

Business review by segment

Segment overview (million €)

	Sales		Income from operations before depreciation and amortization (EBITDA)		Income from operations (EBIT) before special items	
	2017	2016	2017	2016	2017	2016
Chemicals ¹	16,331	12,905	5,374	3,114	4,233	2,032
Performance Products ¹	16,217	15,558	2,427	2,577	1,416	1,777
Functional Materials & Solutions	20,745	18,732	2,251	2,906	1,617	1,946
Agricultural Solutions	5,696	5,569	1,282	1,305	1,033	1,087
Oil & Gas	3,244	2,768	2,069	1,596	793	517
Other	2,242	2,018	(679)	(972)	(764)	(1,050)
	64,475	57,550	12,724	10,526	8,328	6,309

Segment overview (million €)

	Income from operations (EBIT)		Assets		Investments including acquisitions ²	
	2017	2016	2017	2016	2017	2016
Chemicals ¹	4,208	1,953	13,233	13,124	1,149	1,185
Performance Products ¹	1,510	1,678	14,432	14,911	800	892
Functional Materials & Solutions	1,545	2,199	17,364	17,359	1,056	3,679
Agricultural Solutions	1,015	1,037	8,096	8,899	185	266
Oil & Gas	1,043	499	11,967	12,829	988	1,115
Other	(799)	(1,091)	13,676	9,374	186	121
	8,522	6,275	78,768	76,496	4,364	7,258

Contributions to total sales by segment

Chemicals	25%	<div></div>
Performance Products	25%	<div></div>
Functional Materials & Solutions	32%	<div></div>
Agricultural Solutions	9%	<div></div>
Oil & Gas	5%	<div></div>
Other	4%	<div></div>

Contributions to EBITDA by segment

Chemicals	42%	<div></div>
Performance Products	19%	<div></div>
Functional Materials & Solutions	18%	<div></div>
Agricultural Solutions	10%	<div></div>
Oil & Gas	16%	<div></div>
Other	(5%)	<div></div>

¹ On January 1, 2017, the Monomers and Dispersions & Pigments divisions' activities for the electronics industry were merged into the global Electronic Materials business unit and allocated to the Dispersions & Pigments division. For better comparability, the affected figures for 2016 have been adjusted accordingly.

² Additions to property, plant and equipment (thereof from acquisitions: €8 million in 2017 and €155 million in 2016) and intangible assets (thereof from acquisitions: €235 million in 2017 and €2,789 million in 2016)

Sales¹ (million €)

	1st quarter		2nd quarter		3rd quarter		4th quarter	
	2017	2016	2017	2016	2017	2016	2017	2016
Chemicals ²	4,105	3,019	4,045	3,236	4,023	3,227	4,158	3,423
Performance Products ²	4,260	3,913	4,142	3,983	3,983	3,921	3,832	3,741
Functional Materials & Solutions	5,198	4,408	5,261	4,703	4,975	4,660	5,311	4,961
Agricultural Solutions	1,855	1,780	1,526	1,459	987	1,049	1,328	1,281
Oil & Gas	829	611	814	617	739	618	862	922
Other	610	477	476	485	548	538	608	518
	16,857	14,208	16,264	14,483	15,255	14,013	16,099	14,846

Income from operations (EBIT) before special items¹ (million €)

	1st quarter		2nd quarter		3rd quarter		4th quarter	
	2017	2016	2017	2016	2017	2016	2017	2016
Chemicals ²	958	457	1,120	458	1,102	488	1,053	629
Performance Products ²	515	555	405	512	385	473	111	237
Functional Materials & Solutions	531	456	422	535	397	497	267	458
Agricultural Solutions	533	591	272	320	21	97	207	79
Oil & Gas	170	66	183	94	180	194	260	163
Other	(250)	(219)	(151)	(212)	(325)	(233)	(38)	(386)
	2,457	1,906	2,251	1,707	1,760	1,516	1,860	1,180

Income from operations (EBIT)¹ (million €)

	1st quarter		2nd quarter		3rd quarter		4th quarter	
	2017	2016	2017	2016	2017	2016	2017	2016
Chemicals ²	974	460	1,119	458	1,089	490	1,026	545
Performance Products ²	499	543	363	495	567	467	81	173
Functional Materials & Solutions	521	452	427	531	357	492	240	724
Agricultural Solutions	531	590	270	288	20	93	194	66
Oil & Gas	169	66	183	93	255	178	436	162
Other	(243)	(245)	(181)	(147)	(330)	(256)	(45)	(443)
	2,451	1,866	2,181	1,718	1,958	1,464	1,932	1,227

Contributions to EBIT before special items by segment

Chemicals	51%	
Performance Products	17%	
Functional Materials & Solutions	19%	
Agricultural Solutions	12%	
Oil & Gas	10%	
Other	(9%)	

Contributions to EBIT by segment

Chemicals	49%	
Performance Products	18%	
Functional Materials & Solutions	18%	
Agricultural Solutions	12%	
Oil & Gas	12%	
Other	(9%)	

¹ Quarterly results not audited² On January 1, 2017, the Monomers and Dispersions & Pigments divisions' activities for the electronics industry were merged into the global Electronic Materials business unit and allocated to the Dispersions & Pigments division. For better comparability, the affected figures for 2016 have been adjusted accordingly.

Chemicals

The Chemicals segment consists of the Petrochemicals, Monomers and Intermediates divisions. In our integrated production facilities – our Verbund – we produce a broad range of basic chemicals and intermediates in Europe, Asia, North America and South America.

Divisions

Petrochemicals

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

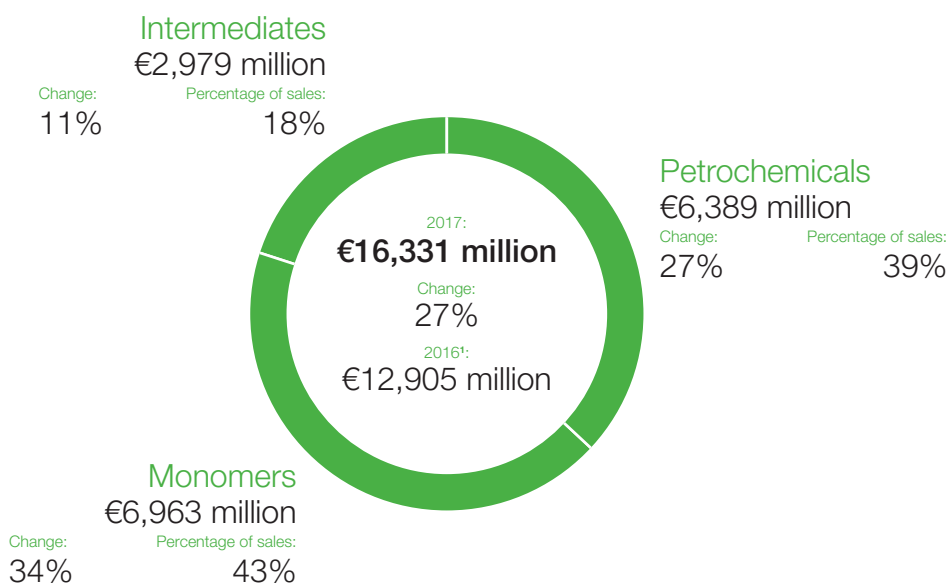
Monomers

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

Intermediates

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

Sales



Factors influencing sales

Volumes	5%	
Prices	23%	
Portfolio	0%	
Currencies	(1%)	
Sales	27%	

Income from operations before special items (million €)

2017	4,233	
2016 ¹	2,032	
		Change: €2,201 million

¹ Restated figures; for more information, see page 66

How we create value – an example

Ultramid® Flex F38

High-performance copolyamide for more sustainable packaging solutions

Value for BASF

Expected average sales growth
by 2025

>25%

Ultramid® Flex F38 gives plastics – like those used in food packaging – exceptional properties such as high tear resistance, transparency and softness even at lower temperatures. The innovative copolyamide is partly made from renewable raw materials, enabling our customers to offer more sustainable packaging solutions. We expect the product to generate average sales growth of over 25% by 2025.

Value for the environment and society

Fossil raw material savings

approx. 25%

BASF uses a monomer made from a regionally-grown rapeseed oil in the production of Ultramid® Flex F38. This reduces the consumption of fossil raw materials by around 25% compared with conventional polyamides, and also cuts greenhouse gas emissions of CO₂ equivalents¹ by 25% in the production process. These emissions are already lower than industry standards in BASF's Verbund production.

Strategy

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

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

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

In Ludwigshafen, Germany, we will strengthen the Verbund by replacing our acetylene plant, which plays a central role for many products and value chains, with a modern, highly efficient plant by 2019.

On September 18, 2017, we signed an agreement with Solvay on the acquisition of Solvay's global polyamide business by BASF. Solvay and BASF aim to close the transaction in the third quarter of 2018 after regulatory approvals have been obtained and the consent of a joint venture partner has been received. The purchase would strengthen our polyamide 6.6 value chain through increased polymerization capacities and the backward integration into the key raw material ADN (adipodinitrile). BASF plans to integrate Solvay's global polyamide business into the Monomers and Performance Materials divisions.

¹ Different gases contribute to global warming to different degrees. In order to compare their impact, emissions are usually converted into CO₂ equivalents.

Products, customers and applications

Division	Products	Customer industries and applications
Petrochemicals	Basic products: ethylene, propylene, butadiene, benzene, alcohols, solvents, plasticizers, alkylene oxides, glycols and acrylic monomers Specialties: special plasticizers, special acrylates	Use in the BASF Verbund Chemical and plastics industry, detergent, hygiene, automotive, packaging and textile industries; production of paints, coatings, and cosmetics as well as oilfield, construction and paper chemicals
Monomers	Basic products: isocyanates (MDI, TDI), ammonia, caprolactam, adipic acid, chlorine, urea, glues and impregnating resins, caustic soda, polyamides 6 and 6.6, standard alcoholates, sulfuric and nitric acid	Use in the BASF Verbund Industries such as plastics, electronics, lumber, furniture, packaging, textile, construction and automotive
Intermediates	Basic products: butanediol and derivatives, alkylamines and alkanolamines, neopentyl glycol, formic and propionic acid Specialties: specialty amines such as tertiary butylamine and polyetheramine, gas treatment chemicals, vinyl monomers, acid chlorides, chloroformates, chiral intermediates	Use in the BASF Verbund Plastics, coatings and pharmaceutical industries, production of detergents and cleaners as well as crop protection products and textile fibers

Production capacities of significant products¹

Product	Sites				Annual capacity (metric tons)
	Europe	North America	Asia Pacific	South America, Africa, Middle East	
Acrylic acid	■	■	■	■	1,510,000
Alkylamines	■	■	■		250,000
Formic acid	■	■	■		305,000
Ammonia	■				1,525,000
Benzene	■	■	■		910,000
Butadiene	■	■	■		680,000
Butanediol equivalents	■	■	■		670,000
Chlorine	■				385,000
Ethanolamines and derivatives	■		■		430,000
Ethylene	■	■	■		3,480,000
Ethylene oxide	■	■	■		1,445,000
Urea	■				545,000
Isocyanates	■	■	■		2,610,000
Caustic soda	■				360,000
Neopentyl glycol	■	■	■		205,000
Oxo-C4 alcohols (calculated as butyraldehyde)	■	■	■		1,625,000
Polyamide 6 and 6.6	■	■	■		820,000
Polyamide precursors	■	■			910,000
PolyTHF®	■	■	■		350,000
Propionic acid	■		■		150,000
Propylene	■	■	■		2,610,000
Propylene oxide	■				675,000
Sulfuric acid	■				920,000
Plasticizers	■	■			595,000

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

Investments

Location	Project	Additional annual capacity through expansion (metric tons)	Total annual capacity (metric tons)	Startup
Freeport, Texas	Construction: ammonia plant ¹		750,000	2018
Ludwigshafen, Germany	Replacement: acetylene plant	n/a	90,000	2019
Nanjing, China	Construction: specialty amines plant	21,000	n/a	2019
	Expansion: propionic acid plant ²	30,000	69,000	2019
Pasadena, Texas	Changeover of plasticizers production to dioctyl terephthalate (DOTP)		60,000	2017
Shanghai, China	Expansion: MDI plant ³	240,000	480,000	2017

¹ Operated by an associated company with Yara International ASA² Operated by a joint venture with Sinopec³ Operated by an associated company with Huntsman, Shanghai Hua Yi (Group) Company, Shanghai Chlor-Alkali Chemical Co. Ltd. and Sinopec Group Assets Management Corp.

Segment data¹ (million €)

	2017	2016	Change in %
Sales to third parties	16,331	12,905	27
Thereof Petrochemicals	6,389	5,035	27
Monomers	6,963	5,189	34
Intermediates	2,979	2,681	11
Intersegmental transfers	6,063	4,832	25
Sales including intersegmental transfers	22,394	17,737	26
Income from operations before depreciation and amortization (EBITDA)	5,374	3,114	73
EBITDA margin %	32.9	24.1	–
Amortization and depreciation ²	1,166	1,161	0
Income from operations (EBIT)	4,208	1,953	115
Special items	(25)	(79)	68
EBIT before special items	4,233	2,032	108
EBIT after cost of capital	2,895	690	320
Assets	13,233	13,124	1
Investments including acquisitions ³	1,149	1,185	(3)
Research and development expenses	128	145	(12)

¹ On January 1, 2017, the Monomers and Dispersions & Pigments divisions' activities for the electronics industry were merged into the global Electronic Materials business unit and allocated to the Dispersions & Pigments division. For better comparability, the affected figures for 2016 have been adjusted accordingly.

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

³ Additions to intangible assets and property, plant and equipment

Chemicals segment

- Sales grow by 27% to €16,331 million, mainly due to higher prices
- Stronger margins increase EBIT before special items by 108% to €4,233 million

In the Chemicals segment, sales to third parties increased by €3,426 million to €16,331 million in 2017 (volumes 5%, prices 23%, portfolio 0%, currencies –1%). This was primarily attributable to higher prices, especially in the Monomers division. We increased volumes in all divisions.

Income from operations (EBIT) before special items rose by €2,201 million to €4,233 million, mainly as a result of higher margins for isocyanates in the Monomers division. Stronger margins in the Petrochemicals and Intermediates divisions also contributed to the increase in earnings; slightly higher fixed costs had an offsetting effect. The negative impact on earnings in 2017 caused by the North Harbor accident at the Ludwigshafen site in October 2016 was compensated by insurance payments. EBIT rose by €2,255 million to €4,208 million. Overall, special items did not have a substantial impact.

For the Outlook for 2018, see page 123

Petrochemicals

- Sales rise by 27% to €6,389 million, primarily as a result of price increases
- Considerable increase in EBIT before special items due to higher margins

Sales to third parties in the Petrochemicals division rose by €1,354 million to €6,389 million in 2017. This was mainly due to significantly higher sales prices in all regions and in almost all strategic business units, particularly for steam cracker products. Prices largely followed the higher raw materials prices for naphtha and butane, our most important feedstock. Sales volumes rose overall. Volumes rose significantly in North America, mainly as a result of higher capacity utilization of the steam cracker and the condensate splitter in Port Arthur, Texas. In Europe, sales volumes were up slightly from the previous year: Higher volumes, especially for steam cracker products, were able to compensate for the limited volumes growth for plasticizers and in the alcohols and solvents business following the accident at the North Harbor.

Petrochemicals – Factors influencing sales

Volumes	8%	<div></div>
Prices	20%	<div></div>
Portfolio	0%	<div></div>
Currencies	(1%)	<div></div>
Sales	27%	<div></div>

Petrochemicals – Sales by region
(Location of customer)

1	Europe	55%
2	North America	34%
3	Asia Pacific	8%
4	South America, Africa, Middle East	3%



EBIT before special items considerably exceeded the 2016 figure as a result of higher margins. In Europe in particular, margins for steam cracker products as well as for alkylene oxides and glycols rose significantly. Margins for acrylic monomers and oxo alcohols also developed positively overall, mainly due to strong demand and low product availability. The negative impact on earnings in 2017 caused by the North Harbor accident was offset by insurance payments.

Monomers

- Sales up 34% at €6,963 million, mainly due to higher prices
- Considerable increase in EBIT before special items, primarily from stronger isocyanate margins

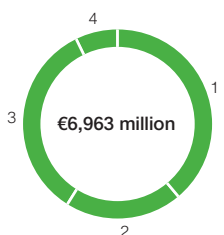
Sales to third parties in the Monomers division rose by €1,774 million to €6,963 million in 2017, largely as a result of higher prices. Robust demand and the temporary product shortages on the market led to a strong price increase, especially in the isocyanates business. Sales prices for polyamides also rose. We achieved year-on-year volumes growth with our new production facilities.

Monomers – Factors influencing sales

Volumes	3%	
Prices	33%	
Portfolio	0%	
Currencies	(2%)	
Sales	34%	

Monomers – Sales by region
(Location of customer)

1	Europe	39%
2	North America	20%
3	Asia Pacific	34%
4	South America, Africa, Middle East	7%



Stronger margins and volumes for isocyanates were the main reason for the considerable increase in EBIT before special items in the Monomers division. Earnings were also positively impacted by the restructuring of our caprolactam production in Europe. Fixed costs exceeded the prior-year level, mainly from our new production facilities.

Intermediates

- Sales growth of 11% to €2,979 million due to higher prices and volumes
- EBIT before special items slightly above the prior-year level due to margin and volumes growth

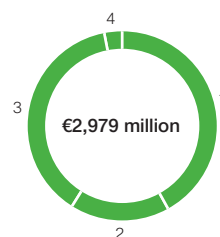
Sales to third parties in the Intermediates division rose by €298 million year-on-year to €2,979 million. This was mainly due to higher prices, particularly in the butanediol and derivatives as well as the acids and polyalcohols businesses. We were able to raise volumes in all regions in 2017. The amines business in Europe and Asia showed especially strong growth. Negative exchange rate effects and the divestiture of the inorganic specialties business in the first quarter of 2017, which included the site in Evans City, Pennsylvania, slightly dampened sales growth.

Intermediates – Factors influencing sales

Volumes	4%	
Prices	10%	
Portfolio	(1%)	
Currencies	(2%)	
Sales	11%	

Intermediates – Sales by region
(Location of customer)

1	Europe	42%
2	North America	17%
3	Asia Pacific	38%
4	South America, Africa, Middle East	3%



EBIT before special items in 2017 was up slightly from the previous year: Improved margins and higher sales volumes more than compensated for the rise in fixed costs. The year-on-year increase in fixed costs was primarily due to a higher number of plant maintenance activities, the startup of new production plants in all regions, as well as unplanned repairs.

The construction of the new acetylene plant in Ludwigs-hafen, Germany, is progressing on schedule.

Performance Products

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

Divisions

Dispersions & Pigments

Raw materials used to formulate products in the construction, automotive, adhesives, printing, packaging, electronics and paper industries

Care Chemicals

Ingredients for the hygiene, cosmetics, detergent and cleaner industries as well as for applications in the chemical industry

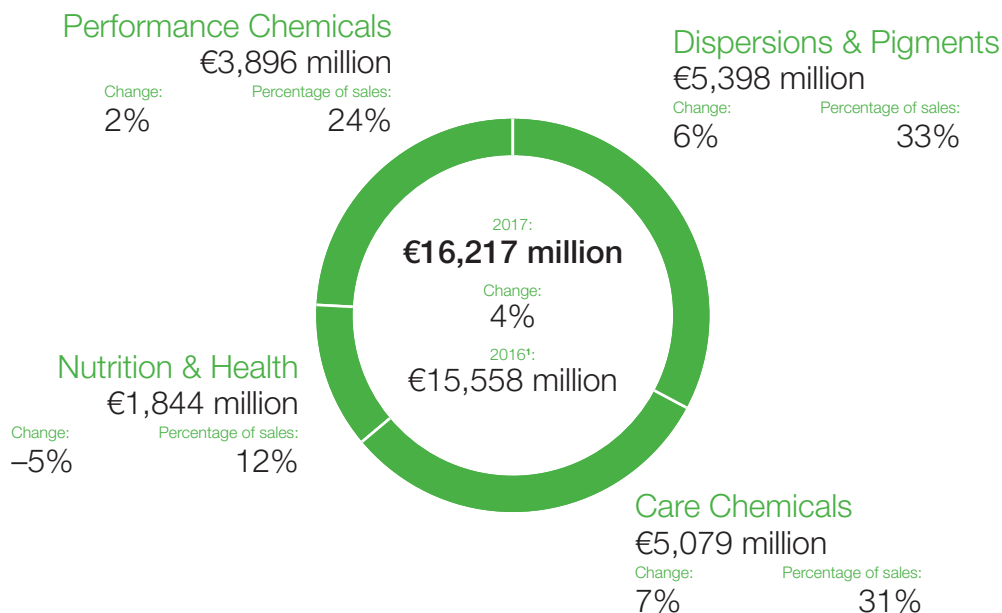
Nutrition & Health

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

Performance Chemicals

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

Sales



Factors influencing sales

Volumes	5%	
Prices	1%	
Portfolio	(1%)	
Currencies	(1%)	
Sales	4%	

Income from operations before special items (million €)

2017	1,416	
2016 ¹	1,777	
		Change: minus €361 million

¹ Restated figures; for more information, see page 72

How we create value – an example

Hydraulic® 406 ESI

New low-viscous brake fluid for enhanced driving safety

Value for BASF

Market growth
compared with the
market for brake fluids
as a whole

2-fold

Value for our customers

Lower viscosity compared with
standard products

>50%

BASF has developed and sold brake fluids for the automotive industry for over 60 years. Hydraulic® 406 ESI enables us to secure a leading position in the attractive market segment for low-viscous brake fluids, which is growing twice as fast as the market as a whole. The new product meets several international market standards¹ as well as the new requirements of automotive manufacturers, particularly with respect to assisted and autonomous driving.

As electronic systems become more and more complex, the demands on the braking system also increase. Brake fluids are a safety factor – they must ensure fast signal processing and breaking reactions. A low viscosity is crucial here. With a viscosity that is more than 50% lower than standard products,² Hydraulic® 406 ESI significantly improves braking safety – even under difficult conditions.

Strategy

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

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

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

sides. In this way, we aim to strengthen our focus on highly specialized applications in the business fields of displays and semi-conductors in the electronics industry, for example.

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

We support our customers by serving as a reliable supplier with consistently high product quality, good value for money and lean processes. In the Dispersions & Pigments division, for instance, we draw on our in-depth knowledge of the areas of application and technological innovations to strengthen customer relationships in key industries.

At the Caojing site in Shanghai, China, we are planning a new plant for plastic additives (antioxidants), which is expected to be completed in 2019. We are expanding our existing ibuprofen production capacities in Bishop, Texas, and are planning the construction of a new world-scale ibuprofen plant in Ludwigshafen, Germany, scheduled for startup in 2021.

¹ DOT 3, DOT 4, DOT 5.1

² Brake fluids in accordance with DOT 3 and DOT 4

Products, customers and applications

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

Production capacities of significant products¹

Product	Sites				Annual capacity (metric tons)
	Europe	North America	Asia Pacific	South America, Africa, Middle East	
Anionic surfactants	■	■	■	■	600,000
Citral	■		■		78,000
Chelating agents	■	■		■	170,000
Methane sulfonic acid	■				30,000
Nonionic surfactants	■	■	■		630,000
Polyisobutene	■		■		265,000
Superabsorbents	■	■	■	■	590,000

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

Investments

Location	Project	Startup
Antwerp, Belgium	Flexibilization: superabsorbent plant	2017
Besigheim, Germany	Expansion: production plant for bismuth vanadate pigments	2017
Kuantan, Malaysia	Construction: aroma ingredients complex	2017/2018
	Construction: polyisobutene plant	2017
Ludwigshafen, Germany	Expansion: polyvinylpyrrolidone plant	2017
	Expansion: production plant for resins (Basonat®)	2017
	Expansion: production plant for dispersions	2018
	Construction: production plant for vitamin A	2020
	Construction: production plant for ibuprofen	2021
Nanjing, China	Construction: production plant for bio-acrylamide	2017
	Expansion: polyacrylamide plant	2018
Shanghai, China	Construction: production plant for emollients and waxes	2017
	Construction: production plant for plastic additives	2019

Segment data¹ (million €)

	2017	2016	Change in %
Sales to third parties	16,217	15,558	4
Thereof Dispersions & Pigments	5,398	5,086	6
Care Chemicals	5,079	4,735	7
Nutrition & Health	1,844	1,932	(5)
Performance Chemicals	3,896	3,805	2
Intersegmental transfers	506	469	8
Sales including intersegmental transfers	16,723	16,027	4
Income from operations before depreciation and amortization (EBITDA)	2,427	2,577	(6)
EBITDA margin %	15.0	16.6	–
Amortization and depreciation ²	917	899	2
Income from operations (EBIT)	1,510	1,678	(10)
Special items	94	(99)	.
EBIT before special items	1,416	1,777	(20)
EBIT after cost of capital	26	205	(87)
Assets	14,432	14,911	(3)
Investments including acquisitions ³	800	892	(10)
Research and development expenses	395	399	(1)

¹ Effective January 1, 2017, the Chemicals and Performance Products segments' activities for the electronics industry were merged and allocated to the Performance Products segment as the Electronic Materials global business unit. To facilitate comparability, the relevant figures for 2016 have been adjusted accordingly.

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

³ Additions to intangible assets and property, plant and equipment

Performance Products segment

- Sales up 4% at €16,217 million, mainly driven by higher volumes
- EBIT before special items decreases by 20% to €1,416 million as a result of lower margins

At €16,217 million, sales to third parties in the Performance Products segment were €659 million above the prior-year figure in 2017 (volumes 5%, prices 1%, portfolio –1%, currencies –1%). This is mainly attributable to volumes growth in all divisions. Higher sales prices in the Care Chemicals and Dispersions & Pigments divisions also had a

positive impact on sales. Portfolio measures and negative currency effects in all divisions reduced sales slightly.

Income from operations (EBIT) before special items declined by €361 million year-on-year to €1,416 million. This was largely due to lower margins, primarily as a result of higher raw materials prices that could not be fully passed on via sales prices. Compared with 2016, EBIT declined by €168 million to €1,510 million. Special income in the Performance Chemicals division from the transfer of BASF's leather chemicals business to the Stahl group only partially compensated for the margin-related decline in earnings.

📖 For the Outlook for 2018, see page 123

Dispersions & Pigments

- Higher volumes and prices lift sales by 6% year-on-year to €5,398 million
- EBIT before special items considerably below prior-year level, mainly due to lower margins

Sales to third parties in the Dispersions & Pigments division amounted to €5,398 million, up €312 million from the previous year. This positive development was driven by volumes growth and higher sales prices in the dispersions business. Portfolio and currency effects were slightly negative overall. The acquisition of Rolic AG, Allschwil, Switzerland, in February 2017, had a positive impact on sales, while the divestiture of the photoinitiator business in August 2016 had a dampening effect.

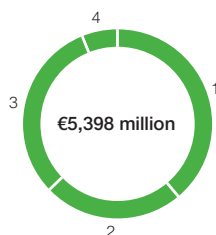
This divestiture reduced sales in the additives business; sales increased in all other business areas. Our sales volumes rose in all business areas, particularly in the dispersions and electronic materials businesses. Sales prices in the dispersions business increased on the back of higher raw materials prices. In the remaining business areas, particularly electronic materials and pigments, sales prices were pushed down by stronger market competition.

Dispersions & Pigments – Factors influencing sales

Volumes	6%	
Prices	2%	
Portfolio	(1%)	
Currencies	(1%)	
Sales	6%	

Dispersions & Pigments – Sales by region (Location of customer)

1	Europe	39%
2	North America	24%
3	Asia Pacific	31%
4	South America, Africa, Middle East	6%



Despite the rise in sales and volumes, EBIT before special items declined considerably compared with 2016. This was mainly due to lower margins as a result of the oil price-related increase in raw materials prices as well as slightly higher fixed costs.

Care Chemicals

- 7% increase in sales to €5,079 million largely due to volumes growth
- Considerable decline in EBIT before special items attributable to lower margins

In the Care Chemicals division, sales to third parties rose by €344 million to €5,079 million in 2017. This was predominantly the result of higher sales volumes, particularly in the hygiene business and of ingredients for the detergents and cleaners industries as well as for the cosmetics industry. Price increases on the back of higher raw materials prices, especially for oleochemical surfactants and fatty alcohols, also had a positive effect on sales. Currency effects reduced sales slightly.

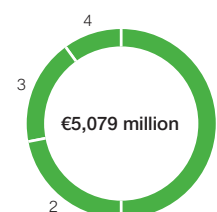
Sales rose in all regions, buoyed by strong demand. Higher volumes led to sales growth in Europe in particular.

Care Chemicals – Factors influencing sales

Volumes	5%	
Prices	3%	
Portfolio	0%	
Currencies	(1%)	
Sales	7%	

Care Chemicals – Sales by region (Location of customer)

1	Europe	50%
2	North America	22%
3	Asia Pacific	18%
4	South America, Africa, Middle East	10%



EBIT before special items declined considerably compared with 2016. This was mainly due to the ongoing pressure on margins for superabsorbents and lower margins for oleochemical surfactants. Fixed costs increased slightly as a result of additional maintenance costs and higher production volumes. Special charges were predominantly attributable to restructuring measures in North America.

In November 2017, we completed the technical retrofitting of the superabsorbent plant at the site in Antwerp, Belgium, where the superabsorbent products Saviva® and HySorb® can be produced.

Nutrition & Health

- Sales decline 5% to €1,844 million, primarily as a result of divestitures
- EBIT before special items considerably below the 2016 figure due to higher fixed costs

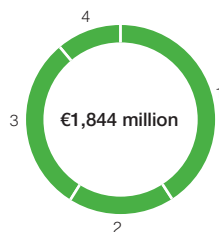
Sales to third parties in 2017 declined by €88 million to €1,844 million in the Nutrition & Health division. This was primarily attributable to portfolio effects. Sales were also reduced by slightly lower sales prices, especially for vitamins, as well as negative currency effects. Higher volumes in almost all business areas had an offsetting effect.

Nutrition & Health – Factors influencing sales

Volumes	2%		
Prices	(1%)		
Portfolio	(5%)		
Currencies	(1%)		
Sales	(5%)		

Nutrition & Health – Sales by region (Location of customer)

1	Europe	41%
2	North America	18%
3	Asia Pacific	30%
4	South America, Africa, Middle East	11%



EBIT before special items declined considerably compared with 2016. This was mainly due to higher fixed costs from the gradual startup of our new aroma ingredients complex in Kuantan, Malaysia, as well as the expansion of capacities at our ibuprofen production facility in Bishop, Texas. Earnings were also reduced by lower margins, especially for vitamins.

On October 31, 2017, a fire occurred during startup of the citral plant in Ludwigshafen, Germany. As a result, we had to declare Force Majeure for all citral- and isoprenol-based aroma ingredients, and consequently for vitamin A, vitamin E and several carotenoid products as well.

Performance Chemicals

- Sales growth of 2% to €3,896 million from higher volumes
- Considerable decline in EBIT before special items due to lower margins

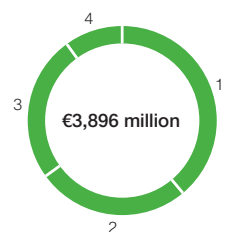
In the Performance Chemicals division, sales to third parties rose by €91 million to €3,896 million compared with 2016. This was due to higher sales volumes in all regions and businesses. Volumes growth led to higher sales, especially in the lubricant and mineral oil additive businesses as well as in plastic additives. Sales were also positively impacted by the recovery of the markets for oilfield and mining chemicals. Lower sales prices, particularly in Asia and South America, negative currency effects and the transfer of BASF's leather chemicals business to the Stahl group reduced sales.

Performance Chemicals – Factors influencing sales

Volumes	6%		
Prices	(1%)		
Portfolio	(2%)		
Currencies	(1%)		
Sales	2%		

Performance Chemicals – Sales by region (Location of customer)

1	Europe	39%
2	North America	26%
3	Asia Pacific	25%
4	South America, Africa, Middle East	10%



EBIT before special items declined considerably compared with the previous year. The softer margins resulting from higher raw materials prices were only partially offset by volumes growth and lower fixed costs.

We generated special income of €195 million from the transfer of BASF's leather chemicals business to the Stahl group.

Functional Materials & Solutions

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

Divisions

Catalysts

Automotive and process catalysts, battery materials, precious metal trading

Construction Chemicals

Solutions for building structure and envelopes, interior construction and infrastructure

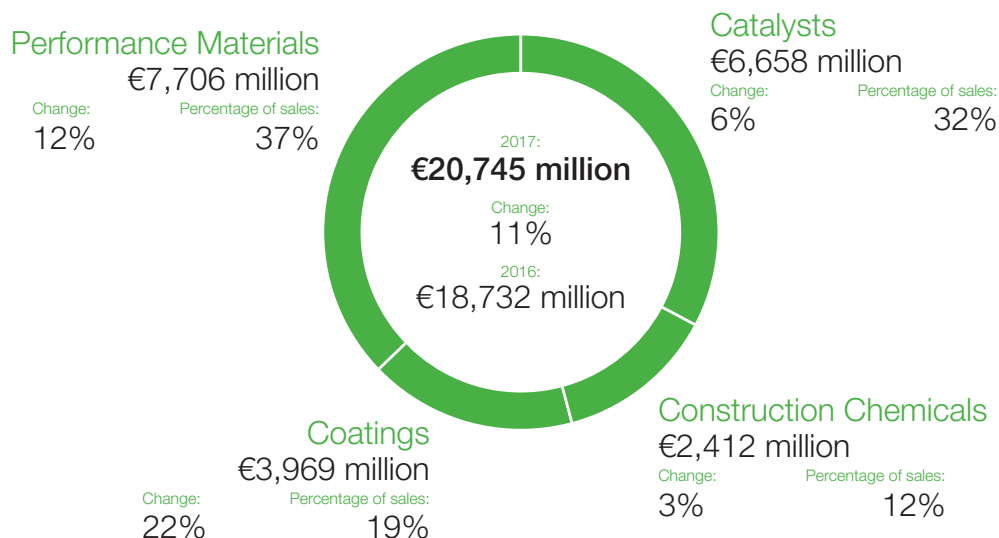
Coatings

Coatings solutions, surface treatments, decorative paints

Performance Materials

Polyurethanes, thermoplastics and foams

Sales



Factors influencing sales

Volumes	4%	
Prices	5%	
Portfolio	3%	
Currencies	(1%)	
Sales	11%	

Income from operations before special items (million €)

2017	1,617	
2016	1,946	
		Change: minus €329 million

How we create value – an example

Borocat®

A new generation of high-performance refining catalysts

Value for BASF

Expected sales growth
with Borocat® through 2022

>50%

Refineries use fluid catalytic cracking (FCC) catalysts to extract high-value products like gasoline, diesel or liquid gas from the residues of crude oil distillation. Borocat®, our new generation of FCC catalysts, increases the yield of valuable hydrocarbons – especially from heavy crude oil with metal contaminants. As more and more crude oil of this type is being produced and processed, we expect sales growth of over 50% for Borocat® through 2022.

Value for our customers and the environment

Unwanted by-product
hydrogen reduced by

up to 25%

The metals contained in crude oil present a particular challenge to further processing as they catalyze the generation of unwanted by-products like hydrogen, reducing the yield of valuable substances. Our new boron-based catalyst technology hampers these chemical by-reactions so that up to 25% less hydrogen is produced. This enables refineries to process heavier, more contaminated crude oil and use these resources more efficiently.

Strategy

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

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

One focus of our strategy is the ongoing optimization of our product and services portfolio and our structures according to different regional market requirements as well as trends

in our customer industries. We are positioning ourselves to grow profitably and faster than the market.

We aim to secure our leading market position in Europe, to profitably expand our position in the North American market and to purposefully extend our activities in the growth regions of Asia, South America, eastern Europe and the Middle East. New business fields such as battery materials play a particularly important role here.

On September 18, 2017, we signed an agreement with Solvay on the acquisition of Solvay's integrated polyamide business. The aim is to close the transaction in the third quarter of 2018 after regulatory approvals have been obtained and the consent of a joint venture partner has been received. The acquisition would complement our engineering plastics portfolio and expand our position as a solutions provider for the transportation, construction and consumer goods industries as well as for other industrial applications. We plan to integrate the global polyamide business into the Performance Materials and Monomers divisions.

Products, customers and applications

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

Investments

Location	Project	Startup
Brighton, Colorado	Capacity expansion: plant for sealants	2019
Dahej, India	Capacity expansion: for Cellasto®	2019
Gimcheon, South Korea	Construction: plant for Ultraform®	2018
Greenville, Ohio	Capacity expansion: resin plant	2019
Hamm, Germany	Capacity expansion: logistics for floor installation systems	2018
Ludwigshafen, Germany	Construction: specialty zeolites plant for emissions catalysts	2019
Münster, Germany	Construction: plant for functional film coatings	2018
Onoda, Japan	Capacity expansion: plant for cathode materials	2017
Rayong, Thailand	Construction: plant for automotive emissions catalysts	2018
Shanghai, China	Construction: chemical catalysts plant	2017
	Construction: automotive coatings plant	2017
	Construction: technical competence center for automotive coatings	2018
Schwarzheide, Germany	Capacity expansion: compounding plant for Ultramid® and Ultradur®	2017
Środa Śląska, Poland	Capacity expansion: plant for emissions catalysts	2020
Tultitlán, Mexico	Capacity expansion: automotive coatings plant	2018
Yangon, Myanmar	Construction: plant for concrete additives	2017
Yeosu, South Korea	Capacity expansion: plant for Ultrason®	2017

Segment data (million €)

	2017	2016	Change in %
Sales to third parties	20,745	18,732	11
Thereof Catalysts	6,658	6,263	6
Construction Chemicals	2,412	2,332	3
Coatings	3,969	3,249	22
Performance Materials	7,706	6,888	12
Intersegmental transfers	805	736	9
Sales including intersegmental transfers	21,550	19,468	11
Income from operations before depreciation and amortization (EBITDA)	2,251	2,906	(23)
EBITDA margin %	10.9	15.5	–
Depreciation and amortization ¹	706	707	0
Income from operations (EBIT)	1,545	2,199	(30)
Special items	(72)	253	.
EBIT before special items	1,617	1,946	(17)
EBIT after cost of capital	(190)	813	.
Assets	17,364	17,359	0
Investments including acquisitions ²	1,056	3,679	(71)
Research and development expenses	431	393	10

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

² Additions to intangible assets and property, plant and equipment

Functional Materials & Solutions segment

- Sales growth of 11% to €20,745 million, mainly from higher prices and volumes
- EBIT before special items down 17% to €1,617 million due to lower margins and rising fixed costs

In the Functional Materials & Solutions segment, sales to third parties increased by €2,013 million to €20,745 million. This was due to higher prices and volumes as well as the Chemetall business, which was acquired from Albemarle in December 2016; sales were slightly reduced by currency effects (volumes 4%, prices 5%, portfolio 3%, currencies –1%). The volumes growth was largely attributable to higher demand for our products for the automotive and construction industries.

At €1,617 million, income from operations (EBIT) before special items was down €329 million on the 2016 figure, primarily due to lower margins and higher fixed costs. Special charges in 2017 mainly related to integration costs in connection with the Chemetall acquisition as well as the acquisition of the western European building material business for professional users from the Henkel group. In 2016, special income arose from the divestiture of the industrial coatings business in the Coatings division. EBIT declined by €654 million to €1,545 million in 2017.

For the Outlook for 2018, see page 123

Catalysts

- Sales increase of 6% to €6,658 million largely driven by higher prices
- Considerable improvement in EBIT before special items, mainly from volumes growth

Sales to third parties in the Catalysts division rose by €395 million to €6,658 million in 2017. This was primarily due to higher sales prices on the back of an increase in precious metal prices and increased volumes of mobile emissions catalysts. Currency effects and the divestiture of the polyolefin catalysts business in June 2016 had a negative impact on sales.

We increased sales volumes for battery materials and chemical catalysts, while volumes declined in the refining catalysts business. In precious metal trading, sales rose by €182 million to €2,518 million. Higher prices more than offset the decline in volumes.

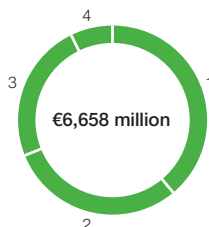
Catalysts – Factors influencing sales

Volumes	1%	
Prices	8%	
Portfolio	(1%)	
Currencies	(2%)	
Sales	6%	

Catalysts – Sales by region

(Location of customer)

1	Europe	39%
2	North America	30%
3	Asia Pacific	24%
4	South America, Africa, Middle East	7%



We considerably increased EBIT before special items year-on-year, mainly thanks to higher sales volumes.

Construction Chemicals

- Sales up 3% year-on-year at €2,412 million as a result of acquisitions and higher volumes
- Considerable decline in EBIT before special items due to increase in raw materials prices

In the Construction Chemicals division, sales to third parties rose by €80 million as against the previous year to €2,412 million. This was partly attributable to the acquisition of the Henkel group's western European building material business for professional users in early 2017, as well as the acquisition of the waterproofing systems supplier Grupo Thermotek, Monterrey, Mexico, in September 2017. We also increased our sales volumes. Overall, prices remained on a level with the previous year.

The aforementioned acquisition of the construction chemicals business and higher volumes led to sales growth in Europe. In North America, the acquisition of Thermotek only partially compensated for declining volumes and negative currency effects. Sales in Asia rose year-on-year due to volumes growth. In the region South America, Africa, Middle East, sales decreased as a result of negative currency effects and slightly lower volumes and prices. Demand in the Middle East in particular did not meet our expectations.

Construction Chemicals – Factors influencing sales

Volumes	2%		
Prices	0%		
Portfolio	4%		
Currencies	(3%)		
Sales	3%		

Construction Chemicals – Sales by region

(Location of customer)

1	Europe	38%
2	North America	30%
3	Asia Pacific	19%
4	South America, Africa, Middle East	13%



EBIT before special items was considerably below the 2016 figure, primarily as a result of higher raw materials prices. Special charges mainly arose in connection with the acquisition of the western European building material business for professional users from the Henkel group.

Coatings

- Sales growth of 22% to €3,969 million from Chemetall acquisition and higher volumes
- EBIT before special items considerably below prior-year figure due to higher fixed costs and lower margins

In the Coatings division, sales to third parties in 2017 grew by €720 million to €3,969 million, mainly as a result of the Chemetall business acquired in December 2016. We increased sales volumes in Asia and Europe in particular. Sales were reduced by negative currency effects, especially in Asia and North America, as well as slightly lower prices.

Sales of automotive OEM coatings increased thanks to higher volumes in all regions. We recorded slight sales growth in the automotive refinish coatings business, as we were able to more than offset the negative currency effects with higher sales volumes and the acquisition of Guangdong Yinfan Chemistry, Jiangmen, China, in September 2016. In the decorative paints business in Brazil, sales were up slightly on the prior-year figure: currency effects and slight price increases had a positive impact, while demand declined slightly.

Coatings – Factors influencing sales

Volumes	4%		
Prices	(1%)		
Portfolio	20%		
Currencies	(1%)		
Sales	22%		

Coatings – Sales by region

(Location of customer)

1	Europe	39%
2	North America	22%
3	Asia Pacific	24%
4	South America, Africa, Middle East	15%



EBIT before special items in the Coatings division declined considerably. The Chemetall business made a positive contribution to earnings but was unable to compensate for the decline in the businesses not affected by the portfolio measures. The decrease in the latter was mainly due to higher fixed costs and lower margins as a result of the increase in raw materials prices. Special charges arose from the integration of the Chemetall business and the restructuring in connection with the divestiture of the industrial coatings business, which was completed in December 2016 and led to special income in the prior year.

In November 2017, we inaugurated a new large-scale automotive coatings plant at the Caojing site in Shanghai, China, to complement our existing automotive coatings plant there. We also inaugurated a production facility for automotive OEM coatings in Bangpoo, Thailand. With the expansion, we aim to even better serve the growing automobile market in Asia Pacific, especially in China.

Performance Materials

- Sales growth of 12% to €7,706 million mainly due to price developments
- Considerable decrease in EBIT before special items, primarily as a result of lower margins

The Performance Materials division increased sales to third parties by €818 million to €7,706 million in 2017. This was largely thanks to price increases on the back of a significant rise in raw materials prices. Higher sales volumes to the automotive, consumer goods and construction industries also contributed to sales growth, while currency effects had a negative impact.

There was strong growth in sales to the automotive industry in Europe and Asia in particular thanks to higher prices and greater demand for polyurethane systems and engineering plastics. The increase in sales volumes in North and South America also contributed to the positive sales development.

In the consumer goods industry, sales were likewise up significantly year-on-year, mainly as a result of higher volumes in Asia and Europe. We recorded volumes growth, particularly in our businesses with polyurethane systems, thermoplastic polyurethanes and biopolymers. Significantly higher prices in the polyurethane systems business also had a positive effect.

Sales to the construction sector grew, mainly as a result of the significant increase in sales prices for polyurethane systems and styrene foams in Europe and Asia. Higher volumes in all regions also boosted sales.

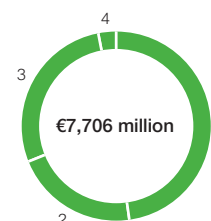
Performance Materials – Factors influencing sales

Volumes	6%	
Prices	7%	
Portfolio	0%	
Currencies	(1%)	
Sales	12%	

Performance Materials – Sales by region

(Location of customer)

1	Europe	48%
2	North America	21%
3	Asia Pacific	28%
4	South America, Africa, Middle East	3%



EBIT before special items was considerably below the prior-year figure. This was mainly attributable to lower margins: The increase in raw materials prices could only be partially offset by the higher sales prices. Earnings were also reduced by higher production costs from the startup of new plants. EBIT before special items in the previous year also included positive one-off effects from insurance payments and the release of provisions.

Agricultural Solutions

The Agricultural Solutions segment consists of the Crop Protection division. We develop and produce innovative solutions for the improvement of crop health and yields, and market them worldwide.

Indications and sectors

Fungicides

Protecting crops against harmful fungi

Herbicides

Reducing competition from weeds for water and nutrients

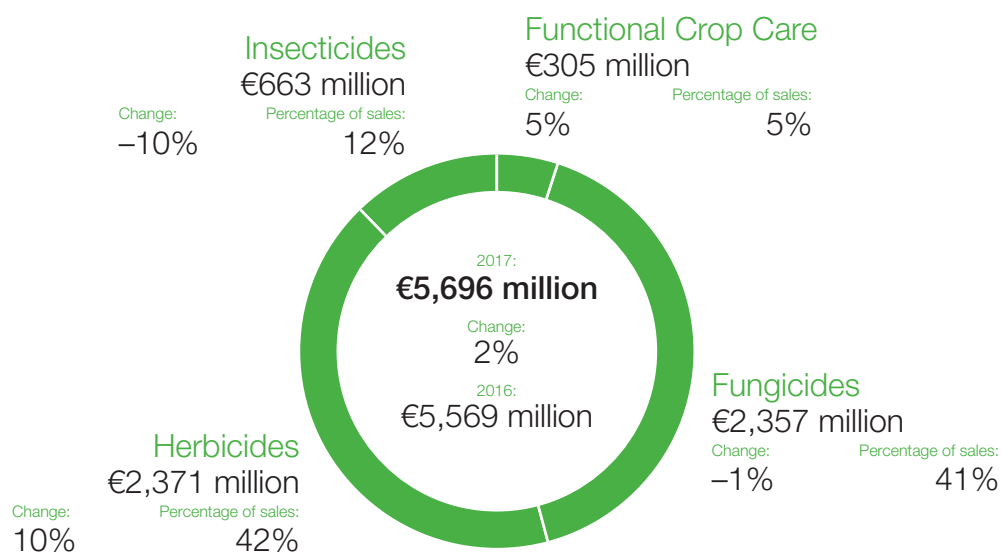
Insecticides

Combating insect pests in agriculture and beyond

Functional Crop Care

Biological crop protection, seed treatment, polymers and colorants

Sales



Factors influencing sales

Volumes	6%	
Prices	(3%)	
Portfolio	0%	
Currencies	(1%)	
Sales	2%	

Income from operations before special items (million €)

2017	1,033	
2016	1,087	
		Change: minus €54 million

How we create value – an example

Revysol®

BASF's new blockbuster fungicide

Value for BASF

Peak sales
potential

>€1 billion

Revysol® will play a key role in our fungicide portfolio in many crops for farmers around the world. We are driving forward the approval process in all regions – in more than 60 countries and for more than 240 crops. The first products based on Revysol® are to be launched on the market for the 2019 growing season following registration with the relevant authorities. This will give farmers a new active ingredient that offers exceptional biological performance and provides additional resistance management opportunities in agriculture. We are aiming for a peak sales potential of over €1 billion with Revysol®.

Value for our customers and the environment

Stronger activity
than existing
triazoles

up to 100 times

Revysol® is an innovative fungicide active ingredient from the triazole chemical class. It binds to the fungus enzyme up to 100 times more strongly than the products currently on the market, making it significantly more effective. Farmers can thus also safely manage those plant diseases that have become resistant to the triazoles used in the past. At the same time, Revysol® has better toxicological properties than other standard triazoles and is another important building block for sustainable agriculture. Farmers around the world will benefit from Revysol®-based products, which safeguard and improve yield quality.

Strategy

- Long-term innovation strategy ensures future growth
- Development of solutions that go beyond conventional crop protection
- Agreement on acquisition of significant parts of Bayer's seed and non-selective herbicide businesses

Natural resources such as land and arable area are limited, while the world's population and its demand for food continue to grow. This means that farmers around the world face the challenge of increasing their crop yields with limited resources. We offer our customers innovative solutions combined with practical, down-to-earth advice so that they can produce more – and more nutritious – food as efficiently as possible.

We are committed to the responsible treatment of our products and the preservation of a healthy environment. We also constantly invest in our development pipeline to offer our customers an increasingly wide range of integrated solutions for crop protection and beyond. 🌐

Our research and development activities range from solutions for guarding plants against fungi, insects and weeds, to seeds and improved soil management, and supporting plant health. For example, the Functional Crop Care business unit

provides products for improving seeds and innovations for better nitrogen and water management in soil. It also offers biological and chemical technologies that make plants better able to withstand stress factors like heat, cold and nutrient deficiency.

The success of our customers depends on many factors such as weather, plant health, soil conditions and prices for agricultural products. As a result, modern farmers have to analyze more and more data of increasing complexity to make the right cultivation decisions. BASF's innovative digital applications help our customers to use these data to their advantage as a basis for making better decisions, ensuring more efficient and sustainable resource allocation.

One example of our strategic investments in digital solutions is the acquisition of ZedX Inc., Bellefonte, Pennsylvania, in May 2017. ZedX is a leader in the development of information technology products and services for the agriculture sector. The company develops agronomic weather, crop and pest models that can rapidly translate data into insights for more efficient agricultural production.

Our aim is to offer farmers a wider range of solutions going forward to even better meet the growing demand for high-

quality seeds as well as chemical and biological crop protection. We therefore signed an agreement to acquire significant parts of the seed and non-selective herbicide businesses from Bayer AG, Leverkusen, Germany, in October 2017. The transaction is expected to close in the first half of 2018, subject to the closing of Bayer's acquisition of Monsanto and approval by the relevant authorities. The planned acquisition includes attractive businesses in important field crops and markets. With the acquisition, we aim to expand our crop protection business, strengthen our herbicide portfolio and enter the seed business in key agricultural markets. It will also strengthen our global innovation potential.

The agreement covers Bayer's global glufosinate-ammonium non-selective herbicide business, commercialized under the Liberty®, Basta® and Finale® brands, as well as its seed businesses for key row crops in selected markets. These include canola hybrids in North America under the InVigor® brand using the LibertyLink® trait technology, as well as the oilseed rape business mainly in the European markets, cotton in the Americas and Europe, and soybean in the Americas. The agreed transaction also includes Bayer's trait research and breeding capabilities for these crops and the LibertyLink® trait and trademark.

Investments

In 2017, we invested €114 million in property, plant and equipment. Major projects included the startup of our expanded production capacities for dicamba in Beaumont, Texas, as well as new production capacities for our fungicide Revysol® and our insecticide Inscalis®. In the area of Functional Crop Care, we expanded our capacities for biological seed treatments and soil management in Saskatoon, Canada. We also invested in infrastructure, in particular at our plants in North America. In

order to continue meeting the ongoing high demand for our innovative solutions in the future, we will invest around €780 million in developing and expanding our infrastructure and in our production and formulation capacities for active ingredients between 2018 and 2022.

Plant biotechnology at BASF

Our activities in the field of plant biotechnology are part of the Bioscience Research technology platform. Research and development expenses, sales, earnings and all other data are not included in the Agricultural Solutions segment; they are reported under Other.

With our network of research sites, we help farmers meet the growing demand for increased agricultural productivity as well as better nutrition. With a pioneering platform for gene identification, we have specialized in the development of plant characteristics such as higher yield, herbicide tolerance, disease resistance and quality traits. Our goal is to optimize crops so that farmers can achieve greater and more secure yields. In this way, we make an important contribution to securing a better food supply for a growing world population. We also contribute to sustainable agriculture, as the cultivation of these plants significantly reduces the amount of land, water and energy required to produce each metric ton of harvested crops.

Together with Cargill, we are developing a rapeseed oil that represents a new source of heart-healthy omega-3 fatty acids, for example. The first regulatory dossier was submitted to the U.S. Department of Agriculture in November 2017. Market launch is planned from 2020, subject to regulatory approval. We are also working on a soybean that is resistant to the devastating Asian soybean rust disease. A number of lead genes have been successfully tested in field trials in Brazil.

Products, customers and applications

Indications and sectors	Applications	Example products
Fungicides	Protecting crops from harmful fungal infections; improving plant health	Boscalid, metiram, dimethomorph, Initium®, metrafenone, F 500®, Xemium®, AgCelence® (umbrella brand)
Herbicides	Reducing competition from weeds for water and nutrients	Kixor®, Engenia®, pendimethalin, imazamox, topramezone, Clearfield® herbicide tolerance system, dimethenamid-P
Insecticides	Combating insect pests in agriculture and beyond, such as in the fields of public health, professional pest control and landscape maintenance	Fipronil, alpha-cypermethrin, chlorfenapyr, teflubenzuron, Nealta®, Termidor® to guard against termite infestation, Interceptor® mosquito nets to protect against malaria
Functional Crop Care	Products for plant health and increased yield potential that go beyond traditional crop protection, such as biological crop protection, seed treatments, polymers and colorants	Vizura®, Limus®, Systiva®, Vault® HP, Nodulator® PRO, Flo Rite®, Integral®, Serifel®

Segment data (million €)

	2017	2016	Change in %
Sales to third parties	5,696	5,569	2
Intersegmental transfers	36	33	9
Sales including intersegmental transfers	5,732	5,602	2
Income from operations before depreciation and amortization (EBITDA)	1,282	1,305	(2)
EBITDA margin %	22.5	23.4	–
Depreciation and amortization ¹	267	268	0
Income from operations (EBIT)	1,015	1,037	(2)
Special items	(18)	(50)	64
EBIT before special items	1,033	1,087	(5)
EBIT after cost of capital	171	172	(1)
Assets	8,096	8,899	(9)
Investments including acquisitions ²	185	266	(30)
Research and development expenses	507	489	4

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

² Additions to intangible assets and property, plant and equipment

Agricultural Solutions segment

- Sales improve by 2% to €5,696 million as a result of higher volumes
- EBIT before special items down 5% year-on-year at €1,033 million due to lower margins

Sales to third parties in the Agricultural Solutions segment rose by €127 million to €5,696 million in 2017 as a result of higher sales volumes. In an ongoing difficult market environment for crop protection products, sales growth was negatively impacted by price declines, especially in South America, and negative currency effects.

In **Europe**, sales increased by €25 million to €1,983 million. Volumes growth, especially in oilseed herbicides in eastern and southern Europe, more than compensated for declines in western and northern Europe, particularly in fungicides.

At €2,003 million, sales in **North America** exceeded the prior-year figure by €202 million. We were able to considerably increase sales volumes, especially for herbicides in the United States. The successful market launch of our new herbicide Engenia® contributed substantially to sales growth. Strong demand for fungicides in Canada also had a positive impact.

Sales in **Asia** rose by €33 million to €582 million. We achieved particularly strong volumes growth for fungicides in China and India, particularly with innovations such as our new product portfolio for rice. In Southeast Asia, sales volumes increased, especially for fungicides and herbicides.

In the region **South America, Africa, Middle East**, sales declined by €133 million to €1,128 million. This was largely due to lower prices for fungicides and insecticides, negative currency effects and the reduction of inventories at our customers in Brazil. Here, we were able to increase sales volumes despite the ongoing difficult business environment for crop protection products. The positive trend in Argentina also contributed to volumes growth in the region.

Agricultural Solutions – Factors influencing sales

Volumes	6%	
Prices	(3%)	
Portfolio	0%	
Currencies	(1%)	
Sales	2%	

Agricultural Solutions – Sales by region

(Location of customer)

1	Europe	35%
2	North America	35%
3	Asia Pacific	10%
4	South America, Africa, Middle East	20%



Income from operations (EBIT) before special items was €1,033 million, down €54 million on the prior-year figure. The slight decline was mainly due to the lower average margins from a different product mix and the difficult market situation in Brazil. Earnings were also negatively impacted by the shut-downs of our production facilities in Beaumont, Texas, and Manatí, Puerto Rico, because of the hurricanes. Fixed costs rose slightly. EBIT declined by €22 million to €1,015 million.

For the Outlook for 2018, see page 123

Oil & Gas

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

Sales



Factors influencing sales

Volumes	4%	<div></div>
Prices/currencies	13%	<div></div>
Portfolio	0%	<div></div>
Sales	17%	<div></div>

Income from operations before special items (million €)

2017	793	<div></div>
2016	517	<div></div>

Change: €276 million

How we create value – an example

Resource-efficient oil production

Use of associated gas from test production reduces energy demand and emissions

Value for BASF



Wintershall developed a mobile test production unit equipped with three micro gas turbines during the revaluation of the German oil field Suderbruch. For the first time, this made it possible to use the associated gas from test production in plant operations, reducing energy demand by around 40%.

Value for the environment




The unit's innovative design enabled us to implement our voluntary commitment – to using the associated gas from oil production in efficient and environmentally friendly ways in routine operations – in test production as well. The resulting lower energy demand reduces CO₂ emissions by over 50%. The unit will also be used in future projects.

Strategy

- Growth through exploration, acquisitions, strategic partnerships and technological expertise
- Contribution to securing Europe's natural gas supply
- Intention to merge Wintershall Group with LetterOne's oil and gas business

In the future, crude oil and natural gas will continue to contribute significantly toward covering the rising energy demand of a growing world population. That is why we invest in the exploration and production of oil and gas, primarily in our core regions Europe, North Africa, Russia and South America. We want to establish the Middle East as another core region in our portfolio.

Selected collaborations and strategic partnerships, innovative technologies and the responsible development and production of hydrocarbons all form the basis of our growth-oriented strategy. Through the continuous optimization of our cost structure and portfolio of oil and gas activities, we ensure our competitiveness, even in times when oil and gas prices are low. Measured by production volumes, gas activities comprised around 70% of our portfolio.

Handling hydrocarbons in a responsible manner demands special measures for the protection of people and the environment. We therefore carefully assess the potential effects of every project before we begin. Together with experts, contractors and relevant stakeholders, we develop methods and carry out measures for using resources even more efficiently and minimizing impact on the environment. This includes acting in accordance with international agreements, legal requirements and our own, self-imposed high standards. 

On December 7, 2017, BASF signed a letter of intent with the LetterOne group on the merger of their respective oil and gas businesses in a joint venture, which would operate under the name Wintershall DEA. The oil and gas activities of BASF bundled in the Wintershall Group comprise Wintershall Holding GmbH, based in Kassel, Germany, and its subsidiaries including the gas transportation business. LetterOne's oil and gas business comprises Hamburg-based DEA Deutsche Erdoel AG and its subsidiaries. According to the plan, Wintershall DEA is to be created by LetterOne contributing all its shares in DEA Deutsche Erdoel AG to Wintershall against issuance of new shares to LetterOne. BASF shall initially hold 67% and LetterOne 33% of the shares in Wintershall DEA.¹ Following the closing of the transaction, we expect to account for our interest in the joint venture using the equity method in the Consolidated Financial Statements.

Wintershall DEA would have significant growth potential and be one of the largest independent European exploration and production companies. Production volumes of Wintershall and DEA in 2016 corresponded to around 590,000 barrels of oil equivalent (BOE) per day; the proven reserves at the end of 2016 amounted to 2.1 billion BOE.

The merger is designed to optimize the portfolio footprint of the combined business and exploit synergies. In the medium term, we aim to take Wintershall DEA public together with LetterOne.

¹ Wintershall's gas transportation business is not included in this shareholding ratio. As of closing, Wintershall DEA would issue a mandatory convertible bond to BASF reflecting the value of Wintershall's gas transportation business.

The definitive transaction agreements are to be negotiated over the coming months; the transaction could be expected to close in the second half of 2018, subject to the customary regulatory approvals. There is no assurance that we will enter into definitive transaction agreements with LetterOne or that the intended transaction will be consummated.

Exploration and production

■ Active portfolio management, including expansion of our position in Norway

Europe: The Mittelplate field off the North Sea coast is the cornerstone of our crude oil production in Germany. We own a 50% share in the development of this largest known oil deposit in the country. Some 30 million metric tons of oil have already been extracted there. We have completed and started up all 12 new wells at the Emlichheim site. A new drilling campaign with a total of five new production wells started at the Bockstedt oilfield. The first wells have already started operation. We conducted a seismic survey at the Landau concession in early 2017 and are currently evaluating the results.

In Norway, oil production from the Maria field in the Norwegian Sea started in 2017. It is the first project in Norway that Wintershall has operated from the discovery of the field to the start of production. Rather than building a new production platform, we implemented an innovative development concept for Maria: The production equipment was installed directly on the seabed and connected underwater with three nearby platforms operated by our cooperation partner Statoil. Production started a year earlier than originally planned and costs were more than a fifth lower than expected. Development of the Ivar Aasen and Edvard Grieg fields continued with additional wells drilled. As the operator of the Nova field (previously: Skarv), we are in the process of finalizing the development concept. This proposes to connect the oil and gas reservoir with the nearby Gjøa platform via a subsea tie-back. In January 2017, Wintershall was granted shares in five new exploration licenses on the Norwegian continental shelf from the Ministry of Petroleum and Energy. Wintershall will take over operatorship of two licenses.

In early 2017, Wintershall Noordzee B.V., Rijswijk, Netherlands, started production from the Ravn oilfield as operator. It is the first oilfield operated by the company in Denmark. Technical difficulties arose in production in mid-August; we are still working on a solution.

Russia: The Yuzhno Russkoye natural gas field in western Siberia, in which Wintershall has a 35% economic interest, has been producing at plateau since 2009. We hold a 50% share in the development of Block IA of the Achimov formation in the Urengoy field in western Siberia. The gradual development of this field was continued and 88 wells were producing at the end of 2017. We will develop blocks IV and V of the Achimov formation with our partner Gazprom. We are also active in exploration and production in the Volgograd region together with the LUKOIL group.

North Africa / Middle East: In Libya, we are the operator of eight oilfields in the onshore concessions 96 and 97. Crude oil production was temporarily suspended in both concessions in March 2017. Based on an agreement with the government-owned National Oil Corporation (NOC), we were able to resume production from June to October: 55,000 barrels of oil per day (BOPD) for concession 96 and 10,000 BOPD for concession 97. Production in concession 96 then halted due to a strike. We are currently negotiating with NOC on the framework of our future cooperation. At the Al Jurf oilfield off the coast of Libya, in which we hold a share, operations could be continued without interruption in 2017.

In Abu Dhabi, Wintershall successfully completed the first offshore exploration well in the Shuwaihat field.

South America: We hold shares in a total of 15 onshore and offshore fields in Argentina. In the Neuquén province, we drilled three pilot wells as an operator in the Bandurria Norte block. The first exploration well in the CN-V block in the Mendoza province found oil. In Tierra del Fuego, work began on the expansion of the gas treatment facilities for the Cuenca Marina Austral 1 concession.

In the Neuquén province, Wintershall reduced its interest in the Aguada Pichana concession. Its share in the Aguada Pichana Oeste (West) block was sold to Pan American Energy LLC, Buenos Aires, Argentina, and YPF S.A., Buenos Aires, Argentina. Wintershall reduced its interest in the Aguada Pichana Este (East) block through the sale of shares to Total Austral S.A., Buenos Aires, Argentina, at the beginning of 2018.

📖 For information on current reserves, see pages 89 and 237

Investments

Location	Project	Plateau/peak production per year ¹	Startup
Argentina	Development of Aguada Pichana Este	7 million BOE	2017/2024 ²
North Sea, Norway	Development of Maria field	8 million BOE	2017
	Development of Edvard Grieg field	5 million BOE	2015/2018 ²
	Development of Aasta Hansteen field	12 million BOE	2018
Siberia, Russia	Achimgaz, development of Achimov horizon in Urengoy natural gas and condensate field	44 million BOE	2008/2020 ²

¹ BASF's share in barrels of oil equivalent (BOE)

² Year completed

Natural gas transportation

- Mostly regulated business with stable framework
- Construction of European gas pipeline link (EUGAL) planned
- Contribution to financing of the project company Nord Stream 2 AG

The largely regulated natural gas transportation sector is characterized by stable conditions and yields based on approved costs and tariffs. Our organizational structure meets the unbundling requirements set down by the German Energy Act.

As an indirect holding company for the German subsidiaries in natural gas transportation, WIGA Transport Beteiligungs-GmbH & Co. KG (WIGA) mainly fulfills a reporting and financing function. GASCADE Gastransport GmbH, OPAL Gastransport GmbH & Co. KG, and NEL Gastransport GmbH all act as independent companies under the umbrella of the WIGA group.

In August 2017, we established W & G Infrastruktur Finanzierungs-GmbH as an intermediate holding company and contributed GASCADE Gastransport GmbH and NEL Gastransport GmbH to it. The intermediate holding company performs WIGA's financing function for the two companies and is accounted for in the BASF Group's financial statements using the equity method.

The companies under the WIGA umbrella operate a 3,300-kilometer long-distance pipeline network that includes links to the Nord Stream pipeline, the Baltic Sea Pipeline Link (OPAL) and the North European Gas Pipeline (NEL).

GASCADE Gastransport GmbH plans, as project developer, to construct the 485-kilometer European gas pipeline link (EUGAL), which will extend from the Baltic sea in northern Germany to the Czech border. Its maximum annual transportation capacity of 51 billion cubic meters is to be achieved in two phases by 2020. The project will be implemented under a fractional ownership agreement with our

partners Fluxys Deutschland GmbH, Düsseldorf, Gasunie Deutschland Transport Services GmbH, Hannover, and ONTRAS Gastransport GmbH, Leipzig, each of which holds a 16.5% share.

We hold a 15.5% share in the Nord Stream pipeline that started up in 2011 through Nord Stream AG, based in Zug, Switzerland, which is accounted for in the BASF Group's financial statements using the equity method. Other shareholders are the Gazprom (51%), E.ON (15.5%), N.V. Nederlandse Gasunie (9%) and ENGIE (9%) groups. With a total capacity of 55 billion cubic meters of natural gas per year, this pipeline, which stretches from Russia to the German coast over the Baltic Sea, helps strengthen the security of supply in Europe.

Wintershall is contributing to the financing of the new Nord Stream 2 project as a co-creditor. Its implementation will strengthen infrastructure and security of supply in Europe, which is particularly important given the decline in production there. Together with the ENGIE, OMV, Royal Dutch Shell and Uniper groups, Wintershall signed long-term financing agreements with the project company Nord Stream 2 AG, Zug, Switzerland, on April 24, 2017. The five European energy companies committed to long-term financing of 50% of the entire project costs, which are currently estimated at €9.5 billion. Wintershall will provide up to €950 million. As of December 31, 2017, €324 million of this amount had already been called up. Gazprom is the sole shareholder of the project company Nord Stream 2 AG.

Segment data¹ (million €)

	2017	2016	Change in %
Sales to third parties	3,244	2,768	17
Intersegmental transfers	409	331	24
Sales including intersegmental transfers	3,653	3,099	18
Income from operations before depreciation and amortization (EBITDA)	2,069	1,596	30
EBITDA margin %	63.8	57.7	–
Depreciation and amortization ²	1,026	1,097	(6)
Income from operations (EBIT)	1,043	499	109
Special items	250	(18)	.
EBIT before special items	793	517	53
EBIT after cost of capital	(175)	(744)	76
Assets	11,967	12,829	(7)
Investments including acquisitions ³	988	1,115	(11)
Research and development expenses	46	39	18
Exploration expenses	104	94	11
Net income ⁴	719	362	99

¹ Supplementary information on the Oil & Gas segment can be found from page 235 onward

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

³ Additions to intangible assets and property, plant and equipment

⁴ More on this figure can be found in the reconciliation reporting for Oil & Gas in the Notes to the Consolidated Financial Statements from page 191 onward.

Oil & Gas segment

- **Sales improve by 17% to €3,244 million due to higher prices and volumes**
- **53% increase in EBIT before special items to €793 million mainly from higher prices**

In the Oil & Gas segment, sales to third parties increased by €476 million year-on-year to €3,244 million as a result of higher prices and volumes. The price of a barrel of Brent crude oil averaged \$54 in 2017 (previous year: \$44). Gas prices on European spot markets rose by 24% compared with the previous year. Volumes growth was mainly driven by higher gas sales volumes. Production volumes matched the prior-year level.

Oil & Gas – Factors influencing sales

Volumes	4%	
Prices/currencies	13%	
Portfolio	0%	
Sales	17%	

Oil & Gas – Sales by region

(Location of customer)

1	Europe	83%
2	North America	0%
3	Asia Pacific	0%
4	South America, Africa, Middle East	17%



Income from operations (EBIT) before special items grew by €276 million to €793 million in 2017. This is primarily attributable to the increase in oil and gas prices as well as the higher earnings contribution from our share in the Yuzhno Russkoye natural gas field. Comprehensive measures aimed at optimizing exploration and technology projects as well as the successful implementation of operational cost-saving measures also had a positive effect. EBIT rose by €544 million to €1,043 million. This included special income from the reversal of impairments in Norway and the Netherlands as well as from the sale of shares in the Aguada Pichana concession in Argentina. This was partially offset by an impairment on exploration potential in Norway. Net income increased by €357 million to €719 million.

For the Outlook for 2018, see page 123

At 164 million barrels of oil equivalent (BOE), our oil and gas production was on a level with the previous year. In the search for new oil and gas reservoirs, we completed a total of seven exploration and appraisal wells in 2017, of which three were successful. Our proven oil and gas reserves rose by 3% compared with the end of 2016, to 1,677 million BOE. We replenished 133% of the volumes produced in 2017. The reserves-to-production ratio is around 10 years (2016: 10 years). This is based on Wintershall's production in 2017 and the reserves at year-end.