Notes on statement of income

5 Earnings per share

Earnings per share

		2017	2016
Net income	million €	6,078	4,056
Weighted-average number of outstanding shares	1,000	918,479	918,479
Earnings per share	**€**	**6.62**	**4.42**
Diluted earnings per share	€	6.61	4.41

In accordance with IAS 33, a potential dilutive effect must be considered in the diluted earnings per share for those BASF shares which will be granted in the future as a part of the BASF share program “*plus*.” This applies regardless of the fact that the necessary shares are acquired by third parties on the market on behalf of BASF, and the fact that there are no plans for the issuance of new shares. The dilutive effect of the issue of “*plus*” shares amounted to €0.01 in 2017 (2016: €0.01).

6 Functional costs

Under the cost-of-sales method, functional costs incurred by the operating functions are determined on the basis of cost center accounting. The functional costs particularly contain the personnel costs, depreciation and amortization accumulated on the underlying final cost centers as well as allocated costs within the cost accounting cycle. Operating expenses that cannot be allocated to the functional costs are reported as other operating expenses.

For more information on other operating expenses, see Note 8 from page 196 onward

Cost of sales

Cost of sales includes all production and purchase costs of the company’s own products as well as merchandise which has been sold in the period, particularly plant, energy and personnel costs.

Selling expenses

Selling expenses particularly include marketing and advertising costs, freight costs, packaging costs, distribution management costs, commissions, and licensing costs.

General administrative expenses

General and administrative expenses primarily include the costs of the central units, the costs of managing business units and divisions, and costs of general management, the Board of Executive Directors and the Supervisory Board.

Research and development expenses

Research and development expenses include the costs resulting from research projects as well as the necessary license fees for research activities.

For more information on research and development expenses by segment, see Note 4 on page 192

7 Other operating income

Million €	2017	2016
Income from the adjustment and reversal of provisions recognized in other operating expenses	74	80
Revenue from miscellaneous revenue-generating activities	178	191
Income from foreign currency and hedging transactions as well as from the measurement of LTI options	110	32
Income from the translation of financial statements in foreign currencies	44	57
Gains on divestitures and the disposal of noncurrent assets	359	667
Reversals of impairment losses on noncurrent assets	189	2
Income from the reversal of valuation allowances for business-related receivables	38	35
Other	924	716
Other operating income	**1,916**	**1,780**

Income from the adjustment and reversal of provisions recognized in other operating expenses was largely related to risks from lawsuits and damage claims, closures and restructuring measures, employee obligations, and various other items as part of the normal course of business. Provisions were reversed or adjusted if the circumstances on the balance sheet date were such that utilization was no longer expected, or expected to a lesser extent.

For more information, see Note 8 from page 196 onward

Revenue from miscellaneous revenue-generating activities primarily included income from rentals, catering operations, cultural events and logistics services.

Income from foreign currency and hedging transactions as well as from the measurement of LTI options pertained to the foreign currency translation of receivables and payables as well as of currency derivatives and other hedging transactions. In 2017, there was also income from the reversal of provisions for the long-term incentive (LTI) program of €68 million. In 2016, by contrast, there was an expense of €267 million arising from the long-term incentive (LTI) program. This was reported under other operating expenses.

Income from the translation of financial statements in foreign currencies contained gains from the translation of companies whose local currency is different from the functional currency.

Gains on divestitures and the disposal of noncurrent assets in the amount of €195 million resulted from the transfer of the leather chemicals business to the Stahl group. Further income of €75 million resulted from the disposal of shares in oil and gas concessions in Argentina. In the previous year, these particularly included gains amounting to €349 million from the sale of the industrial coatings business to AkzoNobel, Amsterdam, Netherlands. Income of €93 million arose from the sale of the global polyolefin catalysts business to W.R. Grace & Co., Columbia, Maryland. Further income of €83 million resulted from the disposal of BASF's OLED intellectual property assets to UDC Ireland Limited, Dublin, Ireland. Income of €72 million pertained to real estate divestitures in several countries.

Reversals of impairment losses on noncurrent assets amounted to €189 million in 2017. These primarily concerned oil and gas fields in Norway.

Income from the reversal of valuation allowances for business-related receivables resulted mainly from the settlement of customer-related receivables for which a valuation allowance had been recorded.

Other income included government grants and government assistance from several countries amounting to €133 million in 2017 and €156 million in 2016. In both years, these were primarily attributable to price compensation from the Argentinian government for gas producers, which was introduced in connection with the New Gas Price Scheme (NGPS) in response to the lower, partly locally regulated gas prices.

Further income resulted from refunds and compensation payments in the amount of €431 million in 2017 and €291 million in 2016. In 2017, these largely included insurance refunds for the damages caused by the fire at the North Harbor in Ludwigshafen, Germany. In the previous year, these were predominantly due to insurance refunds arising from a plant outage at the Ellba C.V. joint operation in Moerdijk, Netherlands. Moreover, income in both years was related to gains from precious metal trading, refunds of consumption taxes and a number of additional items.

8 Other operating expenses

Million €	2017	2016
Restructuring and integration measures	362	482
Environmental protection and safety measures, costs of demolition, removal and project costs that are not subject to mandatory capitalization	375	464
Amortization, depreciation and impairments of noncurrent assets	311	337
Costs from miscellaneous revenue-generating activities	163	179
Expenses from foreign-currency and hedging transactions as well as from the measurement of LTI options	204	530
Losses from the translation of financial statements in foreign currencies	51	17
Losses from divestitures and the disposal of noncurrent assets	106	43
Oil and gas exploration expenses	104	94
Expenses from the addition of valuation allowances for business-related receivables	81	106
Expenses from the consumption of inventories measured at market value and the derecognition of obsolete inventory	220	277
Other	972	604
Other operating expenses	**2,949**	**3,133**

Expenses for **restructuring and integration measures** were primarily related to severance payments amounting to €83 million in 2017 and €190 million in 2016. Further expenses of €38 million concerned the Coatings division in connection with the purchase of the global surface technology provider Chemetall. In the Care Chemicals division, expenses were incurred for restructuring in the USA in the amount of €12 million and €15 million in the Construction Chemicals division for restructuring in Europe. Furthermore, expenses of €10 million concerned the Crop Protection division in relation to the acquisition of significant parts of the seed and non-selective herbicide businesses from Bayer AG, Leverkusen, Germany. Expenses of €27 million in 2017 and €39 million in 2016 arose from the outsourcing of the computer centers. In the previous year, expenses had primarily affected the Petrochemicals division in the amount of €37 million and the Dispersions & Pigments division in the amount of €25 million.

Expenses arose from **environmental protection and safety measures, costs of demolition, removal and project costs that are not subject to mandatory capitalization** according to IFRS. Expenses for demolition, removal and project planning totaled €279 million in 2017 and €375 million in 2016. These especially pertained to the Ludwigshafen site in both years. Further expenses of €54 million in 2017 and €61 million in 2016 arose from the addition to environmental provisions. In both years, these concerned several discontinued sites in North America. In the previous year, expenses were also incurred for landfills in Germany.

Amortization, depreciation and impairments of noncurrent assets arose from impairments in the Oil & Gas segment in the amount of €83 million in 2017. The Performance Products segment posted impairments of €23 million in 2017 and €6 million in 2016. Further impairments of €10 million concerned the Functional Materials & Solutions segment in 2017 and €124 million in 2016. The previous year had recorded €67 million in impairments in the Chemicals segment and €24 million in the Agricultural Solutions segment.

Costs from miscellaneous revenue-generating activities concerned the respective item presented in other operating income.

For more information, see Note 7 on page 195 onward

Expenses from foreign-currency and hedging transactions as well as from the measurement of LTI options were related to foreign currency translations of receivables and payables as well as changes in the fair value of currency derivatives and other hedging transactions. In comparison with the previous year, lower expenses for the hedging of planned sales were posted due to the depreciation of the U.S. dollar relative to the euro as well as lower provisions for the Long-Term-Incentive program.

For more information, see Note 7 on page 195 onward

Losses from divestitures and the disposal of noncurrent assets of €70 million resulted largely from portfolio measures in North America in 2017. Further expenses of €19 million were incurred in connection with the divestiture of the global industrial coatings business to the AkzoNobel Group in December 2016. In the previous year, losses of €17 million had arisen from the reduction in disposal gains from the asset swap with Gazprom as part of the final purchase price allocation.

Expenses from the addition of valuation allowances for business-related receivables decreased by €25 million compared with the previous year. This was predominantly due to lower additions in the region South America, Africa, Middle East.

In both years, expenses under **Other** included expenses from attorneys' fees for litigation cases as well as from REACH, the provision of services, and the implementation of further projects. Expenses of €79 million were also recognized for a product liability case in the Chemicals segment in 2017. Moreover, 2016 contained expenses of €27 million from the fire damage at the Ludwigshafen North Harbor, Germany.

9 Income from companies accounted for using the equity method

Million €	2017	2016
Proportional net income	584	317
Thereof joint ventures	433	157
associated companies	151	160
Other adjustments of income and expense	(13)	(10)
Thereof joint ventures	(12)	(4)
associated companies	(1)	(6)
Income from companies accounted for using the equity method	**571**	**307**

Income from companies accounted for using the equity method increased by a total of €264 million in 2017, primarily due to higher earnings in the Oil & Gas segment, particularly at Wintershall Noordzee B.V., Rijswijk, Netherlands. BASF-YPC Company Ltd., Nanjing, China, also contributed significantly to this increase.

10 Financial result

Million €	2017	2016
Dividends and similar income	22	39
Income from the disposal of shareholdings	5	9
Income from profit transfer agreements	3	6
Income from tax allocation to participating interests	1	–
Income from other shareholdings	**31**	**54**
Expenses from loss transfer agreements	(43)	(18)
Write-downs on/losses from the sale of shareholdings	(17)	(53)
Expenses from other shareholdings	**(60)**	**(71)**
Net income from shareholdings	**(29)**	**(17)**
Interest income from cash and cash equivalents	188	159
Interest and dividend income from securities and loans	38	20
Interest income	**226**	**179**
Interest expenses	**(560)**	**(661)**
Interest result	**(334)**	**(482)**
Net interest income from overfunded pension plans and similar obligations	2	5
Income from the capitalization of borrowing costs	68	92
Miscellaneous financial income	–	–
Other financial income	**70**	**97**
Write-downs on/losses from the disposal of securities and loans	(3)	(10)
Net interest expense from underfunded pension plans and similar obligations	(175)	(183)
Net interest expense from other long-term personnel obligations	(1)	(7)
Unwinding the discount on other noncurrent liabilities	(36)	(47)
Miscellaneous financial expenses	(214)	(231)
Other financial expenses	**(429)**	**(478)**
Other financial result	**(359)**	**(381)**
Financial result	**(722)**	**(880)**

The **interest result** improved by €148 million compared with the previous year from minus €482 million to minus €334 million as a result of higher interest income and lower interest expenses. Higher interest income arose particularly from interest rate and currency swaps to hedge BASF bonds as well as loans granted in connection with the financing of the Nord Stream 2 project. The decrease in interest expenses was largely due to lower liabilities to banks, commercial papers and related hedging transactions.

The **net interest expense from underfunded pension plans and similar obligations** decreased in comparison with the previous year, as a result of the reduced net defined benefit liability as of December 31, 2016. The net interest expenses for the respective business year are based on the discount rate and the defined benefit obligation at the beginning of the year.

In comparison with 2016, **income from the capitalization of borrowing costs** declined due to the start up of major investment projects.

The decline in **other financial expenses** was mostly attributable to lower costs for the hedging of loans in U.S. dollars.

11 Income taxes

In Germany, a uniform corporate income tax rate of 15.0% as well as a solidarity surcharge of 5.5% thereon is levied on all paid out and retained earnings. In addition to corporate income tax, income generated in Germany is subject to a trade tax that varies depending on the municipality in which the company is represented. Due to a constant rate of assessment for Ludwigshafen, Germany, in 2017, the weighted average trade tax rate was 14.1% (2016: 14.1%).

The 30% rate used to calculate deferred taxes for German Group companies remained unchanged in 2017. The profits of foreign Group companies are assessed using the tax rates applicable in their respective countries. These are also generally used to calculate deferred taxes to the extent that tax rate adjustments for the future have not yet been enacted.

Tax expense

Million €	2017	2016
Current tax expense	**1,832**	**1,654**
Corporate income tax, solidarity surcharge and trade taxes (Germany)	464	589
Foreign income tax	1,438	1,184
Taxes for prior years	(70)	(119)
Deferred tax expense (+) / income (–)	**(384)**	**(514)**
From changes in temporary differences	30	(473)
From changes in tax loss carryforwards / unused tax credits	(3)	(43)
From changes in the tax rate	(416)	(6)
From valuation allowances on deferred tax assets	5	8
Income taxes	**1,448**	**1,140**
Other taxes as well as sales and consumption taxes	260	272
Tax expense	**1,708**	**1,412**

The current tax expense for corporate income tax, solidarity surcharge and trade taxes (Germany) decreased due to lower income of the subsidiary companies in Germany.

The changes in temporary differences were largely due to realization and currency effects in connection with provisions for pensions, financial liabilites, and intangible assets.

Changes in valuation allowances on deferred tax assets for tax loss carryforwards resulted in income of €6 million in 2017 and expenses of €7 million in 2016.

Other taxes included real estate taxes and other comparable taxes totaling €107 million in 2017 and €109 million in 2016.

Reconciliation of the income taxes and the effective tax rate

	2017		2016	
	Million €	%	Million €	%
Income before taxes and minority interests	7,800	–	5,395	–
Expected tax based on German corporate income tax (15%)	1,172	15.0	810	15.0
Solidarity surcharge	18	0.2	13	0.2
German trade tax	312	4.0	236	4.4
Foreign tax-rate differential	707	9.1	402	7.5
Tax-exempt income	(20)	(0.3)	(46)	(0.9)
Nondeductible expenses	66	0.8	76	1.4
Income after taxes of companies accounted for using the equity method (Income after taxes)	(86)	(1.1)	(46)	(0.9)
Taxes for prior years	(70)	(0.9)	(119)	(2.2)
Deferred tax liabilities for the future reversal of temporary differences associated with shares in participating interests	(1)	0.0	(2)	0.0
Changes in the tax rate	(416)	(5.3)	(6)	(0.1)
Other	(234)	(2.9)	(178)	(3.3)
Income taxes/effective tax rate	**1,448**	**18.6**	**1,140**	**21.1**

The BASF Group tax rate amounted to 18.6% in 2017 (2016: 21.1%). The lower tax rates resulting from the tax reform in the United States led to deferred tax income in the amount of €379 million.

The foreign tax-rate differential increased due to improvement in earnings in countries with a high tax rate, particularly in Norway, in the Exploration & Production business sector, and in Belgium.

In Other, foreign currency translation differences from the valuation of differences to the tax values as well as additional tax depreciation on oil and gas production facilities in Norway led to tax income.

Taxes for prior years primarily included reversals of long-term tax provisions.

Future reversals of temporary differences for shares in investments that are assumed to have a planning horizon of one year led to deferred tax income of €1 million in 2017 (2016: €2 million).

Deferred taxes

Deferred tax assets and liabilities (million €)

	Deferred tax assets		Deferred tax liabilities	
	2017	2016	2017	2016
Intangible assets	77	90	1,261	1,719
Property, plant and equipment	171	180	2,635	3,336
Financial assets	10	51	49	84
Inventories and accounts receivable	363	348	432	498
Provisions for pensions	2,603	3,028	617	431
Other provisions and liabilities	1,131	1,446	156	170
Tax loss carryforwards	222	279	–	–
Other	42	107	82	95
Netting	(2,501)	(3,016)	(2,501)	(3,016)
Total	**2,118**	**2,513**	**2,731**	**3,317**

Deferred taxes result from temporary differences between tax balances and the measurement of assets and liabilities according to IFRS as well as from tax loss carryforwards and unused tax credits. The remeasurement of all the assets and liabilities associated with acquisitions according to IFRS 3 has resulted in significant deviations between fair values and the values in the tax accounts. This leads primarily to deferred tax liabilities.

Undistributed earnings of subsidiaries resulted in temporary differences of €10,490 million in 2017 (2016: €8,905 million) for which deferred tax liabilities were not recognized, as they are either not subject to taxation on payout or they are expected to be reinvested for indefinite periods of time.

Changes in valuation allowances on deferred tax assets amounted to €92 million, compared with €80 million in 2016. Thereof €24 million (2016: €30 million) pertained to tax loss carryforwards.

Tax loss carryforwards

The regional distribution of tax loss carryforwards is as follows:

Tax loss carryforwards (million €)

	Tax loss carryforwards		Deferred tax assets	
	2017	**2016**	**2017**	**2016**
Germany	–	1	–	–
Foreign	1,485	2,383	222	279
Total	**1,485**	**2,384**	**222**	**279**

Tax loss carryforwards exist in all regions, especially in Europe and Asia. German tax losses may be carried forward indefinitely. In foreign countries, tax loss carryforwards are in some cases only possible for a limited period of time. The bulk of the tax loss carryforwards will expire in Europe by 2018 and in Asia by 2022. No deferred tax assets were recognized for tax loss carryforwards of €804 million (2016: €1,478 million).

Tax obligations

Tax obligations primarily include assessed income taxes and other taxes as well as estimated income taxes not yet assessed for the current year. Tax obligations amounted to €1,119 million in 2017 (2016: €1,288 million).

12 Minority interests

Million €	2017	2016
Minority interests in profits	299	229
Minority interests in losses	(25)	(30)
Total	**274**	**199**

Compared with the same period of 2016, higher **minority interests in profits** in 2017 arose particularly due to increased TDI and MDI sales prices and margins at Shanghai BASF Polyurethane Company Ltd., Shanghai, China.

For more information on minority interests in consolidated companies, see Note 21 on page 211

13 Personnel expenses and employees

Personnel expenses

The BASF Group spent €10,610 million on wages and salaries, social security contributions and expenses for pensions and assistance in 2017 (2016: €10,165 million). This represented an increase in personnel expenses of 4.4%. Besides wage and salary increases, this was particularly due to an increase in the average number of employees due to the acquisition of Chemetall. Countering this were the partial reversal of provisions for the Long Term Incentive (LTI) program as well as currency effects.

Personnel expenses (million €)

	2017	2016
Wages and salaries	8,471	8,170
Social security contributions and expenses for pensions and assistance	2,139	1,995
Thereof for pension benefits	705	627
Personnel expenses	**10,610**	**10,165**

Number of employees

As of December 31, 2017, the number of employees rose to 115,490 employees compared with 113,830 employees as of December 31, 2016.

It was distributed over the regions as follows:

Number of employees as of December 31

	2017	2016
Europe	71,653	70,784
Thereof Germany	54,020	53,318
North America	18,295	17,583
Asia Pacific	18,256	18,156
South America, Africa, Middle East	7,286	7,307
BASF Group	**115,490**	**113,830**
Thereof apprentices and trainees	3,103	3,120
temporary staff	2,550	2,334

Employees from joint operations are included in the number of employees at year end relative to BASF's share in the respective company. In total, this included 472 employees in 2017 (2016: 432 employees).

The average number of employees was distributed over the regions as follows:

Average number of employees

	2017	2016
Europe	71,043	69,873
Thereof Germany	53,390	52,608
North America	17,871	17,308
Asia Pacific	18,132	17,473
South America, Africa, Middle East	7,287	7,321
BASF Group	**114,333**	**111,975**
Thereof apprentices and trainees	2,793	2,838
temporary staff	2,691	2,365

Employees from joint operations are included in the average number of employees relative to BASF's share in the company. This comprised a total of 437 employees (2016: 404 employees).

Notes on balance sheet

14 Intangible assets

The **goodwill** of BASF is allocated to 24 cash-generating units (2016: 22), which are defined either on the basis of business units or on a higher level.

Annual impairment testing took place in the fourth quarter of the year on the basis of the cash-generating units. Recoverable amounts were determined in most cases using the value in use. This was done using plans approved by company management and their respective cash flows, generally for the next five years. Thereafter, a terminal value was calculated using a forward projection from the last detailed planning year as a perpetual annuity. The planning is based on experience, current performance and management's best possible estimates on the future development of individual parameters, such as raw materials prices and profit margins. Oil and gas prices are also among the main input parameters that provide the basis for the forecast of cash flows in the current financial plans. Market assumptions regarding, for example, economic development and market growth are included based on external macroeconomic sources as well as sources specific to the industry.

The required discounting of cash flows for impairment testing is calculated with the weighted average cost of capital rate after tax, which is determined using the Capital Asset Pricing Model. It comprises a risk-free rate, a market risk premium, and a spread for credit risk based on the respective industry-specific peer group. The calculation also takes into account capital structure and the beta factor of the respective peer group as well as the average tax rate of each cash-generating unit. Impairment tests of the units (excluding Exploration & Production in the Oil & Gas segment) were conducted assuming a weighted average cost of capital rate after taxes between 5.69% and 8.2% (2016: between 5.07% and 8.01%). This represents a weighted average cost of capital rate before taxes of between 7.13% and 11.31% (2016: between 6.43% and 10.77%). A valuation model based on a field-related valuation approach has been used, for the unit Exploration & Production in the Oil & Gas segment since the business year 2016, which considers the expected cash flows as well as the tax payments in the individual countries. The period under consideration includes the planned license terms and the production profiles of the included oil and gas fields. Furthermore, instead of using a single weighted average cost of capital rate, the country risk and the specific tax rate is considered in each case: this leads to a more precise calculation of the recoverable amount. Considering these parameters, the capital rate after taxes varied between 7.92% and 12.85% (2016: between 7.5% and 13.76%) and before taxes between 11.32% and 20.07% (2016: between 10.96% and 37.68%).

After determining the recoverable amount of the cash-generating units, it was determined for the large majority of them that reasonable possible deviations from the key assumptions would not lead to the carrying amounts of the units exceeding their respective recoverable amounts. For the goodwill of the Construction Chemicals division and the cash-generating units Pigments in the Dispersions & Pigments division, as well as Surface Treatment in the Coatings division, this is not the case.