Notes to the Statement of Income

5 Earnings per share

Earnings per share

		2018	2017
Income after taxes from continuing operations	million €	4,150	5,592
of which noncontrolling interests	million €	211	233
Income after taxes and noncontrolling interests from continuing operations	**million €**	**3,939**	**5,359**
Income after taxes from discontinued operations	million €	829	760
of which noncontrolling interests	million €	61	41
Income after taxes and noncontrolling interests from discontinued operations	**million €**	**768**	**719**
Income after taxes	million €	4,979	6,352
of which noncontrolling interests	million €	272	274
Income after taxes and noncontrolling interests	**million €**	**4,707**	**6,078**
Weighted average number of outstanding shares	1.000	918,479	918,479
Earnings per share			
from continuing operations	€	4.29	5.84
diluted	€	4.28	5.83
from discontinued operations	€	0.83	0.78
diluted	€	0.83	0.78
from continuing and discontinued operations	€	5.12	6.62
diluted	€	5.11	6.61

In accordance with IAS 33, a potential dilutive effect must be considered in the **diluted earnings per share** for those BASF shares that will be granted in the future as part of BASF's "plus" share program. This applies regardless of the fact that the necessary shares are acquired on the market by third parties on behalf of BASF and that there are no plans to issue new shares. The dilutive effect of the issue of "plus" shares amounted to €0.01 in 2018 (2017: €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 220 onward

Cost of sales

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

Selling expenses

Selling expenses primarily 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 from page 211 onward

7 Other operating income

Other operating income

Million €	2018	2017
Income from the adjustment and release of provisions recognized in other operating expenses	86	73
Revenue from miscellaneous activities	158	168
Income from foreign currency and hedging transactions as well as from the measurement of LTI options	412	177
Income from the translation of financial statements in foreign currencies	7	32
Gains on divestitures and the disposal of noncurrent assets	88	284
Reversals of impairment losses on noncurrent assets	3	24
Income from the reversal of valuation allowances for business-related receivables	65	36
Other	996	775
Other operating income	**1,815**	**1,569**

Income from the adjustment and release 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 individual items as part of the normal course of business. Provisions were reversed or adjusted if, based on the circumstances on the balance sheet date, utilization was no longer expected, or expected to a lesser extent.

For more information, see Note 8 from page 220 onward

Revenue from miscellaneous 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. Of material significance in 2018 was income recorded from the release of provisions for the long-term incentive (LTI) program in the amount of €262 million (2017: income of €67 million).

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 related in the amount of €21 million to the sale of the production site for styrene butadiene-based paper dispersions in Pischelsdorf, Austria in 2018 and in the amount of €195 million to the transfer of the leather chemicals business to the Stahl group in 2017. Income of €14 million resulted from real estate divestitures in several countries (2017: €72 million).

Reversals of impairment losses on noncurrent assets totaled €3 million in 2018 (2017: €24 million).

Income from the reversal of valuation allowances for business-related receivables resulted both from the reversal of valuation allowances for settled customer receivables for which a valuation allowance had been recorded previously as well as from adjusted expectations regarding default on individual customer receivables.

Other income included government grants and government assistance from several countries amounting to €43 million in 2018 and €26 million in 2017. These were primarily due to grants for research projects and regional business development in China.

Further income resulted from refunds and compensation payments in the amount of €569 million in 2018 and €447 million in 2017. In 2018, these mainly included insurance refunds for the damages caused by the fires at the citral plant in Ludwigshafen, Germany and at the North Harbor in Ludwigshafen, Germany, for which there were insurance refunds in 2017 as well. 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

Other operating expenses

Million €	2018	2017
Restructuring and integration measures	412	359
Environmental protection and safety measures, costs of demolition and removal, and project costs not subject to mandatory capitalization	343	353
Amortization, depreciation and impairments of noncurrent assets	72	221
Costs from miscellaneous revenue-generating activities	151	155
Expenses from foreign-currency and hedging transactions as well as from the measurement of LTI options	166	130
Losses from the translation of financial statements in foreign currencies	40	49
Losses from divestitures and the disposal of noncurrent assets	36	106
Expenses from the addition of valuation allowances for business-related receivables	77	70
Expenses for derecognition of obsolete inventory	246	220
Other	822	919
Other operating expenses	**2,365**	**2,582**

Expenses from **restructuring and integration measures** in 2018 were mainly expenses in the amount of €99 million for the integration of significant parts of Bayer's seed and non-selective herbicide business as well as its vegetable seed business, which were acquired in August 2018. These expenses totaled €10 million in the previous year. In both years, expenses also arose in connection with the preparation of the acquisition of Solvay's global polyamide business and the acquisition of global surface technology provider, Chemetall, in 2016.

Restructuring expenses resulted from site closures in North America in the amount of €13 million and from outsourcing computer centers in the amount of €11 million in 2018. In the previous year, expenses of €15 million were incurred in the Construction Chemicals division for restructuring in Europe, and €27 million for the outsourcing of computer centers. Further expenses in the amount of €20 million were incurred for restructuring measures in the Care Chemicals division in 2018 and €12 million in the previous year. Additionally, expenses were recognized in the amount of €17 million in connection with global restructuring measures in the Coatings division in 2018. Expenses were recognized in the Catalysts division in the amount of €16 million due largely to the restructuring of the global emissions catalysts business and the restructuring of the licensed battery materials business.

Expenses arose from **environmental protection and safety measures, costs of demolition and removal, and project costs not subject to mandatory capitalization** pursuant to IFRS. Expenses for demolition, removal and project planning totaled €245 million in 2018 and €252 million in 2017. In both years, these mainly related to the Ludwigshafen site. Further expenses of €55 million in 2018 and €54 million in 2017 arose from the addition to environmental provisions. In both years, these concerned several discontinued sites in North America.

Amortization, depreciation and impairments of noncurrent assets amounted to €72 million in 2018. The impairments resulted primarily from discontinued investment projects. Impairments last year were related primarily to the Chemicals, Functional Materials & Solutions and Performance Products segments.

Costs from miscellaneous revenue-generating activities relate to the items presented in other operating income.

For more information, see Note 7 from page 219 onward

Expenses from foreign currency and hedging transactions as well as from the measurement of LTI options related to foreign currency translation 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, the increase in currency translation losses was mainly due to the devaluation of the currencies in Argentina and Brazil.

For more information, see Note 7 from page 219 onward

Losses from divestitures and the disposal of noncurrent assets totaling €26 million in 2018 were related to the planned merger of the paper and water chemicals business with Solenis. Losses from portfolio measures in North America totaled €70 million last year. Further expenses of €19 million were incurred in 2017 in connection with the divestiture of the global industrial coatings business to the AkzoNobel Group in December 2016.

In both years, expenses under **Other** included expenses for litigation, for REACH, for Group management, for Corporate Citizenship, for the provision of services, and for activities related to the BASF 4.0 project. Expenses in the amount of €79 million were recognized for a product liability case in the Chemicals segment in 2017.

9 Income from companies accounted for using the equity method

Income from companies accounted for using the equity method

Million €	2018	2017
Proportional income after taxes	279	328
of which Joint ventures	250	297
Associated companies	29	31
Other adjustments to income and expenses	(10)	(5)
of which Joint ventures	(9)	(4)
Associated companies	(1)	(1)
Income from companies accounted for using the equity method	**269**	**323**

Income from companies accounted for using the equity method decreased by a total of €54 million in 2018 primarily due to lower earnings at BASF-YPC Company Ltd., Nanjing, China.

10 Financial result

Financial result

Million €	2018	2017
Dividends and similar income	22	19
Income from the disposal of shareholdings	13	4
Income from profit transfer agreements	1	3
Income from tax allocation to shareholdings	–	1
Income from other shareholdings	**36**	**27**
Expenses from loss transfer agreements	(54)	(40)
Write-downs on/losses from the sale of shareholdings	(24)	(17)
Expenses from other shareholdings	**(78)**	**(57)**
Net income from shareholdings	**(42)**	**(30)**
Interest income from cash and cash equivalents	160	165
Interest and dividend income from securities and loans	14	12
Interest income	**174**	**177**
Interest expenses	**(540)**	**(492)**
Interest result	**(366)**	**(315)**
Net interest income from overfunded pension plans and similar obligations	2	2
Income from the capitalization of borrowing costs	30	37
Miscellaneous financial income	–	–
Other financial income	**32**	**39**
Write-downs on/losses from securities and loans	(22)	(1)
Net interest expense from underfunded pension plans and similar obligations	(133)	(169)
Net interest expense from other long-term personnel obligations	–	(1)
Unwinding the discount on other noncurrent liabilities	(5)	(9)
Miscellaneous financial expenses	(209)	(219)
Other financial expenses	**(369)**	**(399)**
Other financial result	**(337)**	**(360)**
Financial result	**(745)**	**(705)**

Net income from shareholdings decreased from minus €30 million to minus €42 million due primarily to higher expenses from loss transfer agreements. One factor was that BASF Digital Farming GmbH was included for the first time in 2018.

The **interest result** fell by €51 million year on year, from minus €315 million to minus €366 million, as a result of higher interest expenses. The increase in interest expenses was mainly due to the higher financial debt, particularly commercial papers.

In comparison with 2017, **income from the capitalization of borrowing costs** declined due to the startup of major investment projects in the United States.

Write-downs/losses from securities and loans increased due to higher valuation allowances on loans and to losses from fair value measurement of securities.

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, 2017. The net interest expense for the respective fiscal year is based on the discount rate and the defined benefit obligation at the beginning of the year.

The decline in **other financial expenses** was primarily attributable to interest on income taxes.

11 Income taxes

In Germany, a uniform corporate income tax rate of 15.0% as well as a solidarity surcharge of 5.5% thereon are levied on all distributed 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 2018, the weighted average trade tax rate was 14.1% (2017: 14.1%). The 30% rate used to calculate deferred taxes for German Group companies remained unchanged in 2018. The income 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

Changes in valuation allowances on deferred tax assets for tax loss carryforwards resulted in income of €1 million in 2018 and of €6 million in 2017. Other taxes included real estate taxes and other comparable taxes totaling €110 million in 2018 and €101 million in 2017.

The BASF Group tax rate amounted to 21.5% in 2018 (2017: 18.7%). The tax rate reductions resulting primarily from the tax reform in Belgium led to deferred tax income of €17 million in 2018. The reduced tax rates resulting from the tax reforms in the United States, Belgium, France, Germany and Argentina led to deferred tax income of €426 million in 2017, of which €379 million in the United States.

Tax expense

Million €	2018	2017
Current tax expense	**1,255**	**1,506**
Corporate income tax, solidarity surcharge and trade taxes (Germany)	386	414
Foreign income tax	1,072	1,173
Taxes for prior years	(203)	(81)
Deferred tax expense (+)/income (–)	**(117)**	**(216)**
From changes in temporary differences	(57)	239
From changes in tax loss carryforwards/unused tax credits	(40)	(34)
From changes in the tax rate	(18)	(426)
From valuation allowances on deferred tax assets	(2)	5
Income taxes	**1,138**	**1,290**
Other taxes as well as sales and consumption taxes	232	230
Tax expense	**1,370**	**1,520**

Reconciliation of income taxes and the effective tax rate

	2018		2017	
	Million €	**%**	**Million €**	**%**
Income before income taxes	5,288	–	6,882	–
Expected tax based on German corporate income tax rate (15%)	794	15.0	1,032	15.0
Solidarity surcharge	15	0.3	18	0.3
German trade tax	145	2.7	288	4.2
Foreign tax rate differential	420	7.9	498	7.2
Tax-exempt income	(24)	(0.5)	(19)	(0.3)
Nondeductible expenses	64	1.2	62	0.9
Income of companies accounted for using the equity method (Income after taxes)	(40)	(0.7)	(48)	(0.7)
Taxes for prior years	(203)	(3.8)	(81)	(1.2)
Deferred tax liabilities for the future reversal of temporary differences associated with shares in participating interests	5	0.1	(1)	0.0
Changes in the tax rate	(18)	(0.3)	(426)	(6.2)
Other	(20)	(0.4)	(33)	(0.5)
Income taxes/effective tax rate	**1,138**	**21.5**	**1,290**	**18.7**

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 primarily leads to deferred tax liabilities.

Deferred taxes

Deferred tax assets and liabilities 2018

Million €

	January 1, 2018, net	Effects recognized in income	Effects recognized in equity (OCI)	Business combinations	Other	Recognized in equity	December 31, 2018, net	Deferred tax assets	Deferred tax liabilities
Intangible assets	(1,184)	40	(5)	(272)	156	–	(1,265)	94	1,359
Property, plant and equipment	(2,464)	(126)	(1)	6	1.609	–	(976)	115	1,091
Financial assets	(39)	52	0	–	(1)	–	12	60	48
Inventories and accounts receivable	(69)	(62)	38	(40)	(70)	–	(203)	272	475
Provisions for pensions	1,986	2	122	13	26	–	2,149	2,657	508
Other provisions and liabilities	975	146	(1)	6	(493)	–	633	738	105
Tax loss carryforwards	222	36	0	0	(53)	–	205	205	–
Other	(40)	29	0	0	11	–	0	83	83
Deferred tax assets (liabilities) before netting	**(613)**	**117**	**153**	**(287)**	**1,185**	**–**	**555**	**4,224**	**3,669**
Netting	–	–	–	–	–	–	–	(1,882)	(1,882)
Deferred tax assets (liabilities) after netting	**(613)**	**117**	**153**	**(287)**	**1,185**	**–**	**555**	**2,342**	**1,787**

Deferred tax assets and liabilities 2017

Million €

	Deferred tax assets	Deferred tax liabilities
Intangible assets	77	1,261
Property, plant and equipment	171	2,635
Financial assets	10	49
Inventories and accounts receivable	363	432
Provisions for pensions	2,603	617
Other provisions and liabilities	1,131	156
Tax loss carryforwards	222	–
Other	42	82
Netting	(2,501)	(2,501)
Total	**2,118**	**2,731**

Undistributed earnings of subsidiaries resulted in temporary differences of €14,088 million in 2018 (2017: €10,490 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 an indefinite period of time.

Changes in valuation allowances on deferred tax assets amounted to €91 million in 2018, compared with €92 million in 2017. Of this figure, €23 million in 2018 (2017: €24 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	
	2018	**2017**	**2018**	**2017**
Germany	–	–	–	–
Foreign	1,143	1,485	205	222
Total	**1,143**	**1,485**	**205**	**222**

Tax loss carryforwards exist in all regions, especially in South America, Asia and Europe. Tax losses in Germany 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 2019 and in Asia by 2023. No deferred tax assets were recognized for tax loss carryforwards of €371 million in 2018 (2017: €804 million).

Tax liabilities

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 €695 million as of December 31, 2018 (December 31, 2017: €1,119 million).

12 Noncontrolling interests

Noncontrolling interests

Million €	2018	2017
Noncontrolling interests in profits	292	299
Noncontrolling interests in losses	(20)	(25)
Total	**272**	**274**

The year-on-year decrease in **noncontrolling interests in profits** in 2018 was mainly due to lower TDI and MDI sales prices and margins at Shanghai BASF Polyurethane Company Ltd., Shanghai, China.

Following a negative earnings contribution in 2017, noncontrolling interests in profits were recorded for BASF TODA Battery Materials, LLC, Tokyo, Japan in 2018 after expansion of its production capacities. The company therefore contributed significantly to the decrease in **noncontrolling interests in losses**.

For more information on noncontrolling interests in consolidated companies, see Note 21 on page 239

13 Personnel expenses and employees

Personnel expenses

The BASF Group spent €10,659 million on wages and salaries, social security contributions and expenses for pensions and assistance in 2018 (2017: €10,610 million). This amount included personnel expenses from the disposal group for the oil and gas business in the amount of €276 million (2017: €268 million). The increase in personnel expenses is due primarily to the higher average number of employees resulting from the acquisition of significant parts of Bayer's business and to the higher level of wages and salaries. Particularly the year-on-year higher release of provisions for the long-term incentive (LTI) program as well as currency effects had a countereffect.

Personnel expenses

Million €	2018	2017
Wages and salaries	8,470	8,471
Social security contributions and assistance expenses	1,459	1,434
Pension expenses	730	705
Personnel expenses	**10,659**	**10,610**

Number of employees

As of December 31, 2018, the number of employees rose to 122,404 employees compared with 115,490 employees as of December 31, 2017. That includes 2,017 employees in the disposal group for the oil and gas business as of December 31, 2018 (December 31, 2017: 1,985 employees).

The increase in the number of employees is due primarily to the acquisition of significant businesses from Bayer in August 2018. As a result, the number of employees rose by more than 4,500 employees.

The number of employees in the BASF Group was distributed over the regions as follows:

Number of employees as of December 31

	2018	2017
Europe	75,188	71,653
of which Germany	55,839	54,020
North America	20,069	18,295
Asia Pacific	19,303	18,256
South America, Africa, Middle East	7,844	7,286
BASF Group	**122,404**	**115,490**
of which apprentices and trainees	3,174	3,103
temporary staff	3,226	2,550

Employees from joint operations are included in the number of employees as of the year-end relative to BASF's share in the company. These had a total of 526 employees (2017: 472 employees).

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

Average number of employees

	2018	2017
Europe	73,067	71,043
of which Germany	54,749	53,390
North America	19,051	17,871
Asia Pacific	18,713	18,132
South America, Africa, Middle East	7,540	7,287
BASF Group	**118,371**	**114,333**
of which apprentices and trainees	2,819	2,793
temporary staff	3,120	2,691

Employees from joint operations are included in the average number of employees relative to BASF's share in the company. On average, these had a total of 492 employees (2017: 437 employees).

BASF Group's average number of employees for 2018 includes 2,021 employees from the disposal group for the oil and gas business (2017: 1,982 employees).