

Business review by segment

Segment overview (million €)

	Sales		Income from operations before depreciation and amortization (EBITDA)		Income from operations (EBIT) before special items	
	2016	2015	2016	2015	2016	2015
Chemicals	13,461	14,670	3,169	3,090	2,064	2,156
Performance Products	15,002	15,648	2,522	2,289	1,745	1,366
Functional Materials & Solutions	18,732	18,523	2,906	2,228	1,946	1,649
Agricultural Solutions	5,569	5,820	1,305	1,321	1,087	1,090
Oil & Gas	2,768	12,998	1,596	2,587	517	1,366
Other	2,018	2,790	(972)	(866)	(1,050)	(888)
	57,550	70,449	10,526	10,649	6,309	6,739

Segment overview (million €)

	Income from operations (EBIT)		Assets		Investments ¹	
	2016	2015	2016	2015	2016	2015
Chemicals	1,983	2,131	13,486	12,823	1,213	1,859
Performance Products	1,648	1,340	14,549	14,232	864	964
Functional Materials & Solutions	2,199	1,607	17,359	13,341	3,679	854
Agricultural Solutions	1,037	1,083	8,899	8,435	266	402
Oil & Gas	499	1,072	12,829	12,373	1,115	1,823
Other	(1,091)	(985)	9,374	9,632	121	111
	6,275	6,248	76,496	70,836	7,258	6,013

¹ Additions to property, plant and equipment (thereof from acquisitions: €155 million in 2016 and €91 million in 2015) and intangible assets (thereof from acquisitions: €2,789 million in 2016 and €136 million in 2015)

Contributions to total sales by segment

Chemicals	23%	<div></div>
Performance Products	26%	<div></div>
Functional Materials & Solutions	33%	<div></div>
Agricultural Solutions	10%	<div></div>
Oil & Gas	5%	<div></div>
Other	3%	<div></div>

Contributions to EBITDA by segment

Chemicals	30%	<div></div>
Performance Products	24%	<div></div>
Functional Materials & Solutions	28%	<div></div>
Agricultural Solutions	12%	<div></div>
Oil & Gas	15%	<div></div>
Other	(9%)	<div></div>

Sales¹ (million €)

	1st quarter		2nd quarter		3rd quarter		4th quarter	
	2016	2015	2016	2015	2016	2015	2016	2015
Chemicals	3,149	3,866	3,373	3,975	3,377	3,640	3,562	3,189
Performance Products	3,783	4,038	3,846	4,084	3,771	3,899	3,602	3,627
Functional Materials & Solutions	4,408	4,584	4,703	4,916	4,660	4,517	4,961	4,506
Agricultural Solutions	1,780	1,898	1,459	1,678	1,049	1,077	1,281	1,167
Oil & Gas	611	4,993	617	3,668	618	3,606	922	731
Other	477	688	485	757	538	685	518	660
	14,208	20,067	14,483	19,078	14,013	17,424	14,846	13,880

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

	1st quarter		2nd quarter		3rd quarter		4th quarter	
	2016	2015	2016	2015	2016	2015	2016	2015
Chemicals	465	726	467	548	497	633	635	249
Performance Products	547	515	503	304	464	319	231	228
Functional Materials & Solutions	456	431	535	458	497	371	458	389
Agricultural Solutions	591	574	320	365	97	7	79	144
Oil & Gas	66	437	94	431	194	371	163	127
Other	(219)	(613)	(212)	(63)	(233)	(98)	(386)	(114)
	1,906	2,070	1,707	2,043	1,516	1,603	1,180	1,023

Income from operations (EBIT)¹ (million €)

	1st quarter		2nd quarter		3rd quarter		4th quarter	
	2016	2015	2016	2015	2016	2015	2016	2015
Chemicals	468	726	467	548	499	631	549	226
Performance Products	535	491	486	368	458	315	169	166
Functional Materials & Solutions	452	464	531	411	492	366	724	366
Agricultural Solutions	590	573	288	365	93	6	66	139
Oil & Gas	66	436	93	430	178	643	162	(437)
Other	(245)	(695)	(147)	(83)	(256)	(72)	(443)	(135)
	1,866	1,995	1,718	2,039	1,464	1,889	1,227	325

EBIT before special items by segment
(million €)

Chemicals	2,064		
Performance Products	1,745		
Functional Materials & Solutions	1,946		
Agricultural Solutions	1,087		
Oil & Gas	517		
Other	(1,050)		

EBIT before special items BASF Group by quarter¹
(million €)

1st quarter 2016	1,906	
2015	2,070	
2nd quarter 2016	1,707	
2015	2,043	
3rd quarter 2016	1,516	
2015	1,603	
4th quarter 2016	1,180	
2015	1,023	

¹ Quarterly results not audited

Chemicals

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

Divisions

Petrochemicals

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

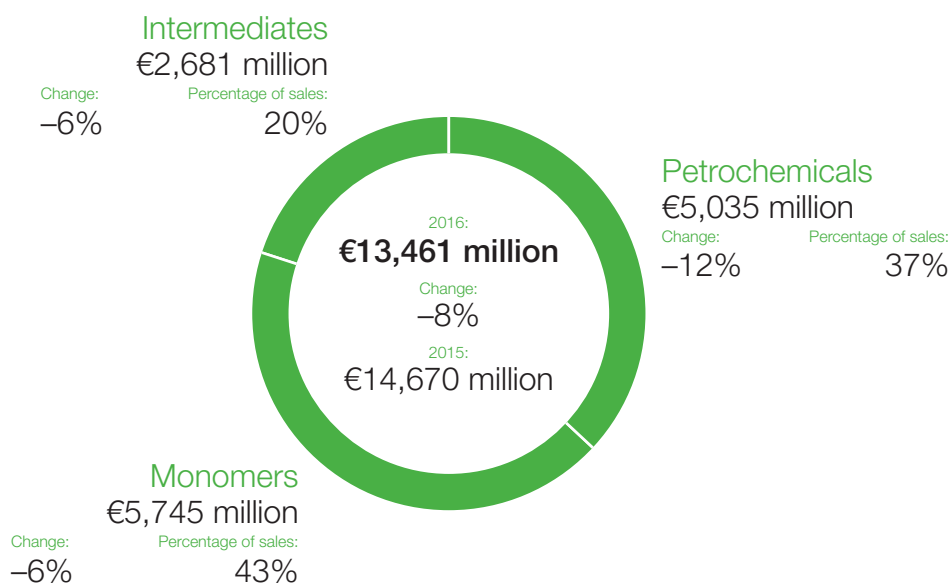
Monomers

Isocyanates and polyamides as well as inorganic basic products and specialties for various branches, 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	3%	
Prices	(11%)	
Portfolio	0%	
Currencies	0%	
Sales	(8%)	

Income from operations before special items (million €)

2016	2,064	
2015	2,156	
		Change: minus €92 million

How we create value – an example

Biomass Balance Approach

A groundbreaking way of using renewable resources in the Verbund

Value for BASF

Externally certified products
since introduction

>40

Value for our customers and the environment

Increased use of renewable
in place of fossil raw
materials per product

up to 100%

Since 2013, we have been in a position to flexibly replace fossil resources in our current Verbund system with sustainably generated bio-based raw materials by feeding raw materials like biogas or bionaphtha right into the beginning of the value chain. The method is independently certified¹ and can be used in existing production facilities. Based on their formulations, we can already allocate and certify the proportion of biomass in more than 40 sales products. Extensions to this portfolio can be accomplished within a short amount of time and enable us to quickly react to growing interest in the use of renewable resources.

📖 For more on the biomass balance approach, see page 94

The approach can be applied to many of our products and adjusted to customer specifications. Up to 100% of a product's fossil raw materials can be replaced by sustainably produced biomass while retaining identical product quality. Some of the products already certified include dispersions, superabsorbents and plastics. The certification makes it easier for our customers to place products on the market that have been produced with the help of renewable resources.

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 to ensure the growth of the entire BASF Verbund. As a reliable supplier, we market our products 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 classical 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, we will strengthen the Verbund by replacing our acetylene plant, which occupies a central role for many products and value chains, with a modern, highly efficient plant by 2019.

¹ Certification standard "Renewable raw materials" of the independent inspection authority TÜV SÜD, Munich, Germany

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 such as Hexamol [®] , Dinch [®] , special acrylates	Use in BASF-Verbund Chemical and plastics industry, detergent, automotive, packing 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 Specialties: electronic chemicals ¹ , metal systems ¹	Use in 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 <i>tert</i> -Butylamine, gas scrubbing chemicals, vinyl monomers, acid chlorides, chloroformates, chiral intermediates	Use in BASF-Verbund Plastics, coatings and pharmaceutical industries, production of detergents and cleaners as well as crop protection products and textile fibers

¹ Transferred to the Dispersions & Pigments division on January 1, 2017

Production capacities of significant products²

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)	■	■	■		1,495,000
Polyamide 6 and 6.6	■	■	■		820,000
Polyamide precursors	■	■			1,010,000
PolyTHF [®]	■	■	■		350,000
Propionic acid	■		■		150,000
Propylene	■	■	■		2,610,000
Propylene oxide	■				675,000
Sulfuric acid	■				920,000
Plasticizers	■	■			535,000

² All capacities are included at 100%, including plants belonging to joint operations and joint ventures.

Capital expenditures

Location	Project	Additional annual capacity through expansion (metric tons)	Total annual capacity (metric tons)	Startup
Caojing, China	Expansion: MDI plant ¹	240,000	480,000	2017
Freeport, Texas	Construction: ammonia plant ²		750,000	2017
Geismar, Louisiana	Expansion: butanediol plant	n/a	160,000	2016
Korla, China	Construction: butanediol plant ³		100,000	2016
	Construction: PolyTHF® plant		50,000	2016
Kuantan, Malaysia	Construction: 2-ethylhexanoic acid plant		30,000	2016
Ludwigshafen, Germany	Construction: TDI plant		300,000	2015/2016
	Replacement: acetylene plant	n/a	90,000	2019
Pasadena, Texas	Changeover of plasticizers production to dioctyl terephthalate (DOTP)	n/a	n/a	2017

¹ Operated by an associated company with Huntsman, Shanghai Huayi (Group) Company, Shanghai Chlor-Alkali Chemical Co. Ltd. and Sinopec Group Assets Management Corp.

² Operated by an associated company with Yara International ASA

³ Operated by an associated company with Xinjiang Markor Chemical Industry Co. Ltd.

Segment data (million €)

	2016	2015	Change in %
Sales to third parties	13,461	14,670	(8)
Thereof Petrochemicals	5,035	5,728	(12)
Monomers	5,745	6,093	(6)
Intermediates	2,681	2,849	(6)
Intersegmental transfers	4,836	5,300	(9)
Sales including intersegmental transfers	18,297	19,970	(8)
Income from operations before depreciation and amortization (EBITDA)	3,169	3,090	3
EBITDA margin %	23.5	21.1	–
Amortization and depreciation ¹	1,186	959	24
Income from operations (EBIT)	1,983	2,131	(7)
Special items	(81)	(25)	.
EBIT before special items	2,064	2,156	(4)
EBIT after cost of capital	686	692	(1)
Assets	13,486	12,823	5
Investments ²	1,213	1,859	(35)
Research and development expenses	182	207	(12)

¹ Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and write-ups)

² Additions to intangible assets and property, plant and equipment (including acquisitions)

Chemicals segment

- Sales decrease by 8% to €13,461 million, due to lower prices
- Decline in EBIT before special items by 4% to €2,064 million mainly owing to higher fixed costs

In the Chemicals segment, sales to third parties decreased by €1,209 million in 2016 to €13,461 million (volumes 3%, prices –11%, portfolio 0%, currencies 0%). The reason for this were lower prices as a result of slumped raw material prices, especially in the Petrochemicals division. We were able to raise our volumes overall.

Income from operations (EBIT) before special items fell by €92 million to €2,064 million, mainly because of higher fixed costs from new production plant startups. Lower margins in the Petrochemicals and Intermediates divisions also dampened EBIT before special items; higher margins for isocyanates in the Monomers division helped slow the decline. EBIT decreased by €148 million to €1,983 million. Special charges came mainly from the overhaul of caprolactam production in Europe.

For the Outlook for 2017, see page 122

Petrochemicals

- At €5,035 million, sales down by 12%, mainly due to price declines
- EBIT before special items slightly below previous year's value owing to lower margins

In the Petrochemicals division, sales to third parties fell by €693 million to €5,035 million in 2016, largely owing to sharp declines in sales prices. These were predominantly brought

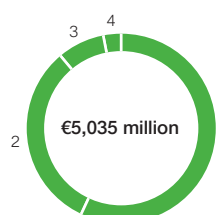
about by raw material prices that were significantly below prior-year levels, especially in the first half of the year. Production was resumed at the Ellba C.V. joint operation plant in Moerdijk, Netherlands, enabling us to slightly increase overall sales volumes. In North America, volumes decreased mainly as a result of lower plant capacity utilization of the condensate splitter as well as of unscheduled shutdowns of the steam cracker in Port Arthur, Texas.

Petrochemicals – Factors influencing sales

Volumes	1%	
Prices	(13%)	
Portfolio	0%	
Currencies	0%	
Sales	(12%)	

Petrochemicals – Sales by region
(Location of customer)

1	Europe	57%
2	North America	32%
3	Asia Pacific	8%
4	South America, Africa, Middle East	3%



EBIT before special items was slightly below the previous year's high level due to lower margins overall. Steam cracker margins fell sharply in North America, while in Europe, they once again matched the high level of 2015. Margins declined in the acrylic monomers and oxo alcohol businesses due to high product availability on the market. Margins developed

positively, however, for steam cracker products in Asia and for ethylene oxide and glycols in Europe, largely driven by product scarcity on the market in the first half of the year.

Monomers

- Sales decrease by 6% to €5,745 million, mainly on account of lower prices
- EBIT before special items considerably higher as a result of increased isocyanate margins

In the Monomers division, sales to third parties declined by €348 million to €5,745 million in 2016. This was basically the result of lower sales prices brought about by a drop in raw material costs, which particularly weighed down sales in the polyamide value chain. By contrast, prices increased for isocyanates.

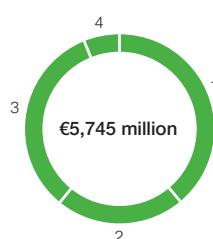
Volumes growth for isocyanates was able to more than compensate for the decline in the caprolactam business; sales volumes grew slightly as a result.

Monomers – Factors influencing sales

Volumes	4%	
Prices	(8%)	
Portfolio	(1%)	
Currencies	(1%)	
Sales	(6%)	

Monomers – Sales by region (Location of customer)

1	Europe	39%
2	North America	22%
3	Asia Pacific	33%
4	South America, Africa, Middle East	6%



Increased margins for isocyanates, particularly in the fourth quarter of 2016, led to a considerable increase in EBIT before special items. They were able to more than offset lower margins in the polyamide value chain as well as the higher fixed costs arising from the startup of new production plants. Special charges came mainly from the overhaul of caprolactam production in Europe.

In August 2016, we began production at the TDI complex in Ludwigshafen, Germany, and started supplying customers for the first time. The plant's gradual startup had begun in November 2015. Owing to a technical defect in November 2016, the TDI plant was still undergoing repair at the time of this report's publication.

Intermediates

- Sales decrease by 6% to €2,681 million on account of lower prices
- Lower margins primarily responsible for considerable year-on-year decline in EBIT before special items

Compared with 2015, sales to third parties decreased by €168 million to €2,681 million in the Intermediates division. Sales prices fell once again, due to a sharp drop in raw material prices. In the butanediol and derivatives market, intense competitive pressure from the startup of new capacities in Asia additionally weighed down prices.

We were able to raise our volumes overall, predominantly driven by higher sales volumes of amines in North America and of polyalcohols, especially neopentylglycol, in Asia.

Intermediates – Factors influencing sales

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

Intermediates – Sales by region (Location of customer)

1	Europe	42%
2	North America	19%
3	Asia Pacific	36%
4	South America, Africa, Middle East	3%



EBIT before special items in 2016 was considerably below the previous year's level. This was mainly the result of substantially shrunken margins in the butanediol and derivatives business. Slowing the decline were improved margins in the polyalcohols business. Fixed costs rose year-on-year, mainly as a result of several production plants beginning operation in the second half of 2015. Special charges resulted predominantly from impairments on assets.

We expanded our butanediol capacities in Geismar, Louisiana, in 2016. With our partner PETRONAS, we started up a plant for 2-ethylhexanoic acid in Kuantan, Malaysia; in Korla, China, we have been producing polytetrahydrofuran (PolyTHF®) since July 2016 with our partner Markor.

Performance Products

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

Divisions

Dispersions & Pigments

Raw materials for the formulation of varnishes, coatings, printing and packaging inks, adhesives and construction materials

Care Chemicals

Ingredients for hygiene, personal care, home care and industrial & institutional cleaning businesses as well as for applications in the chemical industry

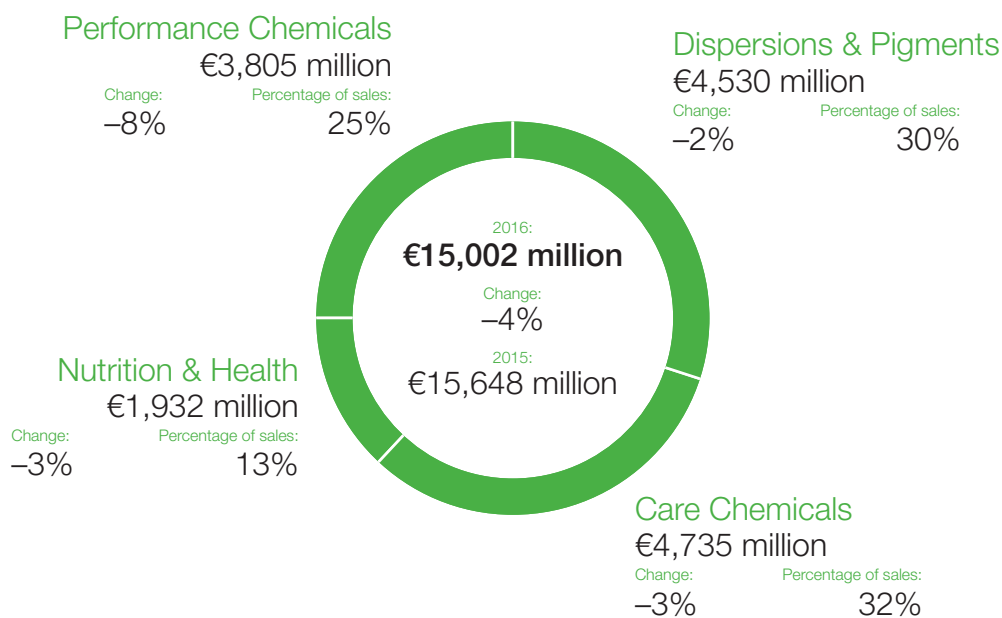
Nutrition & Health

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	1%	
Prices	(2%)	
Portfolio	(2%)	
Currencies	(1%)	
Sales	(4%)	

Income from operations before special items (million €)

2016	1,745	
2015	1,366	
		Change: €379 million

How we create value – an example

Ingredients from RSPO-certified palm kernel oil

Attracting customers as a reliable supplier and supporting more sustainable cultivation

Value for BASF

In 2016, purchase of certified palm kernel oil increased

to **158,000**
metric tons

The sustainable cultivation of renewable raw materials is gaining in importance. Our customers in the cosmetic and detergents and cleaners industries are therefore increasingly making use of ingredients containing palm kernel oil that has been certified according to the criteria of the Round Table on Sustainable Palm Oil (RSPO). The availability of certified palm kernel oil is limited. And yet we were able to expand our purchasing volumes by around 32,000 to 158,000 metric tons in 2016, nearly doubling sales of certified products based on palm kernel oil. This allows us to meet increasing demand and participate in actively shaping the evolving market.

Value for our customers and the environment

Number of RSPO-certified production sites worldwide

19

With a total of 19 RSPO-certified production sites on four continents, we offer our customers a secure supply worldwide, helping them fulfill the obligations they took on for sustainable palm-based products. Our annual use of palm kernel oil and its derivatives requires an average of 785,000 hectares of cultivated acreage. As one of the largest global processors of palm kernel oil, we will continue our commitment to continuously improving sustainability along the entire value chain.

Strategy

- **Tailor-made products and solutions improve our customers' applications and processes**
- **Global presence ensures reliable supply to customers in all regions**
- **Pigments activities transferred to independent legal entities; new Electronic Materials business unit**

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 key 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.

Industry-specific specialties make up a major part of our product range. These products create additional value for our customers, which allows them to stand out from the competition. We develop new solutions together with our customers and strive for long-term partnerships which create profitable growth opportunities for both sides.

We pursue a different business model 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 July 2016, we transferred the global pigments activities to independent legal entities. The largest is BASF Colors & Effects GmbH, headquartered in Ludwigshafen, Germany. This reorganization allows for better adaptation to the challenges facing the pigment industry.

As of January 1, 2017, all resources of the BASF Group for the electronics industry, including the activities of the Monomers division for the semiconductor and display sectors, were combined into a new global business unit, Electronic Materials, allocated to the Dispersions & Pigments division. This will strengthen our position as a strategic partner to the major electronics manufacturers.

We began planning construction of a new vitamin A complex in Ludwigshafen, scheduled to start up in 2020.

Products, customers and applications

Division	Products	Customer industries and applications
Dispersions & Pigments	Polymer dispersions, pigments, resins, high-performance additives, formulation additives, electronic chemicals ¹	Raw materials for paints and coatings, adhesives industry, plastics processing industry, products for construction chemicals, printing and packaging industry, paper industry, specialties for the electronics and other industries
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 for crop protection product formulations and products for metal surface treatments</p> <p>Superabsorbents for baby diapers, adult 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 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, pigments 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>Auxiliaries for the production and treatment of leather and textiles</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, leather industry as well as paper industry and packaging made of paper

¹ Since January 2017Production capacities of significant products²

Product	Sites				Annual capacity (metric tons)
	Europe	North America	Asia Pacific	South America, Africa, Middle East	
Anionic surfactants	■	■	■	■	600,000
Citral	■				40,000
Chelating agents	■	■		■	170,000
Methane sulfonic acid	■				30,000
Nonionic surfactants	■	■	■		630,000
Organic pigments	■	■	■	■	n/a
Polyisobutene	■		■		215,000
Superabsorbents	■	■	■	■	590,000

² All capacities are included at 100%, including plants belonging to joint operations and joint ventures.

Capital expenditures

Location	Project	Startup
Antwerp, Belgium	Modification for new superabsorbent technology	2017
Besigheim, Germany	Expansion: production plant for bismuth vanadate pigments	2017
Bradford, England	Construction: production plant for bio-acrylamide	2016
Kuantan, Malaysia	Construction: aroma ingredients complex	2017
	Construction: polyisobutene plant	2017
Ludwigshafen, Germany	Expansion: lubricants plant	2016
	Expansion: production plant for resins (Laromer®)	2016
	Expansion: production plant for pigments (Paliocrom®)	2016
	Expansion: vinyl formamide plant	2016
	Expansion: polyvinylpyrrolidone plant	2017
	Expansion: production plant for resins (Basonat®)	2017
	Construction: production plant for vitamin A	2020
Nanjing, China	Expansion: polyacrylamide plant	2018
Shanghai, China	Modification: polyvinylpyrrolidone plant	2016

Segment data (million €)

	2016	2015	Change in %
Sales to third parties	15,002	15,648	(4)
Thereof Dispersions & Pigments	4,530	4,629	(2)
Care Chemicals	4,735	4,900	(3)
Nutrition & Health	1,932	1,998	(3)
Performance Chemicals	3,805	4,121	(8)
Intersegmental transfers	465	463	0
Sales including intersegmental transfers	15,467	16,111	(4)
Income from operations before depreciation and amortization (EBITDA)	2,522	2,289	10
EBITDA margin %	16.8	14.6	–
Amortization and depreciation ¹	874	949	(8)
Income before operations (EBIT)	1,648	1,340	23
Special items	(97)	(26)	.
EBIT before special items	1,745	1,366	28
EBIT after cost of capital	209	(305)	.
Assets	14,549	14,232	2
Investments ²	864	964	(10)
Research and development expenses	362	383	(5)

¹ Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and write-ups)

² Additions to intangible assets and property, plant and equipment (including acquisitions)

Performance Products segment

- **At €15,002 million, sales driven down 4% mainly by prices and divestitures**
- **EBIT before special items improves by 28% to €1,745 million, primarily due to lower fixed costs and higher margins**

At €15,002 million, sales to third parties in 2016 in the Performance Products segment were €646 million below the level of the previous year. This was primarily attributable to falling sales prices and the divestitures completed in 2015 (volumes 1%, prices –2%, portfolio –2%, currencies –1%). The drop in sales prices was largely the result of oil-price-related reductions in raw material costs, in addition to ongoing pressure on prices in the hygiene business. Sharp increases in vitamin prices in the Nutrition & Health division helped counter this development.

In addition, the portfolio measures taken in 2015 — in particular, the divestiture of parts of our pharmaceutical ingredients and services business and the paper hydrous kaolin activities, as well as the sale of the textile chemicals business — led to diminished sales in 2016. Currency effects slightly dampened sales in all divisions. We achieved volumes growth overall in the remaining business.

We raised income from operations (EBIT) before special items by €379 million to €1,745 million. This was mostly due to significantly reduced fixed costs thanks to restructuring measures and strict fixed cost management, in addition to improved margins. At €1,648 million, EBIT exceeded the previous year's level by €308 million. Special charges were predominantly attributable to restructuring measures. Special income arose particularly from the sale of the photoinitiator business.

📖 For the Outlook for 2017, see page 122

Dispersions & Pigments

- Sales at €4,530 million, 2% below 2015 level mostly owing to lower prices
- Considerable increase in EBIT before special items, primarily through higher margins

At €4,530 million, sales to third parties were €99 million below the level of the previous year in the Dispersions & Pigments division. Lower sales prices weighed down by an oil-price-related drop in raw material costs were the main reason behind this slight decline. We were able to slightly raise overall sales volumes.

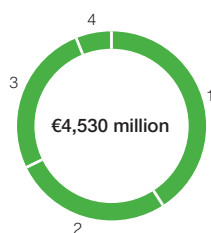
Demand in the dispersions business developed positively, especially in Asia and Europe, but sales as a whole fell on account of price declines. Sales of resins decreased mainly as a result of lower prices. The closure of the production plant in Kankakee, Illinois, also weighed down sales; growth impetus, on the other hand, came from Europe and Asia. In the additives business, rising volumes drove an increase in sales. In July 2016, we transferred our global pigments activities to independent legal entities. Sales in this sector increased slightly thanks largely to the positive business development in Asia; by contrast, sales fell in Europe.

Dispersions & Pigments – Factors influencing sales

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

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

1	Europe	41%
2	North America	27%
3	Asia Pacific	26%
4	South America, Africa, Middle East	6%



We considerably improved EBIT before special items in 2016, predominantly thanks to higher margins. We held fix costs at the previous year's level through strict cost discipline. Special charges were below the level of the previous year, and were mostly related to restructuring measures. They were partly offset by gains from the disposal of the photoinitiator business.

Care Chemicals

- Sales decrease by 3% to €4,735 million, mainly on account of lower prices
- EBIT before special items improves considerably thanks to reduced fixed costs

In the Care Chemicals division, sales to third parties fell by €165 million to €4,735 million in 2016. This was predominantly the result of reduced prices due to lower raw material prices and ongoing intense competition in the hygiene business. Negative currency effects, especially from the Argentinian peso and Brazilian real, additionally dampened sales.

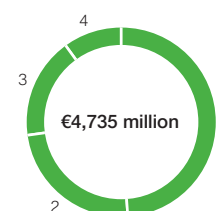
Sales volumes matched the prior-year level in a market environment that remained difficult. We increased sales volumes, especially in our business with ingredients for the detergents and cleaners industry, as well as in the Asia Pacific region. This compensated for lower demand, especially in the hygiene business and in South America.

Care Chemicals – Factors influencing sales

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

Care Chemicals – Sales by region (Location of customer)

1	Europe	49%
2	North America	24%
3	Asia Pacific	17%
4	South America, Africa, Middle East	10%



We were able to reduce fixed costs through strict cost discipline, thereby more than offsetting the continued pressure on margins that came largely from the hygiene business. As a consequence, EBIT before special items rose slightly compared with the previous year. Special charges were predominantly attributable to restructuring measures.

In the fourth quarter of 2016, we started up the expanded production facility for chelating agents, including Trilon® M, at the site in Ludwigshafen, Germany. We increased production volumes of surfactants in Dahej, India, in 2016. We continued modification work for the new superabsorbent technology at the site in Antwerp, Belgium, and plan to complete this in 2017.

Nutrition & Health

- Sales down by 3% to €1,932 million after divestitures in pharmaceuticals business
- Considerable improvement in EBIT before special items, especially through lower fixed costs and higher margins and volumes

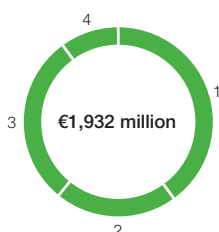
Sales to third parties in 2016 declined by €66 million to €1,932 million in the Nutrition & Health division. This slight reduction came from the sale of parts of our pharmaceutical ingredients and services business at the end of September 2015. We were able to raise volumes in all business areas. Demand grew, especially in the pharmaceuticals and animal nutrition businesses. Sales prices overall were also higher than in the previous year, primarily as a result of significant price increases for vitamins in the animal nutrition business. This allowed us to more than compensate for the decline in prices in the flavor and fragrance business brought about by falling raw material costs.

Nutrition & Health – Factors influencing sales

Volumes	3%	
Prices	3%	
Portfolio	(8%)	
Currencies	(1%)	
Sales	(3%)	

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

1	Europe	40%
2	North America	21%
3	Asia Pacific	29%
4	South America, Africa, Middle East	10%



EBIT before special items improved considerably compared with 2015 due to substantially reduced fixed costs as well as to higher margins and volumes. The reduction in fixed costs was largely thanks to restructuring measures and improved capacity utilization of our production plants. Special charges were primarily related to measures implemented to increase our competitiveness. Special income arose in part from the sale of the sterol site in Pasadena, Texas, in May 2016.

We concluded the modification of our production plant for polyvinylpyrrolidone in Shanghai, China, in 2016. With our partner, PETRONAS, we completed construction of the new aroma ingredients complex at the integrated chemical site in Kuantan, Malaysia. Production facilities for citral and L-menthol will be gradually started up.

Performance Chemicals

- Sales down 8% to €3,805 million, mainly due to lower prices and divestitures
- EBIT before special items rise slightly, mostly through reduction in fixed costs

In the Performance Chemicals division, sales to third parties fell by €316 million to €3,805 million compared with 2015. This was largely the result of the lower sales prices brought about by a sharp drop in raw material prices, as well as the sale of the paper hydrous kaolin activities and the textile chemicals business. Negative currency effects additionally weighed down sales. We were able to raise our volumes overall, with growth impetus coming particularly from the plastic additives business and from the region Europe. Demand for oilfield and mining chemicals declined, however, in an environment fraught with lower oil and raw material prices.

Performance Chemicals – Factors influencing sales

Volumes	1%	
Prices	(4%)	
Portfolio	(4%)	
Currencies	(1%)	
Sales	(8%)	

Performance Chemicals – Sales by region (Location of customer)

1	Europe	38%
2	North America	26%
3	Asia Pacific	26%
4	South America, Africa, Middle East	10%



We achieved a slight rise in EBIT before special items compared with the previous year. This was mainly due to lower fixed costs resulting from restructuring measures and strict cost discipline. Special charges arose partly on account of these restructuring measures.

At the Bradford, England, site, in 2016 we started up a world-scale bio-acrylamide production plant employing a new enzymatic catalysis process. This will strengthen our polymer production network and increase our competitiveness.

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

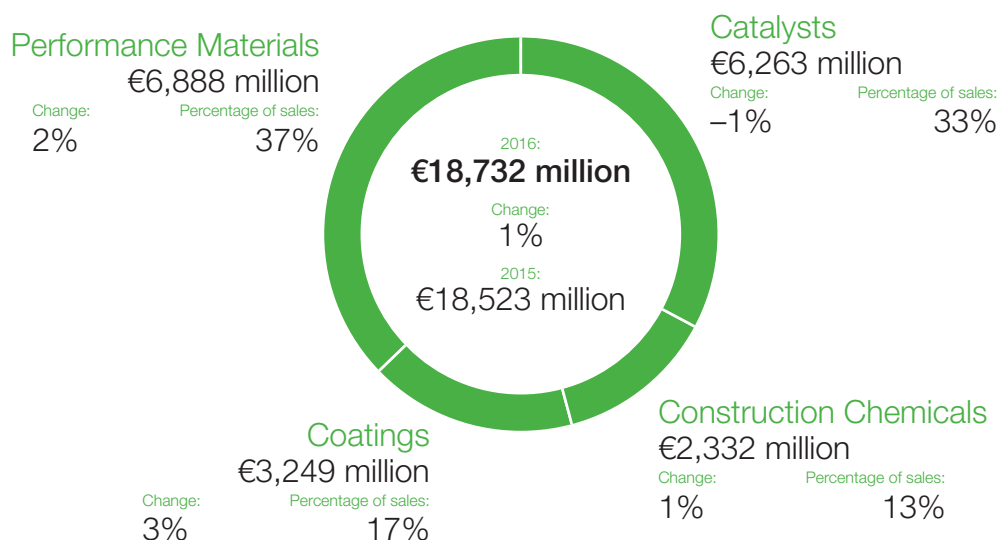
Coatings

Coatings solutions, surface treatments, decorative paints

Performance Materials

Polyurethanes, thermoplastics and foams

Sales



Factors influencing sales

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

Income from operations before special items (million €)

2016	1,946	
2015	1,649	
		Change: €297 million

How we create value – an example

Ultraviolet (UV) primer filler

New automotive refinish product for shorter processing time in the workshop

Value for BASF

Expected average sales
growth per year
through 2021

>19%

Value for our customers

Time saved in painting

up to 65%

Repairing paint damage requires a series of time-consuming steps: For example, primer and filler need to be applied separately, and each needs time for drying and cooling. Our product eliminates one step for steel surfaces, as it serves as both primer and filler. It can also be cured with UVA light, which, unlike conventional methods, generates no heat and thus requires no cooling time. After the successful launch in 2016, we expect annual sales of this UV primer filler to grow by more than 19% on average from 2017 to 2021.

The new UV primer filler allows our customers to save up to 65% of their time in repairing paint damage, depending on the surface material and paint shop equipment. Especially smaller and medium-sized repairs can be conducted more economically. The use of UVA light is also considerably more energy-efficient than other curing methods and prevents plastic parts, like bumpers, from warping. We market the UV primer filler under our brand names Glasurit® and R-M®.

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 use BASF's expertise as the world's leading chemical company to 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 contribute to sustainable development. 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 portfolio and 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 selectively extend our activities in the growth regions of Asia, South America, Eastern Europe and the Middle East.

At the end of 2016, we acquired surface technology provider Chemetall from Abermarle Corp., Charlotte, North Carolina, thereby enhancing our coatings portfolio and supporting our aim to grow profitably in innovative and solution-focused businesses closer to end users.

Products, customers and applications

Operating 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 and industrial 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, wind power industry
Performance Materials	Engineering plastics, biodegradable plastics, standard foams, foam specialties, polyurethanes, epoxy systems for fiber-reinforced composites	Automotive manufacture, electrical engineering, packaging, games, sports and leisure, household, mechanical engineering, construction, medical technology, sanitation and water industry, solar thermal energy and photovoltaics, wind power industry

Capital expenditures

Location	Project	Startup
Gaojing, China	Construction: chemical catalysts plant	2017
	Construction: automotive coatings plant	2017
Carmona, Philippines	Construction: concrete admixtures plant	2016
Chennai, India	Construction: plant for mobile emissions catalysts	2016
Colombo, Sri Lanka	Construction: concrete admixtures plant	2016
Gimcheon, South Korea	Construction: plant for Ultraform®	2018
Hanoi, Vietnam	Construction: concrete admixtures plant	2016
Klang, Malaysia	Capacity expansion: plant for flooring solutions	2016
Kolkata, India	Construction: concrete admixtures plant	2016
Rayong, Thailand	Construction: plant for mobile emissions catalysts	2018
Shanghai, China	Capacity expansion: plant for Cellasto®	2016
	Construction: technical competence center for automotive coatings	2018
Schwarzeide, Germany	Capacity expansion: compounding plant for Ultramid® and Ultradur®	2017
Totsuka, Japan	Optimization: coating production	2016
Yeosu, South Korea	Capacity expansion: plant for Ultrason®	2017

Segment data (million €)

	2016	2015	Change in %
Sales to third parties	18,732	18,523	1
Thereof Catalysts	6,263	6,306	(1)
Construction Chemicals	2,332	2,304	1
Coatings	3,249	3,166	3
Performance Materials	6,888	6,747	2
Intersegmental transfers	736	873	(16)
Sales including intersegmental transfers	19,468	19,396	0
Income from operations before depreciation and amortization (EBITDA)	2,906	2,228	30
EBITDA margin %	15.5	12.0	–
Depreciation and amortization ¹	707	621	14
Income from operations (EBIT)	2,199	1,607	37
Special items	253	(42)	.
EBIT before special items	1,946	1,649	18
EBIT after cost of capital	813	96	.
Assets	17,359	13,341	30
Investments ²	3,679	854	331
Research and development expenses	393	392	0

¹ Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and write-ups)

² Additions to intangible assets and property, plant and equipment (including acquisitions)

Functional Materials & Solutions segment

- Sales grow by 1% to €18,732 million
- EBIT before special items increases by 18% to €1,946 million as a result of higher contributions from all divisions

In the Functional Materials & Solutions segment, sales to third parties increased by €209 million to €18,732 million. By increasing volumes in all divisions, we were able to more than compensate for lower prices and mildly negative currency effects (volumes 7%, prices –5%, portfolio 0%, currencies –1%). The volumes growth was mainly attributable to higher demand for our products for the automotive industry. Business with the construction industry saw sales volumes at a high level overall.

Income from operations (EBIT) before special items grew by €297 million to €1,946 million compared with 2015. All divisions contributed to this considerable earnings increase, with particular support from higher margins in the Performance Materials division. Special income in 2016 especially pertained to the sale of the industrial coatings business as well as the divestiture of the business with polyolefin catalysts. EBIT rose by €592 million to €2,199 million.

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Catalysts

- Sales decline by 1% to €6,263 million, mainly due to lower prices
- EBIT before special items improves considerably, mostly through contribution from mobile emissions catalysts

In the Catalysts division, sales to third parties declined in 2016 by €43 million to €6,263 million. This was predominantly the result of price decreases due to lower precious metal prices. Currency effects and the sale of our business with polyolefin catalysts had a negative impact on sales.

We achieved significant volumes growth, especially through increased volumes of mobile emissions catalysts. Greater demand for refinery catalysts and battery materials also contributed to this development. Lower volumes of chemical catalysts slowed this growth. In precious metal trading, sales declined by €52 million to €2,336 million due to lower prices.

Catalysts – Factors influencing sales

Volumes	9%	
Prices	(8%)	
Portfolio	(1%)	
Currencies	(1%)	
Sales	(1%)	

Catalysts – Sales by region (Location of customer)

1	Europe	42%
2	North America	29%
3	Asia Pacific	22%
4	South America, Africa, Middle East	7%



We considerably raised EBIT before special items year-on-year, mainly thanks to the higher contributions from the mobile emissions catalysts business. In addition, we were able to reduce fixed costs through strict cost discipline. Special charges resulted primarily from asset impairments and special income from the sale of the polyolefin catalysts business in June 2016.

Construction Chemicals

- Sales rise by 1% to €2,332 million as a result of increased sales volumes
- Slight growth in EBIT before special items, thanks primarily to higher sales volumes

In the Construction Chemicals division, sales to third parties reached €2,332 million, an increase of €28 million over 2015. Negative currency effects in all regions and lower prices overall were more than offset by higher sales volumes.

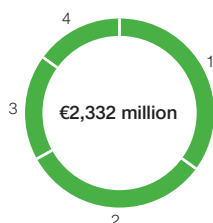
In Europe and North America, sales grew as a result of this volumes increase; prices remained stable. In the region South America, Africa, Middle East, lower volumes and negative currency effects were the main factors behind a drop in sales. Demand declined in Saudi Arabia especially, as the number of public construction projects fell due to low oil prices. Falling prices were largely responsible for reduced sales in Asia. We were able to increase volumes in the region.

Construction Chemicals – Factors influencing sales

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

Construction Chemicals – Sales by region (Location of customer)

1	Europe	35%
2	North America	32%
3	Asia Pacific	18%
4	South America, Africa, Middle East	15%



Income from operations before special items was slightly higher than the level of 2015, primarily as a result of volumes growth.

Coatings

- Sales increase by 3% to €3,249 million
- EBIT before special items considerably up, especially in automotive OEM coatings

In the Coatings division, sales to third parties in 2016 grew by €83 million to €3,249 million. Higher sales volumes in North America and Asia were able to more than compensate for a volumes decline in South America. Prices remained stable overall; negative currency effects in all businesses had a dampening effect on sales.

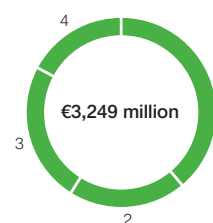
Sales of automotive OEM coatings grew slightly thanks to higher volumes in North America and Asia. In the automotive refinishing coatings business, we observed a slight sales decline as higher prices could only partly offset negative currency effects and slightly lower volumes. The slight sales growth in the industrial coatings business was attributable to higher volumes. Sales fell slightly in the decorative paints business in Brazil, despite significantly increased sales prices. This was mostly the result of overall weak demand as well as negative currency effects.

Coatings – Factors influencing sales

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

Coatings – Sales by region (Location of customer)

1	Europe	39%
2	North America	20%
3	Asia Pacific	24%
4	South America, Africa, Middle East	17%



We were able to raise EBIT before special items considerably in 2016, especially through the contribution from automotive OEM coatings. Special income came from the sale of the industrial coatings business in December 2016.

Since December 14, 2016, the Coatings division has included the Chemetall business, which was acquired from Albemarle. This has had no significant influence on the result for the reporting year 2016.

Performance Materials

- Sales grow by 2% to €6,888 million through higher volumes
- EBIT before special items rises considerably due to stronger margins and specialties business

The Performance Materials division raised its sales to third parties by €141 million to €6,888 million in 2016. This was largely thanks to sharp volumes growth, primarily in Asia and Europe. Prices fell as a result of lower raw material prices. Negative currency effects and portfolio measures additionally dampened sales.

Our businesses with the automotive industry developed positively thanks to significantly higher demand in Asia. We were especially able to achieve substantial volumes growth for polyurethane systems, engineering plastics and the special elastomer Cellasto®.

In the consumer goods industry, sales were slightly down, primarily on account of lower prices while volumes remained stable. We particularly achieved higher volumes of engineering plastics, thermoplastic polyurethanes and biopolymers, while demand ebbed slightly for polyurethane systems.

Sales to the construction sector also declined as a result of falling prices and the divestiture of our white expandable polystyrene (EPS) business in North and South America in March 2015. Volumes development was positive for polyurethane systems and functional foams.

EBIT before special items considerably exceeded that of the previous year. Contributing significantly to this were higher margins due to lower raw material prices and the positive development of our high-margin specialties business. Despite higher production costs from new plant startups, including the capacity expansion for Cellasto® in Shanghai, China, we were able to reduce fixed costs compared with 2015.

Performance Materials – Factors influencing sales

Volumes	8%		
Prices	(4%)		
Portfolio	(1%)		
Currencies	(1%)		
Sales	2%		

Performance Materials – Sales by region

(Location of customer)

1	Europe	47%
2	North America	23%
3	Asia Pacific	27%
4	South America, Africa, Middle East	3%



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

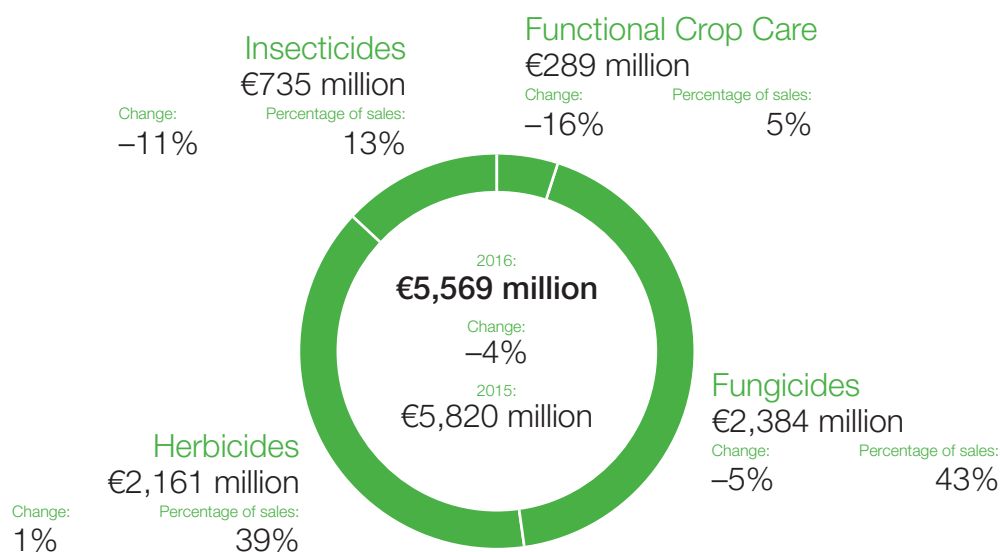
Insecticides

Combating insect pests in agriculture and beyond

Functional Crop Care

Biological crop protection, seed treatment, polymers and colorants

Sales



Factors influencing sales

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

Income from operations before special items (million €)

2016	1,087	
2015	1,090	
		Change: minus €3 million

How we create value – an example

Inscalix®

Innovative insecticide solution for use with numerous plants

Value for BASF

Peak sales
potential

>€100 million

Inscalix® is an innovative solution of a new chemical class for combating piercing and sucking pests. Inscalix® will play an important role in BASF's insecticide portfolio, and be used for various plants in numerous countries starting at the end of the decade. We expect peak sales potential of more than €100 million.

Value for our customers and the environment

Advantages compared with
conventional insecticides

3-fold

Inscalix® offers a three-fold advantage compared with conventional insecticides. Effective in low doses, it is also characterized by low toxicity for beneficial insects such as bees and an alternative mode of action for combating the most important pests. For farmers, this means greater flexibility in application and higher yields with better quality.

Strategy

- **Helping to feed a growing world population**
- **Long-term innovation strategy ensures future growth**
- **Development of solutions that go beyond conventional crop protection**

Our strategy is based on long-term market trends. A key challenge of the future will be to ensure sufficient food for a growing world population. This means that farmers around the world need to increase their yields – and yet the natural resources for doing so, such as water and arable land, are limited. We see it as our duty to provide farmers with professional support in producing more – and more nutritious – food as efficiently as possible.

We are committed to the responsible treatment of our products and the environment. We offer our customers a broad portfolio of integrated solutions and constantly invest in our development pipeline to create chemical and biological innovations in crop protection.

Our research and development activities range from solutions for guarding plants against fungi, insects and weeds, to seeds and soil management, to plant health. For example, the Functional Crop Care business unit not only provides products

for improving seeds and innovations for better soil management, but also biological and chemical technologies that make plants better able to withstand stress factors like heat, cold and nutrient deficiency.

We are intensifying our investment in growth markets and continuing to expand our good position in our core markets. In collaboration with seed companies, we benefit from the technological competence of our crop protection research. In addition, we work together with external partners to be able to offer the best solutions for our customers. With our own projects, jointly with partners like John Deere and in collaboration with farmers, we drive the development of integrated IT applications for modern, sustainable agriculture. One example is the Maglis® digital platform developed by BASF. Since its launch at the beginning of 2016, the BASF team has used Maglis® to support farmers in collecting, interpreting and monitoring a range of agricultural data. This enables them to optimize management and make better decisions in cultivating and marketing crops.

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®, dicamba, 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®

Investments

In 2016, we invested €205 million in property, plant and equipment. Most of this investment amount is attributable to the expansion of dicamba production capacity in Beaumont, Texas. We also increased capacities for the fungicide Xemium® and enlarged a formulation plant for fungicides in Tarragona, Spain. Furthermore, we are continuing to invest in innovative solutions that go beyond classic crop protection. One example from the area of Functional Crop Care is our new research and development center for biological crop protection and seed solutions in Limburgerhof, Germany, which combines expertise in chemical and biological solutions. In order to continue meeting the ongoing high demand for our innovative products in the future, we will invest around €840 million in developing and expanding our infrastructure and in our production and formulation capacities for active ingredients between 2017 and 2021.

Plant biotechnology at BASF

BASF's 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 in Other.

With our network of research sites, we help farmers meet the growing demand for increased agricultural productivity as well as better nutrition. As part of the regular review of our portfolio, we focused our research activities in 2016 on projects with the highest business and technological potential. These projects included the development of crops characterized by higher yields and stress resistance, herbicide tolerance, or resistance against certain diseases. Part of this realignment involved adapting our site structure in North America and Europe; around 350 of approximately 750 positions were cut. Our product marketing takes place in part together with leading seed providers.

Segment data (million €)

	2016	2015	Change in %
Sales to third parties	5,569	5,820	(4)
Intersegmental transfers	33	28	18
Sales including intersegmental transfers	5,602	5,848	(4)
Income from operations before depreciation and amortization (EBITDA)	1,305	1,321	(1)
EBITDA margin %	23.4	22.7	–
Depreciation and amortization ¹	268	238	13
Income from operations (EBIT)	1,037	1,083	(4)
Special items	(50)	(7)	.
EBIT before special items	1,087	1,090	0
EBIT after cost of capital	172	154	12
Assets	8,899	8,435	6
Investments ²	266	402	(34)
Research and development expenses	489	514	(5)

¹ Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and write-ups)

² Additions to intangible assets and property, plant and equipment (including acquisitions)

Agricultural Solutions segment

- **Lower volumes and currency effects lead to 4% decline in sales to €5,569 million**
- **At €1,087 million, EBIT before special items matches prior-year level**

In the Agricultural Solutions segment, sales to third parties in 2016 fell by €251 million to €5,569 million as a result of lower sales volumes and negative currency effects. The challenging market environment for crop protection products particularly dampened demand for insecticides in South America and for fungicides in Europe. Prices matched the level of 2015 (volumes –2%, prices 0%, currencies –2%).

In **Europe**, sales declined by €149 million to €1,958 million. This was mainly attributable to weaker demand for fungicides in the first half of the year. Especially in Germany and Poland, volumes fell as a result of unfavorable weather conditions and our customers' high inventory levels. Price increases, primarily in central and eastern Europe, including Russia, were unable to offset the lower volumes and negative currency effects.

Sales in **North America** decreased by €69 million to €1,801 million, predominantly because of lower prices, especially for fungicides in the United States. Higher demand for fungicides and insecticides in the United States and for herbicides in Canada helped support volumes development.

At €549 million, sales in **Asia** exceeded the previous year's level by €24 million. We were able to raise sales volumes in all indications, largely driven by substantially higher demand for herbicides in India and the overall positive volumes development in Indonesia and Australia. Currency effects slightly dampened sales.

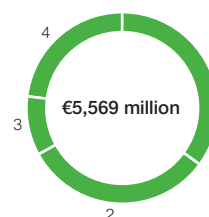
In **South America**, sales fell by €57 million to €1,261 million, basically due to lower insecticide volumes in Brazil. This was primarily attributable to our customers' high inventory levels and critical economic situation, as well as the shrinking market for insecticides in the region. Price increases were unable to fully compensate for the drop in volumes.

Strict cost management enabled us to reduce fixed costs in the Agricultural Solutions segment. Thanks to this development, income from operations (EBIT) before special items matched the previous year's level at €1,087 million despite the sales decline. Due to special charges from the optimization of our production structure, EBIT decreased by €46 million to €1,037 million.

For the Outlook for 2017, see page 122

Crop Protection – Sales by region
(Location of customer)

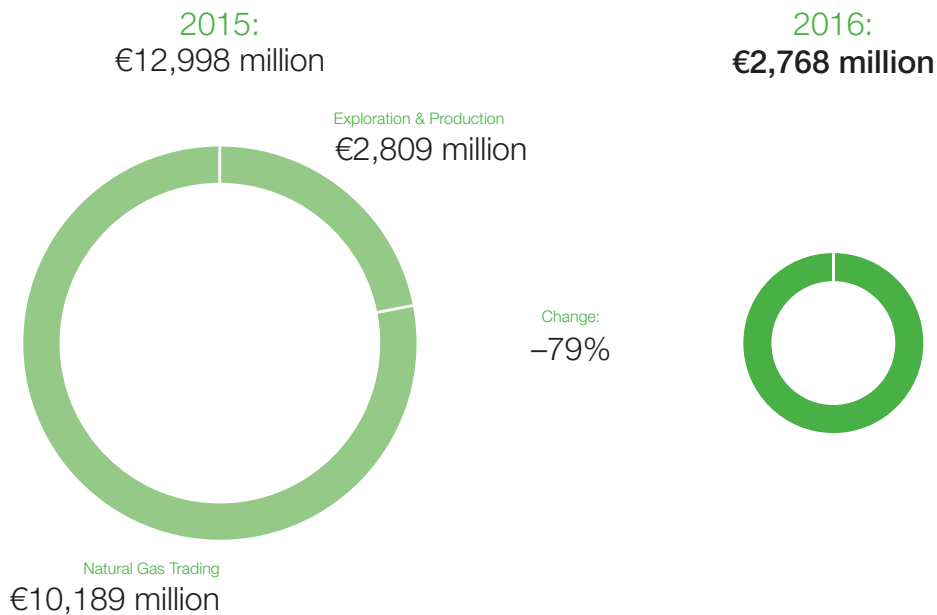
1	Europe	35%
2	North America	32%
3	Asia Pacific	10%
4	South America, Africa, Middle East	23%



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 transport of natural gas in Europe with our Russian partner Gazprom.

Sales



Factors influencing sales

Volumes	3%	
Prices/currencies	(3%)	
Portfolio	(79%)	
Sales	(79%)	

Income from operations before special items (million €)

2016	517	
2015	1,366	
		Change: minus €849 million

How we create value – an example

Optimized oil treatment and storage

Reconstruction and process optimization of tank farm in Barnstorf

Value for BASF

Reduction of
investment costs

around **25%**

An innovative construction concept enabled us to save around 25% in investment costs while reconstructing our tank farm in Barnstorf, Germany. Typical construction methods would have meant replacing the previous twelve crude oil and water tanks with five new ones, and building individual facilities for separating the oil from associated substances and storing it. Because our new tanks allow both at the same time, four new tanks were sufficient. These can be employed more flexibly and economically and ensure lower maintenance costs.

Value for the environment

Reduction of annual
energy demand

around **95%**

The new, optimized tanks are especially safe and do not require large concrete containment systems underneath. Instead, the oil tanks feature an accessible annular gap, while the water tanks are constructed with vacuum-monitored double walls. This increases their energy efficiency: Thanks to the thermally insulating air layer in the annular gap and the especially well insulated double floor, the amount of energy needed to heat the oil tanks has been reduced by around 95% over the course of a year.

Strategy

- **Growth through exploration, acquisitions, strategic partnerships and technological expertise**
- **Contribution to securing Europe's natural gas supply**

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 future competitive viability, 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.

Wintershall's natural gas trading and storage activities were transferred to Gazprom with the swap of assets of equal value completed in September 2015, and are no longer part of our portfolio. Our cooperation with Gazprom in the natural gas transport business continues unaltered. With western Europe's long-term demand for natural gas steadily on the rise, while its local production simultaneously decreases, securing sufficient imports is gaining in importance. 🌐

Exploration & 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 next development phase of this largest known oil deposit in the country. We are expanding production in Emlichheim by drilling twelve new wells, two of which started producing between September and December 2016. Wintershall is assessing a redevelopment of the Suderbruch oilfield with two exploration wells. We continued the field test for increasing recovery rates using the biopolymer Schizophyllan at the Bockstedt oilfield.

In Norway, we were able to expand annual production to 80,000 barrels of oil equivalent (BOE) per day. The further development of fields in which we hold a stake included the installation of two subsea tiebacks in the Norwegian Sea for the Wintershall-operated Maria field in the summer of 2016. These were connected at a depth of 300 meters to the nearby platforms Kristin, Heidrun and Åsgard B, enabling us to use the existing infrastructure for production in the Maria field, in which Wintershall holds a 50% share. Wintershall also has shares in the Ivar Aasen offshore platform installed and started up in 2016. In January 2016, Wintershall obtained shares in seven new exploration licenses on the Norwegian continental shelf from the Norwegian Ministry of Petroleum and Energy. Wintershall will take over operatorship of four licenses.

As part of ongoing portfolio optimization, Wintershall Norge AS agreed with Statoil Petroleum AS (both based in Stavanger, Norway) on the sale of its 25% share in the Byrding field on the Norwegian continental shelf. The field, also known by its previous name, Astero, was discovered in 2005 and is located in the Troll/Fram region of the North Sea. Wintershall Norge furthermore divested its 10% share in the Yme license – also on the Norwegian continental shelf – to OKEA AS, an oil company based in Trondheim, Norway.

In Denmark, we are continuing the transition from the development to the production phase of the Ravn field. The crude oil is to be transported through a subsea pipeline from an unmanned production platform to the A6-A platform 18 kilometers away in the German North Sea. Ravn will be the first field in Denmark that Wintershall Noordzee B.V. (Rijswijk, Norway) transfers to the production phase as operator. The Danish energy ministry granted Wintershall three new licenses in the Danish North Sea at the beginning of 2016. Wintershall is the operator in all three licenses.

Russia: The Yuzhno Russkoye natural gas field in western Siberia, in which we have a 35% economic interest, has been operating at plateau production since 2009. We hold a 50% stake 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 78 wells were producing at the end of 2016. We will develop blocks IV and V of the Achimov formation together with Gazprom.

North Africa / Middle East: In Libya, we are the operator of eight oilfields in the onshore concessions 96 and 97. Due to difficult political conditions, we were only able to start producing in concession 96 again on September 16, 2016, at a low level of 35,000 BOE a day. No production took place in concession 97 in 2016. At the Al Jurf oilfield off the coast of Libya, in which we have a stake, operations could be continued without interruption.

In Abu Dhabi, we began drilling our second appraisal well as operator in the development of the Shuwaihat sour gas field in November 2016. It is Wintershall's first offshore exploration well in the Shuwaihat field.

Wintershall signed a memorandum of understanding in April 2016 with the National Iranian Oil Company on a potential collaboration.

South America: We hold shares in a total of fifteen onshore and offshore fields in Argentina. In February 2016, the offshore field Vega Pléyade, operated by Total Austral S.A., began production off the coast of Tierra del Fuego. We drilled additional wells as an operator in the Vaca Muerta shale formation in the Neuquén province, as stipulated in the joint operation agreement between Wintershall Energía S.A. (Buenos Aires, Argentina) and Gas y Petróleo del Neuquén S.A. (Neuquén, Argentina).

For information on current reserves, see pages 88 and 223

Capital expenditures

Location	Project	Plateau/peak production per year ¹	Startup
Argentina	Development of Vega-Pléyade field	9 million BOE	2016
North Sea, Norway	Development of Maria field	7 million BOE	2018
	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	43 million BOE	2008/2020 ²

¹ BASF's share in barrels of oil equivalent (BOE)² Year completed**Natural Gas Transport**

- **Mostly regulated business with stable conditions**
- **Joint activities with Gazprom**

The highly regulated natural gas transport sector is characterized by stable conditions and yields based on approved costs and tariffs. Our organizational structure allows us to meet the unbundling requirements set down by the German Energy Act: As a holding company for the German subsidiaries in natural gas transport, WIGA Transport Beteiligungs-GmbH & Co. KG (WIGA) mainly fulfills a reporting and financing capacity. GASCADE Gastransport GmbH, OPAL Gastransport GmbH & Co. KG, and NEL Gastransport GmbH all act as independent companies under the umbrella of the holding company.

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

We hold a 15.5% share in the Nord Stream Pipeline 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 Gazprom (51%) and E.ON (15.5%), as well as N.V. Nederlandse Gasunie and ENGIE (9% each). 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 shore up supply security in Europe.

The contracts signed in 2015 to join the companies involved in the Nord Stream 2 AG were canceled in September 2016 after withdrawal of the antitrust clearance application in Poland. BASF continues to firmly believe in the significance of this project for Europe, and is evaluating possibilities to support the endeavor. The project is being developed by Nord Stream 2 AG, a project company in which Gazprom holds 100% of the shares.

Segment data¹ (million €)

	2016	2015	Change in %
Sales to third parties	2,768	12,998	(79)
Intersegmental transfers	331	766	(57)
Sales including intersegmental transfers	3,099	13,764	(77)
Income from operations before depreciation and amortization (EBITDA)	1,596	2,587	(38)
EBITDA margin %	57.7	19.9	–
Depreciation and amortization ²	1,097	1,515	(28)
Income from operations (EBIT)	499	1,072	(53)
Special items	(18)	(294)	94
EBIT before special items	517	1,366	(62)
EBIT after cost of capital	(744)	(443)	(68)
Assets	12,829	12,373	4
Investments ³	1,115	1,823	(39)
Research and development expenses	39	50	(22)
Exploration expenses	94	195	(52)
Net income ⁴	362	1,050	(66)

¹ Supplementary information on the Oil & Gas segment can be found from page 221 onward.

² Amortization of intangible assets and depreciation of property, plant and equipment (including impairments and write-ups)

³ Additions to intangible assets and property, plant and equipment (including acquisitions)

⁴ More on this figure can be found in the reconciliation reporting for Oil & Gas in the Notes to the Consolidated Financial Statements on page 179.

Oil & Gas segment

- Sales decline by 79% and EBIT before special items down by 62% due to discontinuation of contributions from gas trading and storage business as well as to lower oil and gas prices

In the Oil & Gas segment, sales to third parties decreased by €10,230 million to €2,768 million year-on-year (volumes 3%, prices/currencies –3%, portfolio –79%). Owing to the asset swap with Gazprom completed at the end of September 2015, contributions from the natural gas trading and storage business and from Wintershall Noordzee B.V. ceased as of the fourth quarter of 2015. These activities had contributed €10.1 billion to sales in 2015. In the continuing oil and gas business, we raised volumes by 15% compared with 2015, while price and currency effects came out to minus 15%. The price of a barrel of Brent blend crude oil averaged \$44 in 2016 (2015: \$52). Gas prices on European spot markets dropped 29%, also a sharp fall compared with the previous year. Both oil and gas prices recovered significantly toward the end of 2016 as compared with the beginning of the year.

Oil & Gas – Sales by region (Location of customer)

1	Europe	80%
2	North America	0%
3	Asia Pacific	0%
4	South America, Africa, Middle East	20%



Income from operations (EBIT) before special items declined by €849 million to €517 million in 2016. This was primarily the result of falling oil and gas prices, in addition to the divestiture of our gas trading and storage business to Gazprom. The activities transferred to Gazprom had contributed around €260 million to EBIT before special items in 2015. In addition, as we had expected, the earnings contribution from our share in the Yuzhno Russkoye natural gas field was lower: A contractual agreement with our partner Gazprom stipulated that the excess amounts received over previous years be compensated in 2016. Positive effects came from comprehensive measures aimed at optimizing exploration and technology projects as well as the successful implementation of operational cost-saving measures. EBIT declined by €573 million to €499 million. Net income declined by €688 million to €362 million.

For the Outlook for 2017, see page 123

We increased our crude oil and natural gas production by 12 million barrels of oil equivalent (BOE) to 165 million BOE. In the search for new crude oil and natural gas deposits, we finished drilling a total of 14 exploration and appraisal wells in 2016, of which 9 were successful. Our proven crude oil and natural gas reserves fell by 7% compared with the end of 2015, to 1,622 million BOE. We replenished 26% of the volumes produced in 2016. The reserve-to-production ratio is around 10 years (2015: 11 years). This is based on Wintershall's production in 2016 and refers to the reserves at year-end.