Annual Press Conference
Ludwigshafen, February 24, 2023
Agenda

1. Full-year 2022 reporting
2. Measures to increase competitiveness
3. Concluding remarks
Global chemical production grew by 2.2% in the full year 2022 and by only 1.0% in Q4 2022

Chemical production compared with prior year\(^1\) %

<table>
<thead>
<tr>
<th>Region</th>
<th>2021</th>
<th>2022</th>
<th>Q4 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>1.6</td>
<td>1.8</td>
<td>-3.1</td>
</tr>
<tr>
<td>EU</td>
<td>6.3</td>
<td>-5.8</td>
<td>-15.7</td>
</tr>
<tr>
<td>Mainland China</td>
<td>7.7</td>
<td>6.6</td>
<td>10.7</td>
</tr>
<tr>
<td>Asia excl. mainland China</td>
<td>6.1</td>
<td>-2.8</td>
<td>-8.9</td>
</tr>
</tbody>
</table>

Growth rates

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global GDP</td>
<td>3.0</td>
<td>6.1</td>
</tr>
<tr>
<td>Global industrial production</td>
<td>2.5</td>
<td>6.2</td>
</tr>
<tr>
<td>Global chemical production</td>
<td>2.2</td>
<td>6.1</td>
</tr>
</tbody>
</table>

\(^1\) Source: BASF, Q4 2022 partly based on estimates. Data sources: IHS, Oxford Economics, NBS China, Feri, Fed, Eurostat, METI, ONS. All data subject to statistical revision. Growth rates for regional aggregates might differ from official data releases due to different country coverage and weights.
Q4 2022: Sales decreased slightly, mainly due to lower volumes

Sales bridge Q4 2022 vs. Q4 2021

Million €

- Sales decreased by 2.3% to €19,323 million
- Volumes declined by 15.4%
  - Agricultural Solutions increased volumes slightly, all other segments recorded lower volumes
  - Excluding precious metals volumes, BASF Group sales volumes declined by 12.7%
- Prices increased by 9.2%
  - All segments increased prices, except for Chemicals
- Portfolio effects of minus 0.6% were mainly related to the sale of the kaolin minerals business
- Currency effects of plus 4.5%, mainly from the U.S. dollar
Q4 2022: BASF’s EBIT before special items declined primarily due to lower contributions from the upstream segments

<table>
<thead>
<tr>
<th>BASF Group</th>
<th>Chemicals</th>
<th>Materials</th>
<th>Industrial Solutions</th>
<th>Surface Technologies</th>
<th>Nutrition &amp; Care</th>
<th>Agricultural Solutions</th>
<th>Other</th>
<th>BASF Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4 2022: 1,227</td>
<td>-689</td>
<td>-178</td>
<td>-51</td>
<td>137</td>
<td>199</td>
<td>122</td>
<td>-85</td>
<td>373</td>
</tr>
</tbody>
</table>

EBIT before special items
Q4 2022 vs. Q4 2021
Million €

EBIT before special items by segment
Quarter 4 2021
Million €
# BASF Group Q4 2022 and full year 2022: Financial figures

<table>
<thead>
<tr>
<th>Financial figures</th>
<th>Q4 2022</th>
<th>Change</th>
<th>FY 2022</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Million €</td>
<td>%</td>
<td>Million €</td>
<td>%</td>
</tr>
<tr>
<td>Sales</td>
<td>19,323</td>
<td>-2.3</td>
<td>87,327</td>
<td>11.1</td>
</tr>
<tr>
<td>EBITDA before special items</td>
<td>1,401</td>
<td>-35.7</td>
<td>10,762</td>
<td>-5.2</td>
</tr>
<tr>
<td>EBITDA</td>
<td>1,389</td>
<td>-38.3</td>
<td>10,748</td>
<td>-5.3</td>
</tr>
<tr>
<td>EBIT before special items</td>
<td>373</td>
<td>-69.6</td>
<td>6,878</td>
<td>-11.5</td>
</tr>
<tr>
<td>EBIT</td>
<td>119</td>
<td>-90.3</td>
<td>6,548</td>
<td>-14.7</td>
</tr>
<tr>
<td>Net income</td>
<td>-4,847</td>
<td>.</td>
<td>-627</td>
<td>.</td>
</tr>
</tbody>
</table>
Competitiveness in Europe declined – negative operational earnings in Germany in 2022

EBIT before special items of BASF Group
Billion €

- In 2015, Germany, Europe excluding Germany, and the other regions each contributed around one-third

- In 2021, Europe including Germany contributed only one-third, while the other regions contributed two-thirds

- 2022:
  - 1st half: Strongest ever half-year earnings
  - 2nd half: Sharp decline, especially in Germany, where earnings were negative
In the full year 2022, BASF incurred €3.2 billion higher costs for energy globally.

### Additional energy costs\(^1\) 2022 vs. 2021

<table>
<thead>
<tr>
<th>Region</th>
<th>2022</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rest of the world</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Rest of Europe</td>
<td>1.0</td>
<td>1.7</td>
</tr>
<tr>
<td>Ludwigshafen site</td>
<td>1.4</td>
<td>1.7</td>
</tr>
</tbody>
</table>

### Full year 2022 compared with 2021:
- €3.2 billion higher energy costs globally
- €2.2 billion related to higher natural gas costs globally
- €2.0 billion additional costs for natural gas in Europe, despite ~33% lower gas consumption:
  - BASF’s natural gas demand in Europe 2022: ~32 TWh versus ~48 TWh in 2021
- €1.4 billion higher natural gas costs at the Ludwigshafen site, despite ~35% lower gas consumption:
  - BASF’s natural gas demand at the Ludwigshafen site 2022: ~24 TWh versus ~37 TWh in 2021

\(^1\) Including natural gas, electricity, steam, water, fuel oil, nitrogen, compressed air and other energies
Recent developments relating to Wintershall Dea AG

- **Recent developments in Russia**
  - Wintershall Dea has been economically expropriated in Russia
  - Wintershall Dea has practically no longer any possibility of exerting influence on its holdings in Russia

- **Wintershall Dea’s decision to fully exit Russia**
  - Continuing to operate in Russia is not tenable
  - Therefore, Wintershall Dea intends to fully exit Russia in an orderly manner complying with all applicable legal obligations

- **Earnings and cash flow impact on BASF Group level**
  - Non-cash-effective impairments amounted to €6.5 billion in 2022, of which €4.7 billion in Q4 2022, reducing net income from shareholdings accordingly
  - Wintershall Dea transferred around €1 billion in dividends to BASF and thus made a strong contribution to the BASF Group’s cash flow in 2022

- **Monetization of Wintershall Dea**
  - BASF is standing by its strategic goal of selling its share in Wintershall Dea
Strong operating cash flow development in Q4 2022 lifted full-year free cash flow to more than €3.3 billion

Q4 2022 vs. Q4 2021
- Cash flows from operating activities increased by €1.1 billion to €4.5 billion
- Changes in net working capital led to a cash inflow of €3.5 billion
- Cash flows from investing activities amounted to -€1.9 billion compared with -€692 million
- Payments made for property, plant and equipment and intangible assets rose by 26% to €1.9 billion
- Free cash flow increased by €749 million to €2.6 billion

Q4 2022

<table>
<thead>
<tr>
<th>Million €</th>
<th>Cash flows from operating activities</th>
<th>Capex</th>
<th>Free cash flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,470</td>
<td></td>
<td>-1,874</td>
<td>2,596</td>
</tr>
</tbody>
</table>

FY 2022

<table>
<thead>
<tr>
<th>Million €</th>
<th>Cash flows from operating activities</th>
<th>Capex</th>
<th>Free cash flow</th>
</tr>
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<tbody>
<tr>
<td>7,709</td>
<td></td>
<td>-4,375</td>
<td>3,333</td>
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\(^1\) Free cash flow: cash flows from operating activities minus payments made for property, plant and equipment and intangible assets
## BASF Group 2022: Overview of financial and non-financial targets

<table>
<thead>
<tr>
<th>Target</th>
<th>2022 Target</th>
<th>2022 Status</th>
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<tbody>
<tr>
<td>Grow sales volumes faster than global chemical production every year</td>
<td>&gt;2.2%</td>
<td>-7.0%</td>
</tr>
<tr>
<td>Increase EBITDA before special items by 3% to 5% per year</td>
<td>+3–5%</td>
<td>-5.2%</td>
</tr>
<tr>
<td>Achieve a return on capital employed (ROCE)(^1) considerably above the cost of capital percentage every year</td>
<td>&gt;9%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Increase the dividend per share every year based on a strong free cash flow</td>
<td>&gt;€3.40</td>
<td>€3.40(^4)</td>
</tr>
<tr>
<td>Reduce our absolute CO(_2) emissions(^2) by 25% to 16.4 million metric tons by 2030 (baseline 2018)(^3)</td>
<td>≤20.2 million metric tons</td>
<td>18.4 million metric tons</td>
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\(^1\) Return on capital employed is a measure of the profitability of our operations. We calculate ROCE as the EBIT generated by the segments as a percentage of the average cost of capital basis.

\(^2\) The goal includes scope 1 and scope 2 emissions. Other greenhouse gases are converted into CO\(_2\) equivalents according to the Greenhouse Gas Protocol.

\(^3\) 2030 target compared with 1990: 60% CO\(_2\) reduction

\(^4\) Dividend proposal to Annual Shareholders’ Meeting
Attractive shareholder return – also in challenging times

Dividend per share

€

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<tbody>
<tr>
<td>2016</td>
<td>3.00</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
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<tr>
<td>2017</td>
<td>3.10</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
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<tr>
<td>2018</td>
<td>3.20</td>
<td>3.30</td>
<td>3.30</td>
<td>3.30</td>
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<td>3.30</td>
<td>3.30</td>
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Key facts 2022

- Dividend proposal to Annual Shareholders’ Meeting of €3.40 per share
- In total, we would pay out €3.0 billion\(^2\), which is fully covered by our free cash flow of €3.3 billion
- Dividend yield of 7.3% based on the share price of €46.39 at year end 2022

\(^{1}\) Dividend yield based on share price at year end
\(^{2}\) Based on the 893,854,929 shares outstanding as of December 31, 2022
Capex to support future organic growth will peak between 2023 and 2025

Capex budget by type of investment
Billion €, 2023–2027

- Investments in existing business
  - €28.8 billion, thereof €6.3 billion in 2023
  - Average capex billion € p.a.: ~2.7, ~2.7, ~0.4

- Growth projects: Zhanjiang Verbund site and battery materials
  - Investments in net-zero transformation: ~2.7

Billion €, 2023–2027

Growth project: battery materials
- €28.8 billion, thereof €6.3 billion in 2023

Growth project: Zhanjiang Verbund site
- Investments in net-zero transformation: ~2.7
Outlook 2023 for BASF Group

<table>
<thead>
<tr>
<th>Outlook 2023</th>
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<tbody>
<tr>
<td>Sales</td>
<td>€84 billion – €87 billion</td>
</tr>
<tr>
<td>EBIT before special items</td>
<td>€4.8 billion – €5.4 billion</td>
</tr>
<tr>
<td>ROCE</td>
<td>7.2% – 8.0%</td>
</tr>
<tr>
<td>CO₂ emissions</td>
<td>18.1 – 19.1 million metric tons</td>
</tr>
</tbody>
</table>

**Underlying assumptions (prior-year figures in parentheses)**

- Growth in gross domestic product: 1.6% (3.0%)
- Growth in industrial production: 1.8% (2.5%)
- Growth in chemical production: 2.0% (2.2%)
- Average euro/dollar exchange rate: $1.05 per euro ($1.05 per euro)
- Average annual oil price (Brent crude): $90 per barrel ($101 per barrel)
Agenda

1. Full-year 2022 reporting

2. Measures to increase competitiveness

3. Concluding remarks
Measures to increase competitiveness

Cost savings program with focus on Europe

Adaptation of Verbund structures in Ludwigshafen
Cost savings program with focus on Europe successfully started

Expected cost savings by the end of 2024

- **Annual cost savings of more than €500 million** expected to be achieved in non-production areas by the end of 2024; roughly half of the savings to be realized at the Ludwigshafen site
- Key areas for cost savings are service, operating, research & development divisions as well as the corporate center; the focus is on Europe, particularly Germany
- **Defined measures include:**
  - consistent bundling of services in hubs
  - simplified structures in divisional management
  - phase-out and rightsizing of services and activities
  - re-focusing and efficiency increase of R&D activities
- Net effect on **around 2,600 positions** expected globally; this figure includes new positions to be created, in particular in hubs
- **Expected program costs of around €400 million**, including severance packages, training and qualification measures as well as relocation costs
- Employee representatives in all relevant bodies have been and will continue to be involved
Verbund Site Ludwigshafen – Today

Energy
- Natural gas
- Renewable energy
- Fossil raw materials
- Renewable raw materials

Verbund Ludwigshafen
- Upstream
  - Base chemicals to the market
- Downstream
  - BASF downstream sales products: ~8,000 for Europe and global market

Products
- CO₂ emissions
- CO₂ emissions

Raw materials
Thorough analysis of Verbund structures in Ludwigshafen over the last months

**Analyzed** factors such as:
- competitiveness
- production cost
- energy and CO₂ intensity
- contractual obligations
- potential impacts on the workforce

**Identified critical structures and interdependencies** between key value chains

**Increase competitiveness while ensuring continuity of profitable businesses**
Stepwise approach streamlines ammonia value chain while limiting impact on profitable downstream businesses

### Rationale

- **Reduce exposure** to low-margin *caprolactam export market* and **rightsize caprolactam capacity** to core European demand
- **Ensure caprolactam supply to European customers** from BASF’s plant in Antwerp, Belgium

### Measures and results

- Closure of *caprolactam plant* in Ludwigshafen; adaptation of capacities of precursors and by-products with closure of one *ammonia plant* and *fertilizer facilities*
- Reshaping of *polyamide 6 asset setup* in Ludwigshafen to strengthen this core business of BASF
- Overall **significant fixed cost reduction** and streamlining of asset base; **reduced dependency on natural gas** and **lower CO₂ emissions** from operations
Reduction in production scope for adipic acid safeguards profitable captive offtake while enabling further asset optimization

Rationale

- **Reduce exposure to low-margin adipic acid merchant market**; focus on profitable business and **enhance value creation** in the value chain via conversion to polyamide 6.6

- **Respond** to changed European supply/demand situation due to weaker demand development for adipic acid in Europe, Middle East, Africa and **significant capacity build-up in Asia**

Measures and results

- **Reduction of adipic acid** production capacity in Ludwigshafen will improve overall cost efficiency; the **plant setup** for adipic acid in Chalampé, France, will remain unchanged

- **Polyamide 6.6** capacities in Ludwigshafen will remain unchanged

- **Closure of cyclohexanol and cyclohexanone** as well as **soda ash** plants in Ludwigshafen

- Significant **reduction of energy demand** and correspondingly **lower CO₂ emissions** – adipic acid is one of the major energy consumers in Ludwigshafen
Closure of TDI plant addresses sharp input cost increase and lower market growth

Rationale

- **Weak demand development** for TDI\(^1\) in Europe, Middle East, Africa over the past years
- **Energy cost environment** in Europe has further worsened the situation for TDI production in Ludwigshafen
- TDI plant in Ludwigshafen has not met BASF’s expectations in terms of economic performance

Measures and results

- **Closure** of TDI plant including precursor plants for TDA\(^1\) and DNT\(^1\), resulting in significant fixed cost reduction and improved cash-contribution
- **Commitment to European TDI customers**: Continuous reliable supply is ensured from BASF’s global network; overall higher utilization rates of competitive TDI assets in Asia and North America
- **Reduced dependency** on natural gas and lower CO\(_2\) emissions from operations

\(^1\) TDI: Toluene diisocyanate, TDA: Toluenediamine, DNT: Dinitrotoluene
Planned measures structurally improve the competitiveness of BASF’s Ludwigshafen site and contribute to net-zero target

<table>
<thead>
<tr>
<th>Affected production assets</th>
<th>Fixed cost reduction</th>
<th>Natural gas demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% of the asset replacement value at the site</td>
<td>&gt;€200 million per year</td>
<td>-4.8 TWh/a (~15% of 2021)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expected affected positions</th>
<th>Power demand</th>
<th>CO₂ emissions¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>~700</td>
<td>-0.7 TWh/a (~11% of 2021)</td>
<td>-0.9 Mt/a (~12% of 2021)</td>
</tr>
</tbody>
</table>

¹ Expected scope 1 and 2 emission reduction for BASF SE
Technical optimizations and substitution of natural gas significantly lower threshold at which the Ludwigshafen site must be shut down

Gas supply threshold in % based on average consumption in 2021

- Spring 2022: ~50%
- End of 2022: ~30%
- End of 2023: (progressive decrease)

Measures implemented in 2022

- Optimized steering of the Production Verbund, e.g., using the by-product ethane from our steam crackers to feed our acetylene plant
- Increased imports of base chemicals, e.g., ammonia, butanediol; switch to power imports
- Natural gas substituted by fuel oil in steam boilers
- Recommissioning of section of the synthesis gas plant that is independent of natural gas

Measures to be implemented by end of 2023

- Conversion of gas turbines in combined heat and power plants to allow operation with either gas or fuel oil (bivalent operation)
Key pillars to transform the Ludwigshafen Verbund site to net zero by 2045

- **Grey-to-green**
  - Adapting BASF infrastructure for electricity and hydrogen
  - New CO₂-free technologies
  - CCS¹ for hard-to-abate CO₂ streams
  - Implement CCU²-based raw materials
- **Power-to-steam**
- **Mid term**
  - Increase proportion of renewable and recycled raw materials in the Verbund
  - Implement CCU²-based raw materials

**Timeframe**
- **Short term** 2025
- **Mid term** 2030
- **Long term** 2045

¹ Carbon capture and storage
² Carbon capture and utilization
Verbund Site Ludwigshafen – Vision for the future

**Energy**
- Renewable energy
- Emission-free hydrogen
- Fossil raw materials
- Renewable and recycled raw materials

**Verbund Ludwigshafen**
- Upstream
- Downstream

**Products**
- Base chemicals to the market
- BASF downstream sales products: ~8,000 mainly for Europe

**Raw materials**

**CO₂**

Carbon capture and utilization\(^1\)

\(^1\) With usage of carbon capture and storage (CCS) in a transition phase
Measures to increase competitiveness

Cost savings program with focus on Europe

Adaptation of Verbund structures in Ludwigshafen
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What BASF stands for

- Competitive advantages through **flexible Verbund concept** for integrated production
- Strategic focus on **local production for local markets** and on **high-growth market segments**, e.g., battery materials
- Industry leader in **shaping the transformation to net zero CO₂ emissions** with an ambitious carbon management program
- **Powerful innovation** across a broad range of technologies to provide solutions for various customer industries and to increase our productivity
- Diverse team of **committed, capable and creative employees**
- Long-term shareholder **value creation** and **attractive dividend**
We create chemistry