1. Basic information on the Evonik Group

A specialty chemicals company focused on strong market positions, a clear innovation culture, and sustainable business activities

- Corporate structure: three chemical segments that are close to their markets and customers
- Concentration on a balanced portfolio with four growth engines: Specialty Additives, Animal Nutrition, Smart Materials, and Health & Care
- Deep knowledge of our customers' business, coupled with active innovation management, drives profitable growth
- Balanced management of economic, ecological, and social factors

None of our end-markets accounts for more than

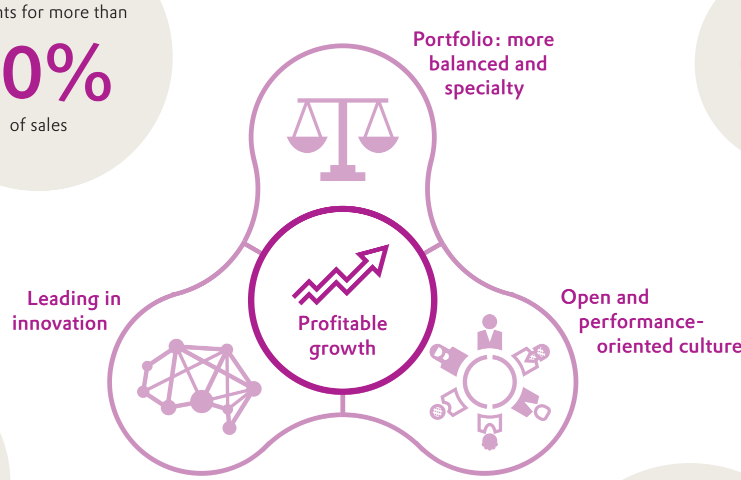
20%

of sales

Operations in more than

100

countries



240

new patent applications submitted

36,043

employees worldwide

Six financial targets support our corporate goal of profitable growth:

- Volume growth > GDP
- Adjusted EBITDA margin between 18 percent and 20 percent
- Free cash flow significantly above the dividend
- ROCE above the cost of capital
- Solid investment grade rating
- Attractive and reliable dividend

1.1 Business model

Evonik is one of the world's leading specialty chemicals companies. Our strengths include the balanced spectrum of our business activities, end-markets, and regions. Around 80 percent of sales come from **market-leading positions**[1], which we are systematically expanding. Our strong competitive position is based on close collaboration with customers, our high innovative capability, and our integrated technology platforms.

Our specialty chemicals products make an indispensable contribution to the benefits of our customers' products, which generate their success in global competition. Close cooperation with our customers enables us to build up a **deep knowledge** of their business, so we can offer products tailored to their specifications and extensive technical service. Our technology centers and customer competence centers play an important role in this around the world.

Market-oriented research and development is a key driver of profitable growth. This is based on our strong **innovation culture,** which is rooted in our innovation management and management development. Good ideas are rapidly recognized, driven forward, and implemented with our customers.

Highly trained **employees** are a key success factor. They drive forward the company on a daily basis through their hard work and identification. We have therefore developed a wide range of activities to gain and develop talented and qualified employees and to position Evonik as a preferred employer in order to retain them.

As preconditions for Evonik's future viability, **sustainable business activities** and **responsible conduct** are cornerstones of our business model. We drive forward our sustainability activities along the value chain in close dialogue with our stakeholders. As well as our own production processes and the products we market, we always consider the supply chain and the product benefits for our customers and their customers. We have observed rising demand for products that demonstrate a good balance of economic, ecological, and social factors. That opens up a broad spectrum of future-oriented business opportunities for Evonik in attractive markets. Sustainability has long been a growth driver in many of our businesses.

In view of this, we defined our sustainability strategy in more detail in 2018, especially as regards foresighted resource management and integrating sustainability into strategic management processes.

A decentralized corporate structure

Our specialty chemicals operations are divided into three chemical manufacturing segments, which operate close to their markets and customers and have a high degree of entrepreneurial independence. They are supported by a Services segment.

The Nutrition & Care and Resource Efficiency segments operate principally in attractive markets with above-average growth rates. Both segments offer customers customized, innovation-driven solutions. The aim for these segments is to achieve above-average, profitable growth through innovations, investments, and acquisitions.

The Performance Materials segment is characterized by processes that make intensive use of energy and raw materials. It therefore concentrates on integrated, cost-optimized technology platforms, efficient workflows, and economies of scale. Our strategic goal for this segment is to contribute earnings to finance the growth of the Evonik Group. Investments and, where appropriate, alliances concentrate on securing our good market positions.

Corporate structure **C05**

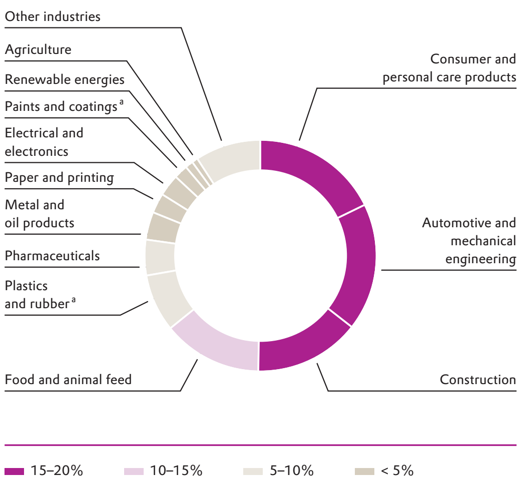
	Evonik			
Segments	**Nutrition & Care**	**Resource Efficiency**	**Performance Materials**	**Services**
	Specialty chemicals for consumer goods for daily needs, animal nutrition, and healthcare products	High-performance materials and specialty additives for environment-friendly and energy-efficient system solutions for the automotive, paints, coatings, adhesives, and construction industries and many other sectors	Production of polymer materials and intermediates, mainly for the rubber, plastics, and agriculture industries	Services for internal and external customers at Evonik sites and standardized group-wide administrative services

[1] We define these as ranking 1st, 2nd, or 3rd in the relevant markets.

Broadly diversified end-markets

Most of our customers are industrial companies that use our products for further processing. The range of markets in which they operate is diverse and balanced. None of these end-markets accounts for more than 20 percent of our sales.

Evonik's end-markets C06



[a] Where not directly assigned to other end-customer industries.

Global production

Evonik has a presence in more than 100 countries and 83 percent of sales are generated outside Germany. We have production facilities in 28 countries on six continents and are therefore close to our markets and our customers. Our largest production sites, for example, Marl, Wesseling, and Rheinfelden (Germany), Antwerp (Belgium), Mobile (Alabama, USA), Shanghai (China), and Singapore, have integrated technology platforms used by various units.

Integrated technology platforms are a competitive advantage

Our products are manufactured using highly developed technologies that we are constantly refining. Evonik has many integrated production complexes where key precursors are produced in neighboring production facilities. In this way, we offer our customers maximum reliability of supply. At the same time, integrated world-scale production facilities combined with technologically demanding production processes act as high entry barriers.

Making good progress with the digital transformation

Digitalization includes fundamental changes to processes in the chemical industry. That starts with the use of artificial intelligence in research and development and continues through the procurement of raw materials, and planning and operating production facilities, to marketing and sales.

Evonik is driving forward digitalization throughout the Group. We want to explore new business models, solutions, and services for our customers, and to empower our employees for the digital world. Evonik also sees digitalization as an opportunity to raise efficiency. To extend our position in the digital world in the long term, we are entering into strategic partnerships with technology companies, universities, and cross-business networks.

1.2 Principles and objectives

Building a best-in-class specialty chemicals company

We want to make Evonik a best-in-class specialty chemicals company. This global aspiration is closely linked to our goal of profitable growth. To increase the value of our company, our strategy has three focal areas:

- A more balanced and more specialty portfolio
- Leading in innovation
- An open and performance-oriented culture.

Our goal is to step up our focus on businesses with clear specialty chemicals characteristics. To ensure an even better balance within our **portfolio** and to grow where Evonik is already strong but there are especially promising prospects, our strategy concentrates on four **growth engines**:

- Specialty Additives
- Animal Nutrition
- Smart Materials
- Health & Care.

Capital allocation for new developments and enhancements, investment, and acquisitions will be concentrated principally on these growth engines. Each of the four growth engines focuses on different markets but they have one thing in common: They are aligned consistently to delivering innovative solutions for issues and developments of relevance to industry and end-customers in the coming decades.

Growth engines

Specialty Additives

Specialty additives improve the properties of countless everyday products. Small quantities of these additives are used in production processes to achieve a variety of different effects, for example, to regulate the hardness of cushioning or the viscosity of lubricants.

Animal Nutrition

Sustainable food production is one of the big challenges of our time. Globally, meat production is increasing as a result of rising living standards in emerging markets. That means more land is required for farming and also increases emissions of methane gases by cattle. Evonik already offers many solutions to address this development. Markets are also influenced by the desire for safer and better-quality food and criticism of the use of antibiotics in animal nutrition.

Smart Materials

Smart materials have specially tailored functionalities that help to optimize products and product properties. Examples are silica and polyamide 12.

Health & Care

This growth engine comprises products and services for pharmaceuticals, medical technology, cosmetics, and nutritional supplements. Examples are pharmaceutical polymers, which release the active ingredients in medicines in the body exactly when and where they are needed.

Innovation is an important driver of profitable growth as it leverages the development of new products and applications. Our focus here is on working intensively with customers and partners along the supply chain. Within the four growth engines, Evonik has defined specific innovation growth fields[1] that target highly attractive new markets where we can effectively deploy our core competencies.

The third element is a performance-oriented **culture** based on our new corporate values: performance, trust, openness, and speed. We initiate change, keep our promises, reward performance and readiness to take risks, foster thinking outside the box, and are open to new ideas. We are agile, decisive, and quick to react. We regard ourselves as an international company and see diversity as an opportunity.

Ambitious targets

To support our goal of profitable growth, we have set six ambitious **financial targets:**

Financial targets for the Evonik Group T04

Volume growth	> GDP
Adjusted EBITDA margin	Between 18 percent and 20 percent
Free cash flow	Significantly above the dividend
ROCE	Above the cost of capital
Rating	A solid investment grade rating
Dividend	Attractive and reliable

As a responsible specialty chemicals company, we are also continuing to pursue our ambitious **non-financial targets**[2]**.**

Non-financial targets for the Evonik Group T05

Accident frequency[a] in 2019	Below upper limit of 1.30
Incident frequency[b] in 2019	Below upper limit of 1.10
Specific greenhouse gas emissions in 2020	Reduction of 12 percent[c]
Specific water intake in 2020	Reduction of 10 percent[c]

[a] All work-related accidents (excluding traffic accidents) resulting in absence of at least one full shift per 1 million working hours.
[b] Number of incidents per 1 million working hours.
[c] Reference base 2012.

[1] See section on research and development.
[2] See section on safety and environment.

1.3 Business management systems

Most important financial key performance indicators

Financial management of Evonik is based on a consistent system of value-oriented indicators. These are used to assess the business performance of the operational units and the Group. Through systematic alignment to these indicators, Evonik endeavors to create value by raising profitability and ensuring profitable growth.

We use **adjusted EBITDA** (i.e., EBITDA after factoring out special items) as a financial performance indicator. Adjusted EBITDA and the corresponding relative indicator, the adjusted EBITDA margin, show operating performance irrespective of the structure of assets and the investment profile. We use this in particular for internal and external comparisons of the cost structure and profitability of our businesses.

The return on capital employed **(ROCE)** is used as a further indicator of value-driven management of the company. It is calculated from adjusted EBIT in relation to average capital employed. Comparison with the cost of capital, which shows the risk-adjusted return expectations of our investors, indicates relative value creation. This is calculated using a weighted average cost of capital, which reflects the return expectations of both shareholders, derived from the capital asset pricing model, and providers of debt capital.

The special items that are factored out when calculating adjusted EBITDA and adjusted EBIT include restructuring, impairment losses/reversals of impairment losses, income and expenses in connection with the purchase/disposal of investments in companies, and other income and expense items that, due to their nature or amount, do not reflect the typical operating business. We consider that the adjusted earnings figures are more suitable than unadjusted data for comparing the performance of operating units over several periods.

We also use **free cash flow** as an operational performance indicator. This is calculated from the cash flow from operating activities, continuing operations, less outflows for capital expenditures on intangible assets, property, plant and equipment. The free cash flow shows the remaining scope for financing, i.e., the company's internal financing capacity.

Most important non-financial key performance indicators

Evonik also uses a wide variety of non-financial performance indicators. For example, our annual sustainability report[1] provides information on ecological and societal issues to supplement our economic reporting.

Traditionally, we accord special significance to **safety,** which is regarded as a holistic management task that has to be lived at all management levels. Our guiding principles on safety are binding for staff at all levels and were reinforced in 2015 by a global safety culture initiative. In accordance with corporate policy, all operational units at Evonik have an occupational safety target. In addition, all production units have a plant safety target. The relevant indicators are accident frequency and incident frequency.[2]

[1] This is based on the Global Reporting Initiative (GRI) Standards 2016.
[2] See section on safety and environment.

2. Business review

Progress in delivering our corporate strategy

Strengthening the growth engines

- Successful integration of the businesses acquired in 2017
- Focused capital expenditures
- Bundling oleochemical activities
- Agreement to acquire PeroxyChem signed
- Examining options for the future development of the methacrylates business

Reducing selling and administrative expenses

- Savings of around €50 million in 2018
- Measures defined for further savings of €150 million

Cultural change underway to strengthen performance orientation

Forecast for 2018 achieved

- ✓ Sales **€15.0 billion**
- ✓ Adjusted EBITDA **€2.6 billion**
- ✓ ROCE **12 %**
- ✓ Capital expenditures **€1.05 billion**
- ✓ Free cash flow **€672 million**

All segments generated higher earnings

Solid investment grade rating

Adjusted EBITDA margin **17.3%**

Record adjusted net income **€1,294 million**

Adjusted earnings per share **€2.78**

Dividend **€1.15** per share

2.1 Overall assessment of the economic situation

Strategically, in 2018 we made good progress in strengthening our four defined growth engines: Specialty Additives, Animal Nutrition, Smart Materials, and Health & Care, which are characterized by above-average growth and low cyclical exposure.

Major **investments** such as the construction of the methionine complex in Singapore were driven forward purposefully and new projects were initiated. These include the planned construction of a production complex for the specialty polymer polyamide 12 in Marl (Germany)—the biggest investment in Evonik's history in this country—and the proposed acquisition of the US company PeroxyChem[1], Philadelphia (Pennsylvania, USA), which is an excellent complement to our hydrogen peroxide activities. Integration of the businesses acquired in 2017 from Air Products and Chemicals, Inc., Allentown (Pennsylvania, USA) and J. M. Huber Corporation, Atlanta (Georgia, USA) took place very successfully. The **Oleo 2020**[2] program introduced in 2018 is bundling our oleochemical activities to raise efficiency, leverage synergies, and reduce complexity.

The **methacrylates business** does not form part of our growth engines; it comprises large-volume monomers such as methylmethacrylate (MMA), various specialty monomers, and the PLEXIGLAS® brand of PMMA molding compounds and semi-finished products. In March 2018, we therefore decided to examine all options for the future development of this business, including potential partnerships and complete separation. Similarly, the precursors for agrochemicals manufactured at the **Jayhawk** site in Galena (Kansas, USA) are not part of our growth business. This site belonging to the Performance Materials segment was divested in November 2018.

We have made good headway with the **SG&A 2020** program[3] introduced at the end of 2017, which is geared to global optimization of processes and a lasting reduction in selling and administrative expenses. We expect further impetus to come from the cultural change towards a more open, performance-oriented **corporate culture.**

Operationally, our business developed successfully. Global demand for our products was high and we achieved organic sales growth of 5 percent. This was principally attributable to higher selling prices. The development of volume sales varied. While volume growth in the Nutrition & Care segment was well above global economic growth (3.2 percent, expected), the volume trend in the Performance Materials segment was held back by the impact of the low water level in the river Rhine. Overall, sales grew 4 percent to €15,024 million.

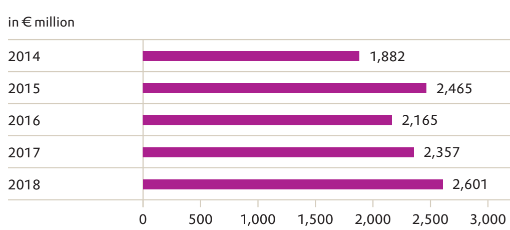
Adjusted EBITDA rose 10 percent to €2,601 million. All segments contributed to the earnings increase.

The adjusted EBITDA margin improved to 17.3 percent (2017: 16.4 percent), but was nevertheless below the target mid-term range of 18–20 percent. ROCE was 12.1 percent, above both the cost of capital and the prior-year level (11.2 percent).

Net income rose 31 percent to €932 million. Net income after adjustment for special items increased 29 percent to a new record of €1,294 million. At the annual shareholders' meeting, the executive board and supervisory board will again propose a dividend of €1.15 per share.

We generated a **free cash flow** of €672 million. That was €161 million higher than in the previous year and well above the dividend payment of €536 million for 2017. Our financial profile is still very good: Evonik has a solid investment grade rating. We were able to reduce net financial debt slightly thanks to the free cash flow.

Development of adjusted EBITDA in the Evonik Group C07



Prior-year figures restated.

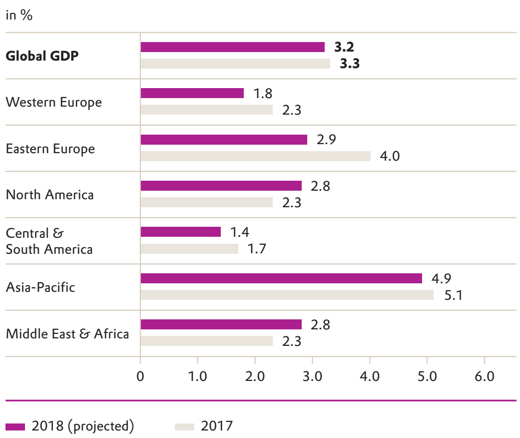
2.2 Economic background

Lower global economic momentum

Global economic conditions developed in line with our expectations in 2018. We estimate that the global economy as a whole grew by around 3.2 percent in 2018. However, growth was weaker than in the previous year (3.3 percent). Economic sentiment deteriorated considerably during the year. Alongside the uncertainty caused by mounting trade policy conflicts, this was due to the tightening of monetary policy in the United States, leading to a reversal of international capital flows, which dampened economic growth in the emerging markets.

[1] See section on major events.
[2] See section on segment performance.
[3] See section on business conditions and performance.

Development of GDP 2017/2018 **C08**



Overall, regional differences in economic momentum have increased.

The pace of economic growth has recently dropped in Western Europe. The automotive industry's problems with the certification of vehicles under the new emissions testing procedure led to lower industrial output. Exports suffered from weaker demand worldwide, and especially from China. In addition, economic activity was dampened by the heightened political uncertainty caused by the prospect of Brexit and the change of government in Italy.

Weaker growth in Eastern Europe was largely due to the slowdown in Turkey. The Russian economy continued its modest growth path. While the economy was supported by private consumption, it was held back by the downturn in manufacturing industry.

The strong growth in North America was driven principally by the US economy, which benefited from extensive tax cuts and an increase in state investment. Higher employment and pay rises boosted domestic consumption. In view of the good economic situation, the Federal Reserve continued to tighten monetary policy, raising its key interest rate by a total of 1.0 percentage points in four steps to 2.5 percent.

Growth in Central & South America was relatively low. Political uncertainty, high levels of unemployment and private debt, together with structural problems, again prevented a significant improvement in the economic situation. Argentina slipped back into recession after two years of economic growth.

The Asia-Pacific region posted slightly slower growth than in the previous year. Economic momentum in Japan fell as a result of lower industrial output and weaker export trade. The trade dispute with the USA, the reduction in debt, and reforms resulted in lower growth in China.

Weaker development of end-customer industries

Worldwide, the development of Evonik's **end-customer industries** differed by region and by sector in 2018. We anticipate that overall industrial growth was lower than in the previous year.

Compared with the previous year, demand for consumer and care products was higher in North America, driven by an improvement in consumer sentiment and falling unemployment, and remained high in the Asia-Pacific region. Growth in the food and feed sectors gained pace in North America but weakened in Central & South America. Automotive and mechanical engineering output declined year-on-year in Europe, North America, and Asia-Pacific. In Europe, growth momentum in the construction sector was higher than in 2017 thanks to an increase in capital spending, while growth rates in the Asia-Pacific region stabilized.

As a result of the significant rise in the price of crude oil between January and October 2018, the price of Evonik's petrochemical feedstocks increased steadily over this period, but fell again in November and December 2018 thanks to the sharp drop in the oil price. In addition, strong demand without any expansion of supply resulted in further price rises for other raw materials. Overall, there was a year-on-year increase Evonik's raw material price index in 2018.

The average annual exchange rate for the euro against Evonik's most important currency—the US dollar—increased to US$1.18, compared to the average exchange rate in the previous year (US$1.13).

2.3 Major events

On November 7, 2018, we signed an agreement with One Equity Partners, Chicago (Illinois, USA) to acquire the US company **PeroxyChem,** Philadelphia (Pennsylvania, USA) for US$625 million. PeroxyChem is a manufacturer of hydrogen peroxide and peracetic acid and is well positioned in high-margin specialty applications. This acquisition expands our portfolio of environmentally friendly and high-growth specialty applications in the Resource Efficiency segment. Furthermore, it gives us an attractive business characterized by above-average growth, moderate capital intensity, and low cyclicality. The transaction should be closed in mid-2019. It is subject to the approval of the relevant authorities.

2.4 Business conditions and performance

Organic sales growth

The Evonik Group grew **sales** 4 percent to €15,024 million. The 5 percent organic sales growth was driven by higher selling prices, resulting in some cases from passing on higher raw material costs. Overall, volumes were on the same level as in the previous year, partly due to the restrictions on the transportation of goods in fall 2018 caused by low water levels in the river Rhine. 1 percentage point of the rise in sales came from the initial consolidation of the silica business acquired from J. M. Huber Corporation, Atlanta (Georgia, USA) effective September 1, 2017 (contained in portfolio/other effects). Negative exchange rate movements had a counter-effect.

Change in sales 2018 versus 2017 T06

in %	
Volumes	–
Prices	5
Organic sales growth	**5**
Exchange rates	–3
Portfolio/other effects	2
Total	**4**

Adjusted EBITDA up considerably year-on-year

Adjusted EBITDA rose 10 percent to €2,601 million, driven by higher earnings in all segments and the initial success of the program to reduce selling and administrative expenses. The adjusted EBITDA margin improved to 17.3 percent, up from 16.4 percent in 2017.

Adjusted EBITDA by segment T07

in € million	2018	2017	Change in %
Nutrition & Care	810	747	8
Resource Efficiency	1,288	1,173	10
Performance Materials	670	658	2
Services	146	133	10
Corporate, other operations, consolidation	–313	–354	12
Evonik	**2,601**	**2,357**	**10**

Prior-year figures restated.

The increase in adjusted EBITDA in the Nutrition & Care segment resulted principally from higher volumes and selling prices. In view of the sustained high level of demand, the rise in the Resource Efficiency segment's adjusted EBITDA was mainly driven by prices. The Performance Materials segment posted slightly higher earnings, and earnings in the Services segment were considerably higher. The adjusted EBITDA reported by corporate, other operations, including consolidation, was higher than in the prior year, partly due to cost-saving measures. Among other things, it includes expenses for the corporate center and strategic research.

Sales and reconciliation from adjusted EBITDA to net income T08

in € million	2018	2017	Change in %
Sales	**15,024**	**14,383**	**4**
Adjusted EBITDA	**2,601**	**2,357**	**10**
Adjusted depreciation, amortization, and impairment losses	–877	–871	
Adjusted EBIT	**1,724**	**1,486**	**16**
Adjustments	–357	–261	
thereof attributable to			
Restructuring	–208	–25	
Impairment losses/reversals of impairment losses	7	–82	
Acquisition/divestment of shareholdings	–31	–89	
Other	–125	–65	
Income before financial result and income taxes (EBIT)	**1,367**	**1,225**	**12**
Financial result	–165	–203	
Income before income taxes, continuing operations	**1,202**	**1,022**	**18**
Income taxes	–250	–292	
Income after taxes, continuing operations	**952**	**730**	**30**
Income after taxes, discontinued operations	2	–	
Income after taxes	**954**	**730**	**31**
thereof attributable to non-controlling interests	22	17	
Net income	**932**	**713**	**31**
Earnings per share	**2.00**	**1.53**	

Prior-year figures restated.

The **adjustments** totaled –€357 million, compared with –€261 million in 2017. The considerable increase in restructuring expenses was mainly due to the SG&A 2020 program to reduce administrative and selling expenses, the Oleo 2020 program to raise the efficiency of the oleochemicals business in the Nutrition & Care segment, and shutdown of a production site in Hungary. The adjustment category purchase/sale of investments contains expenses of €31 million, mainly for integration of the businesses acquired in 2017 and the planned acquisition of PeroxyChem. The category others includes expenses for examining the options for the future development of the methacrylates business and a project to optimize the procurement of outsourced services. The previous year's figure of –€261 million mainly comprised expenses in connection with the acquisitions made in 2017 and impairment losses on assets in the Resource Efficiency and Nutrition & Care segments.

The **financial result** improved to –€165 million. It contains special items of –€3 million for interest expense in connection with the establishment of provisions. The prior-year figure of –€203 million contained special items of –€27 million, principally for impairment losses on loans to an equity investment (–€13 million) and currency hedging of the purchase price of the Huber silica business (–€9 million). The adjusted financial result improved by €14 million to –€162 million. **Income before income taxes, continuing operations** rose 18 percent to €1,202 million. The income tax rate of 21 percent was mainly attributable to lower foreign tax rates and positive effects from the remeasurement of deferred taxes. The income tax rate after factoring out taxes on special items was 23 percent.

Net income improved 31 percent to €932 million, mainly as a result of the higher operating result.

We use **adjusted net income** to assess the earnings power of the continuing operations, especially on a long-term view, and to forecast future development. The calculation starts from EBITDA after adjustment for special items[1]. The financial result is then adjusted for income and expenses in connection with the purchase/disposal of equity investments and other income and expense items that, by nature or amount, do not form part of typical current financing activities. Further, we deduct amortization of intangible assets, which mainly results from acquisitions, and adjust income tax for taxes on special items.

In 2018, adjusted net income improved 29 percent to a new record of €1,294 million as a result of the good operating performance.

Reconciliation to adjusted net income **T09**

in € million	2018	2017	Change in %
Adjusted EBITDA	**2,601**	**2,357**	**10**
Adjusted depreciation, amortization, and impairment losses	–877	–871	
Adjusted EBIT	**1,724**	**1,486**	**16**
Adjusted financial result	–162	–176	
Amortization and impairment losses on intangible assets	145	129	
Adjusted income before income taxes [a]	**1,707**	**1,439**	**19**
Adjusted income taxes	–391	–415	
Adjusted income after taxes [a]	**1,316**	**1,024**	**29**
thereof adjusted income attributable to non-controlling interests	22	17	
Adjusted net income [a]	**1,294**	**1,007**	**29**
Adjusted earnings per share [a] in €	**2.78**	**2.16**	

Prior-year figures restated.
[a] Continuing operations.

Program to reduce costs is making good progress

To support our financial targets, especially the goal of improving the adjusted EBITDA margin, we introduced the SG&A 2020 program in November 2017. The aim is to achieve a lasting reduction of €200 million in selling and administrative expenses by 2021. The first €50 million savings were made in 2018. By year-end 2018, measures had been identified for savings of a further €150 million.

[1] See section on business management systems.

Efficient and effective procurement

Reliable supply, gaining access to new procurement markets, and ongoing optimization of material costs are key tasks for our procurement function.

The principal factors in 2018 were restricted availability of raw materials and rising raw material prices. Production problems at some key suppliers, the persistently low level of water in the river Rhine, and the escalating trade dispute between the USA and China were major influences. Other contributory factors were multiple plant closures in China as a consequence of a more restrictive environmental policy. Because of our sustainability strategy, we were not directly affected by this, but it nevertheless caused an additional tightening of supply on raw material markets.

In 2018, we drove forward the use of new digital procurement solutions to automate further operational tasks and increase the value created by strategic activities. For instance, the procurement function is working on an application to use artificial intelligence to gain a competitive advantage in the procurement of raw materials by speeding up the response to events affecting the market, reducing the time required to obtain information, and improving our negotiating position. In addition, we are actively examining the use of new methods such as machine learning to automate and improve forecasting of raw material prices.

Indirect procurement (procurement of general and technical goods and services) focused on the global introduction of a new cloud-based IT solution for catalogue orders, which brought a further increase in the automation rate. Optimization continued in 2018 in the procurement of construction and technical services to deal with the challenges resulting from the skills shortage and the construction boom in Germany. Here, significant progress was made in validating new suppliers and extending long-term supply relationships.

As well as participating in procurement alliances with other companies and validating new suppliers, we are working intensively to extend strategic relationships with suppliers. Here we are looking for additional opportunities to reduce risk, optimize costs, and enhance cooperation and innovation with the suppliers that are currently of the greatest strategic importance. We are aware of our responsibility within the supply chain. Issues such as safety, health, environmental protection, corporate responsibility, and quality play an integral part in our procurement strategy. These sustainability aspects are also supported by standardized global audits and assessments through the Together for Sustainability (TfS) sector initiative, which was co-founded by Evonik. An audit or assessment has already been performed on Evonik's principal suppliers and 83 percent of suppliers of critical raw materials[1].

In 2018, Evonik spent around €9.9 billion on raw materials and supplies, technical goods, services, energy, and other operating supplies. Raw materials make up around 60 percent of procurement volume. Spending on petrochemical feedstocks is around €4.0 billion and accounts for 67 percent of our raw material base.

Using renewable resources remains important to Evonik. In 2018, around 8 percent of raw materials were from renewable resources. The main applications for these raw materials are amino acids and starting products for the cosmetics industry.

Another good return on capital employed

Within our value-oriented management approach, our success is measured principally by **ROCE,** which was 12.1 percent in 2018 and therefore above our cost of capital. In our regular review in 2018, the cost of capital was confirmed as being 10.0 percent before taxes, unchanged from the previous year.

Capital employed, ROCE and economic value added (EVA®) **T10**

in € million	2018	2017
Intangible assets	6,105	5,476
+ Property, plant and equipment	6,590	6,300
+ Investments	47	46
+ Inventories	2,204	1,952
+ Trade accounts receivable	1,819	1,815
+ Other interest-free assets	461	490
- Interest-free provisions	−934	−915
- Trade accounts payable	−1,535	−1,371
- Other interest-free liabilities	−462	−536
= Capital employed[a]	**14,295**	**13,257**
Adjusted EBIT	**1,724**	**1,486**
ROCE (adjusted EBIT/capital employed) in %	**12.1**	**11.2**
Cost of capital (capital employed ∗ WACC)	1,430	1,325
EVA® (adjusted EBIT – cost of capital)	**294**	**161**

Prior-year figures restated.

[a] Annual averages.

[1] We define these as raw materials whose availability is vital for our production processes.

The average **capital employed** increased by €1.0 billion to €14.3 billion. The acquisition of the Air Products specialty additives business and the Huber silica business in 2017 made a substantial contribution to this. Due to the use of an average, these additions had a full impact on average capital employed for the first time in 2018. In particular, this increased intangible assets, property plant and equipment, and net working capital.

Thanks to the good development of adjusted EBIT, the Evonik Group's ROCE increased in 2018 even though average capital employed was higher.

In the three chemical segments, ROCE was above the cost of capital. In the Resource Efficiency and Performance Materials segments, ROCE was well above average. The Nutrition & Care segment increased ROCE slightly year-on-year.

ROCE by segment **T11**

in %	2018	2017
Nutrition & Care	11.2	10.9
Resource Efficiency	20.5	20.8
Performance Materials	42.5	41.3
Services	1.3	1.5
Evonik (including corporate, other operations)	**12.1**	**11.2**

Prior-year figures restated.

Clear value creation

Economic value added **(EVA®)** is the difference between adjusted EBIT and the cost of capital, which is calculated by multiplying average capital employed by the average cost of capital (WACC). If EVA® is positive, the Group creates value (value spread approach). In 2018, we generated EVA® of €294 million. The improvement of €133 million compared with the previous year was attributable to the rise in the operating result.

2.5 Comparison of forecast and actual performance

We met our forecasts in full, and actually exceeded them for some performance indicators.

Comparison of forecast and actual performance **T12**

Forecast performance indicators	2017	Forecast for 2018	Adjusted forecast for 2018[a]	2018	Forecast for 2019
Group sales	€14.4 billion	Slight increase		€15.0 billion	Slightly[b] lower to stable
Adjusted EBITDA	€2.36 billion	Between €2.4 billion and €2.6 billion	Between €2.60 billion and €2.65 billion	€2.60 billion	Slightly[b] lower to stable
ROCE	11.2%	Above the cost of capital, about level with the prior year		12.1%	Above the cost of capital; slightly lower than in the prior year
Capital expenditures[c]	€1.08 billion	Around €1.0 billion		€1.05 billion	Around €1.0 billion
Free cash flow	€0.51 billion	Slightly above the prior year	Perceptibly above the prior year	€0.67 billion	Significantly higher than in the prior year
Accident frequency	1.16	Stable and below upper limit of 1.30		0.87	Below the upper limit of 1.30
Incident frequency	1.11	Below upper limit of 1.10		1.08	Better and below the upper limit of 1.10

Prior-year figures restated.

[a] In the half-year financial report 2018.
[b] In the context of the outlook, slightly indicates a change of between 1 percent and 5 percent when it refers to sales, and between 1 percent and 10 percent when it refers to adjusted EBITDA.
[c] Capital expenditures for intangible assets, property, plant and equipment.

2.6 Segment performance

Nutrition & Care segment

Key data for the Nutrition & Care segment T13

in € million	2018	2017	Change in %
External sales	4,646	4,507	3
Adjusted EBITDA	810	747	8
Adjusted EBITDA margin in %	17.4	16.6	–
Adjusted EBIT	535	463	16
Capital expenditures[a]	486	391	24
Depreciation and amortization	263	262	–
Capital employed (annual average)	4,774	4,259	12
ROCE in %	11.2	10.9	–
No. of employees as of December 31	8,224	8,257	–

Prior-year figures restated.

[a] Capital expenditures for intangible assets, property, plant and equipment.

Perceptible volume growth

In the Nutrition & Care segment, sales advanced 3 percent to €4,646 million, driven by high global demand. A perceptible rise in volumes and higher selling prices contributed to this. Negative currency movements had a counter-effect.

In the healthcare business, a very successful performance was posted by functional polymers for smart drug delivery systems for oral and parenteral pharmaceutical applications and by exclusive synthesis for the pharmaceutical industry. Personal care products posted clear sales growth thanks to higher volumes and selling prices. Sales of additives for polymer foam, which are used, for example, in mattresses and in insulating materials, were around the prior-year level. Growth in the market for essential amino acids for animal nutrition, especially methionine, remained robust. Sales were around the previous year's level, while volumes increased. Selling prices were lower than in the previous year as a result of the improved availability of products. A wide range of measures were successfully implemented to safeguard earnings by raising efficiency and cutting costs.

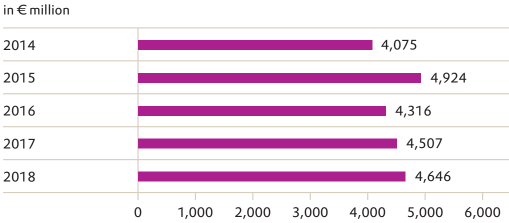
The **Oleo 2020** program introduced in 2018 is bundling our oleochemical activities. We combined our personal care and household care products businesses and the related oleochemical technology platform at the start of 2019. The new Care Solutions unit will concentrate on specialties with high product differentiation. The aim is to achieve greater efficiency in customer relationship management and leverage synergies in production. In addition, two sites in the UK and Spain are to be closed.

Perceptible improvement in adjusted EBITDA

Adjusted EBITDA in the Nutrition & Care segment rose 8 percent to €810 million. This was due to volume growth, the systematic focus on higher-margin products, and successful cost savings. The adjusted EBITDA margin improved to 17.4 percent, up from 16.6 percent in 2017.

Development of sales in the Nutrition & Care segment C09

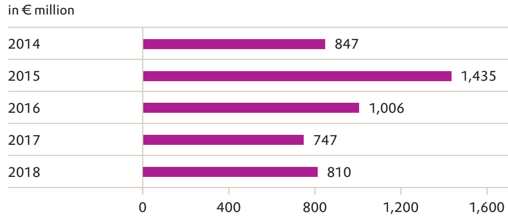
in € million



Prior-year figures restated.

Development of adjusted EBITDA in the Nutrition & Care segment C10

in € million



Prior-year figures restated.

Higher capital expenditures

Capital expenditures in the Nutrition & Care segment increased 24 percent to €486 million. The increase was attributable to major investment in another world-scale production complex for methionine in Singapore. Capital expenditures were therefore well above depreciation and amortization, which was €263 million. The average capital employed increased to €4,774 million, principally due to capital expenditures. ROCE rose to 11.2 percent as a result of the increase in earnings.

Investment projects to drive growth

In view of the strong growth in the market for methionine, Nutrition & Care is currently building a further world-scale production complex in Singapore. It will be located alongside the facility on Jurong Island that came into service in November 2014, and will be fully backwardly integrated, including production of all precursors and intermediates. Start-up is scheduled for mid-2019.

The Veramaris joint venture established by Evonik and Royal DSM, Heerlen (Netherlands) is currently building a plant to produce omega-3 fatty acids from natural sea algae. Together, the two partners are investing around US$200 million in this new plant at Evonik's site in Blair (Nebraska, USA), where it will have access to decades of experience of industrial fermentation technology. Start-up is scheduled for mid-2019. The highly concentrated algal oil produced by Veramaris will enable the animal feed industry to keep pace with rising demand for these essential omega-3 fatty acids for the first time without having to rely on fish oil from stocks of wild fish.

Both investments strengthen the Animal Nutrition growth engine.

Resource Efficiency segment

Key data for the Resource Efficiency segment **T14**

in € million	2018	2017	Change in %
External sales	5,709	5,393	6
Adjusted EBITDA	1,288	1,173	10
Adjusted EBITDA margin in %	22.6	21.8	–
Adjusted EBIT	985	885	11
Capital expenditures[a]	289	340	–15
Depreciation and amortization	290	281	3
Capital employed (annual average)	4,815	4,256	13
ROCE in %	20.5	20.8	–
No. of employees as of December 31	10,268	10,260	–

Prior-year figures restated.

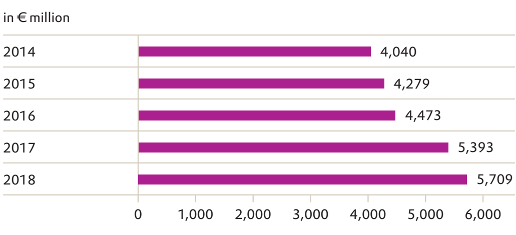
[a] Capital expenditures for intangible assets, property, plant and equipment.

Higher sales

The Resource Efficiency segment's successful performance continued in 2018. Sales rose 6 percent to €5,709 million, driven principally by higher selling prices, partly because increased raw material prices were passed on, and by the consolidation of the silica business acquired from Huber as of September 1, 2017. This was countered by slightly lower volumes and negative currency effects.

The silica business contributed significantly higher sales. Alongside eight months including the first-time consolidation of the Huber business, a very pleasing performance came from products for the tire industry. Coating additives, which mainly offer applications solutions for coating technologies, also generated significantly higher sales. In the business with high-performance polymers, there was especially high demand for polyamide 12 products, for example, from the automotive industry and 3D printing. An improved product mix and higher prices lifted sales. Crosslinkers, which are mainly used in environment-friendly paint systems/coatings, high-performance composites, and specialty plastics, posted a good performance worldwide and were able to grow sales thanks to volumes and prices. Oil additives for the automotive, construction, and transportation industries reported sales on the prior-year level.

Development of sales in the Resource Efficiency segment C11

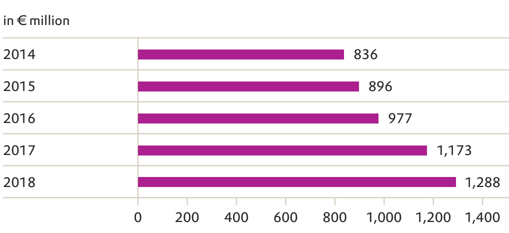


Prior-year figures restated.

Further rise in earnings

Adjusted EBITDA in the Resource Efficiency segment climbed 10 percent to €1,288 million thanks to higher capacity utilization and the additional earnings contributions from the activities acquired from Huber. The adjusted EBITDA margin improved from 21.8 percent to 22.6 percent.

Development of adjusted EBITDA in the Resource Efficiency segment C12



Prior-year figures restated.

Attractive return on capital

Capital expenditures declined 15 percent in the Resource Efficiency segment to €289 million and were on a level with depreciation and amortization. The average capital employed increased to €4,815 million. ROCE was at a very good level of 20.5 percent.

Investment projects to expand market positions

A new production facility for high-molecular polyester was completed at our site in Witten (Germany). As binders for paints, specialty copolyesters are used in coil coatings and, increasingly, in food can coatings.

By raising global capacity for precipitated silica, the Resource Efficiency segment is supporting the growth of its global customers in the tire and construction industries and in attractive specialty markets. In North America, a new production facility for precipitated silica has been erected in Charleston (South Carolina, USA), close to almost all major customers in the tire industry. This involves investment in the low triple-digit million euro range. We are also increasing production capacity for precipitated silica in Adapazari (Turkey) by 2020. Precipitated silica is a fast-growing product that is mainly used in high-quality tires with low rolling resistance. Other areas of application are the food, feed, and agriculture industries.

In Antwerp (Belgium), the Resource Efficiency segment is investing a sum in the high double-digit million euro range to extend capacity for fumed silica. This production complex is scheduled to come into service in summer 2019. Typical applications for this specialty silica, which Evonik markets as AEROSIL®, are paints, coatings, modern adhesive systems, transparent silicones, and non-combustible high-performance insulating materials. Precipitated and fumed silicas belong to the Smart Materials growth engine.

In response to rapidly rising demand, we are planning a new production complex for the specialty polymer polyamide 12 (PA 12) in Marl (Germany), which is scheduled to start operating in early 2021. Thanks to its outstanding properties—high stability combined with flexibility, as well as high temperature resistance and low weight—this high-performance polymer is used as a substitute for steel in many demanding applications: in automotive and lightweight engineering, and in oil and gas pipelines. In addition, it is used medical applications and in 3D printing. This investment also strengthens the Smart Materials growth engine.

In addition, on November 7, 2018, we signed an agreement to acquire the US company PeroxyChem[1] as an extension to our specialty products for the active oxygen business.

[1] See section on major events.

Performance Materials segment

Key data for the Performance Materials segment **T15**

in € million	2018	2017	Change in %
External sales	3,976	3,751	6
Adjusted EBITDA	670	658	2
Adjusted EBITDA margin in %	16.9	17.5	–
Adjusted EBIT	534	507	5
Capital expenditures[a]	114	163	−30
Depreciation and amortization	133	139	−4
Capital employed (annual average)	1,256	1,227	2
ROCE in %	42.5	41.3	–
No. of employees as of December 31	4,132	4,364	−5

Prior-year figures restated.

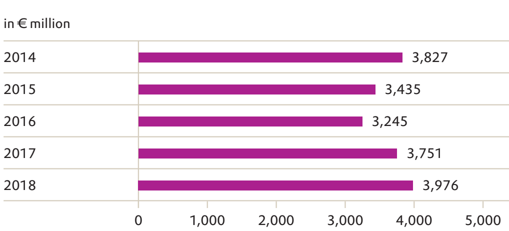
[a] Capital expenditures for intangible assets, property, plant and equipment.

Higher sales

Sales grew 6 percent to €3,976 million in the Performance Materials segment. This was attributable to a significant rise in selling prices, primarily as a consequence of higher raw material costs. The increase in sales was held back by negative currency effects. Transportation restrictions caused by the low water level in the river Rhine resulted in a drop in volumes.

Methacrylates once again posted a good performance and sales were significantly higher. Demand remained high, especially from the coatings and automotive sectors, while supply on the market was tight. We registered pleasing growth in attractive specialty applications, e.g., for medical technology and the automotive sector. In this market environment, business focused specifically on attractive applications. Sales of performance intermediates were higher as a result of the rise in selling prices resulting from higher raw material costs. However, the reduction in volumes caused by transportation restrictions had a significant counter-effect.

Development of sales in the Performance Materials segment **C13**

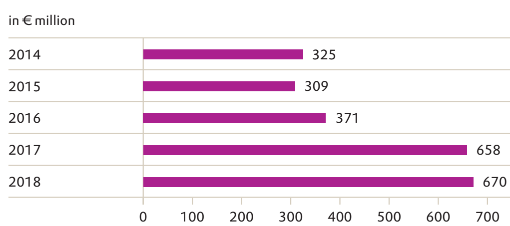


Prior-year figures restated.

High level of adjusted EBITDA

Adjusted EBITDA rose 2 percent to €670 million, driven principally by prices, but was held back by higher logistics costs resulting from the low water level in the river Rhine. The adjusted EBITDA margin dropped from 17.5 percent to 16.9 percent.

Development of adjusted EBITDA in the Performance Materials segment **C14**



Prior-year figures restated.

Excellent return on capital

Investment in the Performance Materials segment aims to secure its leading market positions, raise efficiency, and broaden the technology base. Capital expenditures dropped to €114 million. The average capital employed increased slightly, by 2 percent, to €1,256 million. The rise in ROCE to 42.5 percent was mainly due to higher earnings and the fact that most production facilities have been fully depreciated.

Focused investment

Performance Materials started up a new production facility for high-quality flat films made from multi-layer polymethylmethacrylate (PMMA) in Weiterstadt (Germany). Multilayer PLEXIGLAS® and EUROPLEX® films are used in medical technology, window and façade construction, and in the graphics industry.

Services segment

Key data for the Services segment T16

in € million	2018	2017	Change in %
External sales	677	717	–6
Adjusted EBITDA	146	133	10
Adjusted EBITDA margin in %	21.6	18.5	–
Adjusted EBIT	9	10	–10
Capital expenditures[a]	148	162	–9
Depreciation and amortization	127	124	2
Capital employed (annual average)	675	652	4
ROCE in %	1.3	1.5	–
No. of employees as of December 31	12,913	13,021	–1

Prior-year figures restated.

[a] Capital expenditures for intangible assets, property, plant and equipment.

The Services segment generates sales both internally, with the specialty chemicals segments and the corporate center (2018: €2,247 million), and with external customers. External sales fell 6 percent to €677 million. This was mainly due to lower revenues from procurement for external customers at our sites. Adjusted EBITDA rose 10 percent to €146 million. This was principally due to higher earnings from utilities, waste management, and site management.

Capital expenditures in this segment decreased by 9 percent to €148 million and therefore exceeded depreciation and amortization, which amounted to €127 million.

2.7 Regional development

A global presence

We increased sales in all regions in 2018. 83 percent of our sales were generated outside Germany.

Sales in Western Europe rose 3 percent year-on-year to €6,397 million, driven principally by our Nutrition & Care and Resource Efficiency growth segments, but the Performance Materials also posted higher sales. Western Europe accounted for 43 percent of Group sales.

Investment was once again concentrated on Western Europe. Nevertheless, capital expenditures in this region were below the previous year's high level at €480 million compared with €576 million. A new production facility for high-quality flat films made from multi-layer polymethylmethacrylate (PMMA) came on stream at our site in Weiterstadt (Germany). A production plant for high-molecular polyester was completed in Witten (Germany). Capacity for fumed silicas will be increased in Antwerp (Belgium) by summer 2019. In Marl (Germany), we are planning a new production complex for the specialty polymer polyamide 12. This is scheduled to start operating in early 2021.

In Eastern Europe, sales increased 13 percent to €947 million. The Nutrition & Care and Resource Efficiency segments both reported above-average sales rises. This region's share of Group sales was unchanged at 6 percent.

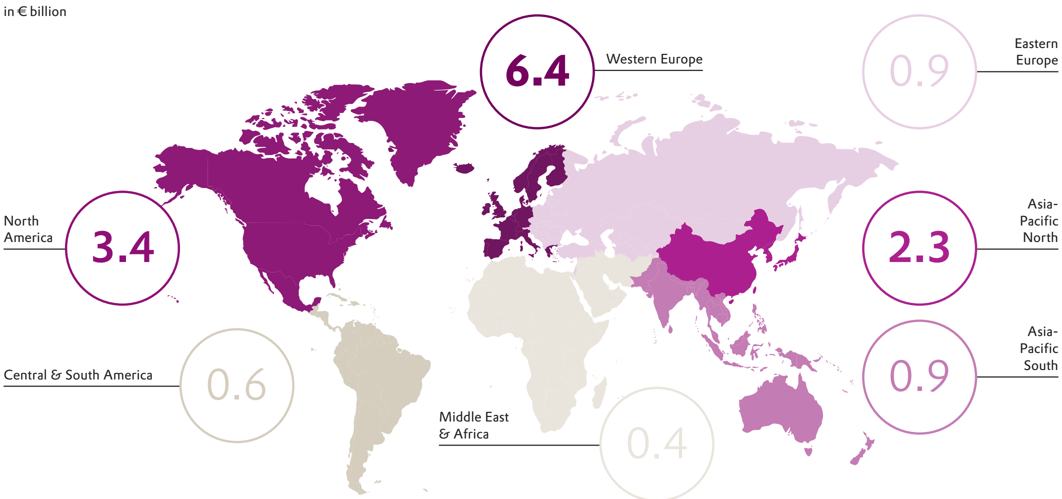
In the Middle East & Africa region, sales rose 3 percent to €435 million, which was 3 percent of Group sales.

Higher sales in the Americas

Sales in North America were 3 percent higher at €3,409 million. In addition to the first-time consolidation of sales from the Huber silica business, which was acquired on September 1, 2017, this was driven primarily by the good development of the Performance Materials segment. This region's share of total sales was unchanged at 23 percent. Capital expenditures were €213 million, which was below the previous year's level (€254 million). We completed a new production facility for precipitated silicas in Charleston (South Carolina, USA) and converted capacity in Chester (Pennsylvania, USA) for these products.

Sales declined 13 percent in Central & South America to €624 million. This region accounted for 4 percent of Group sales.

Sales by region **C15**



Higher investment in the Asia-Pacific region

Sales rose 6 percent to €2,276 million in the Asia-Pacific North region, with pleasing sales growth coming from the Resource Efficiency and Performance Materials segments. This region again accounted for 15 percent of Group sales. Capital expenditures totaled €40 million.

Sales in Asia-Pacific South rose 5 percent to €936 million, which was 6 percent of Group sales. Capital expenditures increased to €303 million (2017: €173 million). A further world-scale production complex for methionine is under construction in Singapore and is scheduled to come on stream in mid-2019.

2.8 Earnings position

Considerable year-on-year rise in income before income taxes, continuing operations

Sales grew 4 percent to €15.0 billion, principally as a result of higher selling prices and initial consolidation of the silica business acquired from Huber effective September 1, 2017. Negative exchange rate movements had a counter-effect. The rise in the cost of sales was driven mainly by consolidation of the new businesses and the increase in raw material costs. The higher selling expenses were mainly due to the expansion of our business. Research and development expenses declined, partly as a result of more targeted alignment of R&D activities. General administrative expenses were lower, mainly as a result of successful measures to reduce costs. In 2017, other operating income contained income in connection with the dissolution of a joint operation. The other operating expenses contained higher restructuring expenses but lower expenses for the purchase of equity investments. Income before financial result and income taxes was 12 percent higher at €1,367 million, principally because of the better operating performance.

Income statement for the Evonik Group **T17**

in € million	2018	2017	Change in %
Sales	15,024	14,383	4
Cost of sales	−10,399	−9,905	5
Gross profit on sales	**4,625**	**4,478**	**3**
Selling expenses	−1,752	−1,695	3
Research and development expenses	−459	−476	−4
General administrative expenses	−656	−714	−8
Other operating income	238	311	−23
Other operating expense	−637	−689	−8
Result from investments recognized at equity	8	10	−20
Income before financial result and income taxes, continuing operations	**1,367**	**1,225**	**12**
Financial result	−165	−203	−19
Income before income taxes, continuing operations	**1,202**	**1,022**	**18**
Income taxes	−250	−292	−14
Income after taxes, continuing operations	**952**	**730**	**30**
Income after taxes, discontinued operations	2	–	–
Income after taxes	**954**	**730**	**31**
thereof attributable to non-controlling interests	22	17	29
Shareholders of Evonik Industries AG (net income)	**932**	**713**	**31**

Prior-year figures restated.

Higher net income

The financial result includes special items totaling −€3 million, compared with −€27 million in the previous year. Income before income taxes, continuing operations increased 18 percent to €1,202 million. Income taxes declined, mainly due to non-period tax income and the remeasurement of deferred taxes. Non-controlling interests in after-tax income comprised the pro rata profits and losses of fully consolidated subsidiaries that are attributable to shareholders outside the Evonik Group.

Net income was 31 percent higher at €932 million, mainly because of the better operating performance.

2.9 Financial condition

Central financial management

The principal objectives of financial management are safeguarding the financial independence of the Evonik Group and limiting financial risks. We therefore apply a central financing strategy. Borrowing and bond issuance are normally undertaken by Evonik Industries AG or its financing company, Evonik Finance B. V., Amsterdam (Netherlands). The liabilities of this company are fully guaranteed by Evonik Industries AG. To reduce external borrowing, surplus liquidity at Group companies is placed in a cash pool at Group level to cover financing requirements in other Group companies through intragroup loans. Currency derivatives are used at Group level to hedge intragroup loans. Evonik has a flexible range of corporate financing instruments to meet liquidity requirements for day-to-day business, investments, and the repayment of financial debt.

Solid investment grade rating confirmed

Both Moody's and Standard & Poor's (S&P) confirmed their credit ratings for Evonik Industries AG in 2018. Moody's rating is still Baa1 and S&P still rates Evonik BBB+, with a stable outlook in both cases. Maintaining a solid investment grade rating is a central element in our financing strategy. In this way we gain access to a broad investor base on appropriate financing terms and thus maintain our financial flexibility. A solid investment grade rating gives banks, investors, customers, and suppliers a reliable basis for a long-term business relationship with Evonik.

Good free cash flow

The free cash flow rose by €161 million to €672 million. It includes cash outflows of around €15 million in connection with the current restructuring programs.

The increase in the free cash flow mainly resulted from the higher cash flow from operating activities, which was €1,704 million, exceeding the prior-year level by €153 million. The main influence here was the better operating result, while the increase in net working capital had a negative effect.

The cash flow from other investing activities comprised an outflow of €10 million. The prior-year outflow of €4,141 million mainly related to outflows for the purchase of subsidiaries.

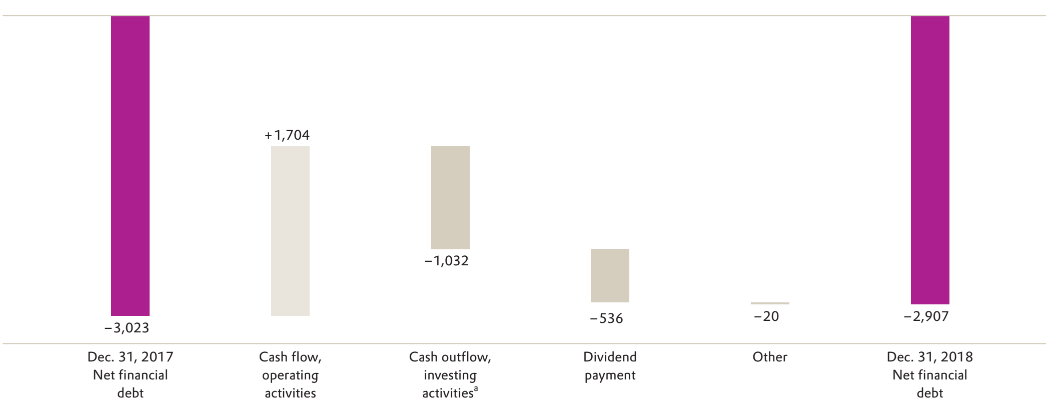
The cash outflow of €676 million for financing activities was principally due to the dividend payment of €536 million for 2017.

Cash flow statement (excerpt) **T18**

in € million	2018	2017
Cash flow from operating activities	1,704	1,551
Cash outflows for investments in intangible assets, property, plant and equipment	–1,032	–1,040
Free cash flow	**672**	**511**
Cash flow from other investing activities	–10	–4,141
Cash flow from financing activities	–676	23
Change in cash and cash equivalents	–14	–3,607

Change in net financial debt C16

in € million



[a] Cash outflows for capital expenditures for intangible assets, property, plant and equipment.

Slight reduction in net financial debt

The dividend payment for 2017 was fully financed out of the free cash flow of €672 million. Net financial debt was reduced to €2,907 million, €116 million lower than on December 31, 2017.

Net financial debt T19

in € million	Dec. 31, 2018	Dec. 31, 2017
Non-current financial liabilities[a]	−3,683	−3,694
Current financial liabilities[a]	−230	−351
Financial debt	**−3,913**	**−4,045**
Cash and cash equivalents	988	1,004
Current securities	8	9
Other financial investments	10	9
Financial assets	**1,006**	**1,022**
Net financial debt as stated on the balance sheet	**−2,907**	**−3,023**

[a] Excluding derivatives, excluding the refund liability for rebate and bonus agreements, and excluding liabilities from exchange-type transactions with competitors.

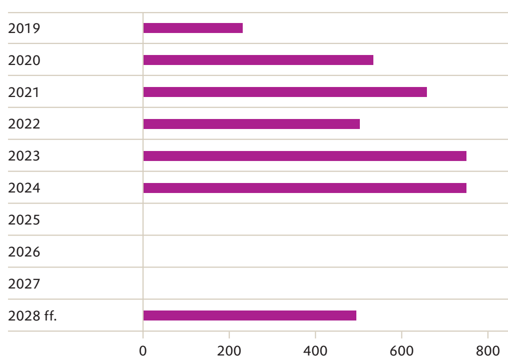
Corporate bonds as a central financing instrument

At year-end 2018, the financial debt of €3,913 million comprised six bonds with a total carrying amount of €3,632 million, bank loans totaling €214 million, and other financial liabilities of €67 million. On the reporting date, €3.15 billion of the debt issuance program of up to €5 billion had been used to issue bonds.

Around 97 percent of the Evonik Group's non-derivative financial liabilities are denominated in euros (2017: 94 percent). The use of currency derivatives aims to ensure that Evonik's global operating activities are financed in the corresponding currencies. Including these currency derivatives, around 42 percent of financial liabilities are denominated in euros, 33 percent in US dollars, 12 percent in Singapore dollars (SGD), 11 percent in Chinese renminbi (CNY), and 2 percent in other currencies.

Maturity profile of financial liabilities C17

in € million



As of December 31, 2018.
The hybrid bond is included in 2022 (when Evonik has its first right of redemption).

Bonds **T20**

	Nominal value in € million	Rating (S&P/Moody's)	Maturity	Coupon in %	Issue price in %
Evonik Industries AG					
Fixed-interest bond 2013/2020[a]	500	BBB+/Baa1	April 8, 2020	1.875	99.185
Fixed-interest bond 2015/2023[a]	750	BBB+/Baa1	Jan. 23, 2023	1.000	99.337
Hybrid bond 2017/2077	500	BBB–/Baa3	Jul. 7, 2077	2.125	99.383
Evonik Finance B.V.					
Fixed-interest bond 2016/2021[a]	650	BBB+/Baa1	Mar. 8, 2021	0.000	99.771
Fixed-interest bond 2016/2024[a]	750	BBB+/Baa1	Sept. 7, 2024	0.375	99.490
Fixed-interest bond 2016/2028[a]	500	BBB+/Baa1	Sept. 7, 2028	0.750	98.830

[a] Issued through the debt issuance program.

Liquidity position remains strong

As of December 31, 2018, Evonik had cash and cash equivalents amounting to €988 million. Alongside cash and cash equivalents and investments in current securities, Evonik's central source of liquidity is a €1.75 billion revolving credit facility. Following exercise of the first extension option in June 2018, the credit facility agreed in June 2017 now runs until June 2023, with a further option to extend it by one year to June 2024 at the latest. This credit facility was not utilized in 2018 and does not contain any covenants requiring Evonik to meet specific financial ratios.

In addition, there are various credit lines to meet local requirements, especially in the Asia-Pacific region. As of December 31, 2018, €495 million of the total amount had not been drawn.

Solid funding of pension obligations

Pension provisions account for about half of our total debt. They are non-current and depend on the discount rate. Applying a constant discount rate, pension provisions declined by €85 million compared with year-end 2017 to €3,732 million. The funding of pension obligations[1] was 69 percent as of the reporting date, a solid level in line with the industry norm.

Slightly lower capital expenditures

Investment projects are aimed at utilizing potential for sustained profitable growth and value creation. In the specialty chemicals sector Evonik is therefore expanding in business areas and markets where it already has—or intends to build—a strong competitive position. Every project is required to undergo detailed strategic and economic analyses. All projects have to meet our minimum return requirement, which is set at our cost of capital. We take a flexible and disciplined approach to extending our leading market positions. All projects are regularly reviewed for changes in the market situation.

Capital expenditures[2] were slightly lower than in the previous year at €1,050 million (2017: €1,078 million).[3] The highest proportion of capital expenditures went to the Nutrition & Care and Resource Efficiency segments (46 percent and 28 percent, respectively). A further 14 percent was allocated to the Performance Materials segment and the Services segment received 11 percent. The regional focus of capital expenditures was Western Europe, which accounted for 46 percent of the total, followed by Asia-Pacific South (29 percent), North America (20 percent), and Asia-Pacific North (4 percent).

Major projects completed or virtually completed in 2018 **T21**

Segment	Location	Project
Resource Efficiency	Witten (Germany)	Expansion of capacity for high-molecular polyester
	Charleston (South Carolina, USA)	New production facility for precipitated silica
	Chester (Pennsylvania, USA)	Conversion of capacity for precipitated silica
Performance Materials	Weiterstadt (Germany)	Expansion of capacity for film extrusion

For further information on current capital expenditure projects, see section on segment performance.

Financial investments amounted to €30 million. The prior-year figure of €4,322 million was dominated by the acquisition of the Air Products specialty additives business and the Huber silica business.

[1] Ratio of plan assets to pension obligations. | [2] Capital expenditures for intangible assets, property, plant and equipment. | [3] In principle, there is a slight timing difference in outflows for property, plant and equipment due to payment terms.

2.10 Asset structure

Slight increase in total assets

As of December 31, 2018, total assets were €0.3 billion higher at €20.3 billion. Non-current assets increased by €0.2 billion to €14.7 billion, mainly as a consequence of investments. In all, non-current assets made up 72 percent of total assets (2017: 73 percent). They are financed by liabilities with the same maturity structure.

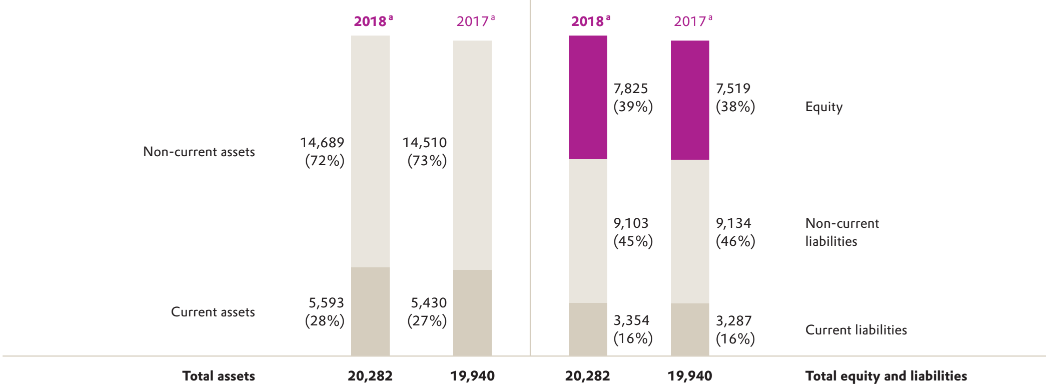
Current assets increased by €0.1 billion to €5.6 billion. Higher raw material prices increased inventories by €0.3 billion to €2.3 billion. By contrast, trade accounts receivable declined by €0.1 billion to €1.7 billion. Current assets therefore increased slightly to 28 percent of total assets (2017: 27 percent).

Equity[1] rose by €0.3 billion, to €7.8 billion. The equity ratio increased from 38 percent to 39 percent.

Non-current liabilities were unchanged at €9.1 billion. Non-current liabilities decreased slightly from 46 percent to 45 percent of total equity and liabilities.

Balance sheet structure of the Evonik Group C18

in € million



[a] As of December 31.

[1] See disclosures pursuant to section 160 paragraph 1 no. 2 German Stock Corporation Act (AktG), note 6.8 (d) to the consolidated financial statements.

3. Performance of Evonik Industries AG

Holding company for the Evonik Group

Financial assets
comprise direct and indirect stakes in all subsidiaries in the Evonik Group

Cash pool
for all Group companies

Coordination of
opportunity and risk management
for the entire Group

Fiscal entity
for income taxes in Germany

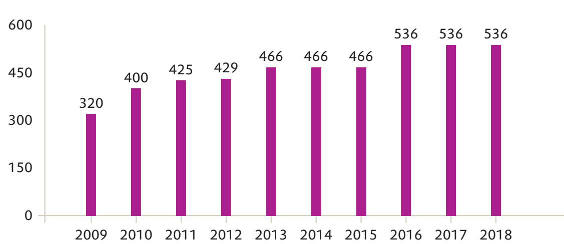
Financing function
for the Group

Free float increased to
35.7%

Annual shareholders' meeting
May 28, 2019

Dividends

in € million



Evonik Industries AG, Essen (Germany) is the parent company of the Evonik Group. Its registered office is in Essen (Germany) and it holds direct and indirect stakes in all subsidiaries in the Evonik Group. The annual financial statements for Evonik Industries AG have been prepared in accordance with the accounting standards set out in the German Commercial Code (HGB) and the German Stock Corporation Act (AktG).

The earnings performance of Evonik Industries AG is essentially dependent on income from its subsidiaries, income and expenses relating to corporate financing, and portfolio management activities. Financial management is therefore based on an earnings indicator that contains all these effects: net income.

Income statement for Evonik Industries AG T22

in € million	2018	2017
Sales	705	667
Change in finished goods and work in progress	–	−5
Other own work capitalized	2	5
Other operating income	484	971
Cost of materials	−263	−246
Personnel expense	−415	−366
Depreciation and amortization of intangible assets, property, plant and equipment	−24	−20
Other operating expense	−855	−1,356
Operating result	**−366**	**−350**
Income from investments	564	834
Write-downs of financial assets and current securities	−15	−49
Write-ups of financial assets and current securities	11	149
Net interest expense	−136	−43
Income before income taxes	**58**	**541**
Income taxes	−121	−166
Income after taxes	**−63**	**375**
Net income	**−63**	**375**
Profit carried forward from the previous year	234	400
Withdrawals from (+)/allocations to (–) retained earnings	365	−5
Distributable profit	**536**	**770**

The 6 percent rise in sales to €705 million was principally attributable to higher selling prices as increases in raw material prices were passed on. Accordingly, the cost of materials rose 7 percent to €263 million. Personnel expense was €415 million, an increase of €49 million compared with the prior year. This increase was mainly attributable to the establishment of provisions in connection with the SG&A 2020 program to reduce administrative and selling expenses. Other operating income declined to €484 million, mainly due to the income from currency translation gains. In the gross presentation, currency translation gains of €420 million (2017: €910 million) are shown in other operating income, while the corresponding currency translation losses of €419 million (2017: €914 million) are shown separately in other operating expense. The net effect was a gain of €1 million (2017: loss of €4 million).

Income from investments fell 32 percent to €564 million. This decline was mainly due to lower income from profit-and-loss transfer agreements, which was caused primarily by negative effects from the measurement of pension assets at the subsidiaries concerned. The write-downs of financial assets and current securities totaling €15 million and write-ups of financial assets and current securities totaling €11 million related to affiliated companies. In the previous year, write-ups on financial assets amounted to €149 million.

Net interest expense was €136 million, well below the previous year's net interest expense of €43 million. This was mainly caused by interest expense in connection with the valuation of pension assets, and the interest effect of the valuation of provisions for pensions and similar commitments based on the 2018 revision of the biometric data in the 2018 G mortality tables published by Klaus Heubeck. In 2017, the valuation of pension assets resulted in interest income. This item also contains interest income and expense from the group-wide cash pool, which is concentrated at Evonik Industries AG.

Income before income taxes declined to €58 million, principally as a result of lower income from profit-and-loss transfer agreements and higher interest expense. Income tax expense was €121 million, compared with €166 million in 2017.

By contrast, the net income of Evonik Industries AG calculated on the basis of German Commercial Code was €438 million lower than in the previous year, resulting in a **net loss** of €63 million.

This was due, among other things, to the factors outlined above, which only affect the commercial accounting regulations applied in the separate financial statements of Evonik Industries AG, and do not affect the consolidated financial statements prepared in accordance with IFRS. Following withdrawal of €365,064,677.09 from retained earnings and taking into account the profit of €234,100,000.00 carried forward from the previous year, the distributable profit was €535,900,000.00. A proposal will be put to the annual shareholders' meeting that the entire distributable profit should be paid out, giving a **dividend** of €1.15 per share.

Balance sheet for Evonik Industries AG T23

in € million	Dec. 31, 2018	Dec. 31, 2017
Assets		
Intangible assets, property, plant and equipment	69	68
Financial assets	8,998	9,430
Non-current assets	**9,067**	**9,498**
Inventories	6	6
Receivables and other assets	3,884	3,327
Cash and cash equivalents	604	637
Current assets	**4,494**	**3,970**
Deferred income	15	16
Total assets	**13,576**	**13,484**
Equity and liabilities		
Issued capital	466	466
Capital reserve	721	721
Retained earnings	4,246	4,611
Distributable profit	536	770
Equity	**5,969**	**6,568**
Provisions	777	610
Payables	6,830	6,305
Deferred income	–	1
Total equity and liabilities	**13,576**	**13,484**

The total assets of Evonik Industries AG increased from €13.5 billion in the previous year to €13.6 billion. Financial assets mainly comprise shares in subsidiaries. The receivables are mainly financial receivables of €3.6 billion (2017: €3.0 billion), principally in connection with loans and cash pooling activities.

Equity decreased by €0.6 billion to €6.0 billion, mainly as a consequence of the dividend payment for 2017 and the net loss. The equity ratio declined from 48.7 percent in 2017 to 44.0 percent. Provisions increased from €0.6 billion to €0.8 billion, mainly as a consequence of interest effects on provisions for pensions and an increase in other provisions. The receivables and payables reflect the financing activities of Evonik Industries AG in its role as the holding company for the Evonik Group. Payables include financial liabilities of €6.6 billion (2017: €6.1 billion). €4.8 billion (2017: €4.2 billion) of this amount comprises liabilities to affiliated companies, principally in connection with cash pooling activities. A further €1.8 billion (2017: €1.8 billion) relates to corporate bonds.

Opportunities and risks

The most significant operating subsidiaries in Germany have profit-and-loss transfer agreements with Evonik Industries AG. In line with the central financing strategy of the Evonik Group, most internal and external financing transactions are handled by Evonik Industries AG. Consequently, Evonik Industries AG is essentially exposed to the same risks and opportunities as the Evonik Group. Further information can be found in the opportunity and risk report.

Outlook[1] for 2019

We anticipate that in 2019 Evonik Industries AG will report slightly higher earnings than in 2018, and anticipate that net income will be positive. This is based on the assumption of attractive income from investments. By contrast, given the low interest rates, effects relating to pension provisions could have a negative impact.

Report on relations with affiliated companies

A report on Evonik Industries AG's relations with affiliated companies has been prepared in accordance with section 312 of the German Stock Corporation Act (AktG). It concludes with the following declaration: "Our company received adequate remuneration or compensation for each of the transactions set out in this report on relations with affiliated companies under the circumstances known to us at the time when the transactions were undertaken. No actions were performed or omitted at the instigation of such companies."

[1] For details of the assumptions, see the section on expected developments.

4. Research and development

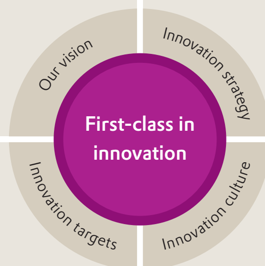
Our aspiration: leading in innovation

Leading in innovation

Focus on growth fields

Push transformational innovation

Open collaboration



Increase the value of the innovation pipeline

New products, applications, and processes must make a substantial contribution to sales and profit

Enhance risk-taking

Trust, openness, and transparency

Improve knowledge sharing

Approx. **240** new patent applications

Total patents held/applications filed approx. **26,000**

R&D expenses **€459 million**

Approx. **2,780** R&D employees

R&D ratio **3.1%**

Registered/pending trademarks approx. **7,600**

Products/applications introduced in the past five years **12%** of sales

Approx. **40** R&D locations

Patent-driven sales approx. **50%**

Our vision for Evonik: leading in innovation

The link between innovative capacity and closeness to customers is a key success factor for Evonik and drives profitable growth. Within the growth engines of relevance for Evonik—Specialty Additives, Animal Nutrition, Smart Materials, and Health & Care—we identify future-oriented innovation growth fields in highly attractive markets with above-average growth rates, which we use to achieve our ambitious targets. Our vision is to be an innovation leader.

We work with customers and external partners across business boundaries and provide incentives for new discoveries so that good ideas can be turned into marketable innovations. Through strategic investment we aim to commercialize the findings of these growth fields faster and more profitably.

Research and development (R&D) in our strategic innovation unit, Creavis, and in our growth segments is aligned to six innovation growth fields:

- **Sustainable Nutrition:** establishing additional products and services for sustainable nutrition of livestock and people
- **Healthcare Solutions:** developing new materials for implants, as components of cell culture media, and for custom-tailored, innovative drug formulations
- **Advanced Food Ingredients:** creating a portfolio of health-enhancing substances and nutritional supplements as a contribution to healthy nutrition
- **Membranes:** extending SEPURAN® technology for efficient gas separation to further applications
- **Cosmetic Solutions:** developing further products based on natural sources for cosmetics and sensorially optimized formulations for skin care products
- **Additive Manufacturing:** developing products and technologies for additive manufacturing

A pleasing example from the Cosmetic Solutions innovation growth field is the good market development of new products with sustainability features. We received awards for RHEANCE® One: a novel ingredient developed by our Personal Care business. This glycolipid cleansing agent for skin and hair is produced from sugar using a fermentation process without tropical oils.

An example from the Sustainable Nutrition innovation growth field is the Veramaris joint venture, which grew out of the successful research collaboration between the Nutrition & Care segment and DMS, and is examining the production of omega-3 fatty acids from algae.

Other strategic investments in this innovation growth field were made in the precision livestock farming program. The acquisition of Porphyrio NV, a spin-off of KU Leuven based in Herent (Belgium), was completed in October 2018. Porphyrio is a leading supplier of big data solutions for livestock farming. Through our venture capital unit, we invested in the start-up OPTIFARM Ltd., Great Chesterford (UK), and the biotechnology start-up In Ovo, Leiden (Netherlands). Both investments enable us to help customers improve their performance and sustainability, and strengthen our Animal Nutrition growth engine.

Successful innovation management

Evonik has an extensive **patent strategy** to protect new products and processes. The value and quality of our patent portfolio has increased steadily in recent years. In 2018, we submitted around 240 new patent applications. Patent-driven sales[1] accounted for around 50 percent of our total sales. In 2018, products and applications introduced in the past five years accounted for 12 percent of Evonik's consolidated sales. The significant increase compared with 2017 (10 percent) is attributable to innovations from the businesses acquired and to initial market successes from our innovation growth fields. R&D expenses declined by 4 percent to €459 million in 2018 as a result of target-oriented management.

Our R&D projects are managed using the multi-step Idea-to-Profit process developed by Evonik to support the systematic development of projects right up to profitable commercialization.

Our **innovation pipeline** addresses completely new business options as well as activities to secure and enhance the prospects of existing business operations. Alongside product and process innovations, the focus includes innovative business models and product and process innovations. Our project portfolio is aligned to the differing strategies of the various business entities.

R&D expenses **C19**

in € million

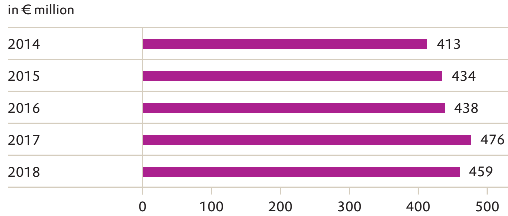


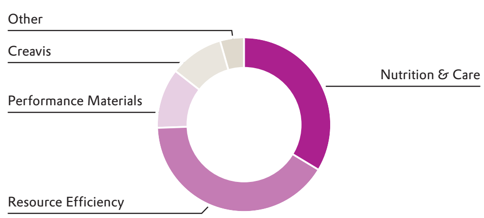
Figure for 2017 restated. See note 3.5 to the consolidated financial statements.

[1] Product sales are defined as patent-driven if there is at least one relevant patent in force worldwide.

Targeted research and development

Around 90 percent of our R&D is performed by our **segments.** That includes, first and foremost, research geared specifically to their core technologies and markets and to the development of new business. An above-average proportion of our R&D funding is allocated to our growth segments: Nutrition & Care and Resource Efficiency. The Performance Materials segment focuses on optimizing products and processes.

Breakdown of R&D expenses **C20**



Creavis concentrates on mid- and long-term innovation projects that support Evonik's growth and sustainability strategy and provide access to new business options. In addition, it identifies future-oriented topics and acts as an internal incubator for Evonik. Work on innovation projects of a cross-organizational nature is organized in project houses. Experts from the organizational units involved in a project house normally work together for a period of three years on the project house's development topics. Since April 2018, the Medical Devices project house has been driving forward seven promising projects as a competence center within the Health Care business line. The newly established Tissue Engineering project house located at the R&D hub in Singapore is currently working on new solutions to grow living cells on a scaffold material. Its work supports the Healthcare Solutions innovation growth field. The aim is to develop materials for biological implants for medical applications.

Since the start of 2018, Evonik and Siemens have been working together on artificial photosynthesis through the "Rheticus" project funded by the Federal Ministry of Education and Science. The aim is to use electricity from renewable resources and bacteria to convert carbon dioxide into specialty chemicals. A first pilot plant is under construction at our site in Marl (Germany).

Evonik also obtains access to innovative technologies and new business options through its **corporate venture capital activities.** We invest specifically in specialized technology funds and start-ups of strategic relevance to Evonik. In this way, we gain insights into innovative developments at a very early stage. We have made more than 24 investments since 2012. In addition to investments to strengthen the Sustainable Nutrition growth field, in 2018 Evonik invested, among others, in Velox Puredigital Ltd, Rosh Ha'Ayin (Israel). Velox has new digital printing technology that allows top-quality printing of metal, plastic, or glass packaging, either in extremely small series or on an industrial scale. This opens up opportunities for the Coating Additives business line to partner with Velox on the development of customized additive solutions for the growing packaging industry market.

Evonik aims to be the **digitalization** leader in the chemical industry. With this in mind, in 2018 we invested in the US high-tech start-up mySkin Inc., Jersey City (New Jersey, USA), which is facilitating a breakthrough in how consumers can determine and improve their skin properties. The company has developed a mobile device that analyzes skin properties and recommends care products.

A **culture of innovation** is a key factor in a company's innovative capability. Alongside commitment, passion, and stamina, that entails the strength to halt R&D projects if their prospects of success are too low, as well as a constructive attitude to mistakes. We therefore regard Evonik as an open, learning company.

5. Sustainability

We take responsibility for our business, our employees, and the environment

- Safety has top priority
- Our products help our customers achieve their sustainability goals
- Evonik offers an attractive working environment so employees like working for us and fulfill their potential
- Protecting the climate and the environment is important to us

Safety indicators at a very good level

✓ **Accident frequency rate:** 0.87, well below the upper limit of 1.30

✓ **Incident frequency rate:** 1.08, slightly below the upper limit of 1.10

Low staff turnover rate of **6.2%**

Our employees come from **104** nations

23.8% of managers are female

New environmental targets support the Paris climate agreement

11% of our shares are held by sustainability-oriented investors

We invest around **€500** per employee in training

44 ESHQ audits worldwide

Accolades:

Diversity Champions: Top 10 von 100

Diversity Champions: Evonik again in the Top 10 out of 100

Top Employer in China

Leading Employer in Germany 1st place in the chemical sector

Sustainable procurement Gold rating from EcoVadis

Responsible corporate management

Sustainability is part of Evonik's market proposition. Our products and solutions are used in many areas that help to improve people's lives and minimize the use of scarce resources. In this way, we also aim to play our part in the United Nations' 17 Sustainable Development Goals, to be achieved by 2030. In the reporting period, we examined the SDGs and their relevance for the Evonik Group on various levels.

Evonik is committed to observing internationally recognized standards and its own more far-reaching guidelines and principles of conduct. That includes, for example, the ten principles of the UN Global Compact. In addition, we are guided by the International Labour Standards issued by the International Labour Organization (ILO) and the Guidelines for Multinational Enterprises published by the Organisation for Economic Cooperation and Development (OECD). Evonik is involved in many networks such as the Chemie[3] sustainability initiative of the German chemical industry, and the World Business Council for Sustainable Development (WBCSD). Together with our code of conduct, our global social policy (GSP) and our environment, safety, health, and quality (ESHQ) values provide a framework for responsible corporate management.

Sustainability strategy defined in more detail

We are convinced that sustainable and responsible business activities are vital for the future of companies. In view of this, we defined our sustainability strategy in more detail in 2018, especially as regards foresighted resource management and integrating sustainability into strategic management processes.

Intensive dialogue with stakeholders

Dialogue with our stakeholders is important to give us a better understanding of different perspectives and regularly review our own positions. Findings and impetus from our stakeholder dialogues facilitate timely identification of upcoming market developments, trends, opportunities, and risks. That enables us to customize our products and solutions to meet the needs of our customers and markets.

We use a variety of formats for dialogue with our stakeholders. In 2018, that included, for example, an exchange of experience on the future of Europe with selected representatives of science, business, and non-governmental organizations. The motto for the Evonik Perspectives forum, which was attended by around 150 stakeholders, was "The two-degree goal—How industry can help meet climate targets."

Extensive review of the materiality analysis

Feedback from our dialogue with stakeholders was also used in the review of our materiality analysis. Based on the opinions of more than 400 stakeholders and internal experts, the most important sustainability topics for Evonik are more sustainable products/solutions for our customers, climate change and emissions into the air, and more efficient use of scarce resources/circular economy. We will be stepping up our focus on these topics in the future.

Further development of sustainability analysis methodology

Sustainability is an important criterion in many of our markets and is increasingly becoming a growth driver. Our sustainability analysis makes the contribution made by corresponding products and services to our business performance measurable. In 2018, we continued to develop the method used for this analysis and had it validated externally. We now analyze our business activities using the WBCSD method at the level of PARCs[1]. Each PARC comprises a product used for a defined application in a specific region.

Continuous improvement of sustainability reporting

Our reporting is focused on measurability and transparency and we have brought forward the publication date of our sustainability report[2] to coincide with publication of the financial report and the separate non-financial report[3]. Evonik has a good position in leading ratings and is included in major sustainability-oriented index families.

[1] A PARC comprises a product used for a defined application in a specific region.
[2] The sustainability report is not part of the management report. It is available at www.evonik.com/responsibility
[3] The separate non-financial report is a non-audited component of the management report and is available at www.evonik.com/nonfinancial-report

5.1 Employees

Employees are the foundations of our success

Skilled and motivated employees are the key to Evonik's success. By providing an attractive working environment, we want to ensure that our employees like to work for Evonik and can develop their talents. We foster the creativity of our employees and offer them space to take their own route to innovative solutions. We want to create an atmosphere based on trust, respect, and openness. We reward performance and readiness to take risks and we develop our own managers.

This is reflected in our human resources strategy, which is divided into the following areas of action: attract, develop, perform, retain, and lead.

Attract

Employer branding—Positioning as an attractive employer

We seek out creative and competent employees with high potential and offer them a working environment that fosters ideas, offers creative freedom, and supports the combinability of work and private life. We also use these employer qualities in the competition to attract the best employees and managers to Evonik.

In our employer branding campaign, #HumanChemistry, employees from various regions share their experience and perspectives of working at Evonik. A sharp rise in the number of visitors to our careers site shows that reaching out to the target groups in this way achieves a good response. Evonik received the Leading Employer 2018 award in Germany and is the best employer in the chemical sector. In the overall ranking of over 70,000 companies, Evonik is ranked 22nd.

Develop

Further training to secure the future

We want to ensure timely identification of the potential of our employees and talents and to foster, develop, and stretch employees accordingly. Our learning and personnel development strategy is aligned to future business requirements. Digitalization is the central focus of our strategic objectives. An important new feature was the development of a learning strategy in collaboration with our employees. This resulted in two offerings: the Global Development Portal (GDP) as a central platform for all learning needs, and the Learning and Individualized Library (LILY), which provides constant access to learning resources. Our learning strategy and offerings were honored with the Gold Excellence Award 2018 for learning and development in Asia.

We invested around €17 million in the continuing professional development of our employees in 2018.

Vocational training for present and future specialists

We want to continue to recruit specialists specifically from young people within the company, and are committed to their development. All employees hired on unlimited contracts following successful completion of their vocational training are offered a clear perspective for the future.

In 2018, Evonik trained around 1,800 young people, including about 400 on behalf of other companies. Our training covered 33 recognized vocational training courses and combined vocational training and study programs at 16 sites. In 2018, 90 places for young people who were not yet ready for an apprenticeship were taken up on the "Start in den Beruf" pre-apprenticeship program. That figure includes the training initiative of the Evonik Foundation, which financed 40 places, including 20 for young refugees. In connection with the MATCHING 2020 internship program, for which RAG-Stiftung is providing funding of €1.35 million, Evonik will be creating 1,500 additional internships by 2020 to support young people in their career choices.

Apprentices accounted for around 6.8 percent of our workforce in Germany, which is still well above the national average of around 5 percent.[1] In all, we invested €63 million in vocational training of employees. In 2018, we were once again singled out as one of the best vocational training companies in Germany for the quality of our training.

Talent management—Developing tomorrow's executives and experts

Key positions are filled predominantly by talented employees from within the company. To this end, we develop employees with potential across hierarchical levels, functions, and organizational units. Important objectives for talent development at Evonik are personal responsibility, diversity, internationality, flexibility/mobility, and a business mindset.

The development of future senior executives is organized as a structured process at Evonik. Job rotation, evaluation of potential, and succession scenarios are discussed and analyzed in detail at regular personnel conferences attended by members of the executive board. Alongside ongoing development, Evonik works with the International Institute for Management Development in Lausanne (Switzerland). Together, we run programs for various groups of talents. The focus is on content of direct relevance to the business and on day-to-day management requirements. We support the personal development of executives using formats that center on personal motivation, attitudes, and the assumption of social responsibility.

Progressive digitalization of working processes

Flexibilization and individualization, digitalization and networking are bringing massive changes to how we work. In order to utilize the resultant opportunities, Evonik systematically taps into employees' ideas and experience.

[1] Source: BiBB Datenreport 2018 (BiBB = Federal Institute for Vocational Education and Training).

People are at the heart of the digital transformation at Evonik. #HumanWork provides cross-unit support, e.g., for the digitalization initiatives of the segments, regions, and service units, including New Work Labs to test new forms of working. Here, employees can try out alternative forms of working and collaboration on a voluntary basis for a limited period. When the lab phase ends, a decision will be taken on whether the working model can be rolled out either group-wide or for specific parts of the Evonik organization. In addition, #HumanWork provides access to new working and learning formats such as the agile method, design thinking, and working out loud. It also promotes use of collaborative in-house tools.

Perform

We regard a healthy performance culture as the basis for the company's success and the personal motivation of every individual employee. Fair, performance-related remuneration plays a central role in this, together with employees' annual performance and development review with their manager.

Remuneration—Performance-related pay around the world

When shaping remuneration systems, Evonik believes it is very important to offer specialists and executives market-oriented and performance-related salaries. The remuneration of almost all members of our workforce includes bonus payments that are based on the company's business performance and/or their personal performance. In 2018, Evonik's bonus system was aligned more clearly to our strategic financial targets, e.g., profitability, growth, and liquidity.

In addition, in 2019 we plan to revise our global performance management for employees in management functions. The new approach should be more flexible and less bureaucratic for both managers and their employees. Regular feedback discussions and clear evaluation of individual performance will support the cultural change at Evonik and the establishment of our new corporate values. In addition, we offer employees in Germany, the USA, China, Belgium, and Singapore the opportunity to take part in the "Share" employee share program. The participation rate remained high at 39 percent in 2018.

Retain

Diversity enriches

Evonik does business in many markets worldwide. Diversity is therefore normal in our business activities. Employees with different backgrounds and personalities enrich our teams and our company. That makes diversity a key to Evonik's economic success because it enhances our creativity, innovative capability, and proximity to customers.

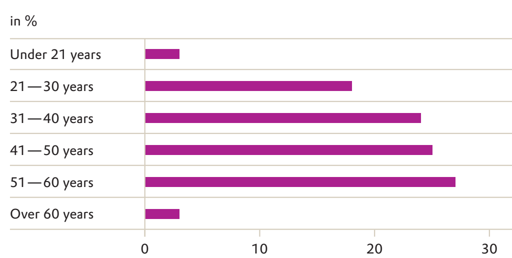
Fostering diversity is a central requirement for every management function at Evonik. Our diversity strategy contains clear targets. We want to increase the proportion of women in our company at all levels worldwide. In the recruitment process for management functions, we are guided by the gender distribution of the academic disciplines with relevance for us. In accordance with German law on equal participation of women and men in management positions, at Evonik Industries AG we have set a target of 20 percent female managers for the top two management levels below the executive board.

As a global company, it is particularly important to us to ensure that our workforce includes a broad spectrum of different nationalities. Around 42 percent of employees in management functions come from countries other than Germany. Group-wide, the proportion in mid-management is 23.2 percent.

Key data on diversity T24

	2018	2017
Women as a proportion of the total workforce in %	24.9	24.9
Female managers as a proportion of total managers in %	23.8	23.2
Average age in years	42.0	41.9
Nationalities	104	110

Age structure in the Evonik Group C21



Work-life balance

Evonik's HR policy is family-friendly and geared to different phases in people's lives. Therefore, it is important to us that our employees find a balance between work and their private lives. We offer corresponding initiatives for more than 93 percent of our employees worldwide. These include flexible worktime models, support for people caring for close relatives, and assistance with childcare. We also have wide-ranging offers to foster the physical and mental fitness of our employees. Many of our sites around the world offer a variety of sports activities.

Employee satisfaction at a good level

We conducted our fifth group-wide employee survey in November 2018. The participation rate was over 85 percent, which was above the participation rate in the previous survey in 2015. The commitment index, which is an indicator of both commitment to the company and personal engagement, was lower than in the 2015 survey, but only slightly below the benchmark comprising a sample of other companies. Reasons include a sense of uncertainty felt by individual employees as a result of far more active portfolio management across the Evonik Group and further optimization of administration. In addition, the results highlight possible scope for improvement in group-wide collaboration. Following a detailed analysis of the results of the survey, we intend to work out specific measures in the first half of 2019.

Key data on employee retention **T25**

	2018	2017
Fluctuation rate in %	6.2	5.8
Average length of service in years	14.7	14.6

Culture and leadership

Focus on an earnings-oriented corporate culture

The heart of our leadership culture is a trustful relationship between employees and managers. Here we focus on three dimensions: clear instructions, consistent action, and a cooperative approach to our employees.

One central task for Evonik's executives is cultural change in the company. Based on our four new corporate values—performance, trust, openness, and speed—which were positioned by the top management at an executive conference in 2018, the responsibility lies with executives. The top-down rollout started in 2018 and executives will start the dialogue with employees in 2019. The results of the employee survey will be used in this process.

Headcount hardly changed

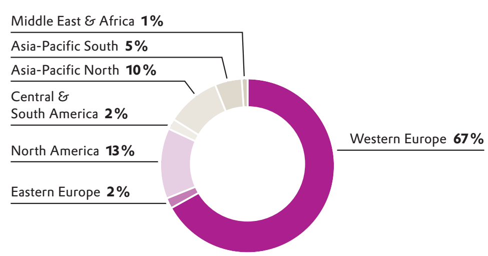
At year-end 2018, the Evonik Group had 36,043 employees, a slight drop of 480 compared with year-end 2017. This was principally due to implementation of the program to optimize administrative functions and some smaller optimization efforts in our chemical segments. At the same time, the reduction was countered by investment in growth projects in the Nutrition & Care and Resource Efficiency segments.

Employees by segment **T26**

	Dec. 31, 2018	Dec. 31, 2017
Nutrition & Care	8,224	8,257
Resource Efficiency	10,268	10,260
Performance Materials	4,132	4,364
Services	12,913	13,021
Other operations	506	621
Evonik	**36,043**	**36,523**

Personnel expenses, including social security contributions and pension expense, rose 7 percent to €3,595 million in 2018. Personnel expenses were therefore 23.9 percent of sales (2017: 23.4 percent).

Employees by region **C22**



5.2 Safety and environment

Safety as a management task

We take our responsibility in the field of safety particularly seriously—during production and while shipping products to our customers. Our objective is to protect our employees and local residents as well as the environment from any potential negative impact of our activities. The group-wide Safety at Evonik initiative has become firmly established as an ongoing process to develop our safety culture and as a fundamental management approach to all aspects of occupational and traffic safety. Our guiding principles for safety and our safety culture provide a structure and guidance for our corporate targets and activities. Binding principles are applicable for all employees, from local personnel to our management, and provide clear and measurable guidance for their personal conduct and leadership.

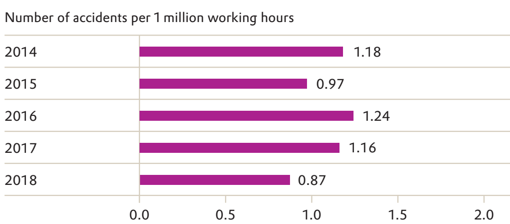
Our overriding aim is to avoid all accidents and incidents. We set annual limits for occupational safety and plant safety indicators.

For 2019 these are unchanged:
- The accident frequency rate should not exceed 1.30.
- The incident frequency rate should not exceed 1.10.

Incident frequency indicator improved considerably and was within the defined limit

A special focus of our initiative is the safety of our employees—both at work and on the way to and from work—and the safety of contractors working at our sites. In 2018, the **accident frequency indicator**[1] for our employees was 0.87, which was within our defined maximum limit of 1.30. That was a slight improvement compared with the previous year (1.16). Discussing the accidents provided valuable pointers for future accident prevention, and these have been communicated to our employees.

Accident frequency indicator **C23**



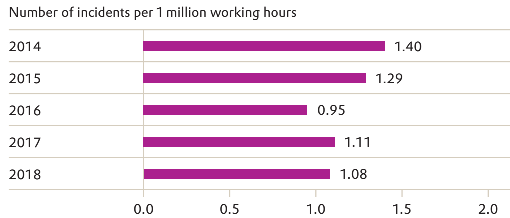
There were no fatal accidents at work involving our employees or contractors' employees in the reporting period, nor were there any fatal traffic accidents involving employees on the way to or from work or on business trips.

The accident frequency rate for contractors' employees was 2.77, which was considerably lower than in 2017 (3.52).[2]

Incident frequency indicator at a very good level

Process safety at our plants is another focus of our initiative. The concepts to prevent fire and the release of hazardous substances are regularly analyzed in detail. The aim is timely identification of risks so we can develop appropriate measures that reliably prevent these risks. We monitor and evaluate plant safety using the **incident frequency indicator**[3]. The incident frequency indicator improved slightly to 1.08 in 2018 and therefore remained below the upper limit we defined. The development of the incident frequency indicator over the past three years shows that the measures introduced are having a long-term effect.

Incident frequency indicator **C24**



Ambitious environmental targets

Protecting our environment and the climate are major global challenges of our age. Maintaining the natural basis of life for future generations is part of our corporate responsibility. That includes steadily reducing emissions and continuously improving the efficient use of materials and resources.

As a specialty chemicals company, we are aware that our production impacts the environment. Our materiality analysis confirms the issues of relevance for the environment area of action, especially climate change and emissions into the air, water management, waste management, and biodiversity.

We also develop products that contribute to forging a clear link between economic success and ecological progress.

We have set demanding environmental targets for the period 2013–2020 (reference base: 2012):
- Reduce specific greenhouse gas emissions[4] by 12 percent.
- Reduce specific water intake[5] by 10 percent.

A further reduction in production waste was set as an additional target.

Status of our environmental targets[a] **T27**

	2018	2017
Reduction in specific greenhouse gas emissions	−17	−17
Reduction in specific water intake	−6	−5

[a] Compared with the reference year (2012).

[1] All work-related accidents (excluding traffic accidents) resulting in absences of at least one full shift, per 1 million working hours. | [2] Calculation based on assumptions and estimates. | [3] Number of incidents per 1 million working hours. | [4] Includes both scope 1 and scope 2 emissions. Scope 2 emissions are calculated using the market-based method in accordance with the Greenhouse Gas Protocol. | [5] Excluding site-specific factors in the use of surface water or groundwater.

The 17 percent reduction in greenhouse gas emissions compared with the reference base (2012) was in line with the very good level achieved in the previous year.

The water required for our production operations is principally for once-through cooling at established plants. The amount of surface water required for this in 2018 increased as a result of the long period of hot, dry weather in Germany and Belgium. At the same time, water requirements in China decreased due to some production stoppages. Taking 2012 as the basis, our total specific water intake was 1 percentage point lower than in 2017.

Total hazardous and non-hazardous production waste declined by 1 percent to 393,000 metric tons in 2018. This was due, among other things, to a reduction in sewage sludge in Antwerp (Belgium) and higher availability of the sulfuric acid cracking plant in Marl (Germany).

Evonik's present environmental targets end in 2020. We therefore defined new environmental targets in the reporting period. We are aiming for a 50 percent reduction in absolute scope 1 and 2 emissions by 2025, compared with the level in 2008 (status of implementation in 2018: 30 percent). That affirms our commitment to the Paris Agreement on Climate Change. The relatively short target period up to 2025 reflects our view that it is not currently possible to predict technological and regulatory developments beyond this period with sufficient certainty.

We are continuing to pursue our goal of a group-wide reduction in specific water intake, but we are replacing the central indicator by introducing a global water management system and driving forward the related site-specific action plans.

Slight increase in greenhouse gas emissions due to acquisitions

Production output was 11.0 million metric tons, the same as in the previous year. The 1 percent increase in scope 1 greenhouse gas emissions to 5.69 million metric tons CO_2 equivalents was mainly due to the increase in natural gas resulting from first-time inclusion[1] of the Huber silica business. The sum of scope 1 and net scope 2 (market-based) greenhouse gas emissions also increased by 1 percent to 6.57 million metric tons CO_2 equivalents in 2018. Scope 2 emissions are reported on a net basis by deducting electricity and steam sold to third parties from the electricity and steam produced for captive use.

The 30 facilities operated by Evonik that fall within the scope of the EU Emissions Trading System (EU ETS) emitted 3.9 million metric tons of CO_2 in 2018 (2017: 3.8 million metric tons CO_2).

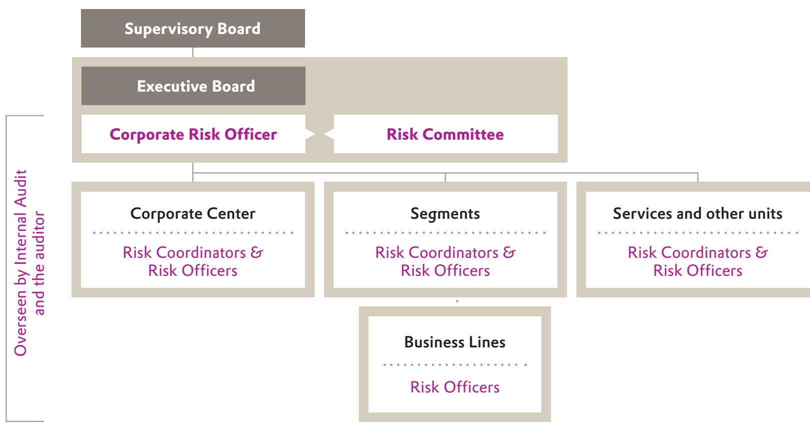
[1] The silica business acquired from Huber was only included in the environmental data from January 1, 2018.

6. Opportunity and risk report

Objectives of opportunity and risk management

- Timely identification of risks
- Action to minimize and counter risks
- Optimal utilization of opportunities

Structure of risk management



Our risk management systems are based on:

- COSO Enterprise Management
- Banking-specific minimum requirements for risk management (MaRisk)
- German legislation on corporate control and transparency (KonTraG)

Material risks

(Expected value > €100 million)

- Changes in exchange rates
- Development of margins for C_4 chemicals
- Overall business performance
- Threat of cyber attacks

Material opportunities

(Expected value > €100 million)

- Changes in exchange rates
- Development of margins for C_4 chemicals

6.1 Opportunity and risk management

Risk strategy

Evonik's group-wide internal opportunity and risk management (referred to generically as risk management in this section) forms a central element in the management of the company. Our risk management includes an early risk detection system, which meets the requirements for publicly listed companies. The aims are to identify risks as early as possible and to define measures to counter and minimize them. To ensure optimal use is made of opportunities, these also need to be recognized and tracked from an early stage. We only enter into entrepreneurial risks if we are convinced that in this way we can generate a sustained rise in the value of the company and, at the same time, permanently limit possible negative implications.

Structure and organization of risk management

At Group level, risk management is assigned to the chief financial officer and is organized on a decentralized basis in line with Evonik's organizational structure.

The segments, corporate divisions, and service units bear prime responsibility for risk management. That comprises early identification of risks and estimating their implications. Furthermore, suitable preventive and control measures have to be introduced and internal communication of risks must be ensured. Risk coordinators in the organizational units are responsible for organizing the relevant risk management activities. At all levels in the Group, systematic and timely risk reporting is a key element in strategic and operational planning, the preparation of investment decisions, projections, and other management and decision-making processes.

A central corporate risk officer coordinates and oversees the processes and systems. The corporate risk officer is the contact for all risk coordinators and is responsible for information, documentation, and coordination at Group level. Further responsibilities include ongoing development of the methodology used by the risk management system. The risk committee is chaired by the chief financial officer and composed of representatives of the corporate divisions. It validates the group-wide risk situation and verifies that it is adequately reflected in financial reporting. The supervisory board, especially the audit committee, oversees the risk management system.

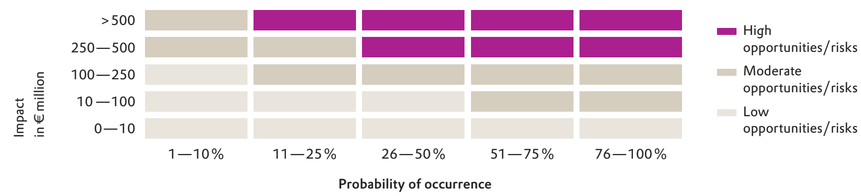
In 2018, risk management again included all consolidated companies in the Evonik Group. At companies where we do not exert a controlling influence, we implement our risk management requirements primarily through our presence in management and supervisory bodies.

The internal audit function monitors risk management in our organizational units to make sure they comply with statutory and internal requirements and to ensure continuous improvement of risk management. The risk detection system is included in the annual audit in compliance with the requirements for listed companies. This audit showed that Evonik's risk detection system is suitable for timely identification of risks that could pose a threat to the company's survival.

The risk management system is based on the internationally recognized COSO Enterprise Management standard. It is implemented through a binding group-wide policy. Individual risks are systematically identified and managed with the aid of special risk management software. Their probability of occurrence and the possible damage (potential impact) are evaluated and documented, together with their expected value (product of probability of occurrence and potential impact). Analogously to current planning, the evaluation is based on a period of three years (mid-term planning). Opportunities and risks are defined as positive and negative deviations from the plan. The relevant indicators include adjusted EBITDA. In addition, longer-term opportunities and risks, including those relating to sustainability, are included.

The organizational units conduct an extensive annual risk inventory in connection with the mid-term planning process. They are required to provide details of the measures to be taken with regard to the risks identified, introduce them immediately, and track their timely implementation. Internal management (for example, reporting by the risk committee) takes a mid-term view. The opportunities and risks identified are classified as low, moderate, or high (see opportunity and risk matrix). The evaluation is always based on a net view, in other words, taking into account risk limitation measures. Risk limitation measures can reduce, transfer, or avoid gross risks. Common measures include economic counteraction, insurance, and the establishment of provisions on the balance sheet.

Opportunity/risk matrix C25



The risk inventory is supplemented by quarterly reviews of all opportunities and risks relating to the present year, both to spot changes in the opportunities and risks that have already been identified and to identify new risks and opportunities.

All high and moderate risks and opportunities with an expected value of over €100 million in the mid term are classified as material individual risks and opportunities. The expected value is used exclusively as a basis for prioritization and to focus reporting on key issues.

6.2 Overall assessment of opportunities and risks

Given the measures planned and implemented, no risks have been identified that—either individually or in conjunction with other risks—could jeopardize the continued existence of Evonik as a whole, including Evonik Industries AG in its role as the holding company for the Evonik Group.

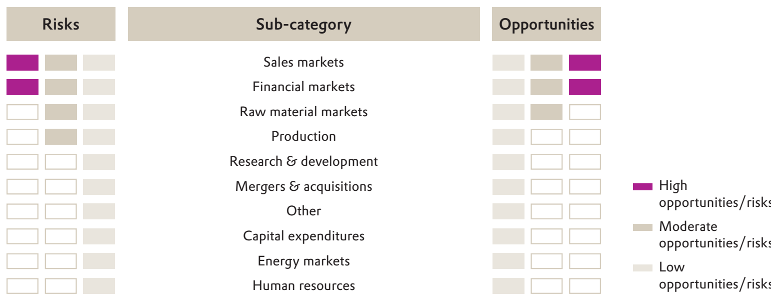
For 2018, we expected more risks than opportunities. Pleasingly, we were able to realize more opportunities than risks during the year. In the Performance Materials segment, in particular, we were able to successfully utilize market opportunities. In the Nutrition & Care and Resource Efficiency segments, the opportunities and risks that materialized were essentially balanced. Our reporting distinguishes between the categories markets and competition, legal and compliance, and process and organization. The main parameters influencing the risk categories in terms of both opportunities realized and risks that materialized resulted from the development of specific market and competition situations. From the present standpoint, the risks for 2019 again outweigh the potential opportunities. Compared with 2018, there has been a slight increase in the risks to which Evonik is exposed, while the opportunities remain constant.

Material individual risks and opportunities for the Evonik Group are changes in exchange rates and the development of margins for C_4 chemicals. Further material risks relate to the overall economic development and the increasing threat of cyber attacks. Measures to reduce the risks include general economic mitigation measures and, especially with regard to changes in exchange rates, the use of hedging instruments. Sections 6.3 and 6.4 present the material individual risks and opportunities, along with further opportunities and risks in each category. Except where otherwise indicated, they apply for all segments.

6.3 Market and competition opportunities and risks

In accordance with our internal management, opportunities and risks in the market and competition category are allocated to risk quantification classes within sub-categories. The chart shows the highest class to which an individual risk or opportunity is allocated in each sub-category. Individual opportunities and risks may also be allocated to the lower risk classes. Where two sub-categories have the same profile in the chart, they are ranked first on the basis of opportunities, then listed in descending order, based on their expected value.

Opportunity and risk classes within the market and competition category **C26**



1. Sales markets

The development of the global economy entails both opportunities and significant risks for Evonik. If economic growth strengthens or weakens, for example, due to political developments, changes in interest rate and exchange rate policy, or the development of key sectors of the economy (e.g., the banking and real estate sectors), this can have an impact on demand in market segments of relevance to Evonik.

An escalation of the trade disputes and a further increase in the already elevated political risks in the European Union, including the future economic relations between the European Union and the United Kingdom after Brexit, could dampen economic momentum. Furthermore, the monetary policy tightening by the Federal Reserve in the US could result in a further reversal of capital flows, which would affect the emerging markets in particular. Such developments can already be seen in Argentina, Turkey, and South Africa.

Global economic trends influence the development of Evonik's earnings and cash flows. We counter these economic risks by constantly monitoring the macroeconomic environment, optimizing cost structures and competitive positions in our established areas of business, setting up production facilities close to our markets, and extending businesses in our portfolio that have low cyclical exposure.

Alongside the general demand situation, intensive competition in the various market segments harbors both opportunities and risks. These may result from either demand in specific markets or from the competitive situation in various industries. Changes in demand can have a considerable impact on our business volume and sales. There are associated opportunities and risks for our amino business and, to a significant extent, for our C_4 chemicals business. In our market segments, climate change could also result in both opportunities and risks for Evonik. There could be a significant hike in the rising demand from our customers for products that save resources, resulting in a correspondingly positive impact on our business. Additional regulations or weather-related incidents could put pressure on production costs and, at the same time, lead to rising demand for our resource-efficient products. To reduce the risks, we monitor the specific developments very carefully and work closely with our customers on the development of sustainable solutions.

Competitors in emerging markets and developing countries can increase competitive pressure through new capacities and aggressive pricing policies that can impair our selling prices and volume trends. To counter this we are broadening our foreign production base and gaining access to new markets in high-growth regions such as Asia and South America. To reduce these risks, the operating units affected also use various methods of increasing customer loyalty and gaining new customers, enter into research alliances with customers, and extend the services offered along the value chain.

We are constantly developing attractive and competitive new products and technologies to mitigate the risk that chemical products could be replaced by new, improved, or less expensive materials or technologies. One potential risk factor for our amino acids business, for example in Asia, is the possible impact of substandard food quality and food safety, especially due to bird flu. We utilize opportunities for profitable future growth by gaining access to new markets as part of our strategic development. One attractive market for our amino acids business is aquaculture, for which we have developed innovative products. As a result of global population growth, rising affluence in emerging markets, and overfishing of the world's oceans, the global aquaculture market is growing faster than other areas of livestock farming.

Customer concentration is basically low in our chemicals segments. None of the end-markets that we supply accounts for more than 20 percent of sales. Nevertheless, some operational units, especially in the Nutrition & Care and Resource Efficiency segments, and the Services segment have a certain dependence on key customers. In the operating business, this applies in particular to production facilities erected in the direct vicinity of major customers. The possible loss of a major customer could result in lower sales and in impairment losses on receivables and investments, as well as impacting our long-term raw material agreements or the financial structure of our affiliates.

2. Financial markets

As a rule, liquidity, credit default, currency, and interest rate risks, and the risks relating to pension obligations, are managed centrally. All material financial risk positions are identified and evaluated in accordance with group-wide policies and principles. This forms the basis for selective hedging to limit risks. In the use of derivative and non-derivative financial instruments to minimize the risks, Evonik applies the principle of separation of front office, risk controlling, and back office functions and takes as its guide the banking-specific minimum requirements for risk management (MaRisk) and the requirements of the German legislation on corporate control and transparency (KonTraG). Financial derivatives[1] are only used in connection with corresponding hedged items.

Exchange rate volatility

Transaction-related exchange rate risks arise from the translation of operating monetary assets and liabilities on the balance sheet into the functional currency of the respective Group company. The resulting net risk is normally hedged in full using derivatives. Further, our transaction-related currency management takes account of forecast cash inflows and outflows, which are hedged on the basis of forecast transactions, with a target hedging rate of up to 75 percent. Material opportunities and risks may arise from the remaining unhedged items and from discrepancies between the actual future rates from the average rates used to hedge forecast transactions. Scenario analyses are performed to estimate and control such risks and opportunities. These focus on the main foreign currencies of relevance for the Evonik Group, the US dollar, Chinese renminbi yuan, and the Singapore dollar. In view of the rising importance of regions outside the euro zone, risks and opportunities relating to transactions in foreign currencies will increase in the long term. In addition, there are currency-related risks from the translation of separate financial statements. The increasing volatility of exchange rates can be seen in particular in emerging markets, for instance, in Argentina, which is a hyperinflationary economy, and in Turkey. Economic risks also arise because exchange rates influence our competitiveness in global markets.

Changes in interest rates

Potential changes in capital market rates result in opportunities and risks. These comprise, on the one hand, changes in the fair value of fixed-interest financial instruments and, on the other, changes in interest payments on variable-rate financial instruments. To control these risks, when setting interest rate terms Evonik pays special attention to the structure of the fixed-floating relationship and uses interest rate swaps for further optimization where appropriate. Through the use of fixed-interest loans and interest rate hedging instruments, 79 percent of all financial liabilities were classified as fixed-interest as of the reporting date, and therefore had no material exposure to changes in interest rates.

Liquidity risks

To manage the Group's solvency, Evonik uses central liquidity risk management[2]. At its heart is a group-wide cash pool. In addition, Evonik's financial independence is secured through a broadly diversified financing structure, a €1.75 billion revolving credit facility as a central source of liquidity, and our solid investment grade rating. Overall, we believe that adequate financing instruments are available to ensure sufficient liquidity at all times.

Default risks

Default risks involve the risk of a loss if our debtors are fully or partially unable to meet their payment commitments. The credit risk of our customers and financial counterparties is therefore systematically examined when the contracts are concluded, and monitored continuously afterwards. Limits are set for each contractual partner on the basis of internal or rating-based creditworthiness analyses.

Financial opportunities and risks in connection with pension obligations

Both opportunities and risks may arise from potential changes in the parameters used to evaluate our pension obligations[3]. Changes, especially in interest rates, but also in mortality rates and rates of salary increases, can alter the present value of pension obligations, which directly alters equity and can result in changes in the expenses for pension plants.

[1] Further details of the financial derivatives used and their recognition and measurement can be found in note 9.2 to the consolidated financial statements. | [2] A detailed overview of liquidity risks and their management can be found in note 9.2 to the consolidated financial statements. Details of the financing of the Evonik Group and action to protect liquidity can be found in the section on financial condition. | [3] See note 6.9 to the consolidated financial statements.

Market opportunities and risks, and liquidity and default risks relating to financial instruments, also arise from the management of our pension plan assets. We counter these risks through an active risk management approach, combined with detailed risk controlling. Strategic management of the portfolios takes place via regular asset/liability studies. To minimize risk, we use derivative hedging strategies where appropriate. The broad diversification of asset classes, portfolio sizes, and asset managers avoids cluster risks but there are unavoidable residual risks in the individual investments.

Impairment risk

The risk of asset impairment arises when the interest rate used in an impairment test rises, the forecast cash flows decline, or investment projects are halted. Specific risks may arise in connection with goodwill or individual assets.

3. Raw material markets

For our business operations we require both high-volume commodities and smaller amounts of strategically relevant raw materials that have to meet highly demanding specifications. In both cases Evonik is confronted with opportunities and risks relating to the increasing volatility of the availability of raw materials and their prices.

The operating business is dependent on the price of strategic raw materials, especially petrochemical feedstocks obtained directly or indirectly from crude oil. The price of renewable raw materials is also highly volatile and is driven, for example, by weather-dependent harvest yields. Structural changes in exchange rates are another significant aspect affecting price risks. These risks are hedged by optimizing the global focus of procurement activities, for example by accessing new markets and concluding market-oriented agreements. To further reduce the price risks with regard to products that have intensive raw material requirements, our aim is to pass both the risks and the opportunities of fluctuations in raw material prices along to other stages in the value chain where necessary, for example, through price escalation clauses.

The overriding aim of the procurement strategy is to secure the availability of raw materials on the best possible business terms. Short- and mid-term bottlenecks in the availability of precursors and intermediates are potential risks. As well as making preparations to use substitute suppliers in an emergency, we constantly observe the business performance of suppliers of selected key raw materials to anticipate bottlenecks and avoid risks.

Increasing volatility requires constant monitoring of the corresponding risks in the value chain.

The opportunities and risks arising from changes in the price of petrochemical feedstocks mainly affect the Performance Materials segment because of its high procurement volume. Risks relating to single sourcing and short-term restrictions on the availability of raw materials mainly affect the Nutrition & Care and Resource Efficiency segments.

Supply chain

Compliance with sustainability criteria in the supply chain is a central aspect of procurement. We expect our suppliers to share our principles of entrepreneurial responsibility. We therefore have our own code of conduct for suppliers, based on the principles of the UN Global Compact, the International Labour Standards issued by the International Labour Organization (ILO), and the Responsible Care® initiative. Globally, this approach to sustainability is also supported by the sector initiative Together for Sustainability, of which Evonik is a founding member, through the use of standardized assessments. Evonik's principal suppliers and the majority of critical suppliers have already taken part in these assessments, which are evaluated by an impartial sustainability rating company.

4. Production

As a specialty chemicals company, Evonik is exposed to the risk of business interruptions, quality problems, and unexpected technical and IT malfunctions. Capacity constraints could hold back organic growth. We use complex production processes, some of them with interdependent production steps. Consequently, disruption and stoppages can adversely affect subsequent production steps and products. The outage of production facilities and interruptions in production workflows could have a significant negative influence on business and earnings performance, and could also harm people and the environment. Group-wide policies on project and quality management, highly qualified employees, and regular maintenance of our plants effectively minimize these risks. Insofar as is economically viable, we take out insurance to cover damage to our plants and sites and production stoppages, so the financial consequences of potential production risks are largely insured. Nevertheless, there is a risk of unforeseeable individual incidents.

5. Research and development

Opportunities for Evonik also come from market-oriented research and development (R&D), which we regard as an important driver of profitable growth. We have a well-stocked R&D pipeline with a balanced mixture of short-, mid-, and long-term R&D projects. On the one hand, we constantly strive to improve our processes in order to strengthen our cost leadership, and on the other, our projects open the door to new markets and new fields of technology. Our project portfolio is consistently aligned to our growth engines and innovation growth fields. Through our venture capital program, we take stakes in companies whose know-how can support us in joint developments. Aspects of digitalization are becoming more significant.

Opportunities and risks in R&D relate to the viability of planned product and process developments and the timing of their implementation. We mainly see opportunities arising from the introduction of new products that go beyond our present planning in our six innovation growth fields.

6. Mergers & acquisitions

Active portfolio management has high priority for Evonik as part of our value-based management approach. We have set out clear procedures for preparing, analyzing, and undertaking acquisitions and divestments. In particular, these include clear rules on accountability and approval processes. An intensive examination of potential acquisition targets (due diligence) is undertaken before they are acquired. This involves systematic identification of all major opportunities and risks and an appropriate valuation. Key aspects of this process are strategic focus, earnings power, and development potential, on the one hand, and any legal, financial, and environmental risks, on the other. New companies are rapidly integrated into the Evonik Group and thus into our risk management and controlling processes. Every transaction of this type entails a risk that integration of the business may not be successful or that integration costs may be unexpectedly high, thus jeopardizing realization of the planned quantitative and qualitative targets such as synergies.

In the integration of the Air Products specialty additives business and the Huber silica business, which were acquired in 2017, Evonik is paying special attention to appropriate measures to realize the identified opportunities and mitigate the risks.

Where businesses no longer fit our strategy or meet our profitability requirements despite optimization, we also examine external options. If a planned divestment is not achieved successfully, this could generate risks that impact the Evonik Group's earnings position.

7. Other

A steady improvement in our cost position is necessary to make us more competitive. Our goal is to achieve a lasting reduction of €200 million in selling and administrative expenses by 2021. Beside the potential to raise strategic flexibility and strengthen the operating units as a result of this program and other restructuring projects, there are risks relating to their implementation. These include delays in implementation, the loss of key personnel, ineffectiveness of measures, and higher costs for the realization of measures. Stringent project management, including involving relevant stakeholders, is used to counter these risks.

8. Investments

Generating growth through investment entails risks as regards the proposed scope and timing of projects. These risks are addressed through established, structured processes. For instance, we take a disciplined approach to implementing our investment program. Both projects that have not yet started and those that are already underway are constantly reviewed for changes in the market situation and postponed if necessary.

At the same time, we regard building new production facilities in regions with high growth momentum as an opportunity to generate further profitable growth. For example, socioeconomic megatrends are driving the development of our amino acids business. Following the successful start-up of a world-scale facility for DL-methionine in Singapore in fall 2014, we are planning to bring another facility into service here in 2019. Global population growth means that demand for animal protein will continue to rise steadily in the future. Moreover, environmentally compatible, resource-saving manufacture of products for animal and human nutrition is becoming increasingly important worldwide for ecological reasons.

Resource efficiency is the basis for a large number of energy-efficient and environment-friendly products from Evonik. One example is precipitated silica, where we are a market leader. Combining precipitated silica with silanes allows the manufacture of tires with considerably lower rolling resistance than conventional auto tires, resulting in fuel savings of up to 8 percent. Here, future growth will be supported, among other factors, by the introduction of tire labeling regulations in further countries. To utilize the resultant opportunities, we are selectively increasing our capacity for silica. For example, we brought a new production facility into service in the USA at the end of 2018 and production capacity for precipitated silica in Turkey is to be raised by 2020.

Our specialty polymer polyamide 12 (PA 12) is also a market leader. In view of its outstanding properties—high stability combined with flexibility, as well as high temperature resistance and low weight—this high-performance polymer is used as a substitute for steel in many demanding applications in automotive and lightweight engineering and in oil and gas pipelines. In addition, it is used in medical applications and 3D printing. To meet the sharp rise in demand, we are planning a new production complex for PA 12 in Marl (Germany), which is scheduled to come on stream in 2021.

The investments described above are included in our mid-term planning.

9. Energy markets

Evonik requires considerable amounts of energy from a wide variety of sources for its chemical facilities and infrastructure. The main sources are natural gas, electricity, and coal. At several sites, our power and steam requirements are fully or partially met by resource-efficient co-generation plants. In 2018, we continued our constant monitoring of trends on the national and international energy markets, enabling us to respond in a risk- and cost-conscious manner.

In countries where the sourcing of energy is not state-regulated, we procured and traded in energy and, where necessary, emission allowances (CO_2 allowances) within the framework of defined risk strategies. The aim is to balance the risks and opportunities of volatile energy markets. Depending on how the general conditions develop, our segments could be faced with additional costs.

For Evonik facilities within the scope of the European emissions trading system, adverse effects could arise from the structure of the fourth trading period (2021 to 2030), especially the possibility of a more stringent benchmark for the allocation of free CO_2 allowances. In the broader regulatory context of the energy markets, the way in which the cost of renewables is allocated among captive energy generators in Germany is of particular significance for Evonik, especially in view of the legal framework in Europe. That said, in principle we assume that captive generation will continue to contribute to the competitiveness of our German sites in the future. Possible costs could arise from the increase in grid feed fees resulting from the shift in German energy policy, including further state-driven cost components and possible fundamental changes to the grid fee system. Overall, we are exposed to fluctuations in the market price and cost of various energy sources as a result of the specific demand/supply situation and political events. These entail both opportunities and risks.

10. Human resources

As a global corporation, we respect the principles of the International Charter of Human Rights, the ten principles of the UN Global Compact, the OECD Guidelines for Multinational Enterprises, and the International Labour Standards of the International Labour Organization (ILO). Compliance with all employment laws is especially important to us.

Qualified specialists and managers are the basis for the achievement of our strategic and operational targets and thus a key competitive factor. Both the loss of key personnel and difficulties in attracting and hiring skilled and talented staff could therefore constitute a risk in this context.

To ensure that we can recruit and retain qualified staff to meet our future requirements, we offer varied employment opportunities worldwide, systematic personnel development, and competitive remuneration. As a responsible employer, Evonik helps the majority of employees build financial security to cover adverse risk factors such as the risk of accident or disability, and provide for retirement, either directly or through pension contributions to external institutions. The arrangements are based on the economic, legal, and tax situation in the various countries. In addition to this, we foster the personal wellbeing of employees through programs such as well@work, a range of consulting offers for employees caring for close relatives, and support in childcare. In this way, we retain and foster high performers and talented employees, and position Evonik as an attractive employer for prospective staff. We maintain close links to universities and professional associations to help us recruit suitable youngsters. Both our employer branding and many internal activities are aligned to diversity. The aim is to make Evonik even more attractive to talented specialists and managers.[1]

Our strategic human resources planning identifies requirements for a five-year period so timely steps can be taken to cover future personnel needs. We have thus largely limited potential human resources risks. Opportunities and risks for the development of personnel expenses could come, for example, from future collective agreements.

[1] See section on employees.

6.4 Legal/compliance opportunities and risks

The opportunities and risks in this category are far more difficult to quantify than market and competition risks, as they not only have financial implications but often also involve reputational risks for the company and/or criminal law consequences. Provisions are set up on our balance sheet to cover the financial impact. These are reflected in our system as reducing risk. In view of this complexity, legal/compliance opportunities and risks are not assigned to the opportunity/risk matrix illustrated above, nor are they allocated to the risk quantification classes.

1. Compliance, law, and the regulatory framework

Compliance means lawful business conduct. The principal compliance rules are set out in the Evonik Code of Conduct, which explicitly prohibits e.g., all forms of corruption, including "facilitation payments," and violation of antitrust regulations. Risks could result from failure to comply with the corresponding regulations. To minimize compliance risks, extensive training and sensitization of employees is undertaken at face-to-face training sessions and/or through e-learning programs. Our code of conduct is binding for all Evonik employees worldwide, including the executive board and the governance bodies of all Evonik companies. They are required to comply with the rules set forth in the code of conduct, to ensure they are familiar with its content, and to take part in the relevant training.[1]

Evonik monitors the observance of human rights along its value chain. To minimize the related risks, we require compliance with our code of conduct for suppliers, our global social policy, and the policy statement on human rights.

Evonik is exposed to legal risks, resulting, for example, from legal disputes such as claims for compensation, and from administrative proceedings and fines. In its operating business, the Evonik Group is exposed to liability risks, especially in connection with product liability, patent law, tax law, competition law, antitrust law, and environmental law. Changes in public law could also give rise to legal risks or materially alter such risk positions. As a chemical company with its own power plants, risks of particular relevance here are a possible change in the charges levied under the German Renewable Energies Act (EEG) and amendments to the European emissions trading regulations.

Further, Evonik may be liable for guarantee claims relating to divestments. Structured post-transaction management closely monitors any liability and guarantee risks resulting from divestments. We have developed a concept involving high quality and safety standards to ensure a controlled approach to such legal risks.

Insurance cover has been purchased for the financial consequences of any damage that may nevertheless occur as a result of damage to property, product liability claims, and other risks. Where necessary, Evonik sets up provisions for legal risks.

At present, the relevant legal risks are the issues outlined below. As a matter of principle, we refrain from evaluating the opportunities and risks of potential legal proceedings or proceedings that have commenced, in order not to influence our position.

Evonik is currently involved in two ongoing appraisal proceedings in connection with the squeeze-out of non-controlling interests pursuant to section 327a et seq of the German Stock Corporation Act (AktG): the squeeze-out of non-controlling interests in RÜTGERS AG (now RÜTGERS GmbH) in 2003, and the squeeze-out of non-controlling interests in Degussa AG (now Evonik Degussa GmbH) in 2006. The appraisal proceedings comprise a court review of the appropriateness of cash settlements.

In connection with the divestment of the former carbon black activities, the purchaser has requested indemnification from environmental guarantees, for example, relating to alleged infringement of the US Clean Air Act. Evonik is currently engaged in a dispute with the purchaser on this.

Following a fine imposed by the EU Commission in 2002 on various methionine producers (including Evonik), the Brazilian antitrust authorities have filed proceedings against Evonik in connection with the delivery of methionine to Brazil. Evonik is of the opinion that a fine cannot be imposed due to the statute of limitations.

Furthermore, following completion of administrative proceedings outside Germany, it is not improbable that individual customers could file claims for compensation.

With regard to employment law, there are risks relating, for example, to recalculation of pension commitments entered into by Evonik and its legal predecessors.

Tax risks relate to differences in the valuation of business processes, capital expenditures, and restructuring by the financial authorities, tax reforms in some countries, and potential retroactive payments in the wake of tax audits.

[1] See declaration on corporate governance.

2. Information security and the protection of intellectual property and know-how

Innovations play a significant part in Evonik's business success. Protecting know-how and intellectual property is therefore of central importance. With markets growing ever closer and the globalization of business, a competent approach to protecting our competitive edge is a key element in our investment activities. The company is also exposed to a risk that intellectual property cannot be adequately protected, even through patents, especially when building new production facilities in certain countries. Similarly, the transfer of know-how in joint ventures and other forms of cooperation also entails a risk of an outflow of expertise from Evonik. For example, in the event of the possible separation from a joint venture or other cooperation partner there is no guarantee that the business partner will not continue to use know-how transferred or disclose it to third parties, thereby damaging Evonik's competitive position.

Measures to minimize and avoid such risks are coordinated by the Corporate Security, Law, and Intellectual Property Management units.

IT risks

Electronic information processing is a key element in Evonik's success. Therefore, sustained protection of information and the availability, confidentiality, and integrity of IT-assisted business processes are especially important. If these systems and information are compromised, there is a significant risk that this could have a detrimental effect on our business and production processes. To protect them and the associated knowledge from cyber criminality (including industrial espionage and manipulation through electronic attacks) from both within and outside the Evonik Group and to minimize such risks, we have developed an IT security strategy and established organizational and technical measures. The secure use of information systems is described in binding group-wide policies and regulations and driven forward and monitored by an internal control system.

In view of the considerable and continuously rising threat, we regularly review our security measures, implement risk-based countermeasures as required, and adapt them wherever necessary. Training, including compulsory training in some cases, and constant information, for example, via the Evonik Group intranet and internal social networking platforms, keep employees aware of the need for IT security. Strictly confidential information that Evonik needs to protect is identified and corresponding protective measures are implemented. At the same time, managers' awareness of this issue is raised. The Evonik Computer Emergency Response Team (CERT) is networked externally at various levels (Germany: member of the German CERT network, Europe: member of TF-CSIRT*, globally: member of FIRST).

3. Environmental risks (environment, safety, health, quality)

Evonik is exposed to risks in the areas of occupational and plant safety. For example, workplace accidents and incidents in production facilities can cause injury to our employees or substance releases that impair the health of our employees and local residents. We counter these risks by living our understanding of safety as a holistic management task at all management levels. Our guiding principles for safety are binding for all managers and employees. In this way, Evonik makes it clear that safety is a central element in its corporate culture. We analyze accidents and incidents carefully so we can learn from them. Moreover, audits are conducted at the request of the executive board to check the controlled handling of such risks.

The aim of our product stewardship is timely identification and evaluation of possible health and environmental risks in our portfolio. We examine the entire value chain of each of our products—from procurement of the raw materials to delivery to our industrial customers, who receive all relevant information on the handling and disposal of our products. That includes, for example, safety data sheets and technical information sheets. As well as complying with all statutory requirements such as the European chemicals regulation (REACH) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), product stewardship at Evonik includes voluntary commitments that go beyond these regulations.

The effects of climate change are already visible today, for example, in water stress[1] and acute weather-related events such as low water levels in the river Rhine and hurricanes. Alongside these direct negative effects of climate change, we are also exposed to risks resulting from stricter environmental regulations.

Furthermore, the group-wide environmental protection and quality management system, which is validated as conforming to international standards, undergoes constant development and improvement. As a responsible chemical company, Evonik ensures that such processes are operated in accordance with the principles of the global Responsible Care® initiative and the UN Global Compact.

[1] Especially water shortages.

Adequate provisions have been established to secure or remediate contaminated sites where necessary. Alongside the need to adjust environmental provisions identified through structured internal processes, for example as a result of changes in the regulatory framework, further unplanned additions to such provisions may be necessary.

6.5 Process/organization risks

1. General

This risk category covers the interface between risk management and the internal control system (ICS). In this category, risks generally result from specific process shortcomings. Alongside general weaknesses, these include, in particular, risks within the ICS and the accounting-related ICS. Classification is therefore based on the list of processes drawn up by Corporate Audit. Starting from key corporate processes, the existence of relevant control objectives and standard controls for the main risks identified is checked. In view of the types of risk in this category, a purely qualitative assessment is normally used.

The evaluation of specific risks resulting from weaknesses in processes within the organizational units showed very little scope to optimize existing processes because of the efficacy of the current controls. Corresponding improvement measures have been identified. There are therefore no signs of systematic errors in the Evonik Group's ICS.

2. Internal control system for financial accounting

The main financial reporting risks are identified in the ICS through a quantitative and a qualitative analysis. Controls are defined for each risk area of the accounting process. Their efficacy is reviewed at regular intervals and improved where necessary. All elements of the control process are verified by the internal audit function on the basis of random samples.
To ensure the quality of financial statements we have a group-wide policy which defines uniform accounting and valuation principles for all German and foreign companies included in the consolidated financial statements for the Evonik Group. The majority of companies have delegated the preparation of their financial statements to Global Financial Services. Through systematic process orientation, standardization, and the utilization of economies of scale, this leverages sustained cost benefits and also improves the quality of accounting. Global Financial Services has developed a standardized control matrix for the internal control system for financial accounting. This is implemented in the three global shared service centers: in Offenbach (Germany) for Germany, Austria, and Finland, in Kuala Lumpur (Malaysia) for the Asia region and EMEA[1] countries not served by the Offenbach center, and in San Jose (Costa Rica) for the Americas region. The aim is to ensure a uniform global standard for the internal control system for financial accounting. In principle, the annual financial statements of all fully consolidated companies and all joint operations are audited. In the few exceptions from this rule, an upfront risk assessment is performed with the auditor.

All data are consolidated by the Accounting division using the SAP SEM-BCS system. Group companies submit their financial statements via a web-based interface. A range of technical validations is performed at this stage. Computerized and manual process controls and checking by a second person are the key oversight functions performed in the financial reporting process. The preparation of the monthly consolidated income statement and publication of three quarterly reports allow us to gain experience with new accounting issues and provide a sound basis for plausibilization of the year-end accounts. The executive board receives monthly reports, and quarterly reports are submitted to the audit committee of the supervisory board.

Aspects that may represent opportunities or risks for financial reporting in the future are identified and evaluated early through the risk management system. This ensures that risk management can be closely aligned to controlling and accounting processes.

[1] Europe, Middle East & Africa.

7. Report on expected developments

Basis for our forecast:

- Global growth of 2.9 percent
- Euro/US dollar exchange rate: US$1.15
- Internal raw material cost index slightly lower than in the prior year

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Outlook 2019

Adjusted EBITDA
expected to be
slightly lower to stable

Sales
expected to be
slightly lower to stable

ROCE
expected to be
above the cost of capital

Accident frequency
expected to be below the upper limit of 1.30

Free cash flow
expected to be
significantly higher

Capital expenditures
should be around
€1.0 billion

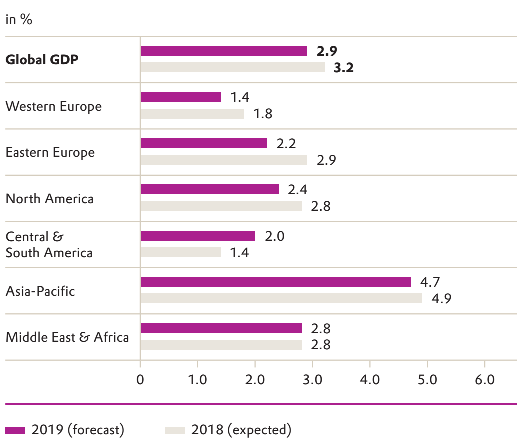
Incident frequency
should improve and remain below the upper limit of 1.10

7.1 Economic background

Global economy expected to grow more slowly in 2019

We expect **global economic conditions** in 2019 to be slightly weaker than in 2018. The US government's protectionist measures will presumably impair global trade further in 2019 and also affect industrial output and thus the global economy via global value chains. Moreover, the deterioration in financing conditions resulting from the expected continuation of the US Federal Reserve's policy of monetary tightening will again hold back growth, especially in the highly indebted emerging markets. Overall, we anticipate weaker global momentum, with a growth rate of 2.9 percent in 2019, compared with 3.2 percent in 2018.

GDP forecast for 2019 C27



We assume that the pace of growth in Europe will gradually slow, principally because of the weakness of manufacturing industry in Germany, France, and Italy. In addition, the headwind from foreign trade will probably increase. This will be countered, however, by ongoing monetary policy stimulation and robust consumer spending. There is likely to be further uncertainty with regard to the future economic relations between the European Union and the UK in 2019, which will hold back the economy, especially in the UK.

We assume further robust growth in the USA. However, the pace will be slightly more modest, because the effects of fiscal measures such as tax relief and higher state spending will be lower than in the previous year. Growth will also be supported by buoyant consumer demand and solid investment spending. Monetary policy will be less expansionary.

Thanks to the economic upturn in Brazil, growth should pick up further in Central & South America. However, political uncertainty in some countries, high unemployment, and private debt are holding back a significant improvement in the economic prospects for this region.

Growth will remain high in the Asia-Pacific region. The Japanese economy will be supported by expansionary monetary and fiscal policy but will probably weaken slightly compared with the previous year. We assume that growth will slow further in China. However, since the government is prepared to introduce economic measures to alleviate the impact of punitive US customs tariffs, we do not anticipate a drastic slowdown in growth momentum in 2019.

The projection for the global economy is affected by increasing uncertainty. For example, we see a risk that an escalation of the trade disputes could perceptibly dampen global economic activity. If the economic slowdown in China gains momentum, this could greatly reduce global growth. Moreover, an increase in the already elevated political risks in the European Union, including the uncertainty about the future economic relations between the European Union and the UK, could dampen economic momentum. Finally, there are initial signs that both the normalization of the US monetary policy and the risks associated with the ongoing trade disputes could unsettle the capital markets, leading to correction phases on the financial markets or an intensified reversal of capital flows. This would adversely affect the emerging markets, in particular, and hold back the global economy.

Given the anticipated slower global economic momentum and relatively stable raw material price trend, we only expect to see a moderate rise in global inflation.

In view of the sharp drop in the price of crude oil at the end of 2018, we assume that Evonik's petroleum-based feedstock prices will decline in the first quarter of 2019. Prices should then stabilize, despite the present heightened uncertainty on global markets. Overall, we expect that in 2019 prices of Evonik-specific raw materials will be slightly lower than in 2018.

We assume that in 2019 the average euro exchange rate will be around the 2018 level as a result of the growth differential and interest rate spread between the euro zone and the USA.

7.2 Outlook

Basis for our forecast:
- Global growth of 2.9 percent
- Euro/US dollar exchange rate: US$1.15 (2018: US$1.18)
- Internal raw material cost index slightly lower than in the prior year

Sales and earnings

The following outlook still includes the methacrylates business. It also takes into account the effects of first-time application of IFRS 16 Leases in 2019. The earnings from the planned acquisition of the US company PeroxyChem are not yet included.

The anticipated reduction in global growth momentum outlined in the economic background section will affect our business performance in 2019.

We therefore expect sales to be slightly[1] lower to stable in 2019 (2018: €15.0 billion).

We also expect adjusted EBITDA to be slightly lower[1] to stable (2018: €2.061 billion). This includes the negative normalization effects of the previously very favorable supply/demand situation in the methacrylates business.

Adjusted EBITDA should be supported by further synergies from the integration of the businesses acquired in 2017 from Air Products and Huber, as well as cost-savings from our efficiency program for sales and administration (SG&A 2020).

We assume a continuation of the volume growth and positive earnings trend in the majority of businesses in the Nutrition & Care segment. With new production capacities coming on stream, we expect the annual average prices for essential amino acids for animal nutrition to be lower than in the previous year. To offset the impact on our earnings, in 2018 we embarked on a program to raise the efficiency of our animal nutrition business. In addition, earnings will be adversely affected by expenses for the planned start-up of our new methionine facility in Singapore. Overall, earnings in the Nutrition & Care Segment are expected to be slightly lower than in the previous year.

In 2019, the Resource Efficiency segment will continue to benefit from its good positioning in the respective markets and from the trend to resource-efficient solutions. Although growth is expected to slow in some end-markets and regions, we expect earnings to be slightly higher than in the previous year.

In the Performance Materials segment, the recent very favorable demand/supply situation in the methacrylates business is expected to normalize. As a result, this segment will not be able to repeat the very high level of earnings seen in 2018; earnings will be perceptibly lower than in 2018.

The earnings impact of the anticipated slight reduction in raw material prices may affect the various businesses differently, but should balance out across the portfolio as a whole.

In 2019, the return on capital employed **(ROCE)** should remain above the cost of capital (10.0 percent before taxes). Partly due to the increase in capital employed resulting from the initial application of IFRS 16 in 2019, ROCE will be slightly lower than in the previous year (2018: 12.1 percent).

Financing and investments

We expect **capital expenditures** to be around the prior-year level at about €1 billion in 2019 (2018: €1.05 billion). The budget for maintenance and growth investments is around €850 million. As a temporary effect in 2019, there will be additional capital expenditure for the construction of a fully backwardly integrated polyamide 12 plant in Marl (Germany).

[1] In the context of sales, slightly refers to a change of between 1 and 5 percent. In the context of adjusted EBITDA, slightly refers to a change of between 1 and 10 percent.

We expect the **free cash flow** to improve significantly year-on-year in 2019 (2018: €672 million). Positive effects will come from the first reimbursement of pensions payments by the CTA[1], which will bring a substantial and lasting improvement in the free cash flow, and from lower cash outflows from net working capital than in 2018. Negative factors will be a normalization of tax payments, cash outflows for the SG&A 2020 efficiency enhancement program, and higher bonus payments as a result of the successful business performance in 2018.

Occupational and plant safety

We assume that the accident frequency rate will remain below the upper limit of 1.30 defined for 2019. We anticipate that we can achieve a slight improvement in our plant safety indicator, incident frequency (2018: 1.08), and that it will remain below the upper limit of 1.10.

[1] Contractual trust arrangement.