual Declaration of Conformity with the German Corporate Governance Code according to section 161 AktG was submitted by the Board of Executive Directors and the Supervisory Board of BASF SE in December 2023 and is published online.

For more information, see basf.com/en/corporategovernance

33 Non-adjusting events after the balance sheet date

Since the beginning of the 2024 business year, no events have occurred that have a material impact on BASF's net assets, financial position and results of operations.

5 Overviews

Ten-Year Summary

Million €

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Statement of income										
Sales	74,326	70,449	57,550	61,223[a]	60,220[b]	59,316	59,149	78,598	87,327	68,902
Income from operations (EBIT)	7,626	6,248	6,275	7,587[a]	5,974[b]	4,201	-191	7,677	6,548	2,240
Income before income taxes	7,203	5,548	5,395	6,882[a]	5,233[b]	3,302	-1,562	7,448	1,190	1,420
Income after taxes from continuing operations	–	–	–	5,592[a]	4,116[b]	2,546	-1,471	6,018	-391	379
Income after taxes from discontinued operations	–	–	–	760[a]	863[b]	5,945	396	-36	–	–
Income after taxes	5,492	4,301	4,255	6,352	4,979	8,491	-1,075	5,982	-391	379
Net income	5,155	3,987	4,056	6,078	4,707	8,421	-1,060	5,523	-627	225
Income from operations before depreciation, amortization and special items (EBITDA before special items)	10,454	10,508	10,327	10,738[a]	9,271[b]	8,324	7,435	11,348	10,762	7,671
EBIT before special items	7,357	6,739	6,309	7,645[a]	6,281[b]	4,643	3,560	7,768	6,878	3,806
Capital expenditures, depreciation and amortization										
Additions to property, plant and equipment and intangible assets	7,285	6,013	7,258	4,364	10,735	4,097	4,869	4,881	4,967	6,006
of which property, plant and equipment	6,369	5,742	4,377	4,028	5,040	3,842	4,075	4,410	4,842	5,864
Depreciation and amortization of property, plant and equipment and intangible assets	3,417	4,401	4,251	4,202	3,750	4,146	6,685	3,678	4,200	4,941
of which property, plant and equipment	2,770	3,600	3,691	3,586	3,155	3,408	5,189	3,064	3,549	4,062
Employees at year-end	**113,292**	**112,435**	**113,830**	**115,490**	**122,404**	**117,628**	**110,302**	**111,047**	**111,481**	**111,991**
Personnel expenses	**9,224**	**9,982**	**10,165**	**10,610**	**10,659**	**10,924**	**10,576**	**11,097**	**11,400**	**10,950**
Research and development expenses	**1,884**	**1,953**	**1,863**	**1,843**[a]	**1,994**[b]	**2,158**	**2,086**	**2,216**	**2,298**	**2,130**

a Figures for 2017 were restated with the presentation of the oil and gas activities as discontinued operations.
b Figures for 2018 were restated with the presentation of the construction chemicals activities as discontinued operations.

Million €

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Balance sheet (IFRS)											
Total assets		71,359	70,836	76,496	78,768	86,556	86,950	80,292	87,383	84,472	77,395
Noncurrent assets		43,939	46,270	50,550	47,623	43,335	55,960	50,424	52,332	47,050	45,923
of which intangible assets		12,967	12,537	15,162	13,594	16,554	14,525	13,145	13,499	13,273	12,216
of which property, plant and equipment		23,496	25,260	26,413	25,258	20,780	21,792	19,647	21,553	22,967	24,080
Current assets		27,420	24,566	25,946	31,145	43,221	30,990	29,868	35,051	37,422	31,472
of which inventories		11,266	9,693	10,005	10,303	12,166	11,223	10,010	13,868	16,028	13,876
of which accounts receivable, trade		10,385	9,516	10,952	10,801	10,665	9,093	9,466	11,942	12,055	10,414
of which cash and cash equivalents		1,718	2,241	1,375	6,495	2,300	2,427	4,330	2,624	2,516	2,624
Equity		28,195	31,545	32,568	34,756	36,109	42,350	34,398	42,081	40,923	36,646
Total liabilities		43,164	39,291	43,928	44,012	50,447	44,600	45,894	45,301	43,550	40,750
of which financial indebtedness		15,384	15,197	16,312	18,032	20,841	18,377	19,214	17,184	19,016	19,268
Key data											
Earnings per share	€	5.61	4.34	4.42	6.62[a]	5.12	9.17	-1.15	6.01	-0.70	0.25
Adjusted earnings per share	€	5.44	5.00	4.83	6.44[a]	5.87	4.00	3.21	6.76	6.96	2.78
Cash flows from operating activities		6,958	9,446	7,717	8,785	7,939	7,474	5,413	7,245	7,709	8,111
EBITDA margin before special items	%	14.1	14.9	17.9	17.5[a]	15.4[b]	14.0	12.6	14.4	12.3	11.1
Return on assets	%	11.7	8.7	8.2	9.5[a]	7.1	4.5	-1.2	9.5	2.1	2.8
Return on equity after tax	%	19.7	14.4	13.3	18.9	14.1	21.6	-2.8	15.6	-0.9	1.0
Return on capital employed (ROCE)	%	–	–	–	15.4	12.0[b]	7.7	1.7	13.7	10.0	4.5
Appropriation of profits											
Net income of BASF SE[c]		5,853	2,158	2,808	3,130	2,982	3,899	3,946	3,928	3,849	7,434
Dividend		2,572	2,664	2,755	2,847	2,939	3,031	3,031	3,072	3,035	3,035[d]
Dividend per share	€	2.80	2.90	3.00	3.10	3.20	3.30	3.30	3.40	3.40	3.40[d]
Number of shares at year-end	**million**	**918.5**	**918.5**	**918.5**	**918.5**	**918.5**	**918.5**	**918.5**	**918.5**	**893.9**	**892.5**

a Figures for 2017 were restated with the presentation of the oil and gas activities as discontinued operations.
b Figures for 2018 were restated with the presentation of the construction chemicals activities as discontinued operations.
c Calculated in accordance with German GAAP
d Based on the number of outstanding shares as of December 31, 2023 (892,522,164).

Selected Key Figures Excluding Precious Metals

The IFRS figures correspond to the amounts presented in the Consolidated Financial Statements. The adjusted figures exclude sales in precious metal trading and precious metal sales in the automotive catalysts business.

BASF Group
Million €

	2023		2022	
	IFRS figure	Adjusted figure	IFRS figure	Adjusted figure
Sales	68,902	61,324	87,327	74,990
Volume growth	-8.4%	-7,3%	-7.0%	-3.6%
EBITDA before special items	7,671	7,671	10,762	10,762
EBITDA margin before special items	11.1%	12.5%	12.3%	14.4%

Surface Technologies
Million €

	2023		2022	
	IFRS figure	Adjusted figure	IFRS figure	Adjusted figure
Sales	16,204	8,626	21,283	8,947
Volume growth	-9.6%	-1.4%	-13.0%	3.9%
EBITDA before special items	1,520	1,520	1,464	1,464
EBITDA margin before special items	9.4%	17.6%	6.9%	16.4%

Glossary, Trademarks and Image Sources

C

CO_2 equivalents

CO_2 equivalents (CO_2e) are units for measuring the impact of greenhouse gas emissions on the greenhouse effect. A factor known as the global warming potential (GWP) shows the impact of the individual gases compared with CO_2 as the reference value.

D

Differentiated Steering

In order to increase the competitiveness of its businesses, BASF is introducing a set of measures. These include the introduction of new financial steering indicators tailored to each business. Additionally, our business areas are continuing to adjust their specific business models and processes, supported by adapted process structures, IT systems and governance frameworks.

E

Eco-Efficiency Analysis

The Eco-Efficiency Analysis is a method developed by BASF for assessing the economic and environmental aspects of products and processes. The aim is to compare products with regard to profitability and environmental compatibility.

F

Formulation

Formulation describes the combination of one or more active substances with excipients like emulsifiers, stabilizers and other inactive components in order to improve the applicability and effectiveness of various products, such as cosmetics, pharmaceuticals, agricultural chemicals, paints and coatings.

G

Genome editing

Genome editing refers to a series of new molecular biological methods to make specific changes in the genome. Naturally occurring processes are used to make small changes to an organism's genes to modify a specific characteristic. Such techniques have great potential for innovative solutions in healthcare, agriculture and industrial applications, for example.

P

Peak sales potential

The peak sales potential of the Agricultural Solutions pipeline describes the total peak sales forecast for individual products in the research and development pipeline. Peak sales are the highest sales value to be expected from one year. The pipeline comprises innovative products that have been on the market since 2023 or will be launched on the market by 2033.

S

SEEbalance®

SEEbalance® is the Socio-Eco-Efficiency analysis developed by BASF. It can be used to evaluate and compare the environmental impact, costs and social aspects of products and manufacturing processes. SEEbalance® makes sustainable development measurable and manageable for companies by combining the three dimensions of sustainability – economy, environment and society – in an integrated product assessment tool.

Steam cracker

A steam cracker is a plant in which steam is used to "crack" naphtha (petroleum) or natural gas. The resulting petrochemicals are the raw materials used to produce most of BASF's products.

T

Traits

Traits are commercial plant characteristics, such as an inherent resistance to certain herbicides or an inherent defense against certain insects.

V

Value Chain

A value chain describes the successive steps in a production process: from raw materials through various intermediate steps, such as transportation and production, to the finished product.

Trademarks[a]

Responsible Care®

Registered trademark of the European Chemical Industry Council

Sodium-sulfur batteries (NAS® batteries)

Registered trademark of NGK INSULATORS LTD.

Operation Clean Sweep®

Registered trademark of OCS from the Plastics Industry Association (PLASTICS) and the Plastics Division of the American Chemistry Council (ACC)

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a Trademarks are not registered/used in all countries.

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Quarterly Statement Q1 2024 / Annual Shareholders' Meeting 2024

April 25, 2024

Half-Year Financial Report 2024

July 26, 2024

Quarterly Statement Q3 2024

October 30, 2024

BASF Report 2024

February 28, 2025

Quarterly Statement Q1 2025 / Annual Shareholders' Meeting 2025

May 2, 2025

Further information

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You can find this and other BASF publications online at basf.com/publications

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- resource-conserving and environmentally friendly manufacturing process
- low emission printing
- mainly from recovered paper QE5

This print product was awarded the Blue Angel

Printed product
CO_2 compensated
klima-druck.de
ID-No. 24166313
VDM+

FSC www.fsc.org
RECYCLED
Paper made from recycled material
FSC® C003404

COMS 2307 E