# The BASF Group's Business Year

## Material Investments and Portfolio Measures

**In addition to innovations, investments make a decisive contribution toward achieving our ambitious growth goals. We use targeted acquisitions to supplement our organic growth.**

By investing in our plants, we create the conditions for our desired growth while constantly improving the efficiency of our production processes. For the period from 2019 to 2023, we have planned capital expenditures (capex)[1] totaling €21.3 billion worldwide.

For more information on our investments from 2019 onward, see page 122

With a world market share of more than 40%, China is today the largest chemical market and drives the growth of global chemical production. We expect China's share to increase to around 50% by 2030. To continue to participate in this growth in Asia in the future, we are investigating the possibility of building an integrated Verbund site in Zhanjiang in the southern Chinese province of Guangdong and expanding the site we operate together with our partner Sinopec in Nanjing, China.

We will also refine our portfolio through acquisitions that promise above-average profitable growth as part of the BASF Verbund and help to reach a relevant market position. We also take into account whether they are innovation-driven or offer a technological differentiation, and make new, sustainable business models possible.

Investments and acquisitions alike are prepared by interdisciplinary teams and assessed using various criteria. In this way, we ensure that economic, environmental and social concerns are included in strategic decision-making.

**Investments and acquisitions 2018**

Million €

| | Investments | Acquisitions | Total |
|---|---|---|---|
| Intangible assets | 155 | 5,540 | 5,695 |
| of which goodwill | – | 1,261 | 1,261 |
| Property, plant and equipment[2] | 3,615 | 1,425 | 5,040 |
| **Total** | **3,770** | **6,965** | **10,735** |

### Investments

We invested €3,615 million[3] in property, plant and equipment in 2018 (previous year: €4,020 million). Capex[1] accounted for €3,498 million of this amount (previous year: €3,735 million). Our investments in 2018 focused on the Chemicals, Functional Materials & Solutions and Performance Products segments.

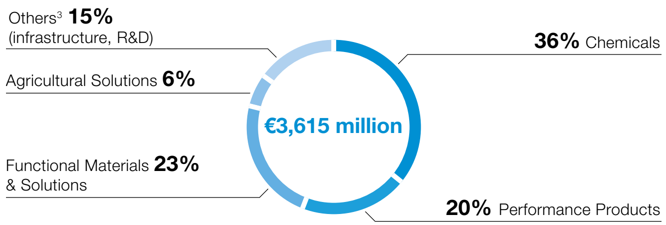
In Europe, we will strengthen the Verbund by replacing our acetylene plant in Ludwigshafen, Germany, which plays a central role for many products and value chains, with a modern, highly efficient plant by the end of 2019. We are also constructing another production plant for special zeolites in Ludwigshafen, Germany. Special zeolites are used to produce state-of-the-art exhaust catalysts for commercial vehicles and passenger cars with diesel engines. Production startup is scheduled for 2019. In the first quarter of 2018, we started construction of another production plant for vitamin A, which is scheduled for startup in 2020.

In North America, we constructed and started operation of an ammonia production plant in Freeport, Texas, together with Yara International ASA, headquartered in Oslo, Norway. We started construction of a new MDI synthesis unit in Geismar, Louisiana. Startup is scheduled for 2020.

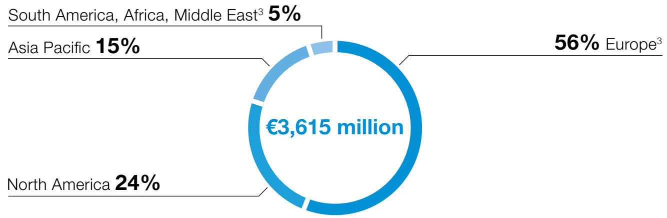
In Asia, we started production at the new aroma ingredients complex in 2018, which was built together with our partner PETRONAS Chemicals Group Berhad, Kuala Lumpur, Malaysia, and at the Ultraform® plant in Gimcheon, South Korea, build together with our partner Kolon Plastics Inc., headquartered in Gimcheon, South Korea. We are constructing a plant for plastic additives in Shanghai, China, with startup planned for 2019. These investments strengthen our presence in Asia.

For more information on investments within the segments, see page 58 onward

**Additions to property, plant and equipment[2] by segment in 2018**




**Additions to property, plant and equipment[2] by region in 2018**




1 Additions to property, plant and equipment excluding acquisitions, capitalized exploration, restoration obligations, IT investments and right-of-use assets arising from leases
2 Including capitalized exploration, restoration obligations and IT investments
3 Including investments in connection with our oil and gas activities until September 2018

## Acquisitions

We added €1,425 million worth of property, plant and equipment through acquisitions in 2018. Additions to intangible assets including goodwill amounted to €5,540 million.

For more information on acquisitions, see the Notes to the Consolidated Financial Statements from page 205 onward

On March 7, 2018, we closed the agreement to form BASF Toda America LLC (BTA), Iselin, New Jersey, for battery materials. BTA is a cooperative venture between BASF and Toda; BASF holds a majority share in and control over BTA. With the acquisition of the Battle Creek site in Michigan and the site contributed by BASF in Elyria, Ohio, the new company took over production of high energy cathode active materials for e-mobility applications. The transaction strengthens the Catalysts division's battery materials business.

On August 1, 2018, we closed the acquisition of a range of businesses and assets from Bayer to complement our activities in crop protection, biotechnology and digital farming. At the same time, the transaction marked our entry into the seeds, non-selective herbicides and nematicide seed treatments businesses. The assets acquired included Bayer's global glufosinate-ammonium business, commercialized under the Liberty®, Basta® and Finale® trademarks, as well as its seed businesses for key field crops in selected markets. The transaction also covered Bayer's trait research and breeding capabilities for these crops. We also closed the acquisition of Bayer's global vegetable seeds business, which mainly operates under the trademark Nunhems®, on August 16, 2018. This strengthens the Agricultural Solutions division. The all-cash purchase price amounted to a total of €7.4 billion and may be subject to purchase price adjustments.

For more information on acquisitions, see page 81 onward

## Divestitures

On January 31, 2018, our production site for styrene butadiene-based paper dispersions in Pischelsdorf, Austria, was sold to Synthomer Austria GmbH, a subsidiary of the British specialty chemicals manufacturer Synthomer plc. The styrene acrylic dispersions that were produced in Pischelsdorf were not included in the sale. They were bundled with the businesses in Ludwigshafen, Germany. The sale was made in connection with the concentration of paper dispersions production in Europe at the sites in Ludwigshafen, Germany, and Hamina, Finland, which is designed to strengthen the Dispersions & Pigments division.

## Agreed transactions

On September 18, 2017, we signed an agreement with the Solvay group on the acquisition of Solvay's global polyamide business, subject to the approval of the relevant antitrust authorities. The E.U. Commission granted conditional clearance for BASF to acquire the polyamide business on January 18, 2019. They require divesting parts of the original transaction scope to a third-party buyer, namely manufacturing assets and innovation capabilities of Solvay for engineering plastics in Europe. The divestment process has started. By complementing the engineering plastics portfolio, enhancing the access to key growth markets in Asia and South America as well as strengthening the value chain through backward integration into key raw materials, BASF will still achieve its key strategic objectives. The review procedure in China is ongoing. Closing is expected in the second half of 2019, as soon as all remaining closing conditions have been fulfilled, including the sale of the businesses and assets to be divested to a third party. We plan to integrate the polyamide business into the Performance Materials and Monomers divisions. Before being adjusted to reflect the necessary antitrust-related changes to the scope of the transaction, the purchase price on a cash and debt-free basis and excluding other adjustments would have been €1.6 billion.

On May 3, 2018, BASF and Solenis announced that they had signed an agreement on the combination of BASF's paper and water chemicals business with Solenis. BASF and Solenis closed the transaction on January 31, 2019.

For more information, see Events after the reporting period on page 122

On September 27, 2018, we signed a definitive agreement with the LetterOne group to merge our respective oil and gas businesses. The merger aims to create the leading independent company in the European oil and gas sector. To effect the merger, LetterOne will contribute all its shares in DEA Deutsche Erdöl AG to Wintershall Holding GmbH against the issuance of new shares of the company to LetterOne. The company will then be renamed Wintershall DEA. BASF will initially hold 67% and LetterOne 33% of Wintershall DEA's ordinary shares, reflecting the value of the respective exploration and production businesses of Wintershall and DEA. To reflect the value of Wintershall's gas transportation business, BASF will receive additional preference shares. No later than 36 months after closing but in all cases before an IPO, these preference shares will be converted into ordinary shares of the company Wintershall DEA. This will increase BASF's share in Wintershall DEA. Closing of the transaction is expected in the first half of 2019, subject to the approvals of merger control and foreign investment authorities as well as mining authorities and the German Federal Network Agency. Until closing, Wintershall and DEA will continue to operate as independent companies.

For more information on this transaction, see Note 2.5 to the Consolidated Financial Statements from page 209 onward

# Economic Environment

**Overall, global economic growth in 2018 was as strong as we expected at the beginning of the year.[1] However, momentum slowed considerably over the course of the year. Economic output in the advanced economies rose at roughly the same rate as in 2017, while growth in the emerging markets softened slightly overall. Growth in the European Union (E.U.) declined significantly. By contrast, gross domestic product (GDP) in the United States increased faster than expected. The Chinese economy cooled in the second half of the year. Global GDP grew by 3.2% overall, only slightly slower than in 2017 (+3.3%). The global chemical industry (excluding pharmaceuticals) expanded by 2.7%, below the 2017 figure (+3.7%). The average price for a barrel of Brent blend crude oil rose to $71 per barrel (2017: $54 per barrel).**

For the outlook on the economic environment in 2019, see page 117 onward

## Trends in the global economy in 2018

The global economy continued its growth trajectory in 2018. However, economic momentum slowed significantly over the course of the year. Regional trends were also more disparate than in 2017 and growth in global trade weakened. The escalation of the trade conflict between the United States and China, as well as fears that the United States would introduce additional tariffs on automotive imports increasingly weighed on the economic climate. In addition, financing conditions for a number of emerging markets deteriorated following interest rate hikes by the Federal Reserve. This led to capital outflows into the dollar zone and corresponding currency devaluations. By contrast, monetary policy in the eurozone and in Japan remained expansionary.

**Gross domestic product**

Real change compared with previous year

| | | |
|---|---|---|
| **World** | **2018** | **3.2%** |
| | 2017 | 3.3% |
| European Union | **2018** | **1.9%** |
| | 2017 | 2.5% |
| United States | **2018** | **2.9%** |
| | 2017 | 2.2% |
| Emerging markets of Asia | **2018** | **6.2%** |
| | 2017 | 6.4% |
| Japan | **2018** | **0.7%** |
| | 2017 | 1.9% |
| South America | **2018** | **1.0%** |
| | 2017 | 1.6% |

## Economic trends by region

- **Weaker economic growth in the E.U.**
- **Acceleration of growth in the United States**
- **Economic cooldown in China**
- **Delayed recovery in South America**

As we had forecast, GDP growth in the **E.U.** slowed to just under 2% in 2018 (2017: +2.5%). Besides capacity bottlenecks, the decline in economic momentum was primarily attributable to weaker export demand. In addition, the rising oil price led to higher import values and energy prices drove up inflation, which dampened growth in consumer purchasing power. Growth in France (+1.5%), Italy (+0.8%), Spain (+2.5%) and the United Kingdom (+1.4%) was in line with our expectations, while Germany turned in a disappointing performance (+1.5%). This was attributable to a large extent to difficulties in the introduction of the new Worldwide Harmonized Light-Duty Vehicles Test Procedure (WLTP) emission standard in the automotive industry, which also affected its supplier industries and led to a slight overall decrease in GDP in the third quarter of 2018. At 4.2%, GDP growth in the eastern E.U. countries remained high but was lower than in the previous year (+4.6%). According to official estimates, Russian GDP rose faster than in the previous year, at 2.3% (2017: +1.6%). The economy was supported by the rising oil price and strong growth in the construction sector, while the weak ruble and sanctions imposed by the E.U. and the United States had an offsetting effect. Consumer confidence also declined significantly, among other factors due to higher inflation rates and the increase in the retirement age.

In the **United States**, the expansionary tax policy led to stronger-than-expected growth of 2.9% (2017: +2.2%). Rising employment figures and income tax cuts boosted private consumption; investment was stimulated by the corporate tax reform. By contrast, headwinds came from foreign trade in the second half of the year. Exports slowed as a result of China's new import tariffs, which were introduced in response to higher U.S. duties.

Average annual growth in the **emerging markets of Asia** declined only slightly (2018: +6.2%; 2017: +6.4%). However, economic momentum in **China** slowed significantly over the course of the year. Overall, China saw growth of 6.6% in 2018, slower than in 2017 (+6.8%). The trade conflict with the United States in particular unsettled consumers and investors. Growth in Chinese industrial production declined over the course of the year. Automotive production declined by 3.8% after tax incentives expired in the previous year. Momentum slowed somewhat in the electronics industry and weakened significantly in the textile industry. Growth picked up in the construction sector. Economic output in the remaining emerging markets of Asia rose at the same rate as in 2017 (+5.6%).

1 All information relating to past years in this section can deviate from the previous year's report due to statistic revisions. In addition, the baseline for calculating real growth rates for GDP, customer industry and chemical production figures has been adjusted from 2010 to 2015. This changes the market share of individual countries and slightly increases global growth rates overall.

In **Japan**, growth declined again in 2018 after the exceptionally strong increase in the previous year (2018: +0.7%; 2017: +1.9%). Although private sector investment in production facilities continued to grow dynamically as a result of low interest rates and high capacity utilization, private consumption only rose moderately and export growth declined significantly. The trade conflict between the United States and China also increasingly made itself felt. In addition, extreme weather conditions and a severe earthquake led to a decline in GDP in the third quarter of 2018.

**South America** continued the recovery that started in 2017, albeit only at a moderate pace (2018: +1.0%; 2017: +1.6%). The truck drivers' strikes and the political uncertainty ahead of the presidential elections in the fall prevented a stronger economic recovery in Brazil (2018: +1.3%; 2017: +1.0%). Argentina suffered a loss of confidence among external investors, succumbed to a severe currency crisis and fell back into recession (2018: –2.4%; 2017: +2.9%). The crisis in Venezuela further intensified (2018: –15.0%; 2017: –9.1%), while the other countries in the region saw stronger growth overall (2018: +3.0%; 2017: +2.0%).

## Trends in key customer industries

- **Growth in global industrial production lower than in 2017**
- **Mixed trends in key customer sectors**

Global industrial production grew by 3.2% in 2018, roughly in line with our expectations at the beginning of 2018 but down from the previous year (2017: +3.4%). Growth slowed in both the advanced economies (2018: +2.1%; 2017: +2.4%) and the emerging markets (2018: +4.2%; 2017: +4.4%).

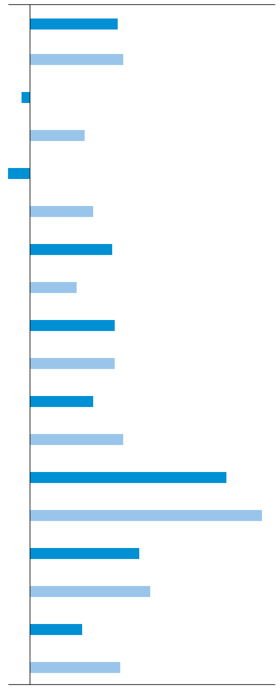
The downturn was most pronounced in the E.U. (2018: +1.4%; 2017: +3.1%) and in Japan (2018: +0.9%; 2017: +2.7%). In South America, too, industrial production again declined slightly (2018: –0.3%; 2017: –0.8%). In the emerging markets of Asia, growth in industrial production was roughly on a level with the previous year, at 5.5% (2017: +5.6%). By contrast, growth in North America accelerated again markedly (2018: +3.1%; 2017: +1.8%).

The chemical industry's key customer sectors saw very mixed trends: Global **automotive production** contracted by 0.8% in 2018, a much weaker performance than in the previous year (+2.3%). Production fell by 1.3% in the E.U. Difficulties in the introduction of the new WLTP emission standard contributed significantly here. Automotive production declined slightly in North America. In China and South Korea, it decreased by 3.8% and 2%, respectively, and was largely flat in Japan (–0.2%). Production growth in the remaining emerging markets of Asia was slightly stronger than in 2017. India was a particularly large contributor here, with growth of 6.6%. In South America and Russia, automotive production rose significantly from a low baseline, but not as strongly as in the previous year. At 3.1%, growth in the **construction industry** was at the prior-year level (+3.1%). The E.U. saw much slower growth in construction activity after the exceptionally strong prior year. Moderating effects came from residential and commercial construction, while the infrastructure segment saw stronger year-on-year growth. Growth in the U.S. construction industry remained modest. Only investment in infrastructure saw significant gains here. In Asia, by contrast, growth in the construction industry remained at a comparatively high level. **Agricultural** production expanded at a much slower pace in 2018 compared with the previous year (2018: +1.9%; 2017: 3.3%), as cereal and soybean yields in Europe, North and South America as well as in South Africa were negatively impacted by the unusually long dry period. Agricultural output was flat overall in western Europe and fell significantly in eastern Europe. Substantial losses were also recorded in North America. Alongside weather-related influences, the trade conflict with China also played a key role here, which negatively impacted U.S. soybean exports to China. There was a noticeable decline in production in South America as a whole, primarily as a result of heavy production losses in Argentina. By contrast, the strong upward trend in agricultural production continued in Asia, although here too, growth was lower than in the previous year.

**Growth in key customer industries**

Real change compared with previous year

| | | |
|---|---|---|
| **Industry total** | **2018** | **3.2%** |
| | 2017 | 3.4% |
| Transportation | **2018** | **(0.3%)** |
| | 2017 | 2.0% |
| of which: automotive industry | **2018** | **(0.8%)** |
| | 2017 | 2.3% |
| Energy and resources | **2018** | **3.0%** |
| | 2017 | 1.7% |
| Construction | **2018** | **3.1%** |
| | 2017 | 3.1% |
| Consumer goods | **2018** | **2.3%** |
| | 2017 | 3.4% |
| Electronics | **2018** | **7.2%** |
| | 2017 | 8.5% |
| Health and nutrition | **2018** | **4.0%** |
| | 2017 | 4.4% |
| Agriculture | **2018** | **1.9%** |
| | 2017 | 3.3% |



## Trends in the chemical industry

- **Global growth weaker than in prior year and below expectations**

The global chemical industry (excluding pharmaceuticals) grew by 2.7%, below our expectations at the beginning of 2018 (+3.6%) and below 2017 (+3.7%). Chemical production in the E.U. declined slightly overall after the strong prior year (2018: –0.9%, 2017: +3.2%), but fell sharply at the end of 2018 in particular. Contributing factors included capacity bottlenecks, lower export demand and weaker demand from the automotive industry in the second half of the year. In Asia, growth slowed overall to 3.4% after 4.5% in the previous year. At 3.6%, growth in the world's largest chemical market, China, was lower than in the prior year (+4.0%) and significantly lower than forecast at the beginning of the year (+5.0%). Stagnant demand from the automotive industry and slower momentum in other customer industries had a dampening effect. In Japan, too, growth fell significantly to 0.9% (2017: +7.1%) due to softer export demand. By contrast, growth picked up in the United States on the back of the economic upturn there and new production capacity (2018: +3.7%; 2017: +2.6%).

## Important raw material price developments

- **Higher prices for crude oil and naphtha**
- **Year-on-year increase in gas prices, but with wide regional variance**

Averaging around $71 per barrel in 2018, the **oil price** for Brent crude rose by about 30% compared with the previous year ($54 per barrel). The average monthly oil price fluctuated over the course of the year between $81 per barrel in October and $56 per barrel in December.

The average monthly price for the chemical raw material **naphtha** ranged over the course of 2018 between $463 per metric ton in December and $676 per metric ton in September. At $602 per metric ton, the annualized average price of naphtha in 2018 was higher than in 2017 ($485 per metric ton).

The average **price of gas** in the United States was $3.16 per mmBtu, above the level of the previous year ($2.97 per mmBtu). In Europe, the average price of gas at the Title Transfer Facility (TTF) was significantly higher than in 2017, at $7.90 per mmBtu (2017: $5.71 per mmBtu). Gas prices in China averaged around $6.38 per mmBtu nationally (2017: $6.24 per mmBtu), while the average price in the coastal provinces of Shanghai, Jiangsu, Zhejiang, Shandong and Guangdong was $7.59 per mmBtu (2017: $7.43 per mmBtu).

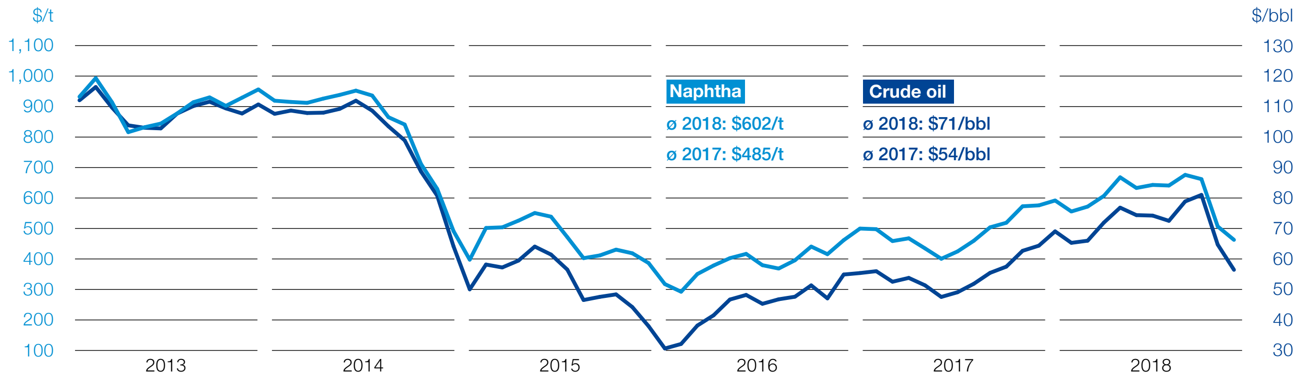
**Chemical production (excluding pharmaceuticals)**

Real change compared with previous year

| | | |
|---|---|---|
| **World** | **2018** | **2.7%** |
| | 2017 | 3.7% |
| European Union | **2018** | **(0.9%)** |
| | 2017 | 3.2% |
| United States | **2018** | **3.7%** |
| | 2017 | 2.6% |
| Emerging markets of Asia | **2018** | **3.6%** |
| | 2017 | 4.3% |
| Japan | **2018** | **0.9%** |
| | 2017 | 7.1% |
| South America | **2018** | **(0.1%)** |
| | 2017 | 0.0% |

**Price trends for crude oil (Brent blend) and naphtha**

$/barrel, $/metric ton



# Results of Operations

**The world economy saw slightly weaker growth in 2018 than in 2017, with momentum increasingly slowing over the course of the year. Growth in global industrial production was also down slightly year on year, while the global chemical industry (excluding pharmaceuticals) saw a stronger decrease. In this market environment, BASF did not perform as well as we expected. Although we increased sales slightly, earnings declined considerably. All segments were affected by the earnings decrease. Earnings rose in the discontinued oil and gas business.**

Business reviews by segment can be found from page 58 onward

## Sales

- **Sales growth of 2% to €62,675 million**

Sales rose by €1,452 million to €62,675 million in 2018. This was primarily attributable to higher sales prices in all segments, particularly in the chemicals business.[1] Sales were also positively impacted by the acquisition of significant businesses and assets from Bayer in the Agricultural Solutions segment, which was closed in August 2018, and higher volumes, especially in the Functional Materials & Solutions segment. This was partly offset by negative currency effects in all segments.

**Sales[2]**

| Million € | |
|---|---|
| 2018 | 62,675 |
| 2017 | 61,223 |
| 2016 | 57,550 |
| 2015 | 70,449 |
| 2014 | 74,326 |

2 Sales for 2017 were reduced by the share attributable to oil and gas activities due to their presentation as discontinued operations. Figures for the years 2014 to 2016 have not been restated.

**Factors influencing sales of the BASF Group**

| | Change in million € | Change in % |
|---|---|---|
| Volumes | 442 | 1 |
| Prices | 2,715 | 4 |
| Currencies | (2,183) | (4) |
| Acquisitions | 629 | 1 |
| Divestitures | (157) | 0 |
| Changes in scope of consolidation | 6 | 0 |
| **Total change in sales** | **1,452** | **2** |

## Income from operations

- **Considerable decline in EBIT before special items, EBIT and EBIT after cost of capital**
- **Significant premium on cost of capital again earned**

Income from operations (EBIT) before special items decreased by €1,292 million to €6,353 million as a result of lower contributions from all segments. The Chemicals segment in particular recorded considerably lower earnings, mainly due to lower margins for isocyanates and steam cracker products. The BASF Group's earnings were also negatively impacted by the low water levels on the Rhine River in the second half of 2018. BASF's business with the automotive industry also slowed in the second half of the year. In the Functional Materials & Solutions segment, EBIT before special items was considerably below the prior-year figure, primarily due to softer margins as a result of the increase in raw materials prices and higher fixed costs. The considerable decline in earnings in the Agricultural Solutions segment was attributable to negative currency effects in all regions as well as the strongly negative contribution from the businesses acquired from Bayer as a result of the late, intra-year timing of the transaction, the seasonality of the businesses and costs for integrating the businesses into the BASF Group. EBIT before special items declined slightly in the Performance Products segment, primarily due to lower sales volumes and negative currency effects.

For an explanation of the indicator EBIT before special items, see pages 29 to 30

**EBIT before special items[3]**

| Million € | |
|---|---|
| 2018 | 6,353 |
| 2017 | 7,645 |
| 2016 | 6,309 |
| 2015 | 6,739 |
| 2014 | 7,357 |

3 EBIT before special items for 2017 was reduced by the share attributable to oil and gas activities due to their presentation as discontinued operations. Figures for the years 2014 to 2016 have not been restated.

**Special items** in EBIT totaled minus €320 million in 2018, compared with minus €58 million in the previous year. Various restructuring measures led to special items of minus €102 million, after minus €131 million in 2017. At €174 million, integration costs in connection with business acquisitions were higher than the prior-year level (2017: €52 million), largely from the integration of the businesses acquired from Bayer in the Agricultural Solutions segment. Divestitures in 2018 accounted for an earnings contribution of minus €2 million. The prior-year figure included special income totaling €137 million, mainly in the Performance Products segment from the transfer of BASF's leather chemicals business to the Stahl group. The special items recognized in other charges and income amounted to minus €42 million in 2018, compared with minus €12 million in the previous year.

For the definition of special items, see pages 29 to 30

1 Our chemicals business comprises the Chemicals, Performance Products and Functional Materials & Solutions segments.

**Special items**

Million €

| | 2018 | 2017 |
|---|---|---|
| Restructuring measures | (102) | (131) |
| Integration costs | (174) | (52) |
| Divestitures | (2) | 137 |
| Other charges and income | (42) | (12) |
| **Total special items in EBIT** | **(320)** | **(58)** |

At €6,033 million, **EBIT** for the BASF Group in 2018 was considerably below the previous year's level (2017: €7,587 million). Included in this figure is income from companies accounted for using the equity method, which declined from €323 million to €269 million.

**EBIT**[1]

Million €

| | |
|---|---|
| 2018 | 6,033 |
| 2017 | 7,587 |
| 2016 | 6,275 |
| 2015 | 6,248 |
| 2014 | 7,626 |

1 EBIT for 2017 was reduced by the share attributable to oil and gas activities due to their presentation as discontinued operations. Figures for the years 2014 to 2016 have not been restated.

We once again earned a significant premium on our cost of capital in 2018. **EBIT after cost of capital** amounted to €825 million, compared with €2,902 million in the previous year. The cost of capital rose by €323 million year on year. This increase was mainly attributable to the assets acquired from Bayer in August 2018. By contrast, the classification of the oil and gas activities as discontinued operations meant that the related assets were retroactively no longer included in the cost of capital basis.

For an explanation of the indicator EBIT after cost of capital, see page 29

The calculation of EBIT as part of our statement of income is shown in the Consolidated Financial Statements on page 176

**EBIT after cost of capital**

Million €

| | 2018 | 2017 |
|---|---|---|
| EBIT of BASF Group | 6,033 | 7,587 |
| – EBIT of Other | (491) | (691) |
| – Cost of capital[2] | 5,699 | 5,376 |
| **EBIT after cost of capital** | **825** | **2,902** |

2 In 2017 and 2018, the cost of capital percentage was 10%.

**EBIT after cost of capital**[3]

Million €

| | |
|---|---|
| 2018 | 825 |
| 2017 | 2,902 |
| 2016 | 1,136 |
| 2015 | 194 |
| 2014 | 1,368 |

3 EBIT after cost of capital for 2017 was reduced by the share attributable to oil and gas activities due to their presentation as discontinued operations. Figures for the years 2014 to 2016 have not been restated.

## Financial result and income after taxes

- **Financial result slightly, net income considerably below previous year**
- **Earnings per share decline from €6.62 to €5.12**

The **financial result** declined to minus €745 million in 2018, compared with minus €705 million in the previous year.

Net income from shareholdings decreased from minus €30 million in 2017 to minus €42 million, mainly as a result of higher expenses from loss transfer agreements.

The interest result declined from minus €315 million in 2017 to minus €366 million, mainly due to the increase in interest expenses from the higher level of financial indebtedness.

The other financial result amounted to minus €337 million, compared with minus €360 million in the previous year. This was largely attributable to the decrease in other financial expenses, primarily due to the lower net interest expense from pension plans.

**Income before income taxes** declined from €6,882 million in the previous year to €5,288 million in 2018. Income taxes decreased from €1,290 million in the previous year to €1,138 million in 2018. At 21.5%, the tax rate was above the prior-year level (18.7%), which included one-off deferred tax income in the total amount of €426 million from tax reforms, of which €379 million in the United States.

**Income after taxes from continuing operations** declined from €5,592 million to €4,150 million. **Income after taxes from discontinued operations** rose from €760 million to €829 million. This was mainly due to higher oil and gas prices as well as volumes growth in Norway and Russia. Overall, **income after taxes** declined from €6,352 million to €4,979 million.

At €272 million, noncontrolling interests were on a level with the previous year. **Net income** amounted to €4,707 million, considerably below the prior-year figure of €6,078 million. **Earnings per share** were €5.12, compared with €6.62 in 2017.

For information on the items in the statement of income, see the Notes to the Consolidated Financial Statements from page 218 onward

For information on the tax rate, see the Notes to the Consolidated Financial Statements from page 223 onward

For more information on the results of operations of discontinued operations, see page 86 onward

## Additional indicators for results of operations

- **ROCE declines from 15.4% to 11.4%, adjusted earnings per share from €6.44 to €5.87**
- **EBITDA before special items and EBITDA considerably below previous year**

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, EBIT after cost of capital, EBITDA before special items, EBITDA, the EBITDA margin, ROCE[1] and adjusted earnings per share. Other APMs are net debt,[2] free cash flow[2] and capital expenditure (capex).[3]

We have used the indicator **return on capital employed (ROCE)** since the 2018 business year. It measures the profitability of the capital employed by the segments. ROCE was 11.4%, after 15.4% in the previous year.

For more information on the determination of ROCE, see page 29

**ROCE**

Million €

| | | 2018 | 2017 |
|---|---|---|---|
| EBIT of BASF Group | | 6,033 | 7,587 |
| – EBIT of Other | | (491) | (691) |
| EBIT of segments | | 6,524 | 8,278 |
| **Cost of capital basis of segments, average of month-end figures** | | **56,990** | **53,750** |
| **ROCE** | % | **11.4** | **15.4** |

**Capital employed**

Million €

| | 2018 | 2017 |
|---|---|---|
| Intangible assets | 13,375 | 11,666 |
| + Property, plant and equipment | 18,519 | 18,128 |
| + Investments accounted for using the equity method | 1,800 | 1,685 |
| + Inventories | 10,951 | 9,896 |
| + Accounts receivable, trade | 10,320 | 10,660 |
| + Current and noncurrent other receivables and other assets[4] | 1,749 | 1,715 |
| + Assets of disposal groups | 276 | – |
| **Cost of capital basis of segments, average of month-end figures** | **56,990** | **53,750** |
| + Deviation from cost of capital basis at closing rates as of December 31 | 5,823 | (625) |
| + Assets not included in cost of capital | 23,743 | 25,643 |
| of which disposal group for the oil and gas business | 14,088 | – |
| **Assets of the BASF Group as of December 31** | **86,556** | **78,768** |

4 Including customer/supplier financing and other adjustments

**Income from operations before depreciation, amortization and special items (EBITDA before special items)** and **income from operations before depreciation and amortization (EBITDA)** are indicators that describe operational performance independent of age-related depreciation and amortization of assets and extraordinary valuation allowances (impairments or reversals of impairments). Both figures are therefore particularly useful in cross-company comparisons. EBITDA before special items is also highly useful in making comparisons over time. The **EBITDA margin** is a relative indicator and is calculated as the ratio of EBITDA to sales revenue, enabling operational performance to be compared independent of the size of the underlying business.

EBITDA before special items declined by €1,257 million year on year to €9,481 million in 2018. At €9,166 million, EBITDA was down €1,599 million from the prior-year figure. The EBITDA margin was 14.6% in 2018, compared with 17.6% in the previous year.

**EBITDA before special items**

Million €

| | 2018 | 2017 |
|---|---|---|
| EBIT | 6,033 | 7,587 |
| – Special items | (320) | (58) |
| **EBIT before special items** | **6,353** | **7.645** |
| + Depreciation and amortization[5] | 3,080 | 2,959 |
| + Valuation allowances on intangible assets and property, plant and equipment[5] | 48 | 134 |
| **Depreciation, amortization and valuation allowances on intangible assets and property, plant and equipment** | **3,128** | **3,093** |
| **EBITDA before special items** | **9,481** | **10,738** |

5 Excluding depreciation, amortization and valuation allowances attributable to the discontinued oil and gas business

1 The financial return on assets reported in the previous year was the starting point for determining the return on assets, adjusted for special items from acquisitions and divestitures, which was used as a compensation parameter. The return on assets is no longer reported on, as this was replaced by ROCE as the compensation-relevant indicator from 2018 onward.
2 For more information on these indicators, see the Financial Position from page 53 onward
3 For more information on capex, see Value-Based Management on page 30 and Material Investments and Portfolio Measures on page 41

**EBITDA**

| Million € | 2018 | 2017 |
|---|---|---|
| EBIT | 6,033 | 7,587 |
| + Depreciation and amortization[1] | 3,080 | 2,959 |
| + Valuation allowances on intangible assets and property, plant and equipment[1] | 53 | 219 |
| **Depreciation, amortization and valuation allowances on intangible assets and property, plant and equipment** | **3,133** | **3,178** |
| **EBITDA** | **9,166** | **10,765** |
| Sales revenue | 62,675 | 61,223 |
| **EBITDA margin** % | **14.6** | **17.6** |

1 Excluding depreciation, amortization and valuation allowances attributable to the discontinued oil and gas business

Compared with earnings per share, **adjusted earnings per share** has firstly been adjusted for special items. Secondly, amortization and valuation allowances (impairments and reversals of impairments) on intangible assets were 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 2018, adjusted earnings per share amounted to €5.87 compared with €6.44 in the previous year.

For information on the earnings per share according to IFRS, see the Notes to the Consolidated Financial Statements on page 218

**Adjusted earnings per share**

| Million € | 2018 | 2017 |
|---|---|---|
| **Income after taxes** | **4,979** | **6,352** |
| – Special items | (320) | (58) |
| + Amortization and valuation allowances on intangible assets | 563 | 539 |
| – Amortization and valuation allowances on intangible assets contained in special items | 1 | 32 |
| – Adjustments to income taxes | 231 | 537 |
| – Adjustments to income after taxes from discontinued operations | (34) | 188 |
| **Adjusted income after taxes** | **5,664** | **6,192** |
| – Adjusted noncontrolling interests | 273 | 277 |
| **Adjusted net income** | **5,391** | **5,915** |
| Weighted average number of outstanding shares (in thousands) | 918,479 | 918,479 |
| **Adjusted earnings per share** € | **5.87** | **6.44** |

### Sales and earnings

Million €

| | | 2018 | 2017 | +/– |
|---|---|---|---|---|
| Sales | | 62,675 | 61,223 | 2.4% |
| Income from operations before depreciation, amortization and special items | | 9,481 | 10,738 | (11.7%) |
| Income from operations before depreciation and amortization (EBITDA) | | 9,166 | 10,765 | (14.9%) |
| EBITDA margin | % | 14.6 | 17.6 | – |
| Depreciation and amortization[1] | | 3,133 | 3,178 | (1.4%) |
| Income from operations (EBIT) | | 6,033 | 7,587 | (20.5%) |
| Special items | | (320) | (58) | . |
| EBIT before special items | | 6,353 | 7,645 | (16.9%) |
| Financial result | | (745) | (705) | (5.7%) |
| Income before income taxes | | 5,288 | 6,882 | (23.2%) |
| Income after taxes from continuing operations | | 4,150 | 5,592 | (25.8%) |
| Income after taxes from discontinued operations | | 829 | 760 | 9.1% |
| Net income | | 4,707 | 6,078 | (22.6%) |
| Earnings per share | € | 5.12 | 6.62 | (22.7%) |
| Adjusted earnings per share | € | 5.87 | 6.44 | (8.9%) |

### Sales and earnings by quarter in 2018[2]

Million €

| | | Q1 | Q2 | Q3 | Q4 | Full year |
|---|---|---|---|---|---|---|
| Sales | | 15,700 | 15,783 | 15,606 | 15,586 | 62,675 |
| Income from operations before depreciation, amortization and special items | | 3,013 | 2,709 | 2,263 | 1,496 | 9,481 |
| Income from operations before depreciation and amortization (EBITDA) | | 2,995 | 2,645 | 2,190 | 1,336 | 9,166 |
| Depreciation and amortization[1] | | 732 | 739 | 795 | 867 | 3,133 |
| Income from operations (EBIT) | | 2,263 | 1,906 | 1,395 | 469 | 6,033 |
| Special items | | (18) | (66) | (75) | (161) | (320) |
| EBIT before special items | | 2,281 | 1,972 | 1,470 | 630 | 6,353 |
| Financial result | | (181) | (192) | (138) | (234) | (745) |
| Income before income taxes | | 2,082 | 1,714 | 1,257 | 235 | 5,288 |
| Income after taxes from continuing operations | | 1,581 | 1,361 | 1,032 | 176 | 4,150 |
| Income after taxes from discontinued operations | | 177 | 162 | 235 | 255 | 829 |
| Net income | | 1,679 | 1,480 | 1,200 | 348 | 4,707 |
| Earnings per share | € | 1.83 | 1.61 | 1.31 | 0.37 | 5.12 |
| Adjusted earnings per share | € | 1.93 | 1.77 | 1.51 | 0.66 | 5.87 |

### Sales and earnings by quarter in 2017[2]

Million €

| | | Q1 | Q2 | Q3 | Q4 | Full year |
|---|---|---|---|---|---|---|
| Sales | | 16,027 | 15,449 | 14,516 | 15,231 | 61,223 |
| Income from operations before depreciation, amortization and special items | | 3,035 | 2,872 | 2,517 | 2,314 | 10,738 |
| Income from operations before depreciation and amortization (EBITDA) | | 3,030 | 2,814 | 2,655 | 2,266 | 10,765 |
| Depreciation and amortization[1] | | 738 | 764 | 831 | 845 | 3,178 |
| Income from operations (EBIT) | | 2,292 | 2,050 | 1,824 | 1,421 | 7,587 |
| Special items | | (6) | (70) | 122 | (104) | (58) |
| EBIT before special items | | 2,298 | 2,120 | 1,702 | 1,525 | 7,645 |
| Financial result | | (149) | (162) | (184) | (210) | (705) |
| Income before income taxes | | 2,143 | 1,888 | 1,640 | 1,211 | 6,882 |
| Income after taxes from continuing operations | | 1,626 | 1,433 | 1,260 | 1,273 | 5,592 |
| Income after taxes from discontinued operations | | 146 | 131 | 149 | 334 | 760 |
| Net income | | 1,709 | 1,496 | 1,336 | 1,537 | 6,078 |
| Earnings per share | € | 1.86 | 1.63 | 1.45 | 1.68 | 6.62 |
| Adjusted earnings per share | € | 1.97 | 1.78 | 1.40 | 1.29 | 6.44 |

1 Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and reversals of impairments) excluding depreciation and amortization attributable to the discontinued oil and gas business
2 Quarterly results not audited

# Net Assets

**Assets**

| | December 31, 2018 | | December 31, 2017 | |
|---|---|---|---|---|
| | **Million €** | **%** | **Million €** | **%** |
| Intangible assets | 16,554 | 19.1 | 13,594 | 17.3 |
| Property, plant and equipment | 20,780 | 24.0 | 25,258 | 32.0 |
| Investments accounted for using the equity method | 2,203 | 2.5 | 4,715 | 6.0 |
| Other financial assets | 570 | 0.7 | 606 | 0.8 |
| Deferred tax assets | 2,342 | 2.7 | 2,118 | 2.7 |
| Other receivables and miscellaneous assets | 886 | 1.0 | 1,332 | 1.7 |
| **Noncurrent assets** | **43,335** | **50.0** | **47,623** | **60.5** |
| | | | | |
| Inventories | 12,166 | 14.1 | 10,303 | 13.1 |
| Accounts receivable, trade[1] | 10,665 | 12.3 | 10,801 | 13.7 |
| Other receivables and miscellaneous assets[1] | 3,139 | 3.6 | 3,494 | 4.4 |
| Marketable securities | 344 | 0.4 | 52 | 0.1 |
| Cash and cash equivalents | 2,300 | 2.7 | 6,495 | 8.2 |
| Assets of disposal groups | 14,607 | 16.9 | – | – |
| **Current assets** | **43,221** | **50.0** | **31,145** | **39.5** |
| **Total assets** | **86,556** | **100.0** | **78,768** | **100.0** |

## Assets

- **Acquisition-driven increase in total assets**
- **Reclassification of material assets to current assets of disposal groups**

Total assets amounted to €86,556 million as of December 31, 2018, around 10% higher than the prior-year figure. This increase was largely driven by the acquisition of significant businesses and assets from Bayer.

Noncurrent assets decreased by €4,288 million to €43,335 million. This is primarily attributable to the reclassification of noncurrent assets to the disposal groups, mainly for the oil and gas business and to a minor extent for the paper and water chemicals business.

More information on the above transactions and disposal groups can be found on page 42 of this Management's Report and in Notes 2.4 and 2.5 to the Consolidated Financial Statements from page 205 onward

The €2,960 million increase in intangible assets was largely attributable to acquisition-related additions, which amounted to €5,540 million as of the year-end, including €1,261 million in goodwill. The main offsetting effects were reclassifications to the disposal groups and depreciation and amortization.[2]

Property, plant and equipment declined by around 18% to €20,780 million, mainly as a result of reclassifications totaling €6,651 million, primarily to the disposal groups. Depreciation and amortization[2] amounted to €3,155 million, lower than investments (€3,615 million). Additions from acquisitions amounted to €1,425 million.

1 As of January 1, 2018, receivables from bank acceptance drafts are no longer reported under trade accounts receivable, but under the item other receivables and miscellaneous assets. The 2017 figures have been restated accordingly. For more information, see Note 18 to the Consolidated Financial Statements from page 235 onward.
2 Including impairments and reversals of impairments

Investments accounted for using the equity method declined by €2,512 million to €2,203 million, largely due to the reclassification of oil and gas shareholdings to the disposal group.

At €570 million, other financial assets were down €36 million from the prior-year level. Deferred tax assets increased by €224 million to €2,342 million, primarily from higher provisions for pensions and similar obligations. Other receivables and miscellaneous assets declined by €446 million year on year to €886 million, mainly due to the reclassification of loan receivables to the disposal group for the oil and gas business.

Current assets rose by €12,076 million to €43,221 million. This was primarily attributable to reclassifications from noncurrent assets to the disposal groups. The assets of disposal groups totaled €14,607 million as of the year-end, of which €14,088 million was attributable to the discontinued oil and gas business.

Inventories increased by €1,863 million. Of this figure, €887 million resulted from the transaction with Bayer. By contrast, trade accounts receivable declined by €136 million and other receivables and miscellaneous assets by €355 million, mainly due to lower bank acceptance drafts in China and the reclassification to the disposal group for the discontinued oil and gas business. Marketable securities rose by €292 million to €344 million following an optimization of current cash deposits. By contrast, cash and cash equivalents decreased by €4,195 million to €2,300 million, largely as a result of the purchase price payment to Bayer.

For more information on the composition and development of individual asset items, see the Notes to the Consolidated Financial Statements from page 228 onward

# Financial Position

### Equity and liabilities

| | December 31, 2018 | | December 31, 2017 | |
|---|---|---|---|---|
| | Million € | % | Million € | % |
| Paid-in capital | 4,294 | 5.0 | 4,293 | 5.4 |
| Retained earnings | 36,699 | 42.4 | 34,826 | 44.2 |
| Other comprehensive income | (5,939) | (6.9) | (5,282) | (6.7) |
| Noncontrolling interests | 1,055 | 1.2 | 919 | 1.2 |
| **Equity** | **36,109** | **41.7** | **34,756** | **44.1** |
| | | | | |
| Provisions for pensions and similar obligations | 7,434 | 8.6 | 6,293 | 8.0 |
| Other provisions | 1,860 | 2.1 | 3,478 | 4.4 |
| Deferred tax liabilities | 1,787 | 2.1 | 2,731 | 3.5 |
| Financial indebtedness | 15,332 | 17.7 | 15,535 | 19.7 |
| Other liabilities | 705 | 0.8 | 1,095 | 1.4 |
| **Noncurrent liabilities** | **27,118** | **31.3** | **29,132** | **37.0** |
| | | | | |
| Accounts payable, trade | 5,122 | 5.9 | 4,971 | 6.3 |
| Provisions | 3,252 | 3.8 | 3,229 | 4.1 |
| Tax liabilities | 695 | 0.8 | 1,119 | 1.4 |
| Financial indebtedness | 5,509 | 6.4 | 2,497 | 3.2 |
| Other liabilities | 2,998 | 3.5 | 3,064 | 3.9 |
| Liabilities of disposal groups | 5,753 | 6.6 | – | – |
| **Current liabilities** | **23,329** | **27.0** | **14,880** | **18.9** |
| **Total equity and liabilities** | **86,556** | **100.0** | **78,768** | **100.0** |

## Equity and liabilities

- **Equity ratio at 41.7%, compared with 44.1% in previous year**
- **Net debt rises by €6,712 million**

Equity rose by €1,353 million year on year to €36,109 million. Retained earnings increased by €1,873 million to €36,699 million. Other comprehensive income declined by €657 million to minus €5,939 million. This was mainly due to actuarial losses on the plan assets for defined benefit plans due to the negative development of the capital markets. This contrasted with currency effects. The equity ratio decreased from 44.1% to 41.7%, mainly as a result of the increase in total assets.

Compared with the end of 2017, noncurrent liabilities decreased by €2,014 million to €27,118 million. This was primarily due to the intra-year reclassification of noncurrent liabilities to the disposal groups, almost exclusively for the oil and gas business. By contrast, the transaction with Bayer increased noncurrent liabilities by €636 million in 2018.

Provisions for pensions and similar obligations rose by €1,141 million. This was largely driven by the remeasurement of plan assets. The reclassification of provisions to the disposal groups had an offsetting effect.

The €203 million decline in noncurrent financial indebtedness was mainly attributable to lower liabilities to credit institutions, which accounted for €190 million of this decrease. The carrying amounts of bonds and other liabilities to the capital market were slightly below the prior-year level as of December 31, 2018. Two eurobonds with an aggregate carrying amount of €2,002 million were reclassified to current financial indebtedness in 2018. By contrast, bonds were issued in pounds sterling, euros, U.S. dollars, Australian dollars and Japanese yen with terms of between four and 30 years and an aggregate carrying amount of €1,866 million as of the year-end. The intrayear reclassification of liabilities to credit institutions with a carrying amount of €499 million to the disposal group for the oil and gas business was partly offset by long-term loans taken out from banks.

Noncurrent other provisions declined by €1,618 million, deferred tax liabilities by €944 million and noncurrent other liabilities by €390 million. In each case, this was mainly due to reclassifications to the disposal group for the oil and gas business.

Current liabilities rose by €8,449 million to €23,329 million, primarily as a result of reclassifications to the disposal groups. The liabilities of disposal groups amounted to €5,753 million as of December 31, 2018. Current liabilities assumed in connection with the transaction with Bayer during the year amounted to €282 million as of the year-end.

Higher current financial indebtedness (+€3,012 million) and trade accounts payable (+€151 million) also contributed to the increase in current liabilities.

The rise in current financial indebtedness was largely due to the issue of U.S. dollar commercial paper with a carrying amount of around €2,549 million as of December 31, 2018. The reclassification of bonds to current financial indebtedness mentioned above contrasted with the scheduled repayment of three eurobonds with an aggregate carrying amount of €1,773 million.

Current tax liabilities declined by €424 million and current other liabilities by €66 million, in both cases primarily as a result of the reclassification to the disposal group for the oil and gas business. Within current liabilities, the main offsetting effect came from higher advances on orders. At €3,252 million as of December 31, 2018, current provisions were slightly above the prior-year level.

Overall, financial indebtedness grew by €2,809 million to €20,841 million. Together with the decline in cash and cash equivalents, particularly in connection with the purchase price payment for the acquisition of significant businesses from Bayer, this increased net debt by €6,712 million compared with December 31, 2017, to €18,197 million. Net debt is calculated by subtracting marketable securities and cash and cash equivalents from current and noncurrent financial indebtedness. This balance-related indicator provides information on effective indebtedness.

For more information on the composition and development of individual equity and liability items, see the Notes to the Consolidated Financial Statements from page 238 onward

For more information on the development of the balance sheet, see the Ten-Year Summary on pages 282 to 283

**Net debt**

Million €

| | December 31, 2018 | December 31, 2017 |
|---|---|---|
| Noncurrent financial indebtedness | 15,332 | 15,535 |
| + Current financial indebtedness | 5,509 | 2,497 |
| **Financial indebtedness** | **20,841** | **18,032** |
| – Marketable securities | 344 | 52 |
| – Cash and cash equivalents | 2,300 | 6,495 |
| **Net debt** | **18,197** | **11,485** |

## Financing policy and credit ratings

- **Financing principles remain unchanged**
- **"A" ratings confirmed**

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.

We strive to maintain 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 €

| | |
|---|---|
| 2019 | 5,509 |
| 2020 | 1,335 |
| 2021 | 1,178 |
| 2022 | 2,105 |
| 2023 | 1,155 |
| 2024 and beyond | 9,559 |

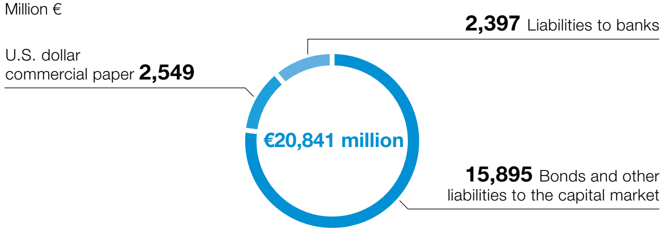
Rated "A1/P-1/outlook stable" by Moody's, "A/A-1/outlook stable" by Standard & Poor's and "A/S-1/outlook stable" by Scope Ratings, BASF enjoys good credit ratings, especially compared with competitors in the chemical industry. These ratings were most recently confirmed by Moody's on February 15, 2019, by Standard & Poor's on January 11, 2019, and by Scope Ratings on December 11, 2018.

We have solid financing. 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 investor base and optimize our debt capital financing conditions.

For short-term financing, we use BASF SE's U.S. dollar commercial paper program, which has an issuing volume of up to $12.5 billion. As of December 31, 2018, commercial paper in the amount of $2,919 million was outstanding under this program; we did not hold any commercial paper as of December 31, 2017. Firmly committed, syndicated credit lines of €6 billion serve to cover the repayment of outstanding commercial paper, and can also be used for general company purposes. These were refinanced in January 2019. The above credit lines were not used at any point in 2018. Our external financing is therefore largely independent of short-term fluctuations in the credit markets.

**Financing instruments**

Million €




Off-balance-sheet financing tools, such as leasing, are of minor importance to us. 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).

For more information on the financing tools used, see Note 24 from page 246 onward and Note 27 from page 251 onward in the Notes to the Consolidated Financial Statements

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 by means of 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 interest to variable rates or vice versa.

## Statement of cash flows

- **Cash flows from operating activities and free cash flow lower year on year**

**Cash flows from operating activities** declined by €846 million compared with the previous year to €7,939 million in 2018. This was mainly due to the decrease in net income, despite lower amortization of intangible assets and depreciation of property, plant and equipment. The change in net working capital had an offsetting effect. This was primarily attributable to the decline in cash tied up for receivables and the higher level of cash released from operating liabilities. This was partly offset by the increase in cash tied up in inventories. The cash released in miscellaneous items in 2018 was largely the result of the increase in pension provisions as well as lower adjustments for non-cash-effective earnings contributions from equity-accounted investments compared with the previous year.

**Cash flows from investing activities** amounted to minus €11,804 million in 2018, compared with minus €3,958 million in 2017. Payments made for intangible assets and property, plant and equipment amounted to €3,894 million, €102 million below the prior-year figure and €144 million higher than amortization of intangible assets and depreciation of property, plant and equipment.

Acquisitions and divestitures in 2018 resulted in net payments made of €7,255 million. These mainly related to the purchase price payment to Bayer, which amounted to €7,208 million including liquid funds assumed. By contrast, net payments of €27 million were received in the previous year.

Cash tied up by changes in financial assets and miscellaneous items amounted to minus €655 million in 2018, after €11 million was released in 2017. The main contributing factors were higher additions from marketable securities and financial assets compared with the previous year, as well as the change in other financing-related receivables.

For more information on investments and acquisitions, see page 41 onward

**Cash flows from financing activities** amounted to minus €52 million in 2018, after €394 million in 2017. Changes in financial and similar liabilities resulted in a cash inflow of €3.0 billion in the reporting year, around €0.3 billion less than in the previous year. This was primarily due to the issue of U.S. dollar commercial paper by BASF SE with a carrying amount of around €2.5 billion and bonds with a carrying amount of around €1.9 billion. The main offsetting effect was the repayment of maturing bonds in the amount of €1.8 billion. In 2018, dividends of €2,847 million were paid to shareholders of BASF SE and €174 million to noncontrolling interests.

Cash and cash equivalents amounted to €2,519 million as of December 31, 2018. They declined by a cash-effective amount of €3,917 million in 2018, mainly as a result of the purchase price payment to Bayer.

**Statement of cash flows**

Million €

| | 2018 | 2017 |
|---|---|---|
| Net income | 4,707 | 6,078 |
| Amortization of intangible assets and depreciation of property, plant and equipment | 3,750 | 4,213 |
| Changes in net working capital | (530) | (1,167) |
| Miscellaneous items | 12 | (339) |
| **Cash flows from operating activities** | **7,939** | **8,785** |
| | | |
| Payments made for intangible assets and property, plant and equipment | (3,894) | (3,996) |
| Acquisitions/divestitures | (7,255) | 27 |
| Changes in financial assets and miscellaneous items | (655) | 11 |
| **Cash flows from investing activities** | **(11,804)** | **(3,958)** |
| | | |
| Capital increases/repayments and other equity transactions | 3 | 19 |
| Changes in financial and similar liabilities | 2,966 | 3,248 |
| Dividends | (3,021) | (2,873) |
| **Cash flows from financing activities** | **(52)** | **394** |
| | | |
| Changes in cash and cash equivalents affecting liquidity | (3,917) | 5,221 |
| Cash and cash equivalents at the beginning of the period and other changes | 6,436 | 1,274 |
| **Cash and cash equivalents at the end of the year[1]** | **2,519** | **6,495** |

1 In 2018, cash and cash equivalents presented in the statement of cash flows deviate from the figure in the balance sheet, as cash and cash equivalents of the oil and gas business in the balance sheet have been reclassified to the disposal group.

Free cash flow, which remains after deducting payments made for intangible assets and property, plant and equipment from cash flows from operating activities, represents the financial resources remaining after investments. It declined to €4,045 million compared with €4,789 million in the previous year due to the decrease in cash flows from operating activities.

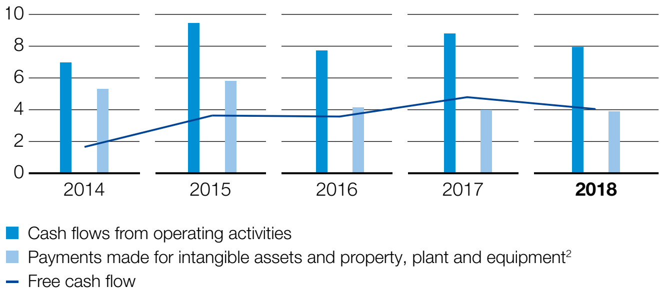
**Free cash flow**

Million €

| | December 31, 2018 | December 31, 2017 |
|---|---|---|
| Cash flows from operating activities | 7,939 | 8,785 |
| – Payments made for intangible assets and property, plant and equipment | 3,894 | 3,996 |
| **Free cash flow** | **4,045** | **4,789** |

**Cash flow**

Billion €




2 Including investments to the extent that they already had an effect on cash

# Actual Development Compared with Outlook for 2018

BASF Group sales increased slightly in 2018, in line with our forecast. EBIT before special items declined considerably in 2018 and was thus lower than the slight increase forecast at the beginning of the year. On the one hand, we adjusted our forecast in September 2018 to a slight decline in EBIT before special items compared with the adjusted figure for 2017 as a result of the changed presentation of the oil and gas business following the signing of the definitive agreement with LetterOne. On the other, earnings development in the Functional Materials & Solutions and Performance Products segments in particular did not meet our expectations. As a result, EBIT also declined considerably in 2018 instead of slightly as we had anticipated. EBIT after cost of capital declined considerably, as expected.

**Forecast/actual comparison[1]**

| | Sales | | Income from operations (EBIT) before special items | |
|---|---|---|---|---|
| | 2018 forecast | 2018 actual | 2018 forecast | 2018 actual |
| Chemicals | slight decline | slight increase | considerable decline | considerable decline |
| Performance Products | slight increase | slight decline | considerable increase | slight decline |
| Functional Materials & Solutions | slight increase | slight increase | considerable increase | considerable decline |
| Agricultural Solutions | considerable increase | considerable increase | slight decline | considerable decline |
| Other | slight increase | considerable increase | slight increase | considerable increase |
| **BASF Group** | **slight increase** | **slight increase** | **slight increase[2]** | **considerable decline** |

1 For sales, "slight" represents a change of 1–5%, while "considerable" applies to changes of 6% and higher. "At prior-year level" indicates no change (+/–0%). For earnings, "slight" means a change of 1–10%, while "considerable" is used for changes of 11% and higher. "At prior-year level" indicates no change (+/–0%).
2 We adjusted our forecast in September 2018 to a slight decline in EBIT before special items compared with the adjusted figure for 2017 as a result of the changed presentation of the Wintershall Group following the signing of the definitive agreement with LetterOne. We revised this forecast in December 2018 to a considerable decline in EBIT before special items.

We increased sales slightly in the **Chemicals** segment, after predicting a slight decline in sales at the beginning of 2018. The anticipated decrease in isocyanate prices as a result of additional capacities occurred later in the year than expected. EBIT before special items declined considerably as forecast.

Sales in the **Performance Products** segment declined slightly, contrary to our forecast of a slight increase. We were unable to increase sales volumes as expected due to the continued lower availability of citral-based products in the Nutrition & Health division and lower sales volumes in the Care Chemicals division, especially for oleochemical surfactants and fatty alcohols, as well as in the hygiene business. As a result, EBIT before special items did not increase considerably as anticipated, but declined slightly.

Sales in the **Functional Materials & Solutions** segment increased slightly in line with our forecast. Margins did not improve as expected due to the increase in raw materials prices, and so we recorded a considerable decline instead of a considerable increase in EBIT before special items.

We achieved a considerable increase in sales in the **Agricultural Solutions** segment, as forecast. The acquisition of significant businesses from Bayer, which was originally expected in the first half of 2018, was delayed until August 2018. The later-than-expected closing of the transaction and the seasonality of the businesses meant that earnings were more negatively impacted than anticipated. Earnings were also weighed down by currency effects in all regions. Consequently, EBIT before special items declined considerably instead of slightly. EBIT before special items excluding the acquired Bayer activities also declined considerably compared with the previous year, rather than the slight increase we forecast.

In **Other**, both sales and EBIT before special items increased considerably and were thus higher than our forecast of a slight increase. The stronger sales development was mainly attributable to higher sales volumes in raw materials trading. The improvement in earnings was primarily due to valuation effects for our long-term incentive program.

In 2018, we invested a total of €3.5 billion in capital expenditures (capex), excluding additions from acquisitions, capitalized exploration, IT investments, restoration obligations and right-of-use assets arising from leases. This includes **capex** of €383 million in the former Oil & Gas segment for the first three quarters of 2018. The figure forecast at the beginning of 2018 was approximately €4.0 billion and included investments of €0.7 billion in the former Oil & Gas segment. Capex in the Functional Materials & Solutions segment and Other in particular was below the planned values.

For information on our expectations for 2019, see page 120 onward
For information on investments, see page 41

# Business Review by Segment

**Segment overview**

Million €

| | Sales | | Income from operations before depreciation and amortization (EBITDA) | | Income from operations (EBIT) before special items | |
|---|---|---|---|---|---|---|
| | **2018** | **2017** | **2018** | **2017** | **2018** | **2017** |
| Chemicals | 16,501 | 16,331 | 4,432 | 5,374 | 3,386 | 4,233 |
| Performance Products | 15,812 | 16,217 | 2,205 | 2,427 | 1,376 | 1,416 |
| Functional Materials & Solutions | 21,435 | 20,745 | 1,917 | 2,251 | 1,307 | 1,617 |
| Agricultural Solutions | 6,156 | 5,696 | 985 | 1,282 | 734 | 1,033 |
| Other | 2,771 | 2,234 | (373) | (569) | (450) | (654) |
| **BASF Group** | **62,675** | **61,223** | **9,166** | **10,765** | **6,353** | **7,645** |

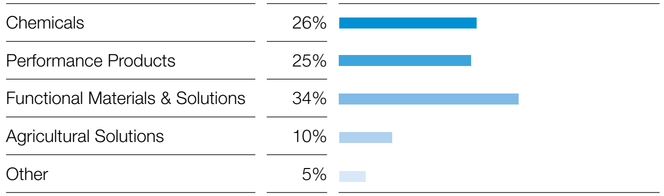
**Segment overview**

Million €

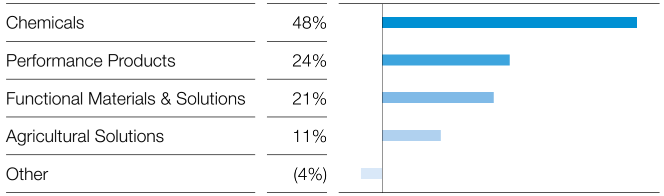
| | Income from operations (EBIT) | | Assets | | Investments including acquisitions[1] | |
|---|---|---|---|---|---|---|
| | **2018** | **2017** | **2018** | **2017** | **2018** | **2017** |
| Chemicals | 3,360 | 4,208 | 13,264 | 13,233 | 1,325 | 1,149 |
| Performance Products | 1,338 | 1,510 | 14,903 | 14,432 | 765 | 800 |
| Functional Materials & Solutions | 1,235 | 1,545 | 17,654 | 17,364 | 872 | 1,056 |
| Agricultural Solutions | 591 | 1,015 | 16,992 | 8,096 | 7,110 | 185 |
| Other | (491) | (691) | 23,743 | 25,643 | 663 | 1,174 |
| **BASF Group** | **6,033** | **7,587** | **86,556** | **78,768** | **10,735** | **4,364** |

1 Additions to property, plant and equipment (of which from acquisitions: €1,425 million in 2018 and €8 million in 2017) and intangible assets (of which from acquisitions: €5,540 million in 2018 and €235 million in 2017)

**Contributions to total sales by segment**




**Contributions to EBITDA by segment**



**Sales[1]**

Million €

| | Q1 | | Q2 | | Q3 | | Q4 | |
|---|---|---|---|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 |
| Chemicals | 4,286 | 4,105 | 4,132 | 4,045 | 4,309 | 4,023 | 3,774 | 4,158 |
| Performance Products | 3,991 | 4,260 | 3,949 | 4,142 | 3,989 | 3,983 | 3,883 | 3,832 |
| Functional Materials & Solutions | 5,139 | 5,198 | 5,540 | 5,261 | 5,238 | 4,975 | 5,518 | 5,311 |
| Agricultural Solutions | 1,728 | 1,855 | 1,501 | 1,526 | 1,243 | 987 | 1,684 | 1,328 |
| Other | 556 | 609 | 661 | 475 | 827 | 548 | 727 | 602 |
| **BASF Group** | **15,700** | **16,027** | **15,783** | **15,449** | **15,606** | **14,516** | **15,586** | **15,231** |

**Income from operations (EBIT) before special items[1]**

Million €

| | Q1 | | Q2 | | Q3 | | Q4 | |
|---|---|---|---|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 |
| Chemicals | 1,134 | 958 | 1,074 | 1,120 | 851 | 1,102 | 327 | 1,053 |
| Performance Products | 470 | 515 | 409 | 405 | 360 | 385 | 137 | 111 |
| Functional Materials & Solutions | 333 | 531 | 338 | 422 | 347 | 397 | 289 | 267 |
| Agricultural Solutions | 423 | 533 | 278 | 272 | (5) | 21 | 38 | 207 |
| Other | (79) | (239) | (127) | (99) | (83) | (203) | (161) | (113) |
| **BASF Group** | **2,281** | **2,298** | **1,972** | **2,120** | **1,470** | **1,702** | **630** | **1,525** |

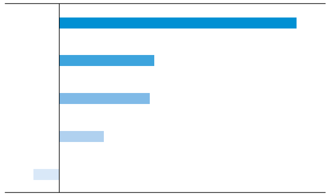
**Income from operations (EBIT)[1]**

Million €

| | Q1 | | Q2 | | Q3 | | Q4 | |
|---|---|---|---|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 |
| Chemicals | 1,126 | 974 | 1,064 | 1,119 | 846 | 1,089 | 324 | 1,026 |
| Performance Products | 482 | 499 | 402 | 363 | 348 | 567 | 106 | 81 |
| Functional Materials & Solutions | 325 | 521 | 326 | 427 | 337 | 357 | 247 | 240 |
| Agricultural Solutions | 417 | 531 | 259 | 270 | (39) | 20 | (46) | 194 |
| Other | (87) | (233) | (145) | (129) | (97) | (209) | (162) | (120) |
| **BASF Group** | **2,263** | **2,292** | **1,906** | **2,050** | **1,395** | **1,824** | **469** | **1,421** |

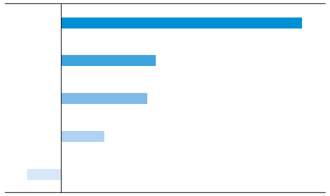
**Contributions to EBIT before special items by segment**

| | |
|---|---|
| Chemicals | 53% |
| Performance Products | 22% |
| Functional Materials & Solutions | 21% |
| Agricultural Solutions | 11% |
| Other | (7%) |



**Contributions to EBIT by segment**

| | |
|---|---|
| Chemicals | 56% |
| Performance Products | 22% |
| Functional Materials & Solutions | 20% |
| Agricultural Solutions | 10% |
| Other | (8%) |



1 Quarterly results not audited

# Chemicals

**The Chemicals segment consists of the Petrochemicals, Monomers and Intermediates divisions. In our integrated production facilities – our Verbund – we produce a broad range of basic chemicals and intermediates in Europe, Asia, North America and South America for our customers as well as for internal supply into the BASF Verbund.**

## Divisions

### Petrochemicals

Broad range of basic products for sectors such as the chemical and plastics industries

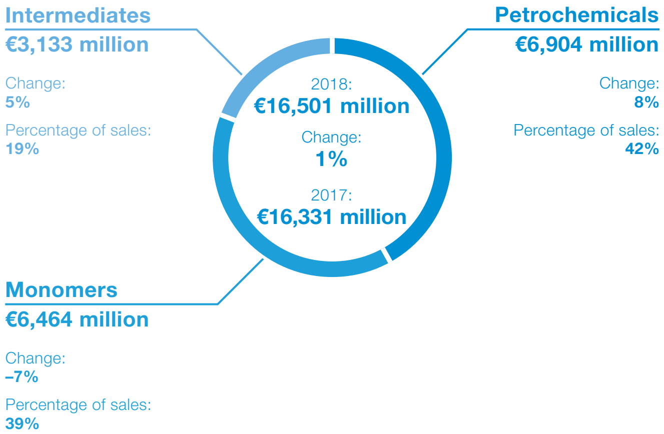
### Monomers

Isocyanates and polyamides as well as inorganic basic products and specialties for various sectors, such as the plastics, automotive and construction industries

### Intermediates

Most comprehensive intermediates portfolio in the world, including precursors for coatings, plastics, textile fibers and crop protection products

## Sales




**Factors influencing sales**

| | |
|---|---|
| Volumes | (1%) |
| Prices | 4% |
| Portfolio | 0% |
| Currencies | (2%) |
| **Sales** | **1%** |

**Income from operations before special items**

| Million € | |
|---|---|
| **2018** | **3,386** |
| 2017 | 4,233 |

Change: **–€847 million**

### How we create value – an example

## Biomass balance approach for methanol

Fossil resource-saving process expanded

**Value for BASF**

Annual volume of relevant market in Europe

**20.5 million** metric tons

**Value for the environment**

**≥50%** lower greenhouse gas emissions

Since 2013, BASF has used the biomass balance approach to promote the use of sustainably produced renewable raw materials in the integrated Production Verbund by replacing fossil feedstock with biogas or bio-naphtha at the very beginning of the value chain. BASF has produced methanol according to the biomass balance approach since 2018. This methanol is certified according to the EU-RedCert standard. Methanol is an important raw material for many products in different value chains. Potential applications are biofuels and fuel additives. The European market for methyl-tert-butylether (MTBE), a fuel additive manufactured from methanol, has an annual volume of 20.5 million metric tons.

Biomass balance products actively contribute to saving fossil raw materials and in this way, help reduce greenhouse gas emissions. For instance, using renewable feedstock in the methanol production process reduces climate-damaging greenhouse gas emissions by at least 50% compared with conventionally produced methanol. For the methanol certified according to the EU-RedCert standard, BASF completely replaces fossil methane with biomethane made from waste and residual materials.

### Strategy

- **Integrated production facilities form core of Verbund**
- **Technology and cost leadership provide most important competitive edge**

With its production facilities, the Chemicals segment is at the heart of the Verbund and supplies BASF's segments with basic chemicals for the production of downstream products. We add value with innovations in processes and production and invest in future markets. As a reliable supplier, we provide chemicals of consistent quality and market them to customers in downstream industries. We continuously improve our value chains and are expanding our market position – particularly outside Europe – with new processes and technologies, as well as through investments and collaborations in future markets.

We invest in research and development to develop new technologies and to make our existing technologies even more efficient. Cost leadership and a clear orientation along individual value chains are among our most important competitive advantages. We concentrate on the critical success factors of the classic chemicals business: leveraging economies of scale and the advantages of our Verbund, high capacity utilization, continuous optimization of access to raw materials, lean and energy efficient processes – including reducing greenhouse gas emissions – and reliable, cost-effective logistics. Furthermore, we are constantly improving our global production structures and aligning these with regional market requirements.

We plan to build an integrated Verbund chemical production site in Zhanjiang in the southern Chinese province of Guangdong. A non-binding Memorandum of Understanding was signed in July 2018. At the new site, we intend to implement a comprehensive smart manufacturing concept based on implementing cutting-edge digital technologies within the plants.

BASF and Sinopec, Beijing, signed a Memorandum of Understanding in October to further strengthen their partnership in chemical production in China. The partners intend to build an additional steam cracker and to further expand their existing 50:50 joint venture, BASF-YPC Company Limited, at our Verbund site in Nanjing.

To support the growing demand for acrylic monomers in Asia Pacific, BASF PETRONAS Chemicals is looking into expanding the production capacity of its acrylic acid plant and butyl acrylate plants at our Verbund site in Kuantan, Malaysia.

At our Verbund site in Antwerp, Belgium, we are planning a significant capacity expansion of the integrated ethylene oxide complex. The project also includes several downstream derivatives, such as surfactants.

In Ludwigshafen, Germany, we will strengthen our Verbund by replacing our acetylene plant with a modern highly efficient plant by the end of 2019.

The new MDI synthesis unit in Geismar, Louisiana, is a major milestone toward increasing MDI production capacity in North America. This investment supports the growth of our MDI customers in the North American market.

On September 18, 2017, we signed an agreement with Solvay on the acquisition of Solvay's integrated polyamide business.

For more information on the current status of the agreement with Solvay, see page 42

**Products, customers and applications**

| Division | Products | Customer industries and applications |
|---|---|---|
| Petrochemicals | Ethylene, propylene, butadiene, benzene, alcohols, solvents, plasticizers, alkylene oxides, glycols and acrylic monomers | Use in the BASF Verbund<br><br>Chemical and plastics industry, detergent, hygiene, automotive, packaging and textile industries; production of paints, coatings, and cosmetics as well as oilfield, construction and paper chemicals |
| 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 | Use in the BASF Verbund<br><br>Industries such as plastics, woodworking, furniture, packaging, textile, construction and automotive |
| Intermediates | Basic products: butanediol and derivatives, alkylamines and alkanolamines, neopentyl glycol, formic and propionic acid<br><br>Specialties: specialty amines such as tertiary butylamine and polyetheramine, gas treatment chemicals, vinyl monomers, acid chlorides, chloroformates, chiral intermediates | Use in the BASF Verbund<br><br>Plastics, coatings and pharmaceutical industries, production of detergents and cleaners as well as crop protection products and textile fibers |

**Investments**

| Location | Project | Additional annual capacity through expansion (metric tons) | Total annual capacity (metric tons) | Startup |
|---|---|---|---|---|
| Freeport, Texas | Construction: ammonia plant[1] | | 750,000 | 2018 |
| Geismar, Louisiana | Construction: MDI synthesis unit | n/a | 300,000 | 2020 |
| Ludwigshafen, Germany | Replacement: acetylene plant | n/a | 90,000 | 2019 |
| Nanjing, China | Construction: specialty amines plant | 21,000 | n/a | 2019 |
| | Expansion: propionic acid plant[2] | 30,000 | 69,000 | 2019 |

1 Operated by an associated company with Yara International ASA
2 Operated by a joint venture with Sinopec

**Production capacities of significant products**[1]

| | Sites | | | | |
|---|---|---|---|---|---|
| **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 |
| Ammonia | ■ | | | | 1,525,000 |
| Benzene | ■ | ■ | ■ | | 910,000 |
| Butadiene | ■ | ■ | ■ | | 680,000 |
| Butanediol equivalents | ■ | ■ | ■ | | 670,000 |
| Chlorine | ■ | | | | 385,000 |
| Ethanolamines and derivatives | ■ | | ■ | | 430,000 |
| Ethylene | ■ | ■ | ■ | | 3,480,000 |
| Ethylene oxide | ■ | ■ | ■ | | 1,445,000 |
| Urea | ■ | | | | 545,000 |
| Isocyanates | ■ | ■ | ■ | | 2,610,000 |
| Caustic soda | ■ | | | | 360,000 |
| Neopentyl glycol | ■ | ■ | ■ | | 205,000 |
| Oxo-C4 alcohols (calculated as butyraldehyde) | ■ | ■ | ■ | | 1,625,000 |
| Polyamide 6 and 6.6 | ■ | ■ | ■ | | 820,000 |
| Polyamide precursors | ■ | ■ | | | 910,000 |
| PolyTHF® | ■ | ■ | ■ | | 350,000 |
| Propionic acid | ■ | | ■ | | 150,000 |
| Propylene | ■ | ■ | ■ | | 2,610,000 |
| Propylene oxide | ■ | | | | 675,000 |
| Sulfuric acid | ■ | | | | 920,000 |
| Plasticizers | ■ | ■ | | | 595,000 |

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

**Segment data – Chemicals**

Million €

| | | 2018 | 2017 | +/– |
|---|---|---|---|---|
| Sales to third parties | | 16,501 | 16,331 | 1% |
| of which Petrochemicals | | 6,904 | 6,389 | 8% |
| Monomers | | 6,464 | 6,963 | (7%) |
| Intermediates | | 3,133 | 2,979 | 5% |
| Intersegment transfers | | 6,105 | 6,063 | 1% |
| Sales including intersegment transfers | | 22,606 | 22,394 | 1% |
| Income from operations before depreciation and amortization (EBITDA) | | 4,432 | 5,374 | (18%) |
| EBITDA margin | % | 26.9 | 32.9 | – |
| Depreciation and amortization[1] | | 1,072 | 1,166 | (8%) |
| Income from operations (EBIT) | | 3,360 | 4,208 | (20%) |
| Special items | | (26) | (25) | (4%) |
| EBIT before special items | | 3,386 | 4,233 | (20%) |
| EBIT after cost of capital | | 2,030 | 2,895 | (30%) |
| Assets | | 13,264 | 13,233 | 0% |
| Investments including acquisitions[2] | | 1,325 | 1,149 | 15% |
| Research and development expenses | | 129 | 128 | 1% |

1 Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and reversals of impairments)
2 Additions to intangible assets and property, plant and equipment

## Chemicals segment

- **Sales growth of 1% to €16,501 million due to higher prices**
- **EBIT before special items declines 20% to €3,386 million primarily as a result of lower margins, impacted by low water level of Rhine River**

At €16,501 million, sales to third parties in the Chemicals segment in 2018 were €170 million above the prior-year figure (volumes –1%, prices 4%, portfolio 0%, currencies –2%). This was due to higher prices overall in all divisions, especially in Petrochemicals. By contrast, the Monomers division saw a decrease in isocyanate prices. Currency effects had a negative impact on sales. Sales volumes were also slightly below the prior-year level. We increased volumes overall in the Petrochemicals and Intermediates divisions despite the low water levels on the Rhine River, while sales volumes declined considerably in the Monomers division.

Income from operations (EBIT) before special items declined by €847 million to €3,386 million. This was mainly attributable to lower margins for isocyanates in the Monomers division and steam cracker products in the Petrochemicals division. Stronger margins in the Intermediates division were unable to compensate for this. Plant shutdowns and the low water levels on the Rhine River in the second half of 2018 also contributed to the decline in earnings. EBIT declined by €848 million to €3,360 million. Overall, special items did not have a substantial impact.

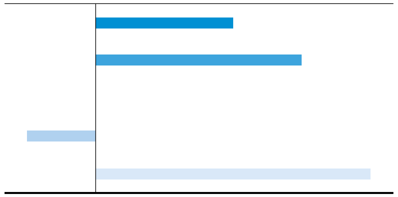
## Petrochemicals

- **Sales rise 8% to €6,904 million due to higher prices and volumes**
- **Considerable decline in EBIT before special items attributable to lower margins, higher fixed costs and low water level of Rhine River**

The Petrochemicals division increased sales to third parties by €515 million to €6,904 million in 2018. This was mainly due to significantly higher sales prices. These rose in all regions and business areas, largely following the higher raw materials prices for naphtha and butane, our most important feedstock. We also increased volumes. In Europe, sales volumes were slightly higher than in the previous year, as the supply of raw materials through the North Harbor and thus production in Ludwigshafen, Germany, was severely restricted in 2017. However, the low water levels on the Rhine River in the third and fourth quarters of 2018 led to significant production limitations. Volumes rose in North America, mainly as a result of higher capacity utilization of the condensate splitter in Port Arthur, Texas. Sales were dampened by currency effects.

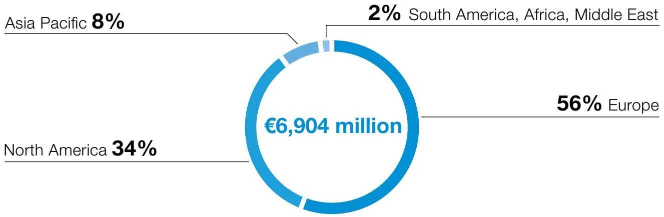
**Petrochemicals – Factors influencing sales**

| | |
|---|---|
| Volumes | 4% |
| Prices | 6% |
| Portfolio | 0% |
| Currencies | (2%) |
| **Sales** | **8%** |



**Petrochemicals – Sales by region**

Location of customer




EBIT before special items declined considerably. Compared with the very strong prior-year level, margins decreased significantly over the course of the year, especially for steam cracker products. This was due to higher market supply as a result of new capacities in the market, particularly in North America. Fixed costs increased. In the previous year, we received significantly higher insurance refunds; in addition, maintenance expenses were up from the 2017 figure. The low water levels on the Rhine River was a significant contributor to the decline in earnings.

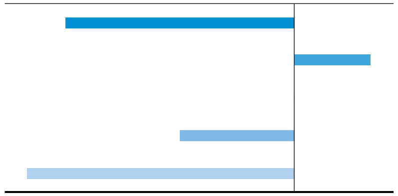
## Monomers

- **Sales down 7% to €6,464 million as a result of lower volumes and negative currency effects**
- **Considerable decline in EBIT before special items largely from lower margins and volumes in the isocyanates business**

Sales to third parties in the Monomers division decreased by €499 million to €6,464 million in 2018 due to lower volumes and negative currency effects. Sales volumes declined year on year as a result of higher market supply and the low water levels on the Rhine River. Overall, prices were above the prior-year level. Higher prices for polyamides in particular compensated for the price decrease in the isocyanates business on the back of higher market supply.

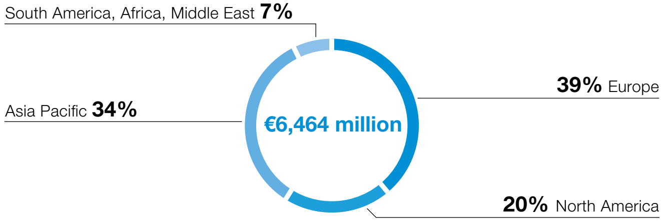
**Monomers – Factors influencing sales**

| | |
|---|---|
| Volumes | (6%) |
| Prices | 2% |
| Portfolio | 0% |
| Currencies | (3%) |
| **Sales** | **(7%)** |



**Monomers – Sales by region**

Location of customer




The considerable year-on-year decline in EBIT before special items in the Monomers division was primarily attributable to the lower margins and volumes in the isocyanates business. Earnings development in the fourth quarter of 2018 was also negatively impacted by the low water levels on the Rhine River. The restructuring of our caprolactam production in Europe and reduced fixed costs, mainly owing to lower impairments, had a positive effect on earnings.

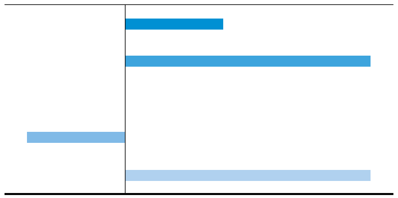
## Intermediates

- **Sales increase of 5% to €3,133 million largely driven by higher prices**
- **EBIT before special items slightly above the prior-year level due to margin and volumes growth**

The Intermediates division increased sales to third parties by €154 million year on year to €3,133 million, primarily due to higher prices. We were able to increase prices, particularly in the acids and polyalcohols business in all regions. Prices for butanediol and derivatives rose as well, especially in Europe and North America. We also increased sales volumes in 2018 – across the entire portfolio in Asia and above all in the amines and butanediol and derivatives businesses in North America. Currency effects had a negative impact on sales.

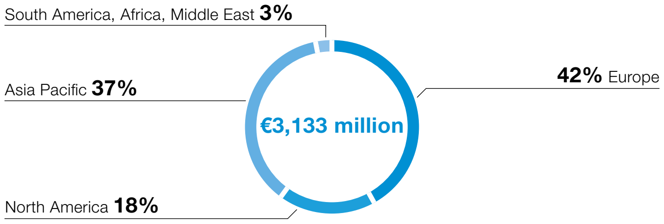
**Intermediates – Factors influencing sales**

| | |
|---|---|
| Volumes | 2% |
| Prices | 5% |
| Portfolio | 0% |
| Currencies | (2%) |
| **Sales** | **5%** |



**Intermediates – Sales by region**

Location of customer




EBIT before special items rose slightly compared with the previous year as a result of improved margins and volumes growth. This was partly offset by higher fixed costs, mostly from plant shutdowns.

The construction of the new acetylene plant in Ludwigshafen, Germany, is progressing according to schedule, with startup planned by the end of 2019.

# Performance Products

**The Performance Products segment consists of the Dispersions & Pigments, Care Chemicals, Nutrition & Health and Performance Chemicals divisions. Our offerings enhance the performance of industrial and consumer products worldwide. With our tailor-made solutions, our customers can make their production processes more efficient and give their products improved application properties.**

## Divisions

### Dispersions & Pigments

Raw materials used to formulate products in the coating, construction, paper, adhesives, printing and packaging, plastics and electronic industries

### Care Chemicals

Ingredients for the cosmetics, detergent and cleaner industries, agrochemical and technical applications and the hygiene industry

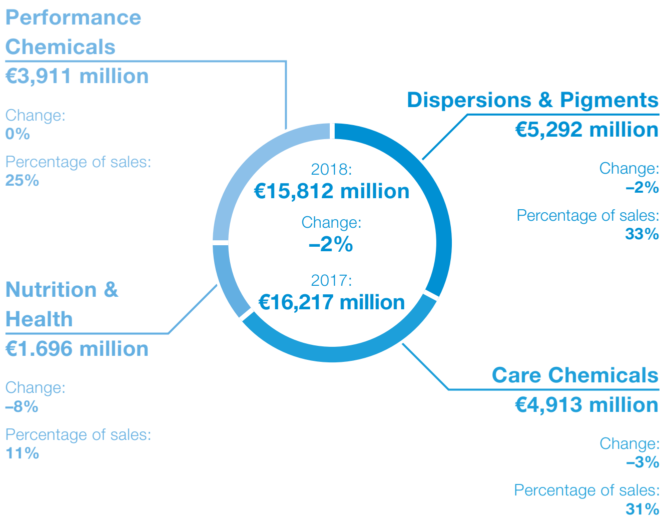
### Nutrition & Health

Products for the food and feed industries, the flavor and fragrance industry, the pharmaceutical industry and the ethanol industry

### Performance Chemicals

Customized products for many sectors, from mining and the fuel industry to plastics processing

## Sales




### Factors influencing sales

| | |
|---|---|
| Volumes | (2%) |
| Prices | 4% |
| Portfolio | (1%) |
| Currencies | (3%) |
| **Sales** | **(2%)** |

### Income from operations before special items

| Million € | |
|---|---|
| **2018** | **1,376** |
| 2017 | 1,416 |

Change: **–€40 million**

## Strategy

- **Tailor-made products and solutions improve our customers' applications and processes**
- **Global presence ensures reliable supply to customers in all regions**

We take on the challenges posed by important future issues, especially population growth: scarce resources, environmental and climatic stressors, greater demand for food and the desire for better quality of life. In doing so, we focus on research and development and maintain close relationships to leading companies in our customer industries. We position ourselves globally in order to reliably supply customers in all regions. We invest in the development of innovations that enable our products and processes – as well as our customers' applications and processes – to make a contribution to sustainability: for example, by allowing resources to be used more efficiently.

Our products create additional value for our customers, providing a competitive advantage. We develop new solutions together with our customers and strive for long-term partnerships that create profitable growth opportunities for both sides.

A different business model is pursued for standard products such as vitamins or dispersions for paper coatings. Here, efficient production setups, backward integration in our Production Verbund's value chains, capacity management, and technology and cost leadership are all essential.

We support our customers by serving as a reliable supplier with consistently high product quality, good value for money and lean processes. Our in-depth knowledge of the areas of application and technological innovations strengthen our customer relationships in key industries.

## How we create value – an example

### Hepaxa™

First-to-the-world dietary management product for patients with non-alcoholic fatty liver disease

**Value for BASF**

Annual sales potential of

around **€45 million**

**Value for customers**

Reduction of fat in the liver of

up to **44%**

Hepaxa™ is a breakthrough in the nutritional support of non-alcoholic fatty liver disease (NAFLD), one of the most common forms of chronic liver disease worldwide and can help tens of millions of patients manage NAFLD. Providing highly concentrated and pure eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), Hepaxa™, which was launched in the United States, is the first product in the world specifically designed to address a build-up of fat in the liver, known as steatosis, in NAFLD patients. We expect an annual sales potential with Hepaxa™ of around €45 million over the medium term.

NAFLD has become a disease of public health significance affecting both adults and children. It has been shown that patients with NAFLD have reduced levels of EPA and DHA. Hepaxa™ helps address a patient's distinct nutritional requirement for such omega-3 long chain polyunsaturated fatty acids. A BASF product-specific clinical trial has shown that Hepaxa™ is safe and effective in the dietary management of steatosis in patients with NAFLD. Patients in the trial showed reductions of fat of up to 44% in the liver after placebo correction.

We plan to increase global production capacities for the antioxidant Irganox® 1010 by 40% at our sites in Jurong, Singapore, and Kaisten, Switzerland. Once the projects are complete – in 2019 in Kaisten and early 2021 in Jurong – BASF wants to even better meet the growing demand from customers in Asia and Europe, the Middle East and Africa at its regional distribution centers. We are expanding our existing ibuprofen production capacities in Bishop, Texas, and started construction of a new world-scale ibuprofen plant in Ludwigshafen, Germany, which is scheduled for startup in 2022. To reliably meet the growing demand for high quality dispersions solutions in the ASEAN countries, Australia and New Zealand, we plan to double the production capacity for acrylics dispersions in Pasir Gudang, Malaysia. The additional capacities are planned to be operational in 2020.

On May 3, 2018, BASF and Solenis announced that they had signed an agreement on the combination of BASF's paper and water chemicals business with Solenis. BASF and Solenis closed the transaction on January 31, 2019.

For more information, see Events after the reporting period on page 122

**Products, customers and applications**

| Division | Products | Customer industries and applications |
|---|---|---|
| Dispersions & Pigments | Polymer dispersions, pigments, resins, formulation additives, electronic materials | Coating, construction, paper, adhesives, printing and packaging, plastics and electronic industries |
| Care Chemicals | Ingredients for skin and hair cleansing and care products, such as emollients, cosmetic active ingredients, polymers and UV filters<br><br>Ingredients for detergents and cleaners in household, institution or industry, such as surfactants, enzymes, chelating agents, polymers, biocides and products for optical effects<br><br>Excipients for crop protection product formulations, products for concrete additives and chemical processes such as emulsion polymerization, metal surface treatments or textile processing, as well as products for biofuels and other industrial applications<br><br>Superabsorbents for baby diapers, incontinence products and feminine hygiene articles | Cosmetics industry, detergent and cleaner industry, agrochemical industry, technical applications for various industries, hygiene industry |
| Nutrition & Health | Additives for the food and feed industries, such as vitamins, carotenoids, sterols, enzymes, emulsifiers and omega-3 fatty acids<br><br>Industrial enzymes for ethanol production<br><br>Flavors and fragrances, such as citral, geraniol, citronellol, L-menthol and linalool<br><br>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 ethanol industry |
| Performance Chemicals | Antioxidants, light stabilizers and flame retardants for plastic applications<br><br>Fuel and refinery additives, polyisobutene, brake fluids and engine coolants, lubricant additives and basestocks, components for metalworking fluids and compounded lubricants<br><br>Process chemicals for the extraction of oil, gas, metals and minerals, chemicals for enhanced oil recovery<br><br>Functional chemicals and process chemicals for the production of paper and cardboard, water treatment chemicals, membrane technologies, kaolin minerals | Plastics processing industry, automotive industry, fuel and lubricant industry, oil and gas industry, mining industry, municipal and industrial water treatment as well as paper and packaging industry |

**Production capacities of significant products[1]**

| | Sites | | | | |
|---|---|---|---|---|---|
| **Product** | **Europe** | **North America** | **Asia Pacific** | **South America, Africa, Middle East** | **Annual capacity (metric tons)** |
| Anionic surfactants | ■ | ■ | ■ | ■ | 600,000 |
| Citral | ■ | | ■ | | 78,000 |
| Chelating agents | ■ | ■ | | ■ | 170,000 |
| Methane sulfonic acid | ■ | | | | 30,000 |
| Nonionic surfactants | ■ | ■ | ■ | | 635,000 |
| Polyisobutene | ■ | | ■ | | 265,000 |
| Superabsorbents | ■ | ■ | ■ | ■ | 590,000 |

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

**Investments**

| Location | Project | Startup |
|---|---|---|
| Antwerp, Belgium | Gradual capacity expansion: alkoxylates | 2018–2021 |
| Bishop, Texas | Capacity expansion: production plant for ibuprofen | 2019 |
| Düsseldorf, Germany | Gradual upgrade of production plants in accordance with the Good Manufacturing Practice Standard issued by the European Federation for Cosmetic Ingredients (EFfCI) | 2022 |
| Jiaxing, China | Construction: production plant for electronic-grade sulfuric acid | 2018 |
| Jurong, Singapore | Capacity expansion: antioxidants (Irganox®) | 2021 |
| Kaisten, Switzerland | Capacity expansion: antioxidants (Irganox®) | 2019 |
| Kuantan, Malaysia | Construction: aroma ingredients complex | 2017/2018 |
| Ludwigshafen, Germany | Expansion: production plant for dispersions | 2018 |
| | Construction: production plant for vitamin A | 2020 |
| | Construction: production plant for ibuprofen | 2022 |
| Nanjing, China | Capacity expansion: polyacrylamide plant | 2018 |
| Pasir Gudang, Malaysia | Capacity expansion: production plant for acrylics dispersions | 2020 |
| Shanghai, China | Construction: production plant for plastic additives | 2019 |

**Segment data – Performance Products**

Million €

| | | 2018 | 2017 | +/– |
|---|---|---|---|---|
| Sales to third parties | | 15,812 | 16,217 | (2%) |
| of which Dispersions & Pigments | | 5,292 | 5,398 | (2%) |
| Care Chemicals | | 4,913 | 5,079 | (3%) |
| Nutrition & Health | | 1,696 | 1,844 | (8%) |
| Performance Chemicals | | 3,911 | 3,896 | 0% |
| Intersegment transfers | | 498 | 506 | (2%) |
| Sales including intersegment transfers | | 16,310 | 16,723 | (2%) |
| Income from operations before depreciation and amortization (EBITDA) | | 2,205 | 2,427 | (9%) |
| EBITDA margin | % | 13.9 | 15.0 | – |
| Depreciation and amortization[1] | | 867 | 917 | (5%) |
| Income from operations (EBIT) | | 1,338 | 1,510 | (11%) |
| Special items | | (38) | 94 | . |
| EBIT before special items | | 1,376 | 1,416 | (3%) |
| EBIT after cost of capital | | (131) | 26 | . |
| Assets | | 14,903 | 14,432 | 3% |
| Investments including acquisitions[2] | | 765 | 800 | (4%) |
| Research and development expenses | | 394 | 395 | (0%) |

1 Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and reversals of impairments)
2 Additions to intangible assets and property, plant and equipment

## Performance Products segment

- **Sales 2% lower at €15,812 million, mainly as a result of currency effects and lower volumes**
- **EBIT before special items down 3% to €1,376 million, primarily due to lower sales volumes and negative currency effects**

At €15,812 million, sales to third parties in the Performance Products segment in 2018 were €405 million below the prior-year figure (volumes –2%, prices 4%, portfolio –1%, currencies –3%). This is mainly attributable to negative currency effects in all divisions. Sales were also negatively impacted by lower volumes in the Nutrition & Health and Care Chemicals divisions as well as portfolio effects. Higher sales prices in all divisions had an offsetting effect.

Despite an overall improvement in margins, income from operations (EBIT) before special items declined by €40 million year on year to €1,376 million. This was largely due to lower sales volumes and negative currency effects. Excluding the negative currency effects, EBIT before special items was flat year on year. Compared with 2017, EBIT declined by €172 million to €1,338 million. In the previous year, we generated special income from the transfer of BASF's leather chemicals business to the Stahl group; in 2018, special charges arose from various individual items.

## Dispersions & Pigments

- **Sales 2% below the prior-year figure at €5,292 million, largely from negative currency effects**
- **Considerable decline in EBIT before special items, primarily as a result of lower margins and higher fixed costs**

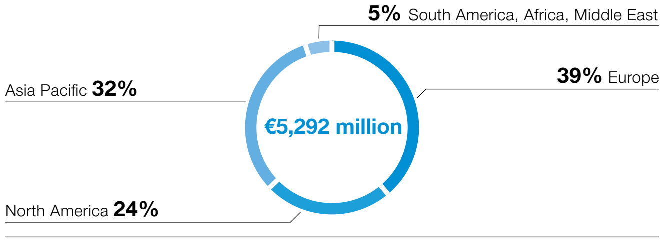
Sales to third parties in the Dispersions & Pigments division amounted to €5,292 million, €106 million below the prior-year level. This was mainly due to negative currency effects in almost all regions. Sales were also reduced by the divestiture of the production site for styrene butadiene-based paper dispersions in Pischelsdorf, Austria. The slight increase in prices, especially in the dispersions and resins businesses, was unable to compensate for this. Volumes were on a level with the prior year. Higher sales volumes in the dispersions business in Europe and North America as well as in the electronic materials business were offset by lower volumes in the additives and pigments businesses as a result of stronger competition and in the resins business due to raw materials shortages.

**Dispersions & Pigments – Factors influencing sales**

| | |
|---|---|
| Volumes | 0% |
| Prices | 2% |
| Portfolio | (1%) |
| Currencies | (3%) |
| **Sales** | **(2%)** |

**Dispersions & Pigments – Sales by region**

Location of customer




EBIT before special items declined considerably compared with 2017. This was mainly due to lower margins as a result of the increase in raw materials prices, negative currency effects and higher fixed costs. In 2017, fixed costs were partly offset by an insurance refund; in 2018, additional fixed costs arose in connection with new production facilities in Ludwigshafen, Germany, and a new electronic materials plant in Yeosu, South Korea.

## Care Chemicals

- **Sales decline 3% to €4,913 million due to lower volumes and currency effects**
- **Considerable increase in EBIT before special items, primarily from higher margins**

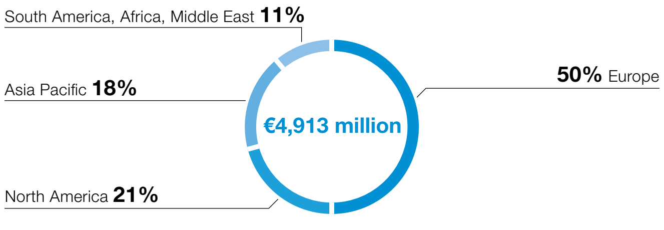
In the Care Chemicals division, sales to third parties declined by €166 million to €4,913 million in 2018. This was attributable to lower sales volumes, especially for oleochemical surfactants and fatty alcohols and in the hygiene business, as well as negative currency effects. By contrast, sales were positively impacted by higher prices in almost all business areas.

**Care Chemicals – Factors influencing sales**

| | |
|---|---|
| Volumes | (3%) |
| Prices | 3% |
| Portfolio | 0% |
| Currencies | (3%) |
| **Sales** | **(3%)** |

**Care Chemicals – Sales by region**

Location of customer




EBIT before special items increased considerably compared with 2017. This was mainly due to higher margins for products for the cosmetics industry, especially for oleochemical surfactants and fatty alcohols. Fixed costs declined slightly as a result of currency effects, insurance refunds and successful restructuring measures, especially in North America.

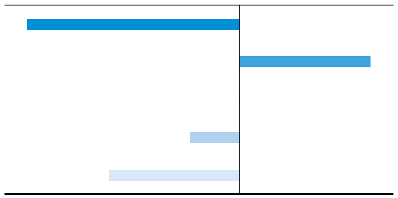
## Nutrition & Health

- **Sales down 8% year on year at €1,696 million, largely as a result of lower product availability**
- **EBIT before special items considerably above the 2017 figure due to lower fixed costs and higher margins**

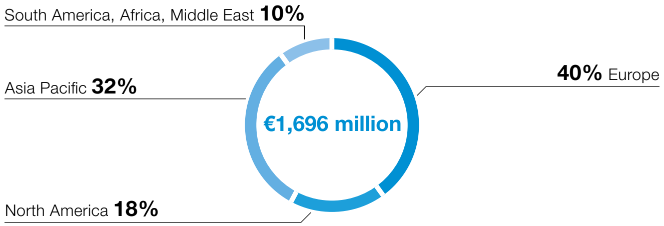
In the Nutrition & Health division, sales to third parties declined by €148 million to €1,696 million in 2018. This was mainly attributable to lower volumes from the reduced availability of citral-based products. In October 2017, a fire occurred during startup of the citral plant in Ludwigshafen, Germany. As a result, we had to declare Force Majeure for all citral and isoprenol-based aroma ingredients, and consequently for vitamin A, vitamin E and several carotenoid products as well. We were able to gradually lift Force Majeure for almost all affected products in 2018. Sales were weighed down by negative currency effects. Higher sales prices had an offsetting effect.

**Nutrition & Health – Factors influencing sales**

| | |
|---|---|
| Volumes | (13%) |
| Prices | 8% |
| Portfolio | 0% |
| Currencies | (3%) |
| **Sales** | **(8%)** |



**Nutrition & Health – Sales by region**




EBIT before special items increased considerably compared with 2017. Insurance refunds for production outages in 2017 and 2018 led to lower fixed costs. Despite higher raw materials prices, we achieved higher margins in the animal nutrition business in particular.

The citral plant in Ludwigshafen, Germany, was restarted in April 2018. We started production of citral, citronellol and menthol at our new aroma ingredients complex in Kuantan, Malaysia.

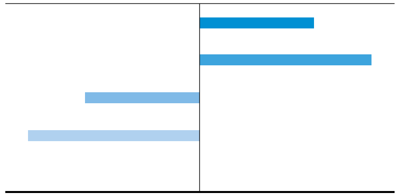
## Performance Chemicals

- **Sales of €3,911 million at prior-year level**
- **EBIT before special items slightly below previous year, mainly due to lower margins**

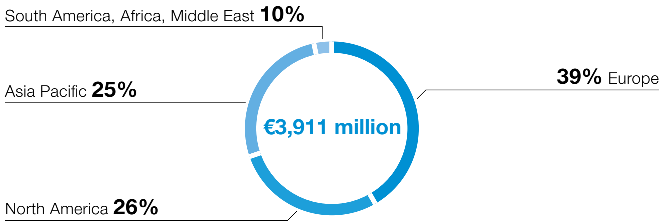
At €3,911 million, sales to third parties in the Performance Chemicals division were on a level with the previous year. Sales were positively impacted by higher sales prices in all regions and almost all business areas, as well as higher volumes in the oilfield and mining chemicals and lubricant and plastic additives businesses. Negative currency effects, mainly from the U.S. dollar, and the transfer of BASF's leather chemicals business to the Stahl group dampened sales development.

**Performance Chemicals – Factors influencing sales**

| | |
|---|---|
| Volumes | 2% |
| Prices | 3% |
| Portfolio | (2%) |
| Currencies | (3%) |
| **Sales** | **0%** |



**Performance Chemicals – Sales by region**




EBIT before special items declined slightly compared with the previous year. This was mainly attributable to lower margins, in particular as a result of negative currency effects. Fixed costs were at the prior-year level.

# Functional Materials & Solutions

**The Functional Materials & Solutions segment comprises the Catalysts, Construction Chemicals, Coatings, and Performance Materials divisions. They develop and market system solutions, services and innovative products for specific sectors and customers, particularly for the automotive, electronics, chemical and construction industries as well as for household applications, sports and leisure.**

## Divisions

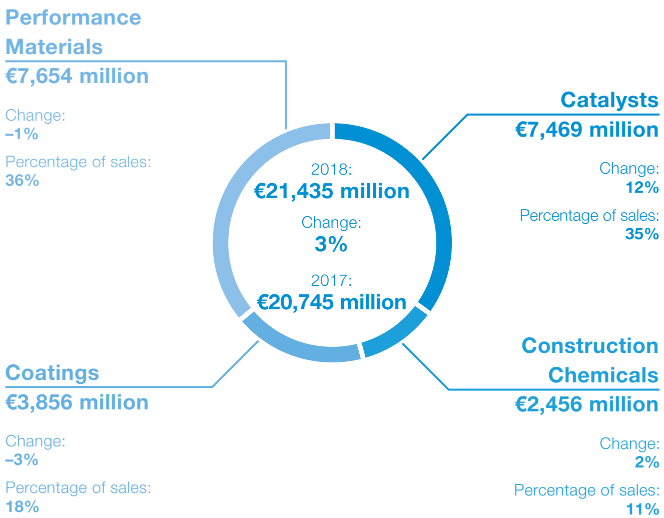
### Catalysts
Automotive and process catalysts, battery materials, precious metal trading

### Construction Chemicals
Solutions for building structure and envelopes, interior construction and infrastructure

### Coatings
Coatings solutions, surface treatments, decorative paints

### Performance Materials
Polyurethanes, thermoplastics and foams

## Sales




### Factors influencing sales

| | |
|---|---|
| Volumes | 2% |
| Prices | 5% |
| Portfolio | 0% |
| Currencies | (4%) |
| **Sales** | **3%** |

### Income from operations before special items

| Million € | |
|---|---|
| **2018** | **1,307** |
| 2017 | 1,617 |

Change: **–€310 million**

## Strategy

- **Development of innovative products and technologies in close collaboration with our customers**
- **Focus on specialties and system solutions that allow our customers to stand out from the competition**

We develop innovative products and technologies in close cooperation with our customers. Our aim is to find the best solution in terms of cost and functionality, helping our customers to drive forward innovation in their industries and contribute to sustainable development. For instance, the transformation of mobility is a key trend in the automotive industry. To address this, we are developing solutions in the areas of battery materials, emission control, lightweight engineering concepts and coatings together with our customers. Our specialties and system solutions enable customers to stand out from the competition.

We aim to continuously optimize our product and services portfolio and our structures according to different regional market requirements as well as trends in our customer industries.

The focus is on securing our leading market position in Europe, profitably expanding our position in the North American market and purposefully extending our activities in the growth regions of Asia, South America, eastern Europe and the Middle East. New business fields such as battery materials play a particularly important role here. On October 22, 2018, we announced that Harjavalta, Finland, will be the location of our first site to produce battery materials for the European automotive market. The plant will be constructed adjacent to the nickel and cobalt refinery owned by Norilsk Nickel (Nornickel). BASF and Nornickel have signed a long-term, market-based supply agreement for nickel and cobalt from Nornickel's metal refinery. With the investment, BASF will be present in all major regions with local production and increased customer proximity.

## How we create value – an example

### Novel diesel oxidation catalyst (DOC)

Efficient design for removing hydrocarbons and carbon monoxide with lower consumption of precious metals

**Value for BASF**

Enabled business wins since first introduction in 2015 with a value of

**>€700 million**

**Value for our customers and the environment**

Meets the latest emission regulations while reducing precious metal consumption by

**≥25%**

Diesel oxidation catalysts (DOC) reduce the emissions of heavy duty diesel engines by removing hydrocarbons and carbon monoxide from the exhaust. Furthermore, they provide the functionality to facilitate the removal of soot and nitrogen oxides by the downstream soot filter and the selective catalytic reduction catalyst. BASF has developed a novel DOC design to better utilize the precious metals of such catalysts, while significantly improving the catalysts' performance. Since its first introduction in 2015, the technology has been continuously further developed and has enabled business wins of more than €700 million.

The novel DOC design is used on-road in all major markets and thus provides a significant benefit for air quality and fuel economy. With our DOC catalyst in the front of the emission control system, it is possible to meet the most stringent of current emission control regulations such as US HDD 2010 (United States), EUVI (Europe), NSVI (China) and BSVI (India). The technology not only reduces precious metal consumption by at least 25%, but also significantly broadens the temperature region to implement removal of soot and prevent build-up of back pressure on the engine, thereby reducing fuel consumption.

On September 18, 2017, we signed an agreement with Solvay on the acquisition of Solvay's integrated polyamide business.

For more information on the current status of the agreement with Solvay, see page 42

We are also evaluating strategic options for our construction chemicals business to ensure the successful and profitable development of the business area in the long term, and to take advantage of opportunities in the market. The outcome of this review is open. We are considering the possibility of merging with a strong partner as well as the option of a divestiture. We strive to sign an agreement in 2019.

### Products, customers and applications

| Division | Products | Customer industries and applications |
|---|---|---|
| Catalysts | Automotive catalysts, process catalysts and technologies<br>Battery materials<br>Precious and base metal services | Automotive and chemical industries, refineries, battery manufacturers, solutions for the protection of air quality as well as the production of fuels, chemicals, plastics and battery materials |
| Construction Chemicals | Concrete admixtures, cement additives, underground construction solutions, flooring systems, sealants, solutions for the protection and repair of concrete, high-performance mortars and grouts, tile-laying systems, exterior insulation and finishing systems, expansion joints, wood protection | Cement and concrete producers, construction companies, craftspeople, builders' merchants, solutions for new building construction, maintenance, repair and renovation of commercial and residential buildings as well as infrastructure |
| 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 |
| Performance Materials | Engineering plastics, biodegradable plastics, standard foams, foam specialties, polyurethanes | Automotive manufacture, electrical engineering, packaging, games, sports and leisure, household, mechanical engineering, construction, medical technology, sanitation and water industry, solar thermal energy and photovoltaics |

### Investments

| Location | Project | Startup |
|---|---|---:|
| Brighton, Colorado | Capacity expansion: plant for sealants | 2019 |
| Dahej, India | Capacity expansion: for Cellasto® | 2019 |
| Gimcheon, South Korea | Construction: plant for Ultraform® | 2018 |
| Greenville, Ohio | Capacity expansion: resin plant | 2019 |
| Hamm, Germany | Capacity expansion: logistics for floor installation systems | 2019 |
| Harjavalta, Finland | Construction: battery materials plant for the automotive market | 2018 |
| Langelsheim, Germany | Capacity expansion: for Naftoseal® aircraft sealants | 2019 |
| Ludwigshafen, Germany | Construction: specialty zeolites plant for emissions catalysts | 2019 |
| Münster, Germany | Construction: modular laboratory for automotive OEM coatings | 2018 |
| | Construction: plant for functional film coatings | 2019 |
| | Construction: laboratory building for automotive coatings | 2020 |
| Pinghu, China | New surface treatment site | 2021 |
| Rayong, Thailand | Construction: plant for automotive emissions catalysts | 2018 |
| Shanghai, China | Construction: technical competence center for automotive coatings | 2018 |
| | Construction: plant for mobile emissions catalysts | 2019 |
| Środa Śląska, Poland | Capacity expansion: plant for emissions catalysts | 2020 |
| Tultitlán, Mexico | Capacity expansion: automotive coatings plant | 2019 |

### Segment data – Functional Materials & Solutions

Million €

| | | 2018 | 2017 | +/– |
|---|---|---|---|---|
| Sales to third parties | | 21,435 | 20,745 | 3% |
| of which Catalysts | | 7,469 | 6,658 | 12% |
| Construction Chemicals | | 2,456 | 2,412 | 2% |
| Coatings | | 3,856 | 3,969 | (3%) |
| Performance Materials | | 7,654 | 7,706 | (1%) |
| Intersegment transfers | | 837 | 805 | 4% |
| Sales including intersegment transfers | | 22,272 | 21,550 | 3% |
| Income from operations before depreciation and amortization (EBITDA) | | 1,917 | 2,251 | (15%) |
| EBITDA margin | % | 8.9 | 10.9 | – |
| Depreciation and amortization[1] | | 682 | 706 | (3%) |
| Income from operations (EBIT) | | 1,235 | 1,545 | (20%) |
| Special items | | (72) | (72) | – |
| EBIT before special items | | 1,307 | 1,617 | (19%) |
| EBIT after cost of capital | | (512) | (190) | . |
| Assets | | 17,654 | 17,364 | 2% |
| Investments including acquisitions[2] | | 872 | 1,056 | (17%) |
| Research and development expenses | | 412 | 431 | (4%) |

**1** Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and reversals of impairments)
**2** Additions to intangible assets and property, plant and equipment

## Functional Materials & Solutions segment

- **Sales growth of 3% to €21,435 million from higher prices and volumes**
- **EBIT before special items declines 19% to €1,307 million, primarily due to lower margins and increase in fixed costs**

Sales to third parties in the Functional Materials & Solutions segment grew by €690 million to €21,435 million, especially in Catalysts. This was mainly attributable to higher prices in all divisions. Volumes also increased. Sales were reduced by currency effects (volumes 2%, prices 5%, portfolio 0%, currencies –4%).

Income from operations (EBIT) before special items was €1,307 million, down €310 million from the 2017 figure. This was mainly driven by lower margins as a result of the increase in raw materials prices and higher fixed costs. EBIT declined by €310 million to €1,235 million in 2018. Overall, special items did not have a substantial impact.

## Catalysts

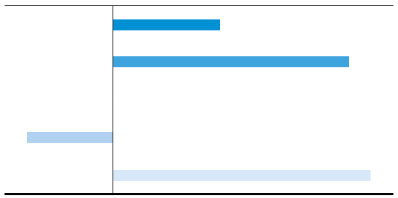
- **Sales increase of 12% to €7,469 million mainly driven by higher prices**
- **EBIT before special items slightly higher, largely as a result of volumes growth**

The Catalysts division increased sales to third parties by €811 million to €7,469 million in 2018. This was largely attributable to higher sales prices on the back of an increase in precious metal prices. Our sales volumes also increased. This was dampened by currency effects.

We recorded considerable volumes growth in the chemical catalysts, battery materials and refining catalysts businesses. By contrast, sales volumes declined for automotive catalysts, especially in Europe. In precious metal trading, sales rose considerably by €672 million to €3,190 million, primarily due to higher prices and volumes.

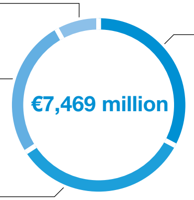
**Catalysts – Factors influencing sales**

| | |
|---|---|
| Volumes | 5% |
| Prices | 11% |
| Portfolio | 0% |
| Currencies | (4%) |
| **Sales** | **12%** |



**Catalysts – Sales by region**

Location of customer




EBIT before special items was slightly above the prior-year figure, mainly owing to higher sales volumes. Fixed costs increased due among other factors to the startup of new plants in the chemical catalysts, automotive catalysts and battery materials businesses.

## Construction Chemicals

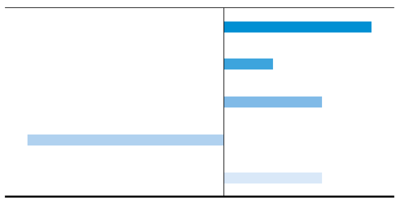
- **Sales 2% above previous year at €2,456 million, primarily due to higher volumes**
- **EBIT before special items slightly lower, mainly from softer margins**

In the Construction Chemicals division, we increased sales to third parties by €44 million compared with the previous year to €2,456 million. This was largely driven by higher sales volumes. The acquisition of Grupo Thermotek, Monterrey, Mexico, in September 2017 and higher prices also contributed to the increase in sales. By contrast, currency effects had a negative impact in all regions.

Higher volumes and prices led to sales growth in Europe, while in North America, the increase was attributable to the Thermotek acquisition and higher sales volumes. In Asia, higher volumes and prices were unable to completely offset the negative currency effects. Despite volumes growth, negative currency effects pushed down sales in the region South America, Africa, Middle East.

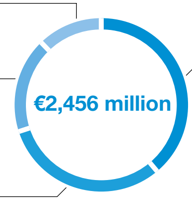
**Construction Chemicals – Factors influencing sales**

| | |
|---|---|
| Volumes | 3% |
| Prices | 1% |
| Portfolio | 2% |
| Currencies | (4%) |
| **Sales** | **2%** |



**Construction Chemicals – Sales by region**

Location of customer




Although sales volumes rose and fixed costs declined, mainly as a result of currency effects, EBIT before special items was slightly below the 2017 figure. This was primarily attributable to lower margins.

## Coatings

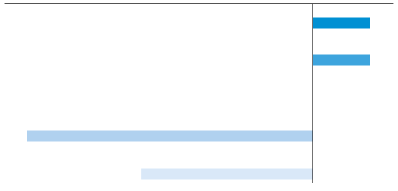
- **Sales decline 3% to €3,856 million as a result of negative currency effects**
- **EBIT before special items considerably below prior-year figure, mainly due to higher fixed costs and lower margins**

Sales to third parties in the Coatings division declined by €113 million to €3,856 million in 2018. This was attributable to negative currency effects in all regions, especially in South America. Sales were positively impacted by higher volumes and prices.

Despite slightly higher volumes, particularly in Asia and North America, sales of automotive OEM coatings declined due to negative currency effects in all regions. We recorded sales growth in the automotive refinish coatings business as negative currency effects were more than offset by higher sales volumes in Asia, North America and Europe, and higher prices. Sales in the decorative paints business in Brazil were considerably below the prior-year figure, with significantly higher sales prices unable to compensate for strongly negative currency effects and slightly weaker demand. We increased sales in the surface treatments business. Higher sales volumes in all regions compensated for negative currency effects.

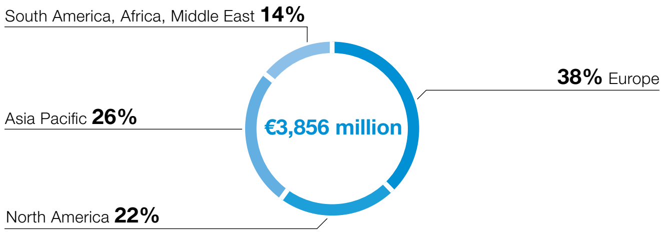
**Coatings – Factors influencing sales**

| | |
|---|---|
| Volumes | 1% |
| Prices | 1% |
| Portfolio | 0% |
| Currencies | (5%) |
| **Sales** | **(3%)** |



**Coatings – Sales by region**

Location of customer




EBIT before special items declined considerably. This was mainly due to higher fixed costs, largely as a result of higher personnel costs and integration costs for the Chemetall business, as well as lower margins from the increase in raw materials prices.

In September 2018, we opened a new laboratory for automotive OEM coatings in Münster, Germany, with a focus on optimized, digital and transparent processes as well as using resources efficiently.

## Performance Materials

- **Sales of €7,654 million, down 1% from the previous year due to currency effects and lower volumes**
- **Considerable year-on-year decrease in EBIT before special items, mainly as a result of lower margins**

At €7,654 million, sales to third parties in the Performance Materials division in 2018 were €52 million below the prior-year level. Price increases due to significantly higher raw materials prices, particularly in the first half of 2018, were unable to completely offset the negative currency effects in all regions and business areas, as well as slightly lower volumes. Sales volumes declined, primarily as a result of weaker demand from the construction and consumer goods industries.

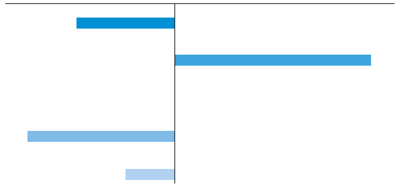
Sales to the automotive industry rose slightly due to higher prices, in particular for engineering plastics in Asia and Europe. Volumes declined slightly overall. While higher volumes contributed to sales growth in South America, demand in Europe, Asia and North America remained below the prior-year level, especially for polyurethane systems.

Sales in the consumer goods industry decreased slightly. As well as currency effects, this was mainly attributable to lower demand for polyurethane systems, particularly in Europe. This could not be completely offset by higher volumes in our engineering plastics and specialty businesses and higher prices.

Sales to the construction industry declined slightly due to lower volumes and currency effects. Although we achieved higher sales prices overall in the polyurethane systems business, demand was down from the prior-year level, especially in Europe. Scheduled plant turnarounds in the first half of 2018 also reduced sales volumes in the styrene foams business.

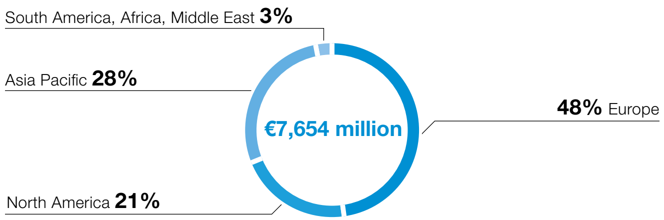
**Performance Materials – Factors influencing sales**

| | |
|---|---|
| Volumes | (2%) |
| Prices | 4% |
| Portfolio | 0% |
| Currencies | (3%) |
| **Sales** | **(1%)** |



**Performance Materials – Sales by region**

Location of customer




EBIT before special items was considerably below the prior-year level. This was mainly attributable to lower margins. The increase in raw materials prices could only be partly offset by higher sales prices. Fixed costs rose slightly. Higher expenses, especially from the startup of new plants for thermoplastic polyurethanes, Ultraform® and Ultrason®, were partly offset by insurance refunds, mainly for production outages.

# Agricultural Solutions

**The Agricultural Solutions segment consists of the division of the same name. We develop and produce innovative solutions to improve crop health and yields, and market them worldwide.**

## Indications and sectors

### Fungicides
Protecting crops against harmful fungal diseases

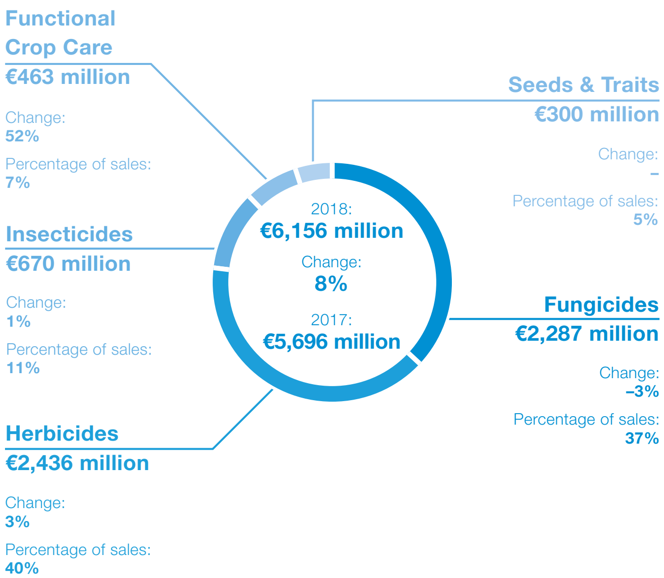
### Herbicides
Reducing competition from weeds for water and nutrients

### Insecticides
Combating insect pests in agriculture and beyond

### Functional Crop Care
Biological crop protection, seed treatment, polymers and colorants

### Seeds & Traits
Optimization and development of seeds and new traits

## Sales




### Factors influencing sales

| | |
|---|---|
| Volumes | 1% |
| Prices | 4% |
| Portfolio | 10% |
| Currencies | (7%) |
| **Sales** | **8%** |

### Income from operations before special items

| Million € | |
|---|---|
| **2018** | **734** |
| 2017 | 1,033 |

Change: **–€299 million**

## Strategy

- **Integrated provider of crop protection and biotechnology products, seeds for selected field crops and vegetables, and digital farming**
- **Long-term innovation strategy ensures future growth**
- **Development of solutions that go beyond conventional crop protection**

Natural resources such as land and arable area are limited, while the world's population and its demand for food continue to grow. This means that farmers around the world face the challenge of increasing their crop yields. We offer our customers innovative solutions combined with practical, down-to-earth advice to support them in the efficient and safe production of high-quality crops over the long term.

In August 2018, we closed the acquisition of a range of businesses and assets from Bayer to be able to provide farmers with an even wider range of solutions in the future, and to better meet the growing demand for high-quality seeds as well as chemical and biological crop protection. The acquisition is a strategic complement to our crop protection, biotechnology and digital farming activities. At the same time, it marks our entry into the seed business for key field crops and vegetables, as well as non-selective herbicides and nematicide seed treatments. With the transaction, our portfolio now also includes the global glufosinate-ammonium non-selective herbicide business, which is marketed under the Liberty®, Basta® and Finale® brands. The seed businesses comprise traits, research and breeding capabilities as well as the corresponding brands for key field crops in selected markets. These include canola hybrids in North America under the InVigor® brand with LibertyLink® trait technology, as well as the oilseed rape business mainly in European markets, cotton in the Americas and Europe, and soybean in the Americas. We also acquired the R&D platform for hybrid wheat,[1] a range of seed treatment products, certain glyphosate-based herbicides in Europe used predominantly for industrial applications, xarvio® digital farming solutions and other non-selective herbicide and nematicide research projects. We are committed to ensuring the responsible use of our products and the preservation of a healthy environment. We also invest continuously in our development pipeline to provide our customers an increasingly wide range of integrated offers. The combination of our existing activities and the acquired businesses increases our innovation potential and strengthens our market position and competitiveness in the long term.

For more information on our R&D activities, see Research and development on page 82

The success of our customers depends on many factors such as weather, plant health, soil conditions and prices for agricultural produce. Modern farmers have to analyze more and more data of

1 Reported under Other

## How we create value – an example

### InVigor®

Patented pod shatter reduction technology for canola/oilseed rape seed pods enabling innovative yield protection and greater harvesting flexibility for growers

**Value for BASF**

Market share of InVigor® seed portfolio in main markets of North America

**>55%**

**Value for customers**

Yield improvement for growers of

**>5%**

InVigor® hybrids with pod shatter reduction (PSR) technology are an innovative solution for minimizing lost yield due to seed pods splitting open and seeds prematurely falling out. The first canola hybrids with patented PSR technology from the newly acquired seed business were launched on the Canadian market in 2014. By 2019, more than half of BASF's InVigor® product line-up in the United States, Canada and Australia will contain the PSR feature. The market share of the InVigor® seed portfolio in its main markets of North America is greater than 55% and popularity in Australia is increasing rapidly.

The patented PSR technology in InVigor® hybrid canola continues to revolutionize the way canola growers approach their season. The PSR feature naturally strengthens the pod seam and connective tissue, reducing premature seed losses prior to harvest. It offers the flexibility to harvest canola by straight cutting, therefore allowing the pod to fill for a longer period of time and providing a yield increase of over 5%.

increasing complexity to make the right cultivation decisions. BASF's innovative digital applications help our customers to use this data to their advantage, supporting better decision-making and ensuring more efficient and sustainable resource allocation. The acquisition of xarvio® digital farming solutions complements our digital offering with novel products with additional functionalities and access to new technologies.

## Investments

Capital expenditures (capex) amounted to €157 million in 2018. Major projects included the startup of new production capacities for our fungicide Revysol® in Hannibal, Missouri, and our insecticide Inscalis® in Elbeuf, France, as well as modernization measures at plants in North America and Europe. A state-of-the-art global breeding station for the vegetable seeds business was opened at the Nunhem site in the Netherlands. We also invested in plant infrastructure in North America and research and development in Limburgerhof, Germany. To meet the continuing high demand for our innovative solutions in the future, we will invest around €1,270 million in developing and expanding our infrastructure and in our production and formulation capacities for active ingredients between 2019 and 2023. This increase in investment is driven by the expansion of production capacities for the planned market launches of a large number of products from our crop protection pipeline, as well as for the acquired businesses.

## Research and development

In 2018, we invested €679 million in research and development in the Agricultural Solutions division, representing around 11% of sales for the segment. Our well-stocked innovation pipeline comprises products with a launch date between 2018 and 2028. With a peak sales potential[1] of more than €6 billion, the pipeline includes innovations from all business areas. The expanded research and development activities in the Agricultural Solutions division range from seeds, including traits, research and breeding capacities, and solutions to protect plants against fungal diseases, insect pests and weeds, to improved soil management and plant health.

With the acquisition of the Bayer businesses in 2018, our team grew by approximately 1,600 research and development employees at 17 locations worldwide. We expanded our biotechnology activities and our research and development capabilities considerably – from advanced breeding techniques, analytics, technology platforms and trait validation to specific discovery expertise. These are closely aligned with further activities in the field of biotechnology, which remain part of BASF's Bioscience Research unit. Research and development expenses, sales, earnings and all other data for BASF's Bioscience Research unit are not reported in the Agricultural Solutions segment; they continue to be reported under Other.

Our combined, complementary seeds and traits research and development activities across field crops and vegetables ensure even better innovation capabilities and scale while positioning us to seize future market opportunities and increase our competitiveness. With our expanded network of research sites, new seed breeding and production facilities, we help farmers meet the growing demand for increased agricultural productivity and better nutrition. With a pioneering platform for gene identification, we have specialized in the development of plant characteristics, such as higher yield, herbicide tolerance, disease resistance, drought tolerance and quality traits. Our goal is to optimize crops so that farmers can achieve greater and more secure yields. In this way, we make an important contribution to securing a better food supply for a growing world population. We also contribute to sustainable agriculture, as the cultivation of these plants significantly reduces the amount of land, water and energy required for food production.

**Products, customers and applications**

| Indications and sectors | Applications | Example products |
|---|---|---|
| Fungicides | Protecting crops from harmful fungal diseases; improving plant health | AgCelence® (umbrella brand), boscalid, dimethomorph, F 500®, Initium®, metiram, metrafenone, Xemium® |
| Herbicides | Reducing competition from weeds for water and nutrients | Basta®, Clearfield®, dimethenamid-P, Engenia®, Finale®, imazamox, Kixor®, Liberty®, pendimethalin, topramezone |
| Insecticides | Combating insect pests in agriculture and beyond, such as in the fields of public health, professional pest control and landscape maintenance | Alpha-cypermethrin, chlorfenapyr, fipronil, Inscalis®, Interceptor®, Nealta®, teflubenzuron, Termidor® |
| Functional Crop Care | Products for plant health and increased yield potential that go beyond traditional crop protection, such as biological crop protection, seed treatments, polymers and colorants | COPeO®, Flo Rite®, ILeVO®, Integral®, Limus®, Nodulator® PRO, PONCHO®, Serifel®, Systiva®, Vault® HP, Velondis®, Vizura®, VOTiVO® |
| Seeds & Traits | Seeds and 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® |

1 Peak sales describes the highest sales value to be expected in one year. For more information, see the Glossary on page 288

**Segment data – Agricultural Solutions**

Million €

| | | 2018 | 2017 | +/– |
|---|---|---|---|---|
| Sales to third parties | | 6,156 | 5,696 | 8% |
| Intersegment transfers | | 58 | 36 | 61% |
| Sales including intersegment transfers | | 6,214 | 5,732 | 8% |
| Income from operations before depreciation and amortization (EBITDA) | | 985 | 1,282 | (23%) |
| EBITDA margin | % | 16.0 | 22.5 | – |
| Depreciation and amortization[1] | | 394 | 267 | 48% |
| Income from operations (EBIT) | | 591 | 1,015 | (42%) |
| Special items | | (143) | (18) | . |
| EBIT before special items | | 734 | 1,033 | (29%) |
| EBIT after cost of capital | | (562) | 171 | . |
| Assets | | 16,992 | 8,096 | 110% |
| Investments including acquisitions[2] | | 7,110 | 185 | . |
| Research and development expenses | | 679 | 507 | 34% |

1 Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and reversals of impairments)
2 Additions to intangible assets and property, plant and equipment

## Agricultural Solutions segment

- **Sales improve by 8% to €6,156 million due to portfolio effects, higher prices and increased volumes**
- **EBIT before special items down 29% year on year at €734 million as a result of negative currency effects and the negative contribution from the acquired businesses**

The Agricultural Solutions segment increased sales to third parties by €460 million to €6,156 million in 2018. The addition of the businesses and assets acquired from Bayer in August 2018 made a significant contribution. A higher price level and growth in sales volumes also contributed to the positive year-on-year sales development. In a continuing difficult market environment, strongly negative currency effects dampened sales in all regions.

Sales in **Europe** were €39 million higher than in the previous year, at €2,022 million. This was attributable to the acquired businesses and higher sales volumes in almost all indications, despite the extreme weather conditions and long dry period. Sales development was dampened by negative currency effects, particularly in eastern Europe and Turkey.

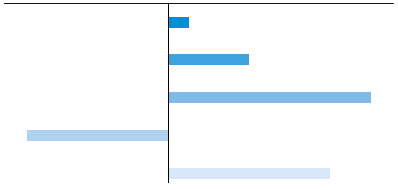
We increased sales in **North America** by €163 million to €2,166 million. The acquired businesses and a higher price level more than compensated for the negative currency effects. Lower volumes, especially for fungicides in Canada and the United States, also had an offsetting effect.

At €645 million, sales in **Asia** exceeded the prior-year figure by €63 million. We achieved volumes growth in all indications, particularly fungicides. The acquired businesses and a higher price level also contributed to the sales increase. Negative currency effects reduced sales development considerably.

In the region **South America, Africa, Middle East**, sales rose by €195 million to €1,323 million. The increase was largely driven by a higher price level and the contribution of the acquired businesses. Especially for fungicides in Brazil, sales volumes increased considerably. Negative currency effects had an offsetting impact.

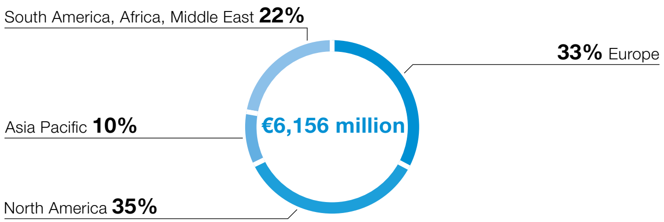
**Agricultural Solutions – Factors influencing sales**

| | |
|---|---|
| Volumes | 1% |
| Prices | 4% |
| Portfolio | 10% |
| Currencies | (7%) |
| **Sales** | **8%** |



**Agricultural Solutions – Sales by region**

Location of customer




Income from operations (EBIT) before special items was €734 million, down €299 million from the prior-year figure. This was attributable to negative currency effects in all regions, as well as the strongly negative contribution from the acquired businesses due to the late, intrayear timing of the transaction, the seasonality of the business as well as costs for integrating the businesses into the BASF Group. EBIT decreased by €424 million to €591 million. Special items primarily arose from the acquisition.

# Other

**Financial data – Other[1]**

| Million € | 2018 | 2017 | +/– |
|---|---|---|---|
| Sales | 2,771 | 2,234 | 24% |
| Income from operations before depreciation and amortization (EBITDA) | (373) | (569) | 34% |
| Depreciation and amortization[2] | 118 | 122 | (3%) |
| Income from operations (EBIT) | (491) | (691) | 29% |
| Special items | (41) | (37) | (11%) |
| EBIT before special items | (450) | (654) | 31% |
| of which Costs for cross-divisional corporate research | (414) | (379) | (9%) |
| Costs of corporate headquarters | (249) | (224) | (11%) |
| Other businesses | 43 | 60 | (28%) |
| Foreign currency results, hedging and other measurement effects | 327 | 88 | 267% |
| Miscellaneous income and expenses | (157) | (199) | 22% |
| Assets[3] | 23,743 | 25,643 | (7%) |
| Investments including acquisitions[4] | 663 | 1,174 | (44%) |
| Research and development expenses | 414 | 382 | 8% |

1 Information on the composition of Other can be found in the Notes to the Consolidated Financial Statements from page 212 onward.
2 Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and reversals of impairments)
3 Contains assets of businesses recognized under Other as well as reconciliation to assets of the BASF Group including the disposal group for the oil and gas business.
4 Additions to intangible assets and property, plant and equipment

Sales in Other rose by €537 million compared with 2017 to €2,771 million, mainly as a result of higher sales volumes in the raw materials trading business.

At minus €450 million, income from operations before special items in Other was up €204 million from the prior-year figure. This was largely attributable to valuation effects for our long-term incentive program.

# Discontinued Oil and Gas Business

**Financial data**[1]

Million €

| | 2018 | 2017 | +/– |
|---|---|---|---|
| Sales to third parties | 4,094 | 3,252 | 26% |
| Income from operations before depreciation and amortization (EBITDA) | 2,350 | 1,959 | 20% |
| Income from operations (EBIT)[2] | 1,733 | 935 | 85% |
| Special items | (12) | 252 | . |
| EBIT before special items[2] | 1,745 | 683 | 155% |
| Financial result | (19) | (17) | (12%) |
| Income taxes | (885) | (158) | . |
| Income after taxes from discontinued operations | 829 | 760 | 9% |
| Assets | 14,088 | 11,967 | 18% |
| Investments including acquisitions[3] | 1,062 | 988 | 7% |

1 For more information, see Note 2.5 to the Consolidated Financial Statements from page 209 onward and Supplementary Information on the Oil and Gas Business from page 269 onward
2 2018 figure only includes depreciation and amortization for the first three quarters
3 Additions to intangible assets and property, plant and equipment and to the corresponding positions in the disposal group

## Agreement with LetterOne

On September 27, 2018, BASF and LetterOne signed a definitive agreement to merge their oil and gas businesses in a joint venture, which will operate under the name Wintershall DEA. In 2017, the combined business of Wintershall and DEA had pro forma sales of €4.7 billion, income from operations before depreciation and amortization (EBITDA) of €2.8 billion and net income of €740 million. Closing of the transaction is expected in the first half of 2019, subject to the approvals of merger control and foreign investment authorities as well as mining authorities and the German Federal Network Agency. Until closing, Wintershall and DEA will continue to operate as independent companies.

The signing of the agreement has an immediate effect on the reporting of BASF Group: The sales and EBIT of the oil and gas business are no longer included in the respective figures for the BASF Group – retroactively as of January 1, 2018, and with the prior-year figures restated. Until closing, the Wintershall Group's income after taxes will be presented in the income after taxes of the BASF Group as a separate item (income after taxes from discontinued operations). The assets and liabilities of the oil and gas business were reclassified to a disposal group as of the end of the third quarter of 2018, and have since been presented under Other. Depreciation and amortization of its assets and accounting according to the equity method were suspended from the signing date onward.

The gain from the change from full consolidation to the equity method will be shown in income after taxes from discontinued operations on closing. From closing, BASF will account for its share in the joint venture Wintershall DEA using the equity method and include its share of Wintershall DEA's net income in EBIT before special items and EBIT for the BASF Group (reported under Other).

## Significant developments

BASF's oil and gas activities are bundled in the Wintershall Group. We focus on exploration and production in oil and gas-rich regions in Europe, North Africa, Russia, South America and the Middle East – core regions in which Wintershall has a high level of regional and technological expertise. We are also active in the transportation of natural gas in Europe with our Russian partner Gazprom.

**Europe:** In March 2018, we started operation of the first development project operated by Wintershall in Norway at the Maria oilfield in the Norwegian Sea. In addition, the Norwegian Ministry of Petroleum and Energy approved the development and operation plan for the Nova field (previously: Skarfjell) operated by Wintershall, which is scheduled to start production in 2021. Production at the Aasta Hansteen gas field in the Norwegian Sea, which is operated by Equinor, started in 2018. A Wintershall exploration well discovered another gas field near Aasta Hansteen and we are now investigating the possibilities of developing this find. In Germany, we successfully completed a 3D seismic survey at the Emlichheim concession in 2018 with the aim of maintaining the crude oil production plateau at the site, which has been in operation for over 70 years.

**Russia:** Achimgaz, a joint venture of Wintershall and Gazprom, celebrated its 15th anniversary in 2018 and achieved a new milestone, with total production reaching 30 billion cubic meters of natural gas. We are drawing on the experience gained with Achimgaz to drive forward the development of Blocks 4A and 5A of the Achimov formation in the Urengoy field in western Siberia in a joint venture, Achim Development.

**Middle East:** Wintershall will invest in oil and gas production in Abu Dhabi. An agreement to this effect was signed by Wintershall and the Abu Dhabi National Oil Company (ADNOC) in November 2018. Wintershall's 10% interest in ADNOC's Ghasha concession marks its entry into natural gas and condensate production in Abu Dhabi. According to ADNOC's planning, the project will start producing around the middle of the next decade, with initial daily production volumes expected to exceed 40 million cubic meters of natural gas.

**South America:** Wintershall was awarded seven offshore exploration licenses in Brazil's 15th oil and gas licensing round. The company will hold the operatorship for four of these licenses. Initial exploration activities in the allocated blocks will start in 2019. In Argentina, Wintershall Energía celebrated its 40th anniversary in 2018 with total production of around 26 million barrels of oil equivalent (BOE) per year. Shares in the Aguada Pichana Este concession in Argentina were sold on January 23, 2018.

**Natural gas transportation:** Pipe-laying work for the Nord Stream 2 pipeline project, which Wintershall is co-financing, started in 2018 and is progressing as planned. The European gas pipeline link (EUGAL) project – the connecting pipeline for Nord Stream 2 – is being implemented by GASCADE Gastransport GmbH as the lead developer. All of the necessary planning approvals have been issued and construction is on schedule.

## Business development

Sales to third parties from our oil and gas activities were increased by €842 million year on year to €4,094 million in 2018. This was mainly due to higher prices. We also increased volumes, while currency effects had an offsetting effect.

The price of a barrel of Brent crude oil averaged $71 in 2018 (previous year: $54). Gas prices on the European spot markets rose by 32% compared with the previous year.

Income from operations (EBIT) before special items increased by €1,062 million to €1,745 million. In addition to higher oil and gas prices, we recorded volumes growth in Norway and Russia. EBIT rose by €798 million to €1,733 million. Depreciation and amortization of assets was suspended as of the end of the third quarter of 2018.

The tax expense rose following the improvement in income from operations. At €829 million, income after taxes from discontinued operations was €69 million above the prior-year figure.

For more information on the earnings contribution from the discontinued oil and gas business, see Note 2.5 to the Consolidated Financial Statements from page 209 onward

# Regional Results

**Regions**

Million €

| | Sales by location of company | | | Sales by location of customer | | | Income from operations by location of company | | |
|---|---|---|---|---|---|---|---|---|---|
| | **2018** | **2017** | **+/–** | **2018** | **2017** | **+/–** | **2018** | **2017** | **+/–** |
| Europe | 28,502 | 28,045 | 2% | 26,546 | 26,507 | 0% | 3,210 | 4,090 | (22%) |
| of which Germany | 18,113 | 18,663 | (3%) | 6,965 | 7,159 | (3%) | 1,140 | 1,838 | (38%) |
| North America | 16,659 | 15,937 | 5% | 16,143 | 15,357 | 5% | 802 | 1,236 | (35%) |
| Asia Pacific | 13,886 | 13,658 | 2% | 14,646 | 14,343 | 2% | 1,820 | 2,209 | (18%) |
| South America, Africa, Middle East | 3,628 | 3,583 | 1% | 5,340 | 5,016 | 6% | 201 | 52 | 287% |
| **BASF Group** | **62,675** | **61,223** | **2%** | **62,675** | **61,223** | **2%** | **6,033** | **7,587** | **(20%)** |

## Europe

- **Sales up 2% compared with 2017 at €28,502 million**
- **Investments strengthen businesses in growth industries and markets**

Sales at companies located in Europe rose by 2% year on year to €28,502 million. Higher prices more than compensated for the negative currency effects and lower volumes.

Higher prices led to slight sales growth in the Chemicals segment. Sales also rose slightly in the Agricultural Solutions segment as a result of portfolio effects and volumes growth. In the Functional Materials & Solutions segment, sales matched the prior-year level. Slight price improvements were offset by lower volumes and negative currency effects. By contrast, sales declined slightly in the Performance Products segment. Lower volumes and negative portfolio and currency effects could not be completely offset by higher prices.

Income from operations (EBIT) decreased by 22% compared with the previous year to €3,210 million due to considerably lower contributions from all segments, but especially from the Chemicals segment. The main drivers for the lower earnings in the Chemicals segment were higher raw materials prices, temporary plant shutdowns as well as the low water levels on the Rhine River. The lower contribution from the Agricultural Solutions segment was mainly attributable to the higher fixed costs from the acquisition of the Bayer businesses. Earnings were also negatively impacted by the long dry period. Softer margins had a significant influence on earnings development in the Functional Materials & Solutions and Performance Products segments.

We aim to strengthen our position in the European market though investments, for example in a production plant for battery materials in Harjavalta, Finland. This investment supports the European Commission's goal of establishing a European value chain for battery production.

## North America

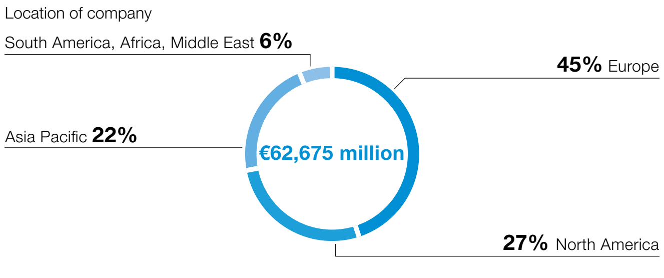
- **Sales growth of 5% year on year to €16,659 million**
- **Ongoing investments in production plants**

Sales at companies located in North America rose by 5% compared with 2017 to €16,659 million. In local currency terms, sales grew by 9%. This was largely due to higher sales prices in all segments. Sales were also positively impacted by portfolio effects, mainly from the acquisition of significant businesses from Bayer, and higher volumes, especially in the Functional Materials & Solutions segment. Currency effects dampened sales in all segments.

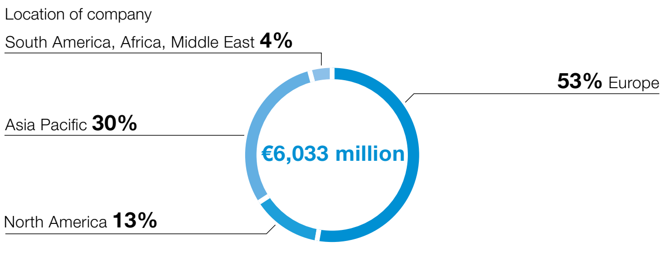
EBIT was down 35% from the 2017 figure, at €802 million. Earnings declined in the Agricultural Solutions segment in particular.

We further strengthened our position in the region with the acquisition of significant businesses from Bayer in the areas of seeds and non-selective herbicides. We aim to invest continuously in our production facilities. For example, we started up a new ammonia plant in Freeport, Texas, together with Yara International ASA, Oslo, Norway; are expanding production for ibuprofen in Bishop, Texas; and started construction of a new MDI synthesis unit in Geismar, Louisiana. We strengthened our global battery materials business with the formation of BASF Toda America LLC (BTA), a cooperation between BASF and Toda Kogyo Corp., Hiroshima, Japan. BTA produces state-of-the-art high energy cathode active materials close to our North American customers.

**Sales by region**




**Income from operations by region**




## Asia Pacific

- **Sales 2% above prior-year level at €13,886 million**
- **Local production footprint expanded with new plants, including in South Korea and Malaysia**

Sales at companies headquartered in the Asia Pacific region rose by 2% to €13,886 million in 2018. In local currency terms, sales rose by 5% year on year. The positive development was mainly driven by the Functional Materials & Solutions segment. We also increased sales in the Agricultural Solutions segment.

All segments increased volumes; Functional Materials & Solutions and Performance Products also achieved higher prices. By contrast, sales were consistently weighed down by currency effects. Portfolio measures had no effect on sales development in 2018. The trade conflict between the United States and China dampened economic sentiment across Asia, leading to lower prices and volumes year on year in the fourth quarter of 2018.

EBIT in the region decreased by 18% year on year to €1,820 million. This was primarily due to the lower contribution from the Chemicals segment as a result of narrower margins in the isocyanates business, as well as for steam cracker products at our joint venture. Lower fixed costs were unable to compensate for these effects.

As part of our regional strategy, we aim to further increase the proportion of sales from local production in Asia Pacific. We once again made progress toward this goal: For instance, we started commercial production of polyoxymethylene (POM) in Gimcheon, South Korea, in October 2018. We started production of citral, citronellol and menthol at our new aroma ingredients complex in Kuantan, Malaysia.

Our investments in production facilities as well as in research and development serve to bring products to market for our local and global customers in this fast-growing region. We therefore plan to build an integrated Verbund site in Zhanjiang in the southern Chinese province of Guangdong and expand our existing joint venture with Sinopec in Nanjing, China.

## South America, Africa, Middle East

- **Sales growth of 1% to €3,628 million**
- **Successful integration of acquired businesses in Agricultural Solutions segment**

Sales at companies located in the region South America, Africa, Middle East increased by 1% compared with 2017 to €3,628 million. In local currency terms, sales exceeded the prior-year figure by 17%.

In South America, the year was characterized by a slight economic recovery amid political uncertainty ahead of the presidential elections in Brazil. Weaker local currencies in Brazil and Argentina led to strongly negative currency effects. Against this background, our sales nevertheless rose as a result of higher prices, positive portfolio effects from the acquisition of significant businesses from Bayer and volumes growth. The Agricultural Solutions segment in particular increased volumes thanks to stronger demand. Sales volumes also rose in the Functional Materials & Solutions segment on the back of the recovery in the automotive industry. Volumes in the Performance Products segment were on a level with the prior year. By contrast, we recorded lower sales volumes in the Chemicals segment due to product shortages.

Companies in Africa and in the Middle East posted a considerable sales decrease. Lower volumes and negative currency effects were responsible for this development.

At €201 million, EBIT in the region South America, Africa, Middle East exceeded the prior-year figure by 287%. This was driven by improved earnings in the Agricultural Solutions segment as a result of higher demand, especially in Brazil, as well as the contribution from the acquired businesses.

Following the two-year recession in South America, which lasted until the end of 2016, our focus in 2018 was on increasing sales volumes and integrating the acquired businesses and assets in the Agricultural Solutions segment. We also continued the expansion of our sales channels to capture new customer segments, including with investments in digital platforms.