Notes

Policies and Scope of Consolidation

1 Summary of accounting policies

1.1 General information

BASF SE (registered at the district trade register, or *Amtsgericht*, for Ludwigshafen am Rhein, number HRB 6000) is a publicly listed corporation headquartered in Ludwigshafen am Rhein, Germany. Its official address is Carl-Bosch-Str. 38, 67056 Ludwigshafen am Rhein, Germany.

The Consolidated Financial Statements of BASF SE as of December 31, 2018, have been prepared in accordance with the International Financial Reporting Standards (IFRS) of the International Accounting Standards Board (IASB), and section 315a (1) of the German Commercial Code (HGB). IFRSs are generally only applied after they have been endorsed by the European Union. For the 2018 fiscal year, all of the binding IFRSs and pronouncements of the International Financial Reporting Interpretations Committee (IFRIC) were applied.

The Consolidated Financial Statements are presented in euros. All amounts, including the figures for previous years, are given in million euros unless otherwise indicated.

The individual financial statements of the consolidated companies are prepared as of the balance sheet date of the Consolidated Financial Statements. The accounting policies applied are largely the same as those used in 2017, with the exception of any changes arising from the application of new or revised accounting standards.

In its meeting on February 18, 2019, the Board of Executive Directors prepared the Consolidated Financial Statements, submitted them to the Supervisory Board for review and approval, and released them for publication.

1.2 Changes in accounting principles

Accounting policies applied for the first time in 2018

IFRS 9 – Financial Instruments
IFRS 9 – Financial Instruments was endorsed by the European Union in the fourth quarter of 2016 and applied by BASF for the first time as of January 1, 2018.

IFRS 9 contains, in particular, new requirements for the classification and measurement of financial assets, fundamental changes regarding the accounting treatment of impairments of certain financial assets, and a revised approach to hedge accounting. IFRS 9 retains "amortized cost" and "fair value" as measurement bases for financial instruments and continues to differentiate between changes in fair value recognized through profit or loss and through other comprehensive income.

The classification and measurement of financial assets in accordance with IFRS 9 is based on the one hand on the cash flow condition (the "solely payments of principle and interest" criterion), that is, the contractual cash flow characteristics of an individual financial asset. On the other hand, it also depends on the business model used for managing financial asset portfolios.

Unlike in IAS 39, under IFRS 9 impairments of financial assets that are not measured at fair value through profit or loss are not just recognized when there is objective evidence of impairment. Rather, impairment allowances are also to be recognized for expected credit losses. These are determined based on the credit risk of a financial asset, as well as any changes to this credit risk: If the credit risk of a financial asset has increased significantly since initial recognition, expected credit losses are generally recognized over the lifetime of the asset. If, however, the credit risk has not increased significantly in this period, impairments are generally only recognized for the 12-month expected credit losses. By contrast, under a simplified approach, impairments for receivables such as lease receivables and trade accounts receivable always cover the lifetime expected credit losses of the receivable concerned.

IFRS 9 also contains new requirements for the application of hedge accounting to better present an entity's risk management activities, in particular with respect to the management of nonfinancial risks.

The first-time adoption of IFRS 9 at BASF follows the modified retrospective method, which means that prior-period information is not restated; this continues to be presented in accordance with IAS 39.

The introduction of the cash flow condition at BASF mainly resulted in the reclassification of securities that were allocated to the "available for sale" category under IAS 39 and subsequently measured at fair value in the balance sheet, with fair value changes recognized in other comprehensive income. Provided the contractual cash flows resulting from these securities are not solely payments of principal and interest, they continue to be measured at fair value in the balance sheet; however, fair value changes are recognized directly in income after taxes. The cash flow condition also leads to minor changes to the subsequent measurement of other receivables that were measured at amortized cost under IAS 39. These are now measured at fair value in the balance sheet, provided the resulting cash flows are not solely payments of principal and interest. Changes to the fair value of these other receivables are recognized in profit or loss as income after taxes.

At BASF, the definition of a business model for financial asset portfolios has implications for the accounting treatment of securities, which were allocated to the "available for sale" category under IAS 39 and, according to IFRS 9, do not have to be measured at fair value because of the cash flow condition. If these securities are managed with the intention of collecting the contractual cash flows, they are subsequently measured at amortized cost in line with the requirements of IFRS 9. If, however, these securities classified as "available for sale" are also managed with the intention of generating cash flows from their sale, they are subsequently measured at fair value; fair value changes are recognized in other comprehensive income.

At BASF, the recognition of impairments for expected credit losses mainly impacts the carrying amounts of trade accounts receivable. It also affects the carrying amounts of other receivables that represent financial instruments. The table below presents the effects of the transition from IAS 39 to IFRS 9 on the carrying amounts as of December 31, 2017, by category of financial instruments:

Reconciliation of carrying amounts of financial assets

Million €

IAS 39 as of December 31, 2017			Changes due to		IFRS 9 as of January 1, 2018		
	Carrying amount	**Measurement category[1]**	**Changes in measurement categories**	**Changes in measurement parameters**	**Carrying amount**		**Measurement category[1]**
Shareholdings	482	AfS	–	–	482	Shareholdings	FVTPL
Receivables from finance leases	29	n/a	–	–	29	Receivables from finance leases	AC
Accounts receivable, trade	11,190	LaR	–	(28)	11,162	Accounts receivable, trade	AC
			–	–	–	Accounts receivable, trade	FVTPL
Derivatives – no hedge accounting	340	aFVTPL	–	–	340	Derivatives – no hedge accounting	FVTPL
Derivatives – hedge accounting	72	n/a	–	–	72	Derivatives – hedge accounting	FVTOCI
Other receivables and miscellaneous assets	1,508	LaR	0	(6)	1,502	Other receivables and miscellaneous assets	AC
			0	–	0	Other receivables and miscellaneous assets	FVTPL
Securities – AfS	175	AfS	(141)	(1)	33	Securities	FVTOCI
			13	0	13	Securities	AC
			128	–	128	Securities	FVTPL
Securities – HtM	1	HtM	–	–	1	Securities	AC
			–	–	–	Securities	FVTOCI
			–	–	–	Securities	FVTPL
Cash and cash equivalents	6,495	LaR	–	0	6,495	Cash and cash equivalents	AC
Total financial assets	**20,292**		**0**	**(35)**	**20,257**	**Total financial assets**	

1 AfS: Available for Sale
AC: Amortized Cost
FVTOCI: at Fair Value through Other Comprehensive Income
(a)FVTPL: (at) Fair Value through Profit or Loss
HtM: Held to Maturity
LaR: Loans and Receivables

At BASF, the credit risk of a financial asset is assessed using both internal estimates, which are prepared as part of credit management, and external rating information on the respective counterparty. A significant increase in the counterparty's credit risk is assumed if its rating is lowered by a certain number of notches. The significance of the increase in credit risk is not reviewed for financial assets subject to the simplified approach.

BASF calculates the expected credit losses of a financial asset as the probability-weighted present value of each expected cash shortfall. As a general rule, three key parameters are used here: the probability of default of the counterparty, the loss ratio if the counterparty defaults, and the amount at risk. In the case of receivables from banks, the expected credit losses are primarily calculated on the basis of the probabilities of default derived from credit default swaps for the counterparty concerned.

The effects of the changes to the valuation allowance model on the impairments recognized in accordance with IAS 39 as of December 31, 2017, are presented in the table below. These mainly relate to valuation allowances for financial assets that were allocated to the “loans and receivables” category under IAS 39. Impairments were increased due to the recognition of expected credit losses. A countereffect arose from the fact that impairments to reflect transfer risks for certain countries and staggered impairments based on overdue status are no longer recognized under IFRS 9.

Reconciliation of impairments for financial assets

Million €

		Changes due to		
	Cumulative impairments as of December 31, 2017 (under IAS 39)	Changes in measurement categories	Changes in measurement parameters	Impairments as of January 1, 2018 (under IFRS 9)
Available for sale	–	–	–	–
Held to maturity	–	–	–	–
Loans and receivables	431	–	35	466
Total impairments for financial assets	**431**	**–**	**35**	**466**

BASF exercises the option to apply the hedge accounting requirements of IFRS 9 only prospectively from January 1, 2018. This option cannot be applied to changes to the time value component of options if only its intrinsic value is designated as a hedging instrument in a hedge accounting relationship. In this case, IFRS 9 stipulates that changes to the fair value of the time value component during the term of the hedging relationship must be recognized in other comprehensive income, and that the amounts accumulated there must be released as an adjustment to the cost of the underlying item or directly in profit or loss. By contrast, under IAS 39, changes to the fair value of these time value components were recognized immediately in profit or loss.

Transition effects from the first-time adoption of IFRS 9 were recognized cumulatively in equity as of the date of initial application. Overall, after allowing for deferred taxes, the first-time adoption of IFRS 9 reduced equity by €30 million, primarily as a result of the increase in valuation allowances for trade accounts receivable. By contrast, the reclassification of components of income that were presented in other comprehensive income under IAS 39 to retained earnings did not have any effect on equity.

The table below shows the first-time adoption effects of IFRS 9 on retained earnings and other comprehensive income:

First-time adoption effects of IFRS 9 on equity

Million €

Effects on retained earnings	
Retained earnings as of December 31, 2017 (prior to application of IFRS 9)	**34,826**
Changes to valuation allowances for trade accounts receivable	(28)
Changes to valuation allowances for other financial instruments	(7)
Transfers to/from other comprehensive income	49
Deferred taxes for first-time adoption effects	5
Retained earnings as of January 1, 2018 (following application of IFRS 9)	**34,845**
Effects on other comprehensive income	
Other comprehensive income after taxes, including noncontrolling interests (prior to application of IFRS 9)	**(5,282)**
Transfers to/from retained earnings, changes to measurement categories	(35)
Transfers to/from retained earnings, other	(14)
Deferred taxes for first-time adoption effects	–
Other comprehensive income after taxes, including noncontrolling interests (following application of IFRS 9)	**(5,331)**
First-time adoption effects of IFRS 9 on equity	**(30)**

IFRS 15 – Revenues from Contracts with Customers

IFRS 15 – Revenues from Contracts with Customers was endorsed by the European Union in the third quarter of 2016 and applied by BASF for the first time as of January 1, 2018.

According to IFRS 15, sales revenue is measured at the amount the entity expects to recognize in exchange for goods and services when control of the agreed goods or services and the benefits obtainable from them are transferred to the customer. The standard provides the following five-step process for revenue recognition:

- Step 1: Identify contracts with customers
- Step 2: Identify performance obligations contained in the contracts
- Step 3: Determine the transaction price
- Step 4: Allocate the transaction price to the performance obligations
- Step 5: Recognize revenue when the performance obligation is satisfied

Control can be transferred at a certain point in time or over a period of time. The performance obligations arising from contracts with BASF's customers are almost always satisfied at a point in time. In individual cases, in particular for licensing agreements, they are satisfied over a period of time.

BASF applied IFRS 15 as of January 1, 2018, using the modified retrospective method. As a result, comparative information for 2017 was not restated. In accordance with IFRS 15.C7, only contracts that had not yet been completed as of the date of initial application were transitioned to the new standard. Contract modifications arising before initial application (IFRS 15.C7 A(b)) did not have to be accounted for.

As part of the adoption of the new standard, the items "contract assets" and "contract liabilities" were added to the balance sheet. A contract liability is BASF's obligation to transfer goods or services to a customer, for which BASF has already received consideration from the customer. There were no contract assets at any point in time during 2018.

The main effect of initial application of the new standard was a change in presentation within "other liabilities." Deferred sales revenue of €204 million from licenses and long-term contracts with customers that was previously presented as deferred income was reclassified to contract liabilities. The adoption of the new standard did not lead to any changes in retained earnings.

Sales revenue of €62 million, that was included in contract liabilities as of January 1, 2018, was recognized in 2018.

Sales revenue for the 2018 fiscal year includes €135 million from performance obligations fulfilled in prior periods in connection with sales and usage-based licenses.

Annual Improvements to IFRSs (2014–2016)

In IAS 28, it was clarified that the option to measure an investment in an associated company or a joint venture held by an entity that is a venture capital organization or other qualifying entity, can be exercised on an investment-by-investment basis. The short-term exemptions in IFRS 1, Appendix E (IFRS 1.E3–E7) for first-time IFRS users were deleted. The amendments are not expected to have any material effect on BASF.

Amendments to IFRS 2 – Classification and Measurement of Share-Based Payment Transactions

The amendments address a number of individual issues pertaining to the accounting of cash-settled share-based payment transactions. The amendments relate to the calculation of fair value of obligations arising from share-based payment transactions. Other requirements concern the effects of withholding tax obligations on the classification of compensation programs, as well as the presentation of option rights with respect to the type of compensation to be received or granted (cash or equity settlement). The amendments are to be applied to compensation granted or changed in fiscal years beginning on or after January 1, 2018. The amendments have no effect on BASF.

Amendments to IFRIC 22 – Foreign Currency Transactions and Advance Consideration

IFRIC 22 addresses an application question for IAS 21 – The Effects of Changes in Foreign Exchange Rates. It clarifies the point in time for determining the exchange rate used to translate foreign currency transactions containing advance payments that have been made or received. The underlying asset, income or expense is translated using the relevant exchange rate on the date on which the asset or liability resulting from the prepayment was first recognized. The amendments have no material effect on BASF.

ASCG Interpretation 4 (IFRS) – Accounting for Interest and Penalties Related to Income Taxes under IFRSs

The interpretation addresses the accounting for interest and penalties related to taxes within the meaning of section 3(4) of the Fiscal Code of Germany (AO) that relate to current income taxes within the meaning of IAS 12.5 in financial statements presented in accordance to IFRS as recognized by the European Union. It prescribes the application of IAS 37 to interest and penalties related to taxes within the meaning of section 3(4) AO and the implications for the recognition, measurement and presentation of interest and penalties related to taxes. At BASF, interest income/expense related to income taxes in accordance with IAS 12.5 and tax penalties were therefore no longer reported under tax income/ expense for the first time in 2018; rather, these were shown under other financial result or other operating expenses. The change in presentation represents a change in accounting policy within the meaning of IAS 8. As the effects were not material, the prior-year figures were not restated in accordance with IAS 8. The interpretation is effective for the first time for reporting periods beginning on or after January 1, 2018.

IFRSs and IFRICs not yet to be considered but already endorsed by the E.U.

The effects on the BASF Group financial statements of the IFRSs and IFRICs not yet in force but already endorsed by the European Union in 2018 were reviewed and are explained below.

IFRS 16 – Leases

The IASB published the new standard on leases, IFRS 16, on January 13, 2016. The rules and definitions of IFRS 16 will supersede the content of IAS 17, IFRIC 4, SIC-15 and SIC-27. The standard requires an accounting model for a lessee that recognizes all right-of-use assets and liabilities from lease agreements in the balance sheet, unless the term is twelve months or less or the underlying asset is of low value. As for the lessor, the new standard substantially carries forward the accounting requirements of IAS 17 – Leases. This means that lessors will continue to classify leases as either finance or operating leases. The European Union endorsed the new standard on October 31, 2017. IFRS 16 must be applied for reporting periods beginning on or after January 1, 2019.

BASF has largely completed its analysis of the effects on the Consolidated Financial Statements and intends to exercise the exemption for lease agreements with a term of up to 12 months and low-value assets. Lease agreements that are already in place as of December 31, 2018, will not be re-assessed.

BASF will generally apply a threshold of €5,000 when identifying leases to be capitalized. However, in the future, a significant number of lease agreements that today represent operating leases will be reported in the balance sheet as right-of-use assets with the corresponding lease liabilities. As of the date of initial application of the new standard (January 1, 2019), BASF will measure – in accordance with the modified retrospective method – lease liabilities arising from operating leases with a remaining term of more than 12 months at the present value of the remaining lease payments, taking into account current incremental borrowing rates. The right-of-use asset will be recognized at the same amount as the lease liability. Existing finance leases will not be affected.

BASF introduced a new software program to manage and measure leases, in which the relevant leases were documented. The following statements on the effects of IFRS 16 are based on a simulation conducted on December 31, 2018, using the data available.

As well as increasing BASF's total assets by around €1.1 billion, the presentation of expenses associated with operating leases will change. For 2019, BASF anticipates a depreciation charge for right-of-use assets of around €250 million and interest expenses on lease liabilities of around €20 million. Moreover, the additional liability items are expected to reduce BASF's equity ratio by 0.5%.

BASF will present the interest component in lease payments in cash flows from operating activities and the repayment portion in cash flows from financing activities. Lease payments under short-term agreements, agreements with low-value assets or variable payments will be presented in cash flows from operating activities.

For more information on leases, see Note 28 from page 259 onward

Amendments to IFRS 9 – Financial Assets with a Prepayment Feature with Negative Compensation

The amendments pertain to the relevant criteria for the classification of financial assets. Financial assets with a prepayment feature with negative compensation may be recognized under certain conditions at amortized cost or at fair value through other comprehensive income instead of at fair value through profit and loss. The amendments are effective as of January 1, 2019. They are not expected to have any material effect on BASF.

IFRIC 23 – Uncertainty over Income Tax Treatments

IFRIC 23 expands on the requirements in IAS 12 on how to account for uncertainties surrounding the income tax treatment of circumstances and transactions with respect to both actual and deferred taxes. The interpretation is effective for reporting periods beginning on or after January 1, 2019. The amendments have no material effect on BASF.

Amendments to IAS 28 – Long-Term Interests in Associates and Joint Ventures

On October 12, 2017, the IASB published amendments to IAS 28 on long-term interests in associated companies and joint ventures. These amendments clarify that IFRS 9 is to be applied to long-term interests in associated companies or joint ventures that are not accounted for using the equity method. The amendments were adopted as E.U. legislation in the first quarter of 2019 and must be applied as of January 1, 2019. The effects are explained under IFRS 9 – Financial Instruments in this Note.

IFRSs and IFRICs not yet to be considered and not yet endorsed by the E.U.

The IASB issued further amendments to standards and interpretations whose application is not yet mandatory and is still subject to E.U. endorsement. These amendments are unlikely to have a material impact on the reporting of BASF. BASF does not plan on early adoption of these amendments.

Amendments to IFRS 10 and IAS 28 – Sale or Contribution of Assets between an Investor and an associated company or Joint Venture

The IASB issued amendments to IFRS 10 and IAS 28 on September 11, 2014. The amendments address a known inconsistency between the requirements of IFRS 10 and IAS 28 (2011) in the case of the sale of an asset to an associated company or a joint venture or the contribution of an asset to an associated company or a joint venture.

IASB has postponed the effective date of the changes indefinitely.

Annual Improvements to IFRSs (2015–2017)

Four IFRSs were amended in the Annual Improvements to IFRSs (2015–2017).

In IFRS 3, it was clarified that when a party to a joint arrangement obtains control of a business that is a joint operation and had rights to the assets and obligations for the liabilities relating to that joint operation immediately before the acquisition date, the transaction is a business combination achieved in stages. The acquirer shall therefore apply the requirements for a business combination achieved in stages, including remeasuring its previously held interest in the joint operation.

In IFRS 11, it was clarified that when an entity obtains joint control of a business that is a joint operation and had rights to the assets and obligations for the liabilities relating to that joint operation immediately before the acquisition date, the previously held interest in that business is not to be remeasured.

IAS 12 was amended to the extent that all income tax effects of dividend payments must be considered in the same way as the income on which the dividends are based.

Finally, in IAS 23, it was determined that when entities borrow funds in general for the acquisition of qualifying assets that those costs for borrowed capital specifically for the acquisition of qualifying assets should not be considered in the determination of the financing rate until their completion.

The amendments are – subject to E.U. endorsement – to be applied for the first time in the reporting period beginning on or after January 1, 2019.

Improvements to IAS 19 – Plan Amendment, Curtailment or Settlement

The amendments relate to the measurement of pension obligations based on updated assumptions if plan amendment, curtailment or settlement occurs. After such an event, the past service cost as well as any gains or losses on the basis of current actuarial assumptions and a comparison of the resulting pension benefits must be calculated before and after the change. The periods before and after the plan amendment, curtailment or settlement are treated separately in subsequent measurement. The amendments are – subject to E.U. endorsement – to be applied for the first time in the reporting period beginning on or after January 1, 2019.

Conceptual Framework

The revised Conceptual Framework issued on March 29, 2018, replaces the previous Conceptual Framework from 2010. The main changes primarily relate to the definition, recognition and measurement of assets and liabilities, as well as the differentiation between income and expense and other comprehensive income. Subject to adoption by E.U. legislation, amendments are effective as of January 1, 2020.

Amendments to References to the Conceptual Framework in IFRS Standards

The amendments update references to and quotes from the Conceptual Framework. The amendments are – subject to E.U. endorsement – to be applied for the first time in the reporting period beginning on or after January 1, 2020.

Amendments to IFRS 3 – Business Combinations

The amendments issued on October 22, 2018, clarify that a business is a set of activities and assets with at least one input and one substantive process that together significantly contribute to the ability to create outputs. Outputs are defined as the provision of goods and services to customers. The reference to cost reduction was removed. In addition, the new provisions also contain an optional concentration test designed to simplify identification of a business. Subject to adoption by E.U. legislation, the modified definition is to be applied to business combinations with an acquisition date on or after January 1, 2020.

Amendments to IAS 1 Financial Statement Presentation and IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors
The amendments issued on October 31, 2018, provide a uniform and more precise definition of the materiality of information provided in the financial statements, together with accompanying examples. In this connection, the definitions in the Conceptual Framework, IAS 1, IAS 8 and the IFRS Practice Statement 2 (Making Materiality Judgements) were harmonized. Subject to adoption by E.U. legislation, the amendments are effective as of January 1, 2020.

1.3 Group accounting principles

Scope of consolidation: The scope of consolidation is based on the application of the standards IFRS 10 and 11.

According to IFRS 10, a group consists of a parent entity and the subsidiaries controlled by the parent. "Control" of an investee assumes the simultaneous fulfillment of the following three criteria:
– The parent company holds decision-making power over the relevant activities of the investee
– The parent company has rights to variable returns from the investee
– The parent company can use its decision-making power to affect the variable returns

Based on corporate governance and any additional agreements, companies are analyzed for their relevant activities and variable returns, and the link between the variable returns and the extent to which their relevant activities could be influenced.

According to IFRS 11, which regulates the accounting of joint arrangements, a distinction must be made between joint ventures and joint operations. In the case of a joint venture, the parties that have joint control of a legally independent company have rights to the net assets of that arrangement. In joint operations, the parties that have joint control have direct rights to the assets and obligations for the liabilities relating to the arrangement. This requirement is particularly fulfilled if the production output of the joint arrangement is almost entirely transferred to the partners, through which the partners guarantee the joint arrangements' ongoing financing.

Companies whose corporate governance structures classify them as joint arrangements are analyzed to determine if they meet the criteria for joint ventures or joint operations in accordance with IFRS 11. Should the arrangement be structured through a separate vehicle, its legal form, contractual arrangements and all other facts and circumstances are reviewed.

In addition to BASF SE, the Consolidated Financial Statements include all material subsidiaries on a fully consolidated and all material joint operations on a proportionally consolidated basis. Companies whose business is dormant or of low volume, and are of minor importance for the presentation of a true and fair view of the net assets, financial position and results of operations, are not consolidated, but rather are reported under other shareholdings. These companies are carried at amortized cost and are written down in the case of an impairment. The aggregate assets and equity of these companies amount to less than 1% of the corresponding value at Group level.

Joint ventures and associated companies are accounted for using the **equity method** in the Consolidated Financial Statements. Associated companies are entities that are not subsidiaries, joint ventures or joint operations, and over whose operating and financial policies significant influence can be exercised. In general, this applies to companies in which BASF has an investment of between 20% and 50%. Equity-accounted income is reported as part of income from operations (EBIT).

Consolidation methods: Assets and liabilities of consolidated companies are uniformly recognized and measured in accordance with the principles described herein. For companies accounted for using the equity method, material deviations in measurement resulting from the application of other accounting principles are adjusted for.

Transactions between consolidated companies as well as intercompany profits resulting from trade between consolidated companies are eliminated in full; for joint operations, they are proportionally eliminated. Material intercompany profits related to companies accounted for using the equity method are eliminated.

Capital consolidation is conducted at the acquisition date according to the purchase method. Initially, all assets, liabilities and additional intangible assets that are to be capitalized are measured at fair value. Finally, the acquisition cost is compared with the proportional share of the net assets acquired at fair value. The resulting positive differences are capitalized as goodwill. Negative differences are reviewed once more, then recognized directly in the income statement.

The incidental acquisition costs of a business combination are recognized in the income statement under other operating expenses.

Foreign currency translation: The cost of assets acquired in foreign currencies and revenue from sales in foreign currencies are determined by the exchange rate on the date the transaction is recognized. Foreign currency receivables and liabilities are valued at the exchange rates on the balance sheet date. Changes in assets and liabilities arising from foreign currency translation are recognized in the income statement, and reported under other operating expenses or income, other financial result, and in the case of financial assets measured at fair value, in other comprehensive income.

Translation of foreign currency financial statements: The translation of foreign currency financial statements depends on the functional currency of the consolidated companies. For companies whose functional currency is not the euro, translation into the reporting currency is based on the closing rate method: Balance sheet items are translated into euros using closing rates on the balance sheet date; expenses and income are translated into euros at monthly average rates and accumulated for the year. The difference between a company's translated equity at historical rates at the time of acquisition or retention and its equity at closing rates on the balance sheet date is reported separately in equity under other comprehensive income (translation adjustments) and is recognized in income only upon the company's disposal.

For certain companies outside the eurozone or U.S. dollar zone, the euro or U.S. dollar is the functional currency. In such cases, financial statements prepared in the local currency are translated into the functional currency using the temporal method: All nonmonetary assets and related depreciation and amortization as well as equity are translated at the exchange rate applying to the respective transactions. All other balance sheet items are translated using closing rates on the balance sheet date; other expenses and income are translated at monthly average rates. The resulting translation differences are recognized in the income statement under other operating income or expenses. If necessary, financial statements in the functional currency are translated into the presentation currency according to the closing rate method.

Selected exchange rates

€1 equals

	Closing rates		Average rates	
	Dec. 31, 2018	Dec. 31, 2017	2018	2017
Brazil (BRL)	4.44	3.97	4.31	3.60
China (CNY)	7.88	7.80	7.81	7.63
United Kingdom (GBP)	0.89	0.89	0.88	0.88
Japan (JPY)	125.85	135.01	130.40	126.68
Malaysia (MYR)	4.73	4.85	4.76	4.85
Mexico (MXN)	22.49	23.66	22.71	21.32
Norway (NOK)	9.95	9.84	9.60	9.33
Russia (RUB)	79.72	69.39	74.04	65.92
Switzerland (CHF)	1.13	1.17	1.15	1.11
South Korea (KRW)	1,277.93	1,279.61	1,299.07	1,276.52
United States (USD)	1.15	1.20	1.18	1.13

1.4 Accounting policies

Revenue recognition

Sales revenue from contracts with customers is recognized in the amount of the consideration BASF expects to receive in exchange for the goods or services when control of the goods or services is transferred to the customer.

BASF primarily generates income from the sale of goods. It is recognized as sales revenue at the point in time when control of the product is transferred from BASF to the customer; this is generally the case on delivery. If products are delivered to a consignment warehouse, BASF normally retains control. Revenue is recognized when the customer consumes the goods. Long-term supply agreements usually contain variable prices dependent on the development of raw materials prices and variable volumes.

Sales revenue from the sale or licensing of technologies or technical expertise are recognized according to the contractually agreed-upon transfer of the rights and obligations associated with these technologies. Recognition of revenue from granting licenses for technology and intellectual property depends on whether they are based on usage rights or access rights. Revenue from a usage-based rights is recognized at the point in time when the license is granted. Revenue from access-based rights is recognized over the term of the contract with the customer. Sales revenue from sales and usage-based licenses is recognized in accordance with the underlying settlement agreements.

Sales revenue from the sale of precious metals to industrial customers is recognized on delivery and the corresponding purchase prices are recorded as cost of sales. In the trading of precious metals and their derivatives with traders, where there is usually no physical delivery, revenues are netted against the associated costs.

Services rendered to customers are invoiced according to work completed and recognized as revenue accordingly.

For more information on the allocation of sales revenue, see Note 4 from page 211 onward and the Management's Report from page 46 onward

If the consideration promised in a contract includes variable components, BASF estimates the amount of consideration to which it will be entitled in exchange for transferring the promised goods to the customer. Variable components are only recognized as revenue when it is highly unlikely that a reversal of sales revenue will occur. Expected rebates and other trade discounts are accrued in accordance with the principle of individual measurement to cover probable risks related to the return of goods, future warranty obligations and other claims.

BASF grants customers rebates if the goods purchased by the customer exceed a contractually defined threshold within the period specified. Rebates are usually deducted from the amounts payable by the customer. Depending on the terms of the underlying contract, BASF uses either the expected value or the most likely amount to estimate the variable consideration for expected future rebates. The method that is the best predictor of variable consideration is primarily determined by the number of volume thresholds contained in the contract. All available historical, current and forecast information is taken into account when calculating rebates.

Customers generally have a right of return if the supplied goods do not meet the agreed specifications. Furthermore, certain contracts grant the customer the right to return the goods within a defined period of time. BASF uses the expected value method to estimates the goods that will be returned, as this method is the best predictor of the amount of variable consideration to which BASF will be entitled.

BASF applies the practical expedient in IFRS 15, which means that it does not adjust the promised amount of consideration for the effects of a significant financing component if, at contract inception, it is expected that the period between the transfer of the promised goods or services to a customer and payment for these goods or services by the customer will be one year or less.

Pursuant to IFRS 15, no information on remaining performance obligations as of December 31, 2018 that have an expected original term of one year or less was reported.

Assets

Acquired intangible assets (excluding goodwill) with defined useful lives are generally measured at cost less straight-line amortization. The useful life is determined using the period of the underlying contract or the period of time over which the intangible asset can be expected to be used.

Impairments are recognized if the recoverable amount of the asset is lower than the carrying amount. The recoverable amount is the higher of either fair value less costs to sell or the value in use. The value in use is determined on the basis of future cash inflows and outflows, and the weighted average cost of capital after taxes, depending on tax rates and country-related risks. If the reasons for an impairment no longer exist, the write-downs are reversed up to the value of the asset had an impairment not been recognized. Depending on the type of intangible asset, amortization is reported under cost of sales, selling expenses, research and development expenses or other operating expenses.

Intangible assets with indefinite useful lives are trade names and trademarks that have been acquired as part of acquisitions. These are measured at cost and tested for impairment annually, or if there is an indication that their value has declined.

Internally generated intangible assets primarily comprise internally developed software. Such software and other internally generated intangible assets are measured at cost and amortized over their estimated useful lives. Impairments are recognized if the carrying amount of an asset exceeds the recoverable amount. In addition to those costs directly attributable to the asset, costs of internally generated intangible assets also include an appropriate portion of overhead costs.

The estimated useful lives and amortization methods of intangible assets are based on historical values, plans and estimates. The weighted average amortization periods of intangible assets were as follows:

Average amortization in years

	2018	2017
Distribution, supply and similar rights	15	15
Product rights, licenses and trademarks	19	20
Know-how, patents and production technologies	15	15
Internally generated intangible assets	4	4
Other rights and values	4	5

Emission rights: Emission rights certificates, which are granted free of charge by the German Emissions Trading Authority (Deutsche Emissionshandelsstelle) or a similar authority in other countries, are recognized in the balance sheet with a value of zero. Certificates purchased on the market are capitalized at cost as intangible assets. Emissions generated create an obligation to surrender the emission certificates. Emission certificates purchased on the market are subsequently measured at fair value, up to a maximum of the amount of the acquisition costs. If the fair value is lower than the carrying amount on the balance sheet date, the emission rights are impaired.

Goodwill is only written down in the case of an impairment. Impairment testing is performed once a year and whenever there is an indication of impairment. Goodwill impairments are not reversed.

Property, plant and equipment are measured at cost less depreciation and impairment over their useful lives. The revaluation method is not applied. Low-value assets are fully expensed in the year of acquisition.

The cost of self-constructed plants includes direct costs, appropriate allocations of material and production overhead costs, and a share of the general administrative costs of the divisions involved in the construction of the plants.

Expenditures related to the scheduled maintenance of large-scale plants are capitalized separately and depreciated using the straight-line method over the period until the next planned turnaround. Costs for the replacement of components are recognized as assets if an additional future benefit is expected. The carrying amount of the replaced components is derecognized. Costs for maintenance and repair as part of normal business operations are recognized as an expense.

Both movable and immovable fixed assets were, for the most part, depreciated using the straight-line method, with the exception of production licenses and plants in the oil and gas business, which has been classified as a discontinued operation since the end of September 2018. Until then, these were primarily depreciated based on use in accordance with the unit of production method. The estimated useful lives and depreciation methods of property, plant and equipment are based on historical values, plans and estimates. The depreciation methods, useful lives and residual values are reviewed at each balance sheet date. The weighted average depreciation periods of continuing operations were as follows:

Weighted average depreciation in years

	2018	2017
Buildings and structural installations	22	21
Machinery and technical equipment	11	10
Miscellaneous equipment and fixtures	7	6

Impairments are recognized if the recoverable amount of the asset is lower than the carrying amount. The measurement is based on fair value less costs to sell or the value in use. The value in use is determined on the basis of future cash inflows and outflows, and the weighted average cost of capital after taxes, depending on tax rates and country-related risks. An impairment is recognized for the difference between the carrying amount and the recoverable amount. If the reasons for an impairment no longer exist, the write-downs are reversed up to the value of the asset had an impairment not been recognized.

Investment properties held to realize capital gains or rental income are immaterial. They are valued at the lower of fair value or acquisition cost less depreciation.

Leases: A lease is an agreement whereby the lessor conveys to the lessee the right to use an asset for an agreed period of time in return for a payment or series of payments. Lease contracts are classified as either finance or operating leases.

Assets subject to operating leases are not capitalized. Lease payments are recognized in the income statement in the period they are incurred.

A lease is classified as a finance lease if it transfers all material risks and rewards related to the leased asset. Assets subject to a finance lease are capitalized at the lower of the fair value of the leased assets or the present value of the minimum lease payments. A lease liability is recorded in the same amount. The periodic lease payments must be divided into principal and interest components. The principal component reduces the liability, while the interest component represents an interest expense. Depreciation is recognized over the shorter of the useful life of the asset or the period of the lease.

Leases can be embedded within other contracts. If separation is required under IFRS, the embedded lease is recorded separately from its host contract and each component of the contract is carried and measured in accordance with the applicable regulations.

Borrowing costs: Borrowing costs directly incurred as part of the acquisition, construction or production of a qualifying asset are capitalized as part of the acquisition or production cost of that asset. A qualifying asset is an asset for which the time period necessary to make it ready for its intended use or sale is longer than one year. Borrowing costs are capitalized up to the date the asset is ready for its intended use. The borrowing costs were calculated based on a rate of 1.5% (previous year: 2.0%) and adjusted on a country-specific basis, if necessary. All other borrowing costs are recognized as an expense in the period in which they are incurred.

Government grants: Government grants related to the acquisition or construction of property, plant and equipment reduce the acquisition or construction cost of the respective assets. Other government grants or government assistance are recognized immediately as other operating income or treated as deferred income and released over the underlying period.

Investments accounted for using the equity method: The carrying amounts of these companies are adjusted annually based on the pro rata share of net income, dividends and other changes in equity. Should there be indications of a reduction in the value of an investment, an impairment is recognized in the income statement.

Inventories are measured at acquisition cost or cost of conversion based on the weighted average method. If the market price or the fair value of the sales products, which are based on the net realizable values, is lower, then the sales products are written down to this lower value. The net realizable value is the estimated price in the ordinary course of business less the estimated costs of completion and the estimated selling costs.

In addition to direct costs, cost of conversion includes an appropriate allocation of production overhead costs based on normal utilization rates of the production plants, provided that they are related to the production process. Pensions, social services and voluntary social benefits are also included, as well as allocations for administrative costs, provided they relate to the production. Borrowing costs are not included in cost of conversion.

Inventories may be written down if the prices for the sales products decline, or in cases of a high rate of days sales of inventory (DSI). Write-downs on inventories are reversed if the reasons for them no longer apply.

The exception made by IAS 2 for traders is applied to the measurement of precious metal inventories. Accordingly, inventories held exclusively for trading purposes are to be measured at fair value less costs to sell. All changes in value are recognized in the statement of income.

Deferred taxes: Deferred taxes are recorded for temporary differences between the carrying amount of assets and liabilities in the financial statements and the carrying amounts for tax purposes as well as for tax loss carryforwards and unused tax credits. This also comprises temporary differences arising from business combinations, with the exception of goodwill. Deferred tax assets and liabilities are calculated using the respective country-specific tax rates applicable for the period in which the asset or liability is realized or settled. Tax rate changes enacted or substantively enacted on or before the balance sheet date are taken into consideration.

Deferred tax assets are offset against deferred tax liabilities provided they are related to the same taxation authority and have the same maturities. Surpluses of deferred tax assets are only recognized provided that the tax benefits are likely to be realized. The valuation of deferred tax assets is based on the probability of a reversal of the differences and the assessment of the ability to utilize tax loss carryforwards and unused tax credits. This depends on whether future taxable profits will exist during the period in which temporary differences are reversed and in which tax loss carryforwards and unused tax credits can be claimed. The valuation of deferred tax assets is based on internal projections of the future earnings of the particular Group company.

Changes in deferred taxes in the balance sheet are recorded as deferred tax expense or income if the underlying transaction is not to be recognized directly in equity or in income and expenses recognized in equity. For those effects which have been recognized in equity, changes to deferred tax assets and tax liabilities are also recognized directly in equity.

Deferred tax liabilities are recognized for differences between the proportional IFRS equity and the tax base of the investment in a consolidated subsidiary if a reversal of these differences is expected in the foreseeable future. Deferred tax liabilities are recognized for dividend distributions planned for the following year if these distributions lead to a reversal of temporary differences.
For more information, see Note 11 from page 223 onward

Financial instruments

Financial assets and financial liabilities are recognized in the consolidated balance sheet when the BASF Group becomes a party to a financial instrument. Financial assets are derecognized when BASF no longer has a contractual right to the cash flows from the financial asset or when the financial asset is transferred together with all material risks and rewards of ownership and BASF does not have control of the financial asset after it has been transferred. For example, receivables are derecognized when they are definitively found to be uncollectible. Financial liabilities are derecognized when the contractual obligations expire, are discharged or cancelled. Regular-way purchases and sales of financial instruments are accounted for using the settlement date; in precious metals trading, the day of trading is used.

The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. If pricing on an active market is available, for example in the form of share prices, these are used as the basis for the measurement. Otherwise, the measurement is based on internal measurement models using current market parameters or external measurements, for example, from banks. These internal measurements predominantly use the net present value method and option pricing models.

BASF began applying IFRS 9 as of January 1, 2018. Except for financial assets measured at fair value through profit or loss, this requires the recognition of impairments for expected credit losses, independent of the existence of any actual default events and individual valuation allowances if evidence of a permanent need for impairment exists. If this evidence no longer exists, the impairment is reversed in the statement of income up to the carrying amount of the asset had the default event not occurred. Valuation allowances are generally recognized in separate accounts.

The classification and measurement of financial assets is based on the one hand on the cash flow condition (the "solely payments of principle and interest" criterion), that is, the contractual cash flow characteristics of an individual financial asset. On the other hand, it also depends on the business model used for managing financial asset portfolios. Based on these two criteria, BASF uses the following measurement categories for financial assets:

- **Financial assets recognized at fair value through profit or loss** include all financial assets whose cash flows are not solely payments of principal and interest in accordance with the cash flow condition established in IFRS 9. At BASF, derivatives are allocated to this measurement category, for example. BASF does not generally exercise the fair value option in IFRS 9, which permits the allocation of financial instruments not to be measured at fair value through profit or loss on the basis of the cash flow condition or the business model criterion to the above category under certain circumstances.
- **Financial assets measured at amortized cost** include all assets with contractual terms that give rise to cash flows on specific dates, provided that these cash flows are solely payments of principal and interest on the principal amount outstanding in accordance with the cash flow condition in IFRS 9, to the extent that the asset is held with the intention of collecting the expected contractual cash flows over its term. At BASF, this measurement category includes trade accounts receivable, as well as receivables reported under other receivables and miscellaneous assets and certain securities.
Initial measurement of these assets is generally at fair value, which usually corresponds to the transaction price at the time of acquisition. Subsequent measurement effects are recognized in income using the effective interest method.
Impairments are recognized for expected credit losses in both initial and subsequent measurement, even before the occurrence of any default event. If the counterparty is considered as having defaulted, an individual valuation allowance is generally recognized for the financial assets measured at amortized cost. In addition, a valuation allowance must be recognized when the contractual conditions that form the basis for the receivable are changed through renegotiation in such a way that the present value of the future cash flows decreases.
The extent of expected credit losses is determined based on the credit risk of a financial asset, as well as any changes to this credit risk: If the credit risk of a financial asset has increased significantly since initial recognition, expected credit losses are generally recognized over the lifetime of the asset. If, however, the credit risk has not increased significantly in this period, impairments are generally only recognized for the 12-month expected credit losses. By contrast, under the simplified approach for determining expected credit losses permitted by IFRS 9, impairments for receivables such as lease receivables and trade accounts receivable always cover the lifetime expected credit losses of the receivable concerned.
At BASF, the credit risk of a financial asset is assessed using both internal information and external rating information on the respective counterparty. A significant increase in the counterparty's credit risk is assumed if its rating is lowered by a certain number of notches. The significance of the increase in the credit risk is not reviewed for trade accounts receivable or lease receivables. Furthermore, it is generally assumed that the credit risk for a counterparty with a high credit rating will not have increased significantly.
Regional and, in certain circumstances, industry-specific factors and expectations are taken into account when assessing the need for a valuation allowance as part of the calculation of expected credit losses and individual valuation allowances. In addition, BASF uses internal and external ratings and the assessments of debt collection agencies and credit insurers, when available. Individual valuation allowances are also based on experience relating to customer solvency and customer-specific risks. Factors such as credit insurance, which covers a portion of receivables measured at amortized cost, are likewise considered when calculating valuation allowances. Bank guarantees and letters of credit are used to an immaterial extent. Expected credit losses and individual valuation allowances are only calculated for those receivables that are not covered by insurance or other collateral. The valuation allowances for receivables whose insurance includes a deductible are not recognized in excess of the amount of the deductible.

A decrease in valuation allowances due, for example, to a reduction in the credit risk of a counterparty or an objective event occurring after the valuation allowance is recorded in profit or loss. Reversals of valuation allowances may not exceed amortized cost, less any expected future credit losses.

– **Financial assets measured at fair value through other comprehensive income** include all assets with contractual terms that give rise to cash flows on specified dates, which are solely payments of principal and interest on the principal amount outstanding in accordance with the cash flow condition in IFRS 9, to the extent that the asset is not just held with the intention of collecting the expected contractual cash flows over its term, but also generating cash flows from its sale. At BASF, certain securities that are classified as debt instruments are allocated to this category. BASF does not exercise the option to subsequently measure equity instruments through other comprehensive income.
  Assets measured at fair value through other comprehensive income are initially measured at fair value, which usually corresponds to the nominal value of the securities allocated to this category at the time of acquisition. Subsequent measurement is likewise at fair value. Changes in the time value are recognized in other comprehensive income and reclassified to the statement of income when the asset is disposed of.
  Impairments on financial assets measured at fair value through other comprehensive income are calculated in the same way as impairments on financial assets measured at amortized cost and recognized in profit or loss. The following measurement categories are used for financial liabilities:
– **Financial liabilities that are measured at amortized cost** generally include all financial liabilities, provided these do not represent derivatives. They are generally measured at fair value at the time of initial recognition, which usually corresponds to the value of the consideration received. Subsequent measurement is recognized in profit or loss at amortized cost using the effective interest method. At BASF, for example, bonds and liabilities to banks reported under financial indebtedness are measured at amortized cost.
– **Financial liabilities recognized at fair value through profit or loss** contain derivative financial liabilities. These are likewise measured at the value of the consideration received as the fair value of the liability on the date of initial recognition. The latter also represents the measurement basis for these liabilities in subsequent measurement. The option to subsequently measure financial liabilities at fair value is not exercised.
  Derivative financial instruments can be embedded within other contracts, creating a hybrid financial instrument. If IFRS requires separation, the embedded derivative is accounted for separately from its host contract and measured at fair value. If IFRS 9 does not provide for separation, the hybrid instrument is accounted for at fair value in its entirety.

Financial guarantees of the BASF Group are contracts that require compensation payments to be made to the guarantee holder if a debtor fails to make payment when due under the terms of a transaction entered into with the holder of the guarantee. Financial guarantees issued by BASF are measured at fair value upon initial recognition. In subsequent periods, these financial guarantees are carried at the higher of amortized cost or the best estimate of the present obligation as of the reporting date.

In **cash flow hedges,** future cash flows and the related income and expenses are hedged against the risk of changes in fair value. To this end, future underlying transactions and the corresponding hedging instruments are designated and the cost of hedging are a cash flow hedge accounting relationship for accounting purposes. The effective portion of the change in fair value of the hedging instrument, which often meets the definition of a derivative, and the cost of hedging are recognized directly in equity under other comprehensive income over the term of the hedge, taking deferred taxes into account. The ineffective portion is recognized immediately in the income statement. In the case of future transactions that lead to recognition of a nonfinancial asset or a nonfinancial liability, the cumulative fair value changes of the hedge in equity are generally charged against the acquisition costs of the hedged item on its initial recognition. For hedges based on financial assets, financial liabilities or future transactions, cumulative fair value changes of the hedges are transferred from equity to the income statement in the reporting period in which the hedged item is recognized in the income statement. The maturity of the hedging instrument is determined based on the effective date of the future transaction.

When **fair value hedge accounting** is used, the asset or liability recognized is hedged against the risk of a change in fair value. The hedging instruments used, which often take the form of a derivative, are measured at fair value and changes in fair value are recognized in the statement of income. The carrying amounts of the assets or liabilities designated as the underlying transaction are also measured at fair value through the statement of income.

BASF applied IAS 39 in 2017. It required recognition of an impairment loss if there was evidence of a permanent impairment of a financial instrument not measured at fair value through profit or loss. If the reason for the impairment of loans and receivables as well as held-to-maturity financial instruments ceased to exist, the impairment was reversed up to the amortized cost and recognized in the income statement. Impairments on financial instruments were recognized in separate accounts.

Financial assets and liabilities were divided into the following measurement categories:

- **Financial assets and liabilities at fair value recognized in the income statement** consisted of derivatives and other trading instruments. At BASF, this measurement category included derivatives only. Derivatives were reported in other receivables and miscellaneous assets or other liabilities. BASF did not make use of the fair value option under IAS 39. The calculation of fair values was based on market parameters or measurement models based on such parameters. In some exceptional cases, the fair value was calculated using parameters that are not observable on the market.
- **Loans and receivables** comprised financial assets with fixed or determinable payments, which were not quoted on an active market and were not derivatives or classified as available-for-sale. This measurement category included trade accounts receivable as well as other receivables and loans reported under other receivables and miscellaneous assets. Initial measurement was at fair value, which generally corresponded to the nominal value of the receivable or loan. Interest-free and low-interest long-term loans and receivables were recorded at present value. Subsequent measurement recognized in income was generally at amortized cost using the effective interest method. If there was objective evidence for an impairment of a receivable or loan, an individual valuation allowance was made. When assessing the need for a valuation allowance, regional and sector-specific conditions were considered. In addition, BASF used internal and external ratings, as well as the assessments of debt collection agencies and credit insurers, when available. A portion of receivables was covered by credit insurance. Bank guarantees and letters of credit were used to an immaterial extent. Valuation allowances were only recognized for those receivables not covered by insurance or other collateral. The valuation allowances for receivables whose insurance included a deductible were not recognized in excess of the amount of the deductible. Write-downs were based on historical values relating to customer solvency and the age, period overdue, insurance policies and customer-specific risks. In addition, a valuation allowance had to be recognized when the contractual conditions forming the basis for the receivable were changed through renegotiation in such a way that the present value of the future cash flows decreased. Furthermore, valuation allowances were recognized for receivables based on transfer risks for certain countries. If, in a subsequent period, the amount of the impairment decreased, and the decrease could be objectively attributed to an event occurring after the valuation allowance was made, it was reversed in the income statement. Reversals of valuation allowances did not exceed amortized cost. Loans and receivables were derecognized when they were definitively found to be uncollectible.
- **Held-to-maturity financial assets** consisted of nonderivative financial assets with fixed or determinable payments and a fixed term, for which there was the intent and ability to hold until maturity, and which did not fall under other valuation categories. They were initially recognized at fair value, which corresponded to the nominal value in most cases. Subsequent measurement was at amortized cost using the effective interest method. BASF did not have any material financial assets that fell under this category.
- **Available-for-sale financial assets** comprised financial assets that were not derivatives and did not fall under any of the above valuation categories. This measurement category comprised shareholdings reported under the item other financial assets, which were not accounted for using the equity method, as well as short and long-term securities. Measurement was at fair value. Changes in fair value were recognized directly in equity (other comprehensive income) and were only recognized in the income statement when the assets had been disposed of or impaired. Subsequent reversals were recognized directly in equity (other comprehensive income). In the case of debt instruments only, reversals were recognized in the income statement up to the amount of the original impairment; reversals above this amount were recognized directly in equity. If the fair value of available-for-sale financial assets fell below acquisition costs, the assets were impaired if the decline in value was material and was considered permanent. The fair values were determined using market prices. Shareholdings whose fair value could not be reliably determined were carried at cost and written down in the case of impairment. Cost represented the best estimate of the fair value of these shareholdings. This category included investments in other shareholdings, provided that these shares were not publicly traded. There were no plans to sell significant shares in these shareholdings.

- **Financial liabilities that were not derivatives** were initially measured at fair value. This usually corresponded to the amount received. Subsequent measurement was at amortized cost using the effective interest method.
- **Cash and cash equivalents** consisted primarily of cash on hand and bank balances with maturities of less than three months.

Derivative financial instruments could be embedded within other contracts. If IAS 39 required separation, the embedded derivative was accounted for separately from its host contract and measured at fair value.

Other comprehensive income

The expenses and income shown in other comprehensive income are divided into two categories: Items that will be recognized in the income statement in the future (known as "recycling") and items that will not be reclassified to the income statement in the future. The first category includes translation adjustments, the measurement of securities at fair value, and changes in the fair value of derivatives held to hedge future cash flows and net investments in foreign operations. Items in other comprehensive income that will not be reclassified to the income statement at a future date include effects from the remeasurement of defined benefit plans.

Liabilities

Provisions for pensions and similar obligations: Provisions for pensions are calculated on an actuarial basis in accordance with the projected unit credit method using assumptions relating to the following valuation parameters, among others: future developments in compensation, pensions and inflation, employee turnover and the life expectancy of beneficiaries. Obligations are discounted based on the market yields on high-quality corporate fixed-rate bonds rated between "AA–" to "AA+" by at least one of the following rating agencies: Fitch, Moody's or Standard & Poor's.

Similar obligations, especially those arising from commitments by North American Group companies to pay the healthcare costs and life insurance premiums of retired staff and their dependents, are reported under provisions for similar obligations.

Actuarial reports are used to calculate the amount of pension provisions.

Actuarial gains and losses from changes in estimates relating to the actuarial assumptions used to calculate defined benefit obligations, the difference between standardized and actual returns on plan assets, as well as the effects of the asset ceiling are recognized directly in equity as other comprehensive income.

For more information on provisions for pensions and similar obligations, see Note 22 from page 240 onward

Other provisions: Other provisions are recognized when there is a present obligation as a result of a past event and when there is a probable outflow of resources whose amount can be reliably estimated. Provisions are recognized at the probable settlement value.

Provisions for German trade income tax, German corporate income tax and similar income taxes are calculated and recognized based on the expected taxable income of the consolidated companies less any prepayments that have been made. Provisions are set up for interest accrued. Other taxes to be assessed are considered accordingly.

Provisions are established for certain environmental protection measures and risks if there is a present legal or constructive obligation arising from a past event, and the expected cash outflow can be estimated with sufficient reliability.

In addition, other provisions also cover expected costs for dismantling existing plants and buildings, rehabilitating contaminated sites, recultivating landfills, removal of environmental contamination from existing production or storage sites and similar measures. If BASF is the only responsible party that can be identified, the provision covers the entire expected claim. At sites operated together with one or more partners, the provision generally covers only BASF's share of the expected claim. The determination of the amount of the provision is based on the available technical information on the site, the technology used, legal regulations, and official obligations.

Provisions are recognized for expected severance payments or similar personnel expenses as well as for demolition expenses and other charges related to restructuring measures that have been planned and publicly announced by management.

Provisions for long-service and anniversary bonuses are predominantly calculated based on actuarial principles. For contracts signed under phased retirement programs, approved supplemental payments are accrued in installments until the end of the exemption phase at the latest. Accounting and measurement follow the German Accounting Standards Committee's Implementation Guidance 1 (IFRS) dated December 2012.

Other provisions also cover risks resulting from legal disputes and proceedings, provided the criteria for recognizing a provision are fulfilled. In order to determine the amount of the provisions, the company takes into consideration the facts related to each case, the size of the claim, claims awarded in similar cases and independent expert advice as well as assumptions regarding the probability of a successful claim and the range of possible claims. Actual costs can deviate from these estimates.

For more information, see Note 26 from page 250 onward

The probable amount required to settle noncurrent provisions is discounted if the effect of discounting is material. In this case, the provision is recognized at present value. Assumptions must be made in determining the discount rate (2018: 1.5%; 2017: 2.0%) used for calculating noncurrent provisions. Financing costs related to unwinding the discount of provisions in subsequent periods are shown in other financial result.

Other accounting policies

Business combinations: In business combinations, the acquired assets and liabilities are recognized at fair value on the date the acquirer effectively obtains control. The fair value of acquired assets and assumed liabilities at the date of acquisition, as well as the useful lives of the acquired assets, are determined on the basis of assumptions. Measurement is largely based on projected cash flows. Actual cash flows can deviate significantly from those. Independent external appraisals are used for the purchase price allocation of material business combinations. Valuations in the course of business combinations are based on existing information as of the acquisition date.

Groups of assets and liabilities held for sale (disposal groups): These comprise those assets and directly associated liabilities shown separately on the balance sheet whose sale in the context of a single transaction is highly probable. A transaction is assumed to be highly probable if there are no significant risks of completion of the transaction, which usually requires the conclusion of binding contracts. The assets and liabilities of disposal groups are recognized at the lower of the sum of their carrying amounts or fair value less costs to sell; this does not apply to assets that do not fall under the valuation principles of IFRS 5. Depreciation of noncurrent assets and the use of the equity method are suspended.

Discontinued operations: These are classified as held for sale and are presented as discontinued operations in BASF's Consolidated Financial Statements in accordance with IFRS 5. Until closing, the income after taxes of discontinued operations will be shown in income after taxes of the BASF Group as a separate item (income after taxes from discontinued operations). The BASF Group's sales and earnings were retroactively adjusted for the consolidated figures for discontinued operations as of the beginning of the fiscal year. The prior-year figures were restated. In addition, the assets and liabilities of the discontinued operations were reclassified to a disposal group (assets or liabilities of disposal groups). Depreciation of noncurrent assets and the use of the equity method are suspended as of the date when the disposal group is initially presented. The statement of cash flows was not restated. The activities of discontinued operations are not allocated to any reportable segment in financial reporting.

For more information, see Note 2.5 from page 209 onward and Note 4 from page 211 onward

Exploration and development expenditures in the discontinued **oil and gas** business are accounted for using the successful efforts method. Under this method, costs of successful exploratory drilling as well as successful and dry development wells are capitalized.

The unit of production method at the field or reservoir level was used to depreciate assets from oil and gas production. Depreciation is generally calculated on the basis of production in the period in relation to the proven, developed reserves.

The intangible asset from the marketing contract for natural gas from the Yuzhno Russkoye natural gas field is amortized based on BASF's share of the produced and distributed volumes.

Intangible assets in the discontinued oil and gas business relate primarily to exploration and production rights. During the exploration phase, these are not subject to amortization but are tested for impairment annually. When economic success is determined, the rights are amortized in accordance with the unit of production method.

Amortization and depreciation of intangible assets and property, plant and equipment of the discontinued oil and gas business were included in the earnings of the BASF Group through September 2018.

Provisions for restoration obligations concern the filling of wells and the removal of production facilities upon the termination of production. When the obligation arises, the provision is measured at the present value of the future restoration costs. An asset of the same amount is capitalized as part of the carrying amount of the plant concerned and is depreciated along with the plant. The discount on the provision is unwound annually until the time of the planned restoration.

The assumptions regarding the long-term development of oil and gas prices are significant for impairment tests in the discontinued oil and gas business. The internal company projections are based on an empirical analysis of global oil and gas supply and demand. Short-term estimates up to three years also consider the current prices on active markets or forward transactions. In long-term estimates, assumptions were made regarding factors such as inflation, production quantities and costs as well as energy efficiency and the substitution of energy sources. Using external sources and reports, the oil and gas price estimates were regularly checked for plausibility.

A valuation model based on a field-related valuation approach is used for the Exploration & Production unit in the discontinued oil and gas business. This takes into account 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. Allowing for these parameters, the cost of capital rate after taxes varied from 6.56% to 10.63% (2017: from 7.92% to 12.85%) and before taxes from 9.62% to 30.37% (2017: from 11.32% to 36.99%).

Use of estimates and assumptions in preparing the Consolidated Financial Statements

The carrying amount of assets, liabilities and provisions, contingent liabilities and other financial obligations reported in the Consolidated Financial Statements depends on the use of estimates, assumptions and use of discretionary scope. Specific estimates or assumptions used in individual accounting or valuation methods are disclosed in their respective sections. They are based on the circumstances and estimates on the balance sheet date and thus affect the amounts of income and expenses shown for the reporting periods presented. These assumptions primarily relate to the determination of discounted cash flows in the context of impairment tests and purchase price allocations; the useful lives of property, plant and equipment and intangible assets; the carrying amount of shareholdings; and the measurement of provisions for items such as employee benefits, warranties, trade discounts, environmental protection and taxes. Although uncertainty is appropriately incorporated in the valuation factors, actual results can differ from these estimates.

For planning purposes in 2019, BASF assumes an oil price of \$70/bbl (Brent) and for gas of approximately €19/MWh (roughly \$7/mmBtu).

Impairment tests on assets are carried out whenever certain triggering events indicate potential impairment. External triggering events include, for example, changes in customer industries, technologies used and economic downturns. Internal triggering events for an impairment test include lower product profitability, planned restructuring measures or physical damage to assets. Impairment tests are based on a comparison of the carrying amount and the recoverable amount. The recoverable amount is the higher of fair value less costs to sell and the value in use. As a rule, value in use is determined using the discounted cash flow method. The estimation of cash flows and the assumptions used consider all information available on the respective balance sheet date on the future development of the operating business. Actual future developments may vary. Impairment testing relies upon the cash-generating unit's long-term earnings forecasts, which are based on macroeconomic trends. The weighted average cost of capital (WACC) based on the capital asset pricing model plays an important role in impairment testing. It comprises a risk-free rate, the market risk premium and the spread for the credit risk. Additional important assumptions are the forecasts for the detailed planning period and the terminal growth rates used.

For more information, see Note 14 from page 228 onward

An impairment is recognized if the recoverable amount of the asset is lower than the carrying amount. The impaired asset (excluding goodwill) is written down by the amount of the difference between these amounts.

The goodwill impairment test is based on cash-generating units. At BASF, these largely correspond to the business units, or in individual cases the divisions. If there is a need for a valuation allowance, the existing goodwill is, if necessary, completely written off as a first step. If there is further need for a valuation allowance, this is allocated to the remaining assets of the cash-generating unit. Goodwill impairments are reported under other operating expenses.

2 Scope of consolidation

2.1 Changes in scope of consolidation

In 2018, a total of 331 companies were included, either partly or wholly, in the scope of consolidation for the Consolidated Financial Statements (2017: 294). Of these, 42 companies were first-time consolidations (2017: 10). Since the beginning of 2018, a total of five companies (2017: 10) were deconsolidated due to divestiture, merger, liquidation or immateriality.

First-time consolidations in 2018 comprised:
- 22 acquired companies with headquarters in Europe (11; one of those is in Germany), North America (two), South America, Africa, Middle East (six) and Asia Pacific (three)
- three newly established companies with headquarters in Europe (two; none of which in Germany) and Asia Pacific (one)
- 17 companies that had not been consolidated at the time of initial inclusion in the Consolidated Financial Statements in Europe (five; two of those in Germany), North America (eight), South America, Africa, Middle East (two) and Asia Pacific (two)

Of the 42 companies that were consolidated in the Consolidated Financial Statements for the first time in 2018, 35 companies were included for the first time due to the addition of significant parts of Bayer's seed and non-selective herbicide business (13) and its vegetable seed business (22) as acquired, new or initially consolidated entities.

First-time consolidations in 2017 comprised:
- Five acquired companies with headquarters in Europe and North America
- One newly established company with headquarters in Asia Pacific
- One newly established company with headquarters in South America, Africa, Middle East
- Three companies with headquarters in Europe that had not been consolidated at the time of initial inclusion in the Consolidated Financial Statements

Although BASF does not hold majority shares in ZAO Gazprom YRGM Trading, whose assets and liabilities are part of the disposal group, BASF is entitled to the earnings of the company due to profit distribution arrangements. As a result, the company is fully consolidated in the Group Consolidated Financial Statements.

A list of the companies included in the Consolidated Financial Statements and a list of all companies in which BASF SE has a shareholding as required by section 313(2) of the German Commercial Code (HGB) is provided in the list of shares held.

For more information, see Note 3 on page 211
For more information, see basf.com/en/corporategovernance

Scope of consolidation

	Europe	of which Germany	North America	Asia Pacific	South America, Africa, Middle East	2018	2017
As of January 1	**153**	**56**	**43**	**71**	**27**	**294**	**294**
of which proportionally consolidated	6	–	–	2	–	8	8
First-time consolidations	18	3	10	6	8	42	10
of which proportionally consolidated	–	–	–	–	–	–	–
Deconsolidations	1	–	1	2	1	5	10
of which proportionally consolidated	–	–	–	–	–	–	–
As of December 31	**170**	**59**	**52**	**75**	**34**	**331**	**294**
of which proportionally consolidated	6	–	–	2	–	8	8

Overview of impact of changes to the scope of consolidation (excluding acquisitions and divestitures)

	2018		2017	
	Million €	%	Million €	%
Sales	**2**	**0.0**	**2**	**0.0**
Noncurrent assets	2	0.0	(7)	0.0
of which property, plant and equipment	79	0.4	1	0.0
Current assets	(8)	0.0	1	0.0
of which cash and cash equivalents	–	–	(1)	0.0
Assets	**(6)**	**0.0**	**(6)**	**0.0**
Equity	(1)	0.0	3	0.0
Noncurrent liabilities	1	0.0	8	0.0
of which financial indebtedness	–	–	–	–
Current liabilities	(6)	0.0	(17)	0.1
of which financial indebtedness	–	–	–	–
Total equity and liabilities	**(6)**	**0.0**	**(6)**	**0.0**
Other financial obligations	–	–	–	–

2.2 Joint Operations

Proportionally consolidated joint operations include, in particular:
- Ellba C.V., Rotterdam, Netherlands, which is jointly operated with Shell for the production of propylene oxide and styrene monomer
- AO Achimgaz, Novy Urengoy, Russia, which is jointly operated with Gazprom for the production of natural gas and condensate and is part of the discontinued oil and gas business
- BASF DOW HPPO Production B.V.B.A., Antwerp, Belgium, which is jointly operated with The Dow Chemical Company for the production of propylene oxide

BASF holds a 50% share in each of these companies and controls them jointly with the respective partner. The companies sell their products directly to the partners. The partners ensure ongoing financing of the companies by purchasing the production. The companies were therefore classified as joint operations in accordance with IFRS 11.

A majority of the activities in the discontinued oil and gas business are conducted through joint activities and not in separate companies. This primarily relates to activities in Germany, Norway and Argentina, which are reported as joint operations pursuant to IFRS 11.

2.3 Joint ventures and associated companies

BASF has a shareholding in a material joint venture. BASF-YPC Company Ltd., Nanjing, China, is operated by BASF together with its partner, Sinopec, at the Verbund site in Nanjing. BASF's share equals 50%.

Financial information on BASF-YPC Company Ltd., Nanjing, China (100%)

Million €	2018	2017
Balance sheet		
Noncurrent assets	1,110	1,254
Current assets	932	908
of which marketable securities, cash and cash equivalents	201	231
Assets	**2,042**	**2,162**
Equity	1,691	1,756
Noncurrent liabilities	29	124
of which financial indebtedness	28	122
Current liabilities	322	282
of which financial indebtedness	92	30
Total equity and liabilities	**2,042**	**2,162**
Statement of income		
Sales revenue	2,764	2,761
Depreciation and amortization	206	207
Interest income	5	5
Interest expenses	6	9
Income taxes	112	159
Income after taxes	343	473
Carrying amount according to the equity method as of the beginning of the year	**879**	**881**
Proportional income after taxes	171	236
Proportional change of other comprehensive income	(6)	(59)
Total comprehensive income	**165**	**177**
Capital measures/dividends/changes in the scope of consolidation/other adjustments	(197)	(179)
of which dividends	(197)	(179)
Other adjustments to income and expenses	–	–
Carrying amount according to the equity method as of the end of the year	**847**	**879**

W & G Infrastruktur Finanzierungs-GmbH, Kassel, Germany, (BASF interest: 50%), a material joint venture in 2017, was reclassified to assets of disposal groups.

Non-material joint ventures accounted for using the equity method include, in particular:

– Heesung Catalysts Corporation, Seoul, South Korea, which is operated jointly with the partner Heesung (BASF interest: 50%)
– N.E. Chemcat Corporation, Tokyo, Japan, which is operated jointly with the partner Sumitomo Metal Mining Co. Ltd. (BASF interest: 50%)

Non-material joint ventures accounted for using the equity method (BASF interest)

Million €

	2018	2017
Carrying amount according to the equity method as of the beginning of the year	1,509	823
Proportional income after taxes[1]	106	197
Proportional change of other comprehensive income	16	(27)
Total comprehensive income	**122**	**170**
Capital measures/dividends/changes in the scope of consolidation/other adjustments[2]	(1,054)	528
Other adjustments to income and expenses[1]	(24)	(12)
Carrying amount according to the equity method as of the end of the year	**553**	**1,509**

1 This item includes accumulated effects from the discontinued business in the amount of €12 million in 2018 (€70 million in 2017).
2 In 2018, the amount of €939 million was transferred to the assets of the oil and gas disposal group.

The material associated company in 2017, Joint Stock Company Achim Trading, Moscow, Russia (BASF interest: 18.01%, economic share: 25.01%), was transferred to the assets of disposal groups.

Non-material associated companies accounted for using the equity method include, in particular:

– Stahl Lux 2 S.A., Luxembourg (BASF interest: 16.6%) is classified as an associated company as BASF can exercise significant influence over the company due to the fact that its approval is required for certain relevant board resolutions
– Yara Freeport LLC, Wilmington, Delaware (BASF interest: 32%)
– CIMO Compagnie industrielle de Monthey S.A., Monthey, Switzerland (BASF interest: 50%)
– BASF Huntsman Shanghai Isocyanate Investment B.V., Arnheim, Netherlands (BASF interest: 50%)

Non-material associated companies accounted for using the equity method (BASF interest)

Million €

	2018	2017
Carrying amount according to the equity method as of the beginning of the year	2,327	2,943
Proportional income after taxes[3]	115	151
Proportional change of other comprehensive income	11	(31)
Total comprehensive income	**126**	**120**
Capital measures/dividends/changes in the scope of consolidation/other adjustments[4]	(1,650)	(735)
Other adjustments to income and expenses[3]	–	(1)
Carrying amount according to the equity method as of the end of the year	**803**	**2,327**

3 This item includes effects from discontinued operations in the amount of €87 million in 2018 (€178 million in 2017).
4 In 2018, the amount of €1,613 million was transferred to the assets of the oil and gas disposal group.

2.4 Acquisitions and divestitures

Acquisitions

In 2018, BASF acquired the following activities:

– On March 7, 2018, BASF closed the agreement to form BASF TODA America LLC (BTA), Iselin, New Jersey, for battery materials. BTA is a cooperative venture between BASF and TODA; BASF holds a majority share in and control over BTA. With the Battle Creek site in Michigan and the site contributed by BASF in Elyria, Ohio, the new company took over production of high energy cathode active materials for e-mobility applications. The transaction strengthens the Catalysts division's battery materials business.
– On August 1, 2018, BASF closed the acquisition of a range of businesses and assets from Bayer to complement its own activities in crop protection, biotechnology and digital farming. At the same time, the transaction marked BASF's entry into the seeds, non-selective herbicides and nematicide seed treatments businesses. The assets acquired included Bayer's global glufosinate-ammonium business, commercialized under the Liberty®, Basta® and Finale® trademarks, as well as its seed businesses for key field crops in selected markets. The transaction also covered Bayer's trait research and breeding capabilities for these crops. BASF acquired the manufacturing sites for glufosinate-ammonium production and formulation in Germany, the United States and Canada, seed breeding facilities in the Americas and Europe as well as trait research facilities in the United States and Europe. BASF also closed the acquisition of Bayer's global vegetable seeds business, which mainly operates under the trademark Nunhems®, on August 16, 2018. The acquired vegetable seed business comprises 24 crops and about 2,600 varieties. It also includes R&D breeding systems with more than 100 breeding programs in over 15 cultures. This strengthens BASF's Agricultural Solutions division. The purchase price amounted to a total of €7.4 billion and may be subject to further purchase price adjustments.

The following table provides the preliminary fair values of the assets and liabilities acquired from Bayer.

Preliminary purchase price allocation for the acquisition of assets and liabilities from Bayer

Million €	Fair values as of date of acquisition
Goodwill	1,253
Other intangible assets	4,285
Property, plant and equipment	1,404
Investments accounted for using the equity method	–
Other financial assets	–
Deferred taxes	65
Other receivables and miscellaneous assets	2
Noncurrent assets	**7,009**
Inventories	887
Accounts receivable, trade	61
Other receivables and miscellaneous assets	169
Marketable securities	–
Cash and cash equivalents	69
Current assets	**1,186**
Total assets	**8,195**
Provisions for pensions and similar obligations	34
Other provisions	240
Deferred taxes	353
Financial indebtedness	–
Other liabilities	9
Noncurrent liabilities	**636**
Accounts payable, trade	18
Provisions	58
Tax liabilities	5
Financial indebtedness	–
Other liabilities	57
Current liabilities	**138**
Borrowing costs	**774**
Total purchase price	**7,421**

The purchase price allocations consider all the facts and circumstances prevailing as of the respective dates of acquisition that were known prior to the preparation of these Consolidated Financial Statements. In accordance with IFRS 3, should further facts and circumstances become known within the 12-month measurement period, the purchase price allocation will be adjusted accordingly.

Goodwill of €1,253 million resulted in particular from sales synergies. The businesses acquired from Bayer contributed €586 million to sales and minus €256 million to income from operations in 2018. If Bayer's businesses and assets had been included in BASF's Consolidated Financial Statements for the first time as of January 1, 2018, sales revenue would have totaled €2,027 million and income from operations minus €129 million. This pro forma data serves the purpose of comparability; it does not necessarily provide the values that would have resulted had the transaction occurred as of January 1, 2018. Furthermore, they are not a forecast of future developments or results. The majority of total goodwill is tax deductible.

– Wintershall Middle East GmbH acquired a 10% stake in Abu Dhabi National Oil Company's (ADNOC) Ghasha concession in the United Arab Emirates (UAE) on November 25, 2018. The Hail, Ghasha, Dalma and other ultra-sour gas and condensate fields are located in the Al Dhafra region off the coast of the Golf Emirate. The acquisition in the discontinued oil and gas business marks Wintershall's entry into natural gas and condensate production in Abu Dhabi.

In 2017, BASF acquired the following activities:

- Effective January 1, 2017, BASF took over the western European Construction Chemicals business from the Henkel group with the trade names Thomsit® and Ceresit® for floor and tile-laying systems as well as sealants for professional users. This strengthened BASF's portfolio in the construction chemicals business of the PCI Group, which belongs to the Construction Chemicals division.
- On February 7, 2017, BASF acquired the formerly private company, Rolic AG, headquartered in Allschwil, Switzerland. The company develops and sells ready-to-use formulations and functional film products for the display and security documents as well as barrier materials and films. With the acquisition, BASF broadened its technology know-how and product portfolio of display materials. The largest part of the activities was integrated into the Dispersions & Pigments division and a smaller part into the Coatings division.
- On May 24, 2017, BASF acquired ZedX Inc., Bellefonte, Pennsylvania. The company develops agronomic weather, crop and pest models that can rapidly translate data into insights for more efficient agricultural production. The integration of the business into the Agricultural Solutions division strengthens BASF's activities in the area of digital agriculture.
- On September 4, 2017, BASF completed the acquisition of GRUPO Thermotek, a leading manufacturer of waterproofing systems in Mexico with headquarters in Monterrey, Mexico. The acquisition strengthened the Construction Chemicals division's sales channels and its product portfolio, especially in Mexico. The transaction includes trademarks such as Thermotek® and Chovatek®.

The purchase prices for businesses acquired in 2018 and the purchase price adjustments for acquisitions from 2017 totaled €7,600 million. Payments amounted to €7,431 million in 2018. The purchase price allocations were carried out in accordance with IFRS 3. Goodwill resulted in the amount of €1,261 million.

The following overview shows the effects of acquisitions in 2018 and 2017 on the Consolidated Financial Statements. When acquisitions resulted in the transfer of assets or the assumption of additional liabilities, these are shown as a net impact.

Effects of acquisitions and changes in the preliminary purchase price allocations

	2018		2017	
	Million €	**%[1]**	**Million €**	**%[1]**
Goodwill	1,261	13.7	97	1.0
Other intangible assets	4,279	58.3	138	3.3
Property, plant and equipment	1,425	6.9	8	.
Financial assets	–	–	3	0.1
Other noncurrent assets	67	2.1	(3)	(0.1)
Noncurrent assets	**7,032**	**16.2**	**243**	**0.5**
Current assets	**1,324**	**3.1**	**18**	**0.1**
of which cash and cash equivalents	69	3.0	5	0.1
Assets	**8,356**	**9.7**	**261**	**0.3**
Equity	**10**	**–**	**–**	**–**
Noncurrent liabilities	**634**	**2.3**	**40**	**0.1**
of which financial indebtedness	–	–	–	–
Current liabilities	**281**	**1.2**	**66**	**0.4**
of which financial indebtedness	–	–	–	–
Total equity and liabilities	**925**	**1.1**	**106**	**0.1**
Payments made for acquisitions	**7,431**		**155**	

1 Proportional share in relation to the BASF Group

Divestitures

In 2018, BASF sold the following activities:

- Shares in the Aguada Pichana Este concession in Argentina were sold on January 23, 2018. The sale pertained to the discontinued oil and gas business.
- On January 31, 2018, BASF's production site for styrene butadiene-based paper dispersions in Pischelsdorf, Austria was sold to Synthomer Austria GmbH, a subsidiary of the British specialty chemicals manufacturer Synthomer plc. The styrene acrylic dispersions that were produced in Pischelsdorf were not included in the sale. They were bundled with the businesses in Ludwigshafen, Germany. The sale was made in connection with the concentration of paper dispersions production in Europe at the sites in Ludwigshafen and Hamina, Finland, which is designed to strengthen the Dispersions & Pigments division.

In 2017, BASF sold the following activities:

- On February 28, 2017, BASF sold its inorganic specialties business to Edgewater Capital Partners LP, Cleveland, Ohio. The transaction comprised the production site in Evans City, Pennsylvania, and the product lines for special alcoholates, boranes and alkali metals manufactured there in the Intermediates division.
- On July 17, 2017, BASF sold its bleaching clay and mineral absorbents businesses to EP Minerals LLC, based in Reno, Nevada. The divestiture affected one global business unit in the Catalysts division and comprises a production site as well as a bleaching clay mine in Mississippi and the mineral rights sublease for a mine in Arizona. 66 employees transferred to EP Minerals LLC.
- On September 29, 2017, BASF completed the combination of the global leather chemicals business in the Performance Chemicals division with the Stahl group. The transaction comprised the global leather chemicals business, as well as the leather chemicals production site in L'Hospitalet, Spain. Around 210 jobs were affected worldwide, 110 of which in Asia. Under the terms of the agreement, BASF received a 16% minority interest in the Stahl group as well as a payment; this resulted in special income. Furthermore, in the medium to long term, BASF will supply Stahl with significant volumes of leather chemicals.
- On September 30, 2017, BASF concluded the sale of its production site for electrolytes in Suzhou, China, to Shenzhen Capchem Technology Co. Ltd., based in Shenzhen, China. The site was allocated to the Catalysts division.

The following overview shows the effects of the divestitures conducted in 2018 and 2017 on the Consolidated Financial Statements. The sales line item shows the year-on-year decline resulting from divestitures. The impact on equity related mainly to gains and losses from divestitures.

Effects of divestitures

	2018		2017	
	Million €	%[1]	Million €	%[1]
Sales	**(157)**	**(0.3)**	**(460)**	**(0.8)**
Noncurrent assets	**(21)**	**–**	**93**	**0.2**
of which property, plant and equipment	(15)	(0.1)	(50)	(0.2)
Current assets	**(39)**	**(0.1)**	**(48)**	**(0.2)**
of which cash and cash equivalents	–	–	–	–
Assets	**(60)**	**(0.1)**	**45**	**0.1**
Equity	**48**	**0.1**	**239**	**0.7**
Noncurrent liabilities	**(1)**	**–**	**(13)**	**.**
of which financial indebtedness	–	–	–	–
Current liabilities	**–**	**–**	**(4)**	**.**
of which financial indebtedness	–	–	–	–
Total equity and liabilities	**47**	**0.1**	**222**	**0.3**
Payments received from divestitures	**107**		**177**	

1 Proportional share in relation to the BASF Group

Agreed transactions

- On September 18, 2017, BASF signed an agreement with the Solvay group on the acquisition of Solvay's global polyamide business, subject to the approval of the relevant antitrust authorities. The E.U. Commission approved the acquisition of the polyamide business, subject to certain conditions, on January 18, 2019. These conditions require the sale of parts of the original transaction volume to a third party. Specifically, this refers to Solvay's production plants and innovation competencies in the engineering plastics field in Europe. The sale process has already begun. The approval process is pending in China. The transaction is expected to close in the second half of 2019, as soon as all remaining conditions are met. This includes the divestiture of businesses and assets to a third party. BASF plans to integrate the polyamide business into the Performance Materials and Monomers divisions. Before being adjusted to reflect the antitrust-related changes to the scope of the transaction, the purchase price on a cash and debt-free basis and excluding other adjustments would have been €1.6 billion. If the transaction is not concluded, the agreement provides for, subject to certain conditions, a payment of €150 million from BASF to Solvay.
- On May 3, 2018, BASF and Solenis announced that they had signed an agreement on the combination of BASF's paper and water chemicals business with Solenis. The affected assets and liabilities were reclassified to a disposal group. BASF and Solenis closed the transaction on January 31, 2019.

  For more information, see Note 2.5 from page 209 onward and Note 35 on page 268
- On September 27, 2018, BASF and the LetterOne group signed a definitive transaction agreement to merge their oil and gas businesses. The merger is intended to form an independent European exploration and production company with international operations.

  For more information, see Note 2.5 from page 209 onward

2.5 Discontinued operations/disposal groups

Discontinued operations

As of the binding agreement between BASF and LetterOne to merge their respective activities on September 27, 2018, the oil and gas business is presented as a discontinued operation.

For more information, see Note 1.4 from page 192 onward

The joint venture that will result from the merger will operate under the name Wintershall DEA. Although BASF will receive a majority stake in Wintershall DEA, the agreement stipulates joint control. With this transaction, the formation of a leading independent European oil and gas company is being pursued. BASF expects to close the transaction in the first half of 2019. Until closing, Wintershall and DEA will continue to operate as independent companies.

BASF's oil and gas activities are bundled in the Wintershall Group. Wintershall, headquartered in Kassel, Germany, focuses on exploration and production in oil and gas-rich regions in Europe, North Africa, Russia, South America and the Middle East. Wintershall is also active in the transport of natural gas in Europe with BASF's Russian partner Gazprom.

Impairments were not recorded for the discontinued oil and gas business on the date of reclassification to "held for sale" or at the end of the reporting period.

The amounts in the following tables illustrate the consolidated contribution of discontinued operations.

Earnings from discontinued operations are as follows:

Statement of Income from discontinued operations

Million €	2018	2017
Sales revenue	**4,094**	**3,252**
Cost of sales	(2,024)	(2,338)
Gross profit on sales	**2,070**	**914**
Selling expenses	(94)	(80)
General administrative expenses	(68)	(82)
Research and development expenses	(26)	(45)
Other operating income and expenses	(248)	(20)
Income from companies accounted for using the equity method	99	248
EBIT	**1,733**	**935**
Financial result	(19)	(17)
Income before income taxes	**1,714**	**918**
Income taxes	(885)	(158)
Income after income taxes	**829**	**760**
of which attributable to noncontrolling interests	(61)	(41)
Net income	**768**	**719**
Earnings per share from discontinued operations €	**0.83**	**0.78**
Amortization of intangible assets and depreciation of property, plant and equipment (until September 30, 2018)	617	1,024
of which impairments and reversals of impairments (until September 9, 2018)	–	(79)

Of other comprehensive income after taxes attributable to BASF SE shareholders totaling minus €608 million (2017: minus €1,268 million), minus €102 million (2017: minus €327 million) related to discontinued operations and minus €506 million (2017: minus €941 million) to continuing operations.

Discontinued operations accounted for the following amounts in BASF's Statement of Cash Flows:

Cash flows from discontinued operations

Million €

	2018	2017
Cash flows from operating activities	1,554	1,835
Cash flows from investing activities	(1,011)	(920)
Cash flows from financing activities	(346)	(387)
Total	**197**	**528**

The carrrying amounts of the balance sheet items of the discontinued operations are presented in the following table "Disposal groups as of December 31, 2018."

Groups of assets and liabilities held for sale (disposal groups)

On May 3, 2018, BASF and Solenis announced that they had signed an agreement on the combination of BASF's paper and water chemicals business with Solenis. The relevant assets and liabilities were reclassified to a disposal group. No impairments were recognized for the disposal group for the paper and water chemicals business on the date of reclassification to "hold to sell" or at the end of the reporting period. The business was allocated to the Performance Chemicals division until the transaction closed on January 31, 2019.

The values for the disposal groups are presented in the following table.

Other comprehensive income included minus €1,174 million for the oil and gas disposal group as of December 31, 2018. The paper and water chemicals business disposal group did not contribute to other comprehensive income.

Disposal groups as of December 31, 2018

Million €

	Paper and water chemicals business	Oil and gas business	Total
Balance sheet			
Goodwill	39	1,572	1,611
Other intangible assets	10	724	734
Property, plant and equipment	312	6,959	7,271
Investments accounted for using the equity method	–	2,565	2,565
Other financial assets	–	2	2
Deferred tax assets	–	128	128
Other receivables and miscellaneous assets	–	896	896
Noncurrent assets	**361**	**12,846**	**13,207**
Inventories	158	136	294
Accounts receivable, trade	–	614	614
Other receivables and miscellaneous assets	–	273	273
Marketable securities	–	–	–
Cash and cash equivalents	–	219	219
Current assets	**158**	**1,242**	**1,400**
Assets of the disposal group	**519**	**14,088**	**14,607**
Provisions for pensions and similar obligations	3	307	310
Other provisions	–	1,605	1,605
Deferred tax liabilities	–	1,637	1,637
Financial indebtedness	–	499	499
Other liabilities	–	217	217
Noncurrent liabilities	**3**	**4,265**	**4,268**
Accounts payable, trade	–	342	342
Provisions	–	72	72
Tax liabilities	–	228	228
Financial indebtedness	–	10	10
Other liabilities	–	833	833
Current liabilities	**–**	**1,485**	**1,485**
Liabilities of the disposal group	**3**	**5,750**	**5,753**
Net assets	**516**	**8,338**	**8,854**

3 BASF Group list of shares held pursuant to section 313(2) of the German Commercial Code (HGB)

The list of consolidated companies and the complete list of all companies in which BASF SE holds shares as required by section 313(2) HGB and information on the exemption of subsidiaries from accounting and disclosure obligations are an integral component of the audited Consolidated Financial Statements submitted to the electronic Federal Gazette (Bundesanzeiger). The list of shares held is also published online.

For more information, see basf.com/en/corporategovernance

4 Reporting by segment and region

In 2018, BASF's business was conducted by 13 divisions in five segments until a binding agreement between BASF and LetterOne was signed on September 27, 2018, to merge their oil and gas activities; from that date until the end of the year, business was conducted by 12 divisions in four segments. The divisions are allocated to the segments based on their business models.

BASF adjusted its segment structure as part of its updated strategy. The changes effective as of January 1, 2019, affect all segments except the Agricultural Solutions segment. Since then, the 12 divisions are allocated to six segments. The composition of a number of divisions has changed as well. The propylene oxide and propylene glycol business will be transferred from the Petrochemicals division to the Monomers division. The superabsorbents business will be allocated to the Petrochemicals division rather than the Care Chemicals division. The styrene, polystyrene and styrene-based foams business, which previously fell mainly under Performance Materials and a small part under Other, will be bundled in Petrochemicals.

The new segment structure will enable an even more differentiated steering of the businesses, taking into account market-specific requirements and the competitive environment. It will further increase the transparency of the segments' results and highlight the importance of the Verbund and value chains to business success. The aggregation of the segments based on business models reflects the divisions' focal points, their customer groups, the focus of their innovations, their investment relevance and sustainability aspects.

The **Chemicals** segment comprises the classic chemicals business with basic chemicals and intermediates. It continues to form the core of BASF's Production Verbund and contributes to the organic growth of BASF's key value chains. Customers include the chemical and plastics industries as well as internal outlets. The segment's competitiveness will be augmented through technological leadership and operational excellence. The Chemicals segment was composed of the Petrochemicals, Monomers and Intermediates divisions until December 31, 2018. As of January 1, 2019, the Monomers division is allocated to the new Materials segment.

The **Performance Products** segment consisted of the Dispersions & Pigments, Care Chemicals, Nutrition & Health and Performance Chemicals divisions until the end of 2018. They focus on tailor-made solutions enabling customers to improve the application properties of their products and optimize production processes, for example. Close customer contact and meeting the demanding requirements of a wide range of industries were crucial to business success.

The divisions in this segment were separated into two segments as of January 1, 2019.
- The new **Industrial Solutions** segment comprises the Dispersions & Pigments division and the Performance Chemicals division. This segment develops and markets ingredients and additives for industrial applications such as polymer dispersions, pigments, resins, electronic materials, antioxidants and admixtures. Its customers come from key industries such as automotive, plastics and electronics.
- The new **Nutrition & Care** segment combines the Care Chemicals and Nutrition & Health divisions. This segment produces ingredients for consumer products in the area of nutrition, cleaners and personal care. Its customers include food and feed producers as well as the pharmaceutical, cosmetics, and the detergent and cleaner industries.

Until the end of 2018, the **Functional Materials & Solutions** segment bundled industry and customer-specific system solutions, services and innovative products, especially for the automotive, electronics, chemical and construction sectors, as well as applications for household, sports and leisure. An in-depth understanding of applications, the development of innovations in close cooperation with customers, and adaptation to different regional needs were key success factors. The segment was made up of the Catalysts, Construction Chemicals, Coatings, and Performance Materials divisions. The divisions of this segment were allocated to two new segments as of January 1, 2019:

- The new **Materials** segment consists of the Performance Materials division and the Monomers division, formerly pertaining to the Chemicals segment. This segment offers advanced materials and their precursors for new applications and systems. Its product portfolio includes isocyanates and polyamides as well as inorganic basic products and specialties for plastics and plastics processing in various industries.
- The new **Surface Technologies** segment comprises the Catalysts, Coatings and Construction Chemicals divisions. It offers a platform for chemical surface solutions. Its product spectrum includes catalysts and battery materials for the automotive and chemical industries, surface treatments, colors and coatings as well as cement modifications and construction materials.

The **Agricultural Solutions** segment comprises the Agricultural Solutions division, which was previously known as Crop Protection and was renamed after the acquisition of significant businesses from Bayer and the associated expansion of its portfolio. As an integrated provider of crop protection and seeds, Agricultural Solutions will continue to grow, primarily organically through innovation, and through targeted portfolio enhancement. Its portfolio comprises fungicides, herbicides, insecticides and biological crop protection products, as well as seeds and seed treatment products. Furthermore, Agricultural Solutions offers farmers innovative solutions, including those based on digital technologies, combined with practical advice.

Activities that are not allocated to any of the continued operating divisions continue to be recorded under **Other**. These include other businesses such as commodity trading, engineering and other services, rental income and leases, steering the BASF Group by corporate headquarters, and cross-divisional corporate research. Cross-divisional corporate research, which includes plant biotechnology research, works on long-term topics of strategic importance to the BASF Group. Furthermore, it focuses on the development of specific key technologies, which are of central importance for the divisions.

Earnings from currency translation that are not allocated to the segments are also reported under Other, as are earnings from the hedging of raw materials prices and foreign currency exchange risks. Furthermore, gains and losses from the long-term incentive (LTI) program are reported here.

Discontinued operations and all remaining activities after divestiture not previously reported under Other are reported under Other as of January 1, 2019. The latter includes, for example, participating interests accounted for using the equity method or supply obligations assumed in the context of divestitures. Reclassification affects the remaining activities for the leather and textile chemicals business, previously recorded in the Performance Products segment, and the remaining activities for the industrial coatings business, previously recorded in the Functional Materials & Solutions segment. Furthermore, the following will also be reported here in the future: remanent fixed costs resulting from organizational changes or restructuring; function and region-related restructuring costs not allocated to a division; idle capacity costs from internal human resource platforms.

Since the signing of the binding agreement between BASF and LetterOne to merge their oil and gas activities, the former Oil & Gas division has been reported as a **discontinued oil and gas business**. The segment of the same name was dissolved. The assets and liabilities of the oil and gas business were reclassified to a disposal group as of the end of the third quarter of 2018. Since then, they are included in Other.

The oil and gas business focuses on exploration and production in oil and gas-rich regions in Europe, North Africa, Russia, South America and the Middle East. It benefits from strong partnerships and its technological expertise. In Europe, it is also active in the transport of natural gas together with its Russian partner Gazprom.

For more information on the discontinued oil and gas business, see Note 2.5 from page 209 onward

The same accounting rules are used for segment reporting as those used for the Group, which are presented in Note 1. Transfers between the segments are generally executed at adjusted market-based prices, taking into account the higher cost efficiency and lower risk of intragroup transactions. Assets, as well as their depreciation and amortization, are allocated to the segments based on economic control. Assets used by more than one segment are allocated based on the percentage of usage. Assets not used by the segments are reported under Other.

Sales by operating division[1]

Million €

	2018	2017
Petrochemicals	6,904	6,389
Monomers	6,464	6,963
Intermediates	3,133	2,979
Chemicals	**16,501**	**16,331**
Dispersions & Pigments	5,292	5,398
Care Chemicals	4,913	5,079
Nutrition & Health	1,696	1,844
Performance Chemicals	3,911	3,896
Performance Products	**15,812**	**16,217**
Catalysts	7,469	6,658
Construction Chemicals	2,456	2,412
Coatings	3,856	3,969
Performance Materials	7,654	7,706
Functional Materials & Solutions	**21,435**	**20,745**
Fungicides	2,287	2,357
Herbicides	2,436	2,371
Insecticides	670	663
Functional Crop Care	463	305
Seeds & Traits	300	–
Agricultural Solutions	**6,156**	**5,696**
Other	**2,771**	**2,234**
BASF Group	**62,675**	**61,223**

1 Indications and sectors are given for the Agricultural Solutions segment, which comprises just one operating division.

Income from operations (EBIT) of Other

Million €

	2018	2017
Costs for cross-divisional corporate research	(414)	(379)
Costs of corporate headquarters	(249)	(224)
Other businesses	38	81
Foreign currency results, hedging and other measurement effects	327	88
Miscellaneous income and expenses	(193)	(257)
Income from operations of Other	**(491)**	**(691)**

Income from operations of Other increased by €200 million year on year from minus €691 million to minus €491 million. The **costs for cross-divisional corporate research** increased by €35 million to €414 million, and the **costs of corporate headquarters** were €25 million higher at €249 million. Income from **other businesses** fell by €43 million to €38 million. The line item **foreign currency results, hedging and other measurement effects** increased by €239 million to €327 million. This was due to an increase of €195 million to €262 million from the release of provisions for the LTI program. The line item **miscellaneous income and expenses** amounted to minus €193 million compared with minus €257 million in the previous year.

Assets of Other

Million €

	Dec. 31, 2018	Dec. 31, 2017
Assets of businesses included in Other	2,134	2,007
Financial assets	570	606
Deferred tax assets	2,342	2,118
Cash and cash equivalents/marketable securities	2,644	6,547
Defined benefit assets	63	70
Other receivables/prepaid expenses	1,902	2,328
Operating assets of the former Oil & Gas segment (2017) and of the oil and gas business disposal group (2018)[1]	12,570	11,967
Other assets of the oil and gas business disposal group[1]	1,518	–
Assets of Other	**23,743**	**25,643**

1 For more information, see Note 2.5 from page 209 onward

Segments 2018

Million €

	Chemicals	Performance Products	Functional Materials & Solutions	Agricultural Solutions	Other[2]	BASF Group
Sales	16,501	15,812	21,435	6,156	2,771	62,675
Intersegmental transfers	6,105	498	837	58	2	7,500
Sales including transfers	22,606	16,310	22,272	6,214	2,773	70,175
Research and development expenses	129	394	412	679	414	2,028
Income from companies accounted for using the equity method	196	22	43	–	8	269
Income from operations	3,360	1,338	1,235	591	(491)	6,033
Assets	13,264	14,903	17,654	16,992	23,743	86,556
of which goodwill	55	2,079	3,773	3,236	68	9,211
other intangible assets	104	895	1,878	4,441	25	7,343
property, plant and equipment	7,837	4,875	4,554	2,660	854	20,780
investments accounted for using the equity method	1,000	360	410	–	433	2,203
Liabilities	4,104	5,421	4,587	3,080	33,255	50,447
Additions to intangible assets and property, plant and equipment (including acquisitions)	1,325	765	872	7,110	663	10,735
Amortization and depreciation of intangible assets and property, plant and equipment	1,072	867	682	394	735	3,750
of which impairments and reversals of impairments	29	10	5	7	2	53

2 Other includes assets and liabilities as well as amortization of intangible assets and depreciation of property, plant and equipment of the discontinued oil and gas business. For more information, see Note 2.5 from page 209 onward. Until reclassification to the disposal group, additions to intangible assets and property, plant and equipment (including acquisitions) of the discontinued oil and gas business, also included in Other, amounted to €468 million in 2018.

Segments 2017

Million €

	Chemicals	Performance Products	Functional Materials & Solutions	Agricultural Solutions	Other[1]	BASF Group
Sales	16,331	16,217	20,745	5,696	2,234	61,223
Intersegmental transfers	6,063	506	805	36	(3)	7,407
Sales including transfers	22,394	16,723	21,550	5,732	2,231	68,630
Research and development expenses	128	395	431	507	382	1,843
Income from companies accounted for using the equity method	257	(1)	49	–	18	323
Income from operations	4,208	1,510	1,545	1,015	(691)	7,587
Assets	13,233	14,432	17,364	8,096	25,643	78,768
of which goodwill	56	2,078	3,718	1,929	1,572	9,353
other intangible assets	103	1,048	2,045	208	837	4,241
property, plant and equipment	7,497	5,000	4,163	1,366	7,232	25,258
investments accounted for using the equity method	1,026	369	393	–	2,927	4,715
Liabilities	4,461	5,419	4,385	1,768	27,979	44,012
Additions to intangible assets and property, plant and equipment (including acquisitions)	1,149	800	1,056	185	1,174	4,364
Amortization and depreciation of intangible assets and property, plant and equipment	1,166	917	706	267	1,146	4,202
of which impairments and reversals of impairments	129	53	28	2	(72)	140

1 Other includes assets and liabilities as well as amortization of intangible assets and depreciation of property, plant and equipment of the discontinued oil and gas business. For more information, see Note 2.5 from page 209 onward. Additions to intangible assets and property, plant and equipment (including acquisitions) of the discontinued oil and gas business, also included in Other, amounted to €988 million in 2017.

Regions 2018

Million €

		Europe	of which Germany	North America	Asia Pacific	South America, Africa, Middle East	BASF Group
Location of customer							
Sales		26,546	6,965	16,143	14,646	5,340	62,675
Share	%	42.3	11.1	25.8	23.4	8.5	100.0
Location of company							
Sales		28,502	18,113	16,659	13,886	3,628	62,675
Sales including interregional transfers[1]		35,805	24,083	19,161	14,872	4,006	73,844
Income from companies accounted for using the equity method		36	10	0	233	–	269
Income from operations		3,210	1,140	802	1,820	201	6,033
Assets		45,562	23,739	22,079	13,576	5,339	86,556
of which intangible assets		7,281	3,874	7,308	1,499	466	16,554
property, plant and equipment		9,231	6,357	6,286	4,416	847	20,780
investments accounted for using the equity method		637	289	122	1,444	–	2,203
Additions to intangible assets and property, plant and equipment (including acquisitions)		5,317	3,674	4,461	585	372	10,735
Amortization of intangible assets and depreciation of property, plant and equipment including impairments and reversals of impairments		2,031	1,180	990	479	250	3,750

1 The sum of sales including interregional transfers for all the regions can differ from the sum of sales including intersegmental transfers for all the segments, as the segments are viewed globally, and therefore shipments and services between regions within the same segment are not classified as transfers.

Regions 2017

Million €		Europe	of which Germany	North America	Asia Pacific	South America, Africa, Middle East	BASF Group
Location of customer							
Sales		26,507	7,159	15,357	14,343	5,016	61,223
Share	%	43.3	11.7	25.1	23.4	8.2	100.0
Location of company							
Sales		28,045	18,663	15,937	13,658	3,583	61,223
Sales including interregional transfers[1]		35,243	24,452	18,570	14,534	3,890	72,237
Income from companies accounted for using the equity method		23	5	9	291	–	323
Income from operations		4,090	1,838	1,236	2,209	52	7,587
Assets		43,924	24,631	16,201	13,547	5,096	78,768
of which intangible assets		7,167	2,736	4,428	1,499	500	13,594
property, plant and equipment		13,876	7,019	5,281	4,337	1,764	25,258
investments accounted for using the equity method		3,153	989	115	1,447	–	4,715
Additions to intangible assets and property, plant and equipment (including acquisitions)		2,455	1,228	958	711	240	4,364
Amortization of intangible assets and depreciation of property, plant and equipment including impairments and reversals of impairments		2,399	1,234	1,011	516	276	4,202

1 The sum of sales including interregional transfers for all the regions can differ from the sum of sales including intersegmental transfers for all the segments, as the segments are viewed globally, and therefore shipments and services between regions within the same segment are not classified as transfers.

In the United States, sales to third parties in 2018 amounted to €14,775 million (2017: €13,909 million) according to location of companies and €14,062 million (2017: €13,127 million) according to location of customers. In the United States, intangible assets, property, plant and equipment, and investments accounted for using the equity method amounted to €12,958 million compared with €9,279 million in the previous year.

In China, sales to third parties in 2018 amounted to €7,595 million (2017: €5,976 million) according to location of companies and €6,731 million (2017: €6,676 million) according to location of customers. In China, intangible assets, property, plant and equipment, and investments accounted for using the equity method amounted to €4,162 million compared with €4,206 million in the previous year.

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).

Notes to the Balance Sheet

14 Intangible assets

BASF's **goodwill** is allocated to 23 cash-generating units (2017: 24), which are defined either on the basis of business units or at a higher level.

Annual impairment testing was performed in the fourth quarter on the basis of the cash-generating units. Recoverable amounts were determined in most cases using the value in use. This was based on plans approved by company management and their respective cash flows, generally for the next five years. For the period thereafter, a terminal value was calculated using a forward projection from the last detailed planning year as a perpetual annuity. 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 and industry-specific sources.

The required discounting of cash flows for impairment testing is calculated using 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 were conducted assuming a weighted average cost of capital rate after taxes of between 5.83% and 6.90% (2017: between 5.69% and 8.2%). This corresponds to a weighted average cost of capital rate before taxes of between 7.0% and 8.5% (2017: between 7.13% and 11.31%).

After determining the recoverable amount for the cash-generating units, it was established that reasonable possible deviations from the key assumptions would not lead to the carrying amounts of 22 units exceeding their respective recoverable amounts. This is not the case for goodwill for the Pigments unit in the Dispersions & Pigments division.

In 2018, the recoverable amount for Pigments exceeded the carrying amount by €192 million. The weighted average cost of capital rate after taxes used for impairment testing was 5.84% (2017: 6.05%). The recoverable amount would equal the unit's carrying amount if the weighted average cost of capital rate increased by 0.74 percentage points (2017: by 0.04 percentage points) or if income from operations of the last detailed planning year – as the basis for the terminal value – were 14.39% lower (2017: 0.81% lower).

Goodwill of cash-generating units

Million €

	2018		2017	
Cash-generating unit	**Goodwill**	**Growth rate[1]**	**Goodwill**	**Growth rate[1]**
Agricultural Solutions division	3,236	2.0%	1,929	2.0%
Catalysts division (excluding battery materials)	1,298	2.0%	1,285	2.0%
Construction Chemicals division	753	2.0%	732	2.0%
Personal Care Ingredients in the Care Chemicals division	518	2.0%	499	2.0%
Pigments in the Dispersions & Pigments division	403	1.5%	389	1.5%
Surface Treatment in the Coatings division	1,500	2.0%	1,490	2.0%
Exploration & Production[2]	–	–	1,504	–
Other cash-generating units	1,503	0.0–2.0%	1,525	0.0–2.0%
Goodwill as of December 31	**9,211**		**9,353**	

1 Growth rates used in impairment tests to determine terminal values in accordance with IAS 36
2 Reclassification of goodwill from oil and gas business to the disposal group minus €1,572 million

Development of intangible assets 2018

Million €

	Distribution, supply and similar rights	Product rights, licenses and trademarks	Know-how, patents and production technologies	Internally generated intangible assets	Other rights and values[1]	Goodwill	Total
Cost							
As of January 1, 2018	4,722	1,150	1,879	116	411	9,477	17,755
Changes in the scope of consolidation	–	–	–	–	–	–	–
Additions	1	35	36	36	47	–	155
Additions from acquisitions	364	1,054	2,725	–	136	1,261	5,540
Disposals	(174)	(8)	(73)	(1)	(32)	(6)	(294)
Transfers	2	–	(29)	1	21	–	(5)
Transfers to disposal groups	(862)	(413)	(15)	–	(35)	(1,722)	(3,047)
Currency effects	(15)	21	52	–	5	201	264
As of December 31, 2018	4,038	1,839	4,575	152	553	9,211	20,368
Accumulated amortization							
As of January 1, 2018	2,301	479	954	81	222	124	4,161
Changes in the scope of consolidation	–	–	–	–	–	–	–
Additions	279	49	168	14	85	–	595
Disposals	(173)	(5)	(72)	(1)	(26)	–	(277)
Transfers	–	–	–	0	(1)	–	(1)
Transfers to disposal groups	(370)	(151)	(13)	–	(26)	(128)	(688)
Currency effects	6	4	9	–	1	4	24
As of December 31, 2018	2,043	376	1,046	94	255	0	3,814
Net carrying amount as of December 31, 2018	**1,995**	**1,463**	**3,529**	**58**	**298**	**9,211**	**16,554**

1 Including licenses to such rights and values

In addition to goodwill, **intangible assets** include acquired and internally generated intangible assets. Intangible assets include rights of the Oil & Gas segment, which are amortized using the unit of production method, until the date of reclassification to the disposal group.

Additions refer primarily to software licenses purchased or internally developed software applications. Additions also include concessions for the search and production of oil and gas in Brazil.

Additions from acquisitions amounted to €5,540 million in 2018. Key acquisitions, the acquisition of significant parts of Bayer's seed and non-selective herbicide businesses and vegetable seed business, as well as the acquisition of Toda America LLC's battery materials business led to a €1,257 million increase in **goodwill**. A further addition to goodwill amounting to €4 million arose from a retroactive purchase price payment for the acquisition in 2017 of GRUPO Thermotek based in Monterrey, Mexico. Further additions to intangible assets in connection with the key acquisitions mentioned above amounted to €4,279 million. These related predominantly to know-how, patents and production technologies in the amount of €2,725 million; product rights, licenses and trademarks in the amount of €1,054 million, as well as distribution, supply and similar rights in the amount of €364 million.

Disposals of intangible assets amounting to €294 million were largely attributable to the derecognition of fully amortized assets. The sale of shares in the Aguada Pichana Este concession in Argentina and the divestiture of the production site for styrene butadiene-based paper dispersions in Pischelsdorf, Austria led to a €6 million disposal of goodwill.

Transfers to disposal groups related mainly to the reclassification of intangible assets from the oil and gas business as of September 30, 2018 and, to a lesser extent, from the paper and water chemicals business to the disposal groups.

In 2018, additions to **accumulated amortization** contained impairments of €4 million. This mainly pertained to impairments of non-strategic know-how, patents and production technologies in the Functional Materials & Solutions segment and, to a lesser extent, to the amortization of unused software licenses and discontinued IT projects. Reversals of impairments of €2 million included in additions to accumulated amortization had a countereffect. These related primarily to distribution rights in the Functional Materials & Solutions segment and to a higher valuation of emissions rights due to increased fair market values. Until September 30, 2018, they also included amortization of rights belonging to the Oil & Gas segment in the amount of €29 million, which were amortized in accordance with the unit of production method.

Development of intangible assets 2017

Million €

	Distribution, supply and similar rights	Product rights, licenses and trademarks	Know-how, patents and production technologies	Internally generated intangible assets	Other rights and values[1]	Goodwill	Total
Cost							
As of January 1, 2017	5,051	1,339	1,958	92	435	10,214	19,089
Changes in the scope of consolidation	1	–	–	–	–	–	1
Additions	3	19	20	25	34	–	101
Additions from acquisitions	10	47	56	–	25	97	235
Disposals	(40)	(20)	(53)	(1)	(79)	(28)	(221)
Transfers	14	(178)	(24)	–	13	–	(175)
Currency effects	(317)	(57)	(78)	–	(17)	(806)	(1,275)
As of December 31, 2017	4,722	1,150	1,879	116	411	9,477	17,755
Accumulated amortization							
As of January 1, 2017	2,168	435	882	72	229	141	3,927
Changes in the scope of consolidation	–	–	–	–	–	–	–
Additions	298	70	166	10	72	–	616
Disposals	(35)	(17)	(53)	(1)	(72)	–	(178)
Transfers	–	–	–	–	–	–	–
Currency effects	(130)	(9)	(41)	–	(7)	(17)	(204)
As of December 31, 2017	2,301	479	954	81	222	124	4,161
Net carrying amount as of December 31, 2017	**2,421**	**671**	**925**	**35**	**189**	**9,353**	**13,594**

1 Including licenses to such rights and values

In addition to goodwill, acquired and internally generated intangible assets, **intangible assets** included rights belonging to the Oil & Gas segment in 2017, which were amortized in accordance with the unit of production method. As of December 31, 2017, their acquisition costs amounted to €962 million and accumulated amortization to €312 million; amortization in 2017 amounted to €41 million.

Additions from acquisitions amounted to €235 million in 2017. Goodwill rose by €79 million as a result of the following key acquisitions: Rolic AG headquartered in Allschwil, Switzerland; GRUPO Thermotek headquartered in Monterrey, Mexico; Henkel group's western European construction chemicals business; and ZedX Inc. in Bellefonte, Pennsylvania. A further addition to **goodwill** amounting to €18 million arose primarily from a retroactive purchase price payment for the acquisition of Chemetall in the previous year.

Further additions to intangible assets in connection with these transactions amounted to €138 million. These related predominantly to product rights, licenses and trademarks as well as know-how, patents and production technologies.

Concessions for oil and gas production included in **product rights, licenses and trademarks** had a net carrying amount of €234 million in 2017. These authorize the holder to search for and produce oil and gas in specific areas. At the end of the term of a concession, the rights are returned.

Disposals of intangible assets amounting to €221 million were largely attributable to the derecognition of fully amortized software as well as the sale of the production site for electrolytes in Suzhou, China, the sale of the bleaching clay and mineral adsorbents businesses, and the transfer of the global leather chemicals business to the Stahl group. Goodwill of €28 million was derecognized in connection with this.

Transfers largely concerned the confirmed oil and gas deposits in the Maria field in Norway to property, plant and equipment. Non-confirmed deposits in connection with acquired concessions are reported as intangible assets under product rights, licenses and trademarks.

In 2017, **accumulated amortization** included impairments of €67 million. This mainly pertained to impairments of non-strategic know-how, patents and production technologies in the Functional Materials & Solutions segment and exploration potential for oil and gas production in Norway. This was offset by reversals of impairments totaling €7 million. These related primarily to distribution rights in the Functional Materials & Solutions segment.

15 Property, plant and equipment

Machinery and technical equipment contained oil and gas deposits, including related wells, production facilities and further infrastructure, which were depreciated according to the unit of production method. The following table presents the development of property, plant and equipment including these assets until the oil and gas business was transferred to the disposal group.

Development of property, plant and equipment 2018

Million €

	Land, land rights and buildings	Machinery and technical equipment	Of which depreciation according to the unit of production method	Miscellaneous equipment and fixtures	Construction in progress	Total
Cost						
As of January 1, 2018	11,169	50,558	7,940	4,387	4,799	70,913
Changes in the scope of consolidation	77	5	–	2	1	85
Additions	192	679	109	216	2,528	3,615
Additions from acquisitions	650	634	–	64	77	1,425
Disposals	(71)	(407)	–	(171)	(52)	(701)
Transfers	300	1,159	–	190	(1,657)	(8)
Transfers to disposal groups	(245)	(10,899)	(8,170)	(108)	(1,883)	(13,135)
Currency effects	84	602	121	36	92	814
As of December 31, 2018	12,156	42,331	–	4,616	3,905	63,008
Accumulated depreciation						
As of January 1, 2018	6,065	36,110	4,329	3,264	216	45,655
Changes in the scope of consolidation	4	–	–	2	–	6
Additions	354	2,409	498	358	34	3,155
Disposals	(45)	(372)	–	(164)	(52)	(633)
Transfers	(3)	(7)	–	–	–	(10)
Transfers to disposal groups	(81)	(6,118)	(4,923)	(87)	(196)	(6,482)
Currency effects	48	458	96	27	4	537
As of December 31, 2018	6,342	32,480	–	3,400	6	42,228
Net carrying amount as of December 31, 2018	**5,814**	**9,851**	**–**	**1,216**	**3,899**	**20,780**

Additions to property, plant and equipment arising from investment projects amounted to €3,615 million in 2018. Investments were made at the following sites in particular: Ludwigshafen, Germany; Antwerp, Belgium; Shanghai, China; Geismar, Louisiana; and Freeport, Texas. Material investments included the acetylene plant currently under construction as well as plants for the production of catalysts in Ludwigshafen, Germany. In addition, additions included renovations to the steam cracker and the construction of a new propane tank in Antwerp, Belgium. Other investments included the construction of oil and gas facilities and wells in Europe and South America.

Government grants for funding investment measures reduced asset additions by €26 million.

Acquisitions led to an increase in property, plant and equipment in the amount of €1,425 million, primarily from the acquisition of significant parts of Bayer's seed and non-selective herbicide businesses and its vegetable seed business.

In 2018, impairments of €52 million and reversals of impairments of €1 million were included in **accumulated depreciation**. The impairments were primarily attributable to construction in progress resulting from discontinued investment projects in North America.

Disposals of property, plant and equipment included the sale of production plants for oleochemical surfactants in Mexico and the production site for styrene butadiene-based paper dispersions in Pischelsdorf, Austria.

For more information on divestitures, see Note 2.4 from page 205 onward

Transfers related mainly to the reclassification of operation-ready assets from construction in progress to other asset categories.

Currency effects raised property, plant and equipment by €277 million and resulted mainly from the appreciation of the U.S. dollar against the euro.

Development of property, plant and equipment 2017

Million €

	Land, land rights and buildings	Machinery and technical equipment	Of which depreciation according to the unit of production method	Miscellaneous equipment and fixtures	Construction in progress	Total
Cost						
As of January 1, 2017	11,257	49,893	7,180	4,437	5,989	71,576
Changes in the scope of consolidation	–	14	–	–	1	15
Additions	171	1,292	450	272	2,285	4,020
Additions from acquisitions	–	7	–	1	–	8
Disposals	(131)	(825)	(17)	(280)	(36)	(1,272)
Transfers	367	2,635	890	128	(2,945)	185
Currency effects	(495)	(2,458)	(563)	(171)	(495)	(3,619)
As of December 31, 2017	11,169	50,558	7,940	4,387	4,799	70,913
Accumulated depreciation						
As of January 1, 2017	5,969	35,655	3,711	3,308	231	45,163
Changes in the scope of consolidation	–	14	–	–	–	14
Additions	385	2,878	931	335	(12)	3,586
Disposals	(95)	(761)	(3)	(266)	(32)	(1,154)
Transfers	–	(50)	–	(1)	53	2
Currency effects	(194)	(1,626)	(310)	(112)	(24)	(1,956)
As of December 31, 2017	6,065	36,110	4,329	3,264	216	45,655
Net carrying amount as of December 31, 2017	**5,104**	**14,448**	**3,611**	**1,123**	**4,583**	**25,258**

Additions to property, plant and equipment arising from investment projects amounted to €4,020 million in 2017. Material investments refer to the acetylene plant currently under construction as well as plants for the production of catalysts in Ludwigshafen, Germany. Additions also included the construction of an aroma ingredients complex in Kuantan, Malaysia, and the modification of production plants for plasticizers in Pasadena, Texas, which have already partly started up. Material investments were also made for the construction of oil and gas facilities and wells in Europe and South America. Furthermore, investments were made at the following sites in particular: Ludwigshafen, Germany; Antwerp, Belgium; Shanghai, China; Freeport, Texas; Geismar, Louisiana; and Port Arthur, Texas.

Government grants for funding investment measures reduced asset additions by €9 million.

Acquisitions led to an increase in property, plant and equipment in the amount of €8 million, primarily from the acquisition of GRUPO Thermotek in Monterrey, Mexico.

In 2017, impairments of €262 million were included in **accumulated depreciation**. These pertained largely to machinery and technical equipment and resulted primarily from the full impairment of a production plant in the Chemicals segment due to overcapacities. The recoverable amount equaled value in use, and the weighted average cost of capital rate before taxes was 10.27%.

Depreciation also included impairments in the former Oil & Gas segment, which were more than offset by reversals of impairments in the same segment. These primarily concerned construction in progress. Overall, reversals of impairments in additions to accumulated depreciation amounted to €182 million.

Disposals of property, plant and equipment were largely attributable to the sale of the bleaching clay and mineral absorbents businesses; the production site for electrolytes in Suzhou, China; the inorganic specialties business; and the leather chemicals business.

For more information on divestitures, see Note 2.4 from page 205 onward

Transfers pertained mainly to the transfer of confirmed oil and gas deposits in the Maria field in Norway from intangible assets to machinery and technical equipment.

Currency effects reduced property, plant and equipment by €1,663 million and arose mainly from the depreciation of the U.S. dollar against the euro.

16 Investments accounted for using the equity method and other financial assets

Additions included capital increases amounting to €55 million in 2018. In 2017, additions were mainly attributable to the combination of the global leather chemicals business with the Stahl group. In this connection, BASF received a 16.6% share in Stahl Lux 2 S.A., Luxembourg.

In addition to the net income of investments accounted for using the equity method, dividend distributions and other comprehensive income of the companies, transfers included €2,552 million from the reclassification of investments accounted for using the equity method to assets of the disposal group for the oil and gas business. For one investment in the Chemicals segment accounted for using the equity method, the carrying amount was impaired by €7 million in 2018.

For a detailed overview of income from companies accounted for using the equity method, see Note 9 on page 221

Investments accounted for using the equity method

Million €

	2018	2017
As of January 1	4,715	4,647
Changes in the scope of consolidation	–	(50)
Additions	55	223
Disposals	(10)	(82)
Transfers[1]	(2,571)	120
Currency effects	14	(143)
Net carrying amount as of December 31	**2,203**	**4,715**

1 This item includes effects from the discontinued oil and gas business in the amount of €99 million in 2018 (2017: €248 million).

Other financial assets

Million €

	Dec. 31, 2018	Dec. 31, 2017
Other shareholdings	453	482
Long-term securities	117	124
Other financial assets	**570**	**606**

17 Inventories

Inventories

Million €

	Dec. 31, 2018	Dec. 31, 2017
Raw materials and factory supplies	3,541	3,255
Work in progress, finished goods and merchandise	8,507	6,979
Advance payments and services in progress	118	69
Inventories	**12,166**	**10,303**

Work in progress, finished goods and merchandise are combined into one item due to production conditions in the chemical industry. Services in progress mainly relate to services not invoiced as of the balance sheet date.

Cost of sales included inventories recognized as an expense amounting to €31,285 million in 2018, and €29,941 million in 2017.

Write-downs on inventory was recognized in the amount of €73 million in 2018 and reversals of write-downs in the amount of €18 million in 2017.

Of total **inventories**, €1,120 million was measured at net realizable value in 2018 and €863 million in 2017.

18 Receivables and miscellaneous assets

Other receivables and miscellaneous assets

Million €

	December 31, 2018		December 31, 2017	
	Noncurrent	Current	Noncurrent	Current
Loans and interest receivables	224	271	782	245
Derivatives with positive fair values	121	224	91	321
Receivables from finance leases	23	2	25	4
Insurance compensation receivables	0	0	0	41
Receivables from bank acceptance drafts	–	163	–	389
Miscellaneous	243	267	111	329
Other receivables and assets that qualify as financial instruments	**611**	**927**	**1,009**	**1,329**
Prepaid expenses	57	251	54	249
Defined benefit assets	63	–	70	–
Tax refund claims	107	891	125	787
Employee receivables	0	16	–	8
Precious metal trading items	–	780	–	746
Miscellaneous	48	274	74	375
Other receivables and assets that do not qualify as financial instruments	**275**	**2,212**	**323**	**2,165**
Other receivables and miscellaneous assets	**886**	**3,139**	**1,332**	**3,494**

The decrease in noncurrent **loans and interest receivables** was predominantly due to the reclassification of a loan in the amount of €325 million from Wintershall Nederland Transport and Trading B.V., Rijswijk, Netherlands, to Nord Stream 2 AG, and a loan in the amount of €140 million from W & G Transport Holding GmbH, Kassel, Germany, to W & G Infrastruktur Finanzierungs-GmbH, Kassel, Germany, to the assets of the disposal groups. In addition to the above loans, this item included, in particular, loans and interest receivables from BASF Ireland Ltd., Cork, Ireland, to finance the business expansion of Asian companies, and receivables in favor of BASF SE from BASF Pensionskasse VVaG.

The increase in noncurrent **derivatives with positive fair values** primarily affected the market valuation of combined interest rate and currency swaps. The change in current derivatives with positive fair market values was largely attributable to the lower fair values of precious metal and foreign currency derivatives.

As of January 1, 2018, **receivables from bank acceptance drafts** are no longer reported under trade accounts receivable, but under other operating receivables, since the remaining credit risks are toward the issuing bank and no longer the customer. Receivables from bank acceptance drafts fell by €226 million in 2018. They totaled €389 million in 2017. This amount was reclassified from trade accounts receivable to other receivables and miscellaneous assets in the Balance Sheet as of December 31, 2017.

Bank acceptance drafts are used as an alternative form of payment in China. They can be held until maturity, discounted by a bank and provided to suppliers as an endorsement in exchange for goods or services before maturity. Depending on the specific agreement, the major risks and opportunities either remain with BASF or are assumed by the counterparty. Only when the counterparty assumes the default risk is the receivable derecognized. If BASF discounts a bank acceptance draft with recourse, a liability toward the credit institution granting the discount is recognized in the amount of the payment received and held to maturity; if BASF endorses the bank acceptance draft to a supplier with recourse, neither receivables from bank acceptance drafts nor trade payables are derecognized. Bank acceptance drafts were endorsed in the amount of €8 million and not derecognized as of December 31, 2018.

Prepaid expenses in 2018 mainly included prepayments of €22 million related to operating activities compared with €62 million in 2017, as well as €83 million in prepayments for insurance in 2018 compared with €50 million in 2017. Prepayments for license costs decreased from €42 million in 2017 to €38 million in 2018.

The increase in current **tax refund claims** is largely attributable to the rise in open income tax receivables.

Precious metal trading items primarily comprise physical items and precious metal accounts as well as long positions in precious metals, which are largely hedged through sales or derivatives.

Expected losses on trade accounts receivable at BASF are calculated on the basis of internal or external customer ratings and the associated probability of default since January 1, 2018.

The following table presents the gross values and credit risks for trade accounts receivable as of December 31, 2018.

Accounts receivable, trade

Million €

Creditworthiness as of December 31, 2018	Equivalence to external rating[1]	Gross carrying amounts
High/medium credit rating	from AAA to BBB–	6,553
Low credit rating	from BB– to D	4,465

1 Standard & Poor's rating

BASF monitors the credit risk associated with counterparties with which receivables are held in the form of financial instruments. In accordance with IFRS 9, impairments for expected credit lossses on receivables are recognized based on this.

Because, pursuant to IAS 39, impairments were only recognized when objective indications for an impairment were present, initial application of IFRS 9 resulted in total additional impairments on trade accounts receivable, loan receivables and other receivables of of €34 million.

For more information in the effects of implementation of IFRS 9, see Note 1.2 from page 183 onward

Valuation allowances for receivables (financial instruments) 2018

Million €

	As of January 1, 2018	Additions	Reversals	Reclassification between stages	Translation effect	Reclassification to assets of disposal groups	As of December 31, 2018
Accounts receivable, trade	**377**	**128**	**117**	**(1)**	**(21)**	**(13)**	**353**
of which stage 2	52	45	44	(4)	(4)	(3)	42
stage 3	325	83	73	3	(17)	(10)	311
Other receivables	**88**	**11**	**9**	**0**	**0**	**(63)**	**27**
of which stage 1	6	3	4	0	0	(2)	3
stage 2	1	1	2	0	0	0	0
stage 3	81	7	3	0	0	(61)	24
Total	**465**	**139**	**126**	**(1)**	**(21)**	**(76)**	**380**

Valuation allowances for receivables 2017

Million €

	As of January 1, 2017	Additions	Reversals	Additions not recognized in income	Reversals not recognized in income	As of December 31, 2017
Accounts receivable, trade	370	80	38	12	75	349
Other receivables	118	10	6	–	10	112
Total	**488**	**90**	**44**	**12**	**85**	**461**

At BASF, a comprehensive, global credit insurance program covers **accounts receivable, trade**. Under a global excess of loss policy, future bad debts are insured for essentially all BASF Group companies excluding joint ventures. The program has no impact on the calculation of impairments in accordance with IFRS 9. No compensation claims were incurred in either 2018 or 2017.

Payment terms are generally agreed upon individually with customers and, as a rule, are within 90 days. In 2018, valuation allowances of €128 million were recognized for trade accounts receivable, and of €117 million were reversed. In the previous year, valuation allowances of €92 million were recognized for trade accounts receivable, and of €113 million were reversed.

In 2018, valuation allowances of €11 million were recognized for **other receivables** representing financial instruments, and of €9 million were reversed. In the previous year, valuation allowances of €10 million were recognized for all other receivables, and of €6 million were reversed.

The addition and reversal of value allowances included impairments of €2 million due to a change in valuation parameters and €4 million due to foreign currency fluctuations.

Aging analysis of accounts receivable, trade

Million €

	December 31, 2017	
	Gross value	Valuation allowances
Not yet due	10,065	35
Past due less than 30 days	522	1
Past due between 30 and 89 days	115	6
Past due more than 90 days	448	307
Total	**11,150**	**349**

The gross values for receivables from bank acceptance drafts as of December 31, 2017 were removed from the aging analysis of trade accounts receivable.

Prior to adoption of IFRS 9, impairments to trade accounts receivable were calculated using amounts past due, among other things.

19 Capital, reserves and retained earnings

Authorized capital

BASF SE has only issued fully paid-up registered shares with no par value. There are no preferential voting rights or other restrictions. BASF SE does not hold any treasury shares.

The Annual Shareholders' Meeting of May 2, 2014, authorized the Board of Executive Directors, with the approval of the Supervisory Board, to increase subscribed capital by issuing new registered shares up to a total of €500 million against cash or contributions in kind until May 1, 2019. The Board of Executive Directors is authorized, with the approval of the Supervisory Board, to exclude shareholders' statutory subscription rights in the cases specified in the authorizing resolution. To date, this option has not been exercised and no new shares have been issued.

Conditional capital

By way of a resolution of the Annual Shareholders' Meeting of May 12, 2017, the Board of Executive Directors was authorized, with the approval of the Supervisory Board, to issue, on a one-off basis or in portions on more than one occasion, bearer or registered convertible bonds and/or bonds with warrants, or combinations of these instruments, with or without maturity limitations up to a nominal value of €10 billion until May 11, 2022. The notional interest in the share capital attributable to the BASF shares to be issued in connection with the debt instruments issued under this authorization may not exceed 10% of the share capital.

In this connection, the share capital was increased conditionally by up to €117,565,184 by issuing a maximum of 91,847,800 new registered BASF shares. The conditional capital increase will only be carried out to the extent to which holders of convertible bonds, or warrants attached to bonds with warrants issued, exercise their conversion or option rights. This authorization has not been exercised to date.

Authorization of share buybacks

By way of a resolution of the Annual Shareholders' Meeting of May 12, 2017, the Board of Executive Directors was authorized to buy back shares until May 11, 2022, in accordance with section 71(1) no. 8 of the German Stock Corporation Act (AktG). The buyback cannot exceed 10% of the company's share capital at the time the resolution was passed and can take place via the stock exchange, a public purchase offer addressed to all shareholders, or a public invitation to the shareholders to submit sales offers. This authorization has not been exercised to date.

Reserves and retained earnings

Capital reserves include effects from BASF's share program, premiums from capital increases and consideration for warrants and negative goodwill from the capital consolidation resulting from acquisitions of subsidiaries in exchange for the issue of BASF SE shares at par value.

Reserves and retained earnings

Million €	December 31, 2018	December 31, 2017
Legal reserves	767	678
Other retained earnings	35,932	34,148
Retained earnings	**36,699**	**34,826**

Transfers from **other retained earnings** increased **legal reserves** by €81 million in 2018 (2017: €53 million).

The acquisition of shares in companies that BASF already controls or that are included in the Consolidated Financial Statements as a joint arrangement is treated as a transaction between shareholders, as long as this does not lead to a change in the consolidation method. There were no transactions of this type in 2018, as in the previous year.

Payment of dividends

In accordance with the resolution of the Annual Shareholders' Meeting on May 4, 2018, BASF SE paid a dividend of €3.10 per share from the retained profit of the 2017 fiscal year. With 918,478,694 qualifying shares, this represented total dividends of €2,847,283,951.40. The remaining €282,560,220.29 in retained profits was recorded under retained earnings.

20 Other comprehensive income

Unrealized gains/losses from currency translation

Translation adjustments decreased by €139 million year on year. The change arose primarily from the appreciation of the U.S. dollar relative to the euro. This was offset in particular by the development of the Russian ruble.

Cash flow hedges

Hedging future cash flows at Nord Stream AG, Zug, Switzerland, which is accounted for using the equity method, led to a decrease of €11 million in 2018 and a decrease of €17 million in 2017.

For more information on cash flow hedge accounting, see Note 27.4 from page 258 onward

Remeasurement of defined benefit plans

Other comprehensive income fell €980 million before taxes in 2018 and rose €1,073 million before taxes in 2017 due to changes in the value of plan assets.

For more information on the remeasurement of defined benefit plans, see Note 22 from page 240 onward

21 Noncontrolling interests

Noncontrolling interests

		December 31, 2018		December 31, 2017	
		Equity interest		Equity interest	
Group company	**Partner**	**%**	**Million €**	**%**	**Million €**
WIGA Transport Beteiligungs-GmbH & Co. KG, W & G Transport Holding GmbH[1], OPAL Gastransport GmbH & Co. KG[1]	Gazprom Germania GmbH, Berlin, Germany	49.98[1]	141	49.98[1]	71
BASF India Ltd., Mumbai, India	free float	26.67	42	26.67	39
BASF PETRONAS Chemicals Sdn. Bhd., Shah Alam, Malaysia	PETRONAS Chemicals Group Berhad, Kuala Lumpur, Malaysia	40.00	193	40.00	198
BASF TOTAL Petrochemicals LLC, Port Arthur, Texas	Total Petrochemicals & Refining USA, Inc., Houston, Texas	40.00	302	40.00	243
Shanghai BASF Polyurethane Company Ltd., Shanghai, China	Shanghai Hua Yi (Group) Company, Shanghai, China, and SINOPEC Assets Management Corporation, Bejing, China	30.00	178	30.00	199
BASF TODA Battery Materials, LLC, Tokyo, Japan	TODA KOGYO CORP., Hiroshima, Japan	34.00	35	34.00	26
BASF Shanghai Coatings Co. Ltd., Shanghai, China	Shanghai Huayi Fine Chemical Co., Ltd, Shanghai, China	40.00	59	40.00	57
Other			105		86
Total			**1,055**		**919**

1 Partners' equity interest in W & G Transportation Holding GmbH and OPAL Gastransport GmbH & Co. KG: 50.03%; voting rights and share of earnings: 49.98%

22 Provisions for pensions and similar obligations

In addition to state pension plans, most employees are granted company pension benefits from either defined contribution or defined benefit plans. Benefits generally depend on years of service, contributions or compensation, and take into consideration the legal framework of labor, tax and social security laws of the countries where the companies are located. To limit the risks of changing financial market conditions as well as demographic developments, employees have, for a number of years now, been almost exclusively offered defined contribution plans for future years of service.

The Group Pension Committee monitors the risks of all pension plans of the Group. In this context, it issues guidelines regarding the governance and risk management of pension plans, particularly with regard to the financing of pension commitments and the portfolio structure of existing plan assets. The organization, responsibilities, strategy, implementation and reporting requirements are documented for the units involved.

Economic and legal environment of the plans

In some countries – especially in Germany, in the United States, in the United Kingdom and in Switzerland – there are pension obligations subject to government supervision or similar legal restrictions. For example, there are minimum funding requirements to cover pension obligations, which are based on actuarial assumptions that may differ from those pursuant to IAS 19. Furthermore, there are qualitative and quantitative restrictions on allocating plan assets to certain asset categories. This could result in annual fluctuations in employer contributions, financing requirements and the assumption of obligations in favor of the pension funds to comply with regulatory requirements.

The obligations and the plan assets used to fund the obligations are exposed to demographic, legal and economic risks. Economic risks are primarily due to unforeseen developments on commodity and capital markets. They affect, for example, pension adjustments based on the level of inflation in Germany and in the United Kingdom, as well as the impact of discount rates on the amount of the defined benefit obligation. In previous years, measures taken to close plans with defined benefits for future service, especially benefits based on final pay promises and the assumption of healthcare costs for former employees led to a reduction in risk with regard to future benefit levels.

The strategy of the BASF Group with regard to financing pension commitments is aligned with country-specific supervisory and tax regulations.

In some countries, pension benefits were granted for which the employer has a subsidiary liability. Pension benefits in a number of countries include minimum interest guarantees to a limited extent. If the pension fund cannot generate the income needed to provide the minimum guarantee, this must be provided by the employer under the subsidiary liability. To the extent that recourse to the employer is unlikely based on the structure and execution of the pension benefits as well as the asset situation of the pension fund, these plans are treated as defined contribution plans.

Description of the defined benefit plans

The typical plan structure in the individual countries is described in the following. Different arrangements may exist, in particular due to the assumption of plans as part of acquisitions; however, these do not have any material impact on the description of plans in the individual countries.

Germany

For BASF SE and German Group companies, a basic level of benefits is provided by BASF Pensionskasse VVaG, a legally independent plan, which is financed by employer and employee contributions as well as the return on plan assets. BASF SE ensures the necessary contributions to adequately finance the benefits promised by BASF Pensionskasse VVaG. Some of the benefits financed via BASF Pensionskasse VVaG are subject to adjustments that must be borne by its member companies to the extent that these cannot be borne by BASF Pensionskasse VVaG due to the regulations imposed by the German supervisory authority. In 2004, the basic benefit plan was closed for newly hired employees at German BASF companies and replaced by a defined contribution plan. At BASF SE, occupational pension promises that exceed the basic level of benefits are financed under a contractual trust arrangement by BASF Pensionstreuhand e.V.; at German Group companies, these benefits are financed primarily via pension provisions. The benefits are largely based on cash balance plans. Furthermore, employees are given the option of participating in various deferred compensation schemes.

United States

Employees are granted benefits based on defined contribution plans.

Effective 2010, the existing defined benefit plans were closed to further increases in benefits based on future years of service, and benefits earned in the past were frozen. There is no entitlement to pension adjustments to compensate for cost-of-living increases.

The legal and regulatory frameworks governing the plans are based on the U.S. Employee Retirement Income Security Act (ERISA), which requires the plan sponsor to ensure a minimum funding level. Any employer contributions necessary to meet the minimum funding level are based on the results of an actuarial valuation. Furthermore, there are unfunded pension plans that are not subject to ERISA requirements.

Additional similar obligations arise from plans that assume the healthcare costs and life insurance premiums of retired employees and their dependents. Such plans have been closed to new entrants since 2007. In addition, the amount of the benefits for such plans has been frozen.

Switzerland

The employees of the BASF Group in Switzerland receive a company pension, which is financed through a pension fund by employer and employee contributions as well as the return on plan assets. The pension plans are accounted for as defined benefit plans, as the obligatory minimum pension guaranteed by law under the Swiss Pension Fund Act (BVG) is included in the scheme. All benefits vest immediately. According to government regulations, the employer is obligated to make contributions, so that the pension funds are able to grant the minimum benefits guaranteed by law. The pension funds are managed by boards, where employer and employees are equally represented, which steer and monitor the benefit plans and asset allocation.

United Kingdom

Employees are granted benefits based on a defined contribution plan.

The BASF Group also maintains defined benefit plans in the United Kingdom, which have been closed for further increases based on future years of service. Adjustments to compensate for increases in the cost of living until the beginning of retirement are legally required for beneficiaries of defined benefit plans.

The financing of the pension plans is determined by the provisions of the regulatory authority for pensions and the relevant social and labor law requirements. The defined benefit plans are administered by a trust company, whose Board of Trustees, according to the trustee agreement and law, represents the interests of the beneficiaries and ensures that the benefits can be paid in the future. The required funding is determined using technical valuations according to local regulations every three years.

Other countries

For subsidiaries in other countries, defined benefits are covered in some cases by pension provisions, but mainly by external insurance companies or pension funds.

Actuarial assumptions

The valuation of the defined benefit obligation is based on the following key assumptions:

Assumptions used to determine the defined benefit obligation as of December 31

	Germany		United States		Switzerland		United Kingdom	
	2018	2017	2018	2017	2018	2017	2018	2017
Discount rate	1.70	1.90	4.10	3.60	0.90	0.50	2.90	2.60
Projected pension increase	1.50	1.50	–	–	–	–	3.10	3.10

Assumptions used to determine expenses for pension benefits in the respective business year

	Germany		United States		Switzerland		United Kingdom	
	2018	2017	2018	2017	2018	2017	2018	2017
Discount rate	1.90	1.80	3.60	4.00	0.50	0.60	2.60	2.80
Projected pension increase	1.50	1.50	–	–	–	–	3.10	3.10

The assumptions used to ascertain the defined benefit obligation as of December 31 are used in the following year to determine the expenses for pension plans.

A Group-wide, uniform procedure is used to determine the discount rates applied for valuation of material pension obligations of the BASF Group. Accordingly, the discount rates were derived from the yields on corporate bonds in the respective currency zones with an issue volume of more than 100 million units of the respective currency with a minimum rating of "AA–" to "AA+" from at least one of the following three rating agencies: Fitch, Moody's, or Standard & Poor's.

The valuation of the defined benefit obligation is generally performed using the most recent actuarial mortality tables as of December 31 of the respective business year, which in Germany and the United States are derived from the BASF Group population and were last updated in 2015 for the pension obligations in Germany and in 2018 for the pension obligations in the United States.

Actuarial mortality tables (significant countries) as of December 31, 2018

Germany	Heubeck Richttafeln 2005G (modified)
United States	RP-2018 (modified) with MP-2018 generational projection
Switzerland	BVG 2015 generational
United Kingdom	S1PxA (standard actuarial mortality tables for self-administered plans (SAPS))

Sensitivity analysis

A change in the material actuarial assumptions would have the following effects on the defined benefit obligation:

Sensitivity of the defined benefit obligation as of December 31

Million €

	Increase by 0.5 percentage points		Decrease by 0.5 percentage points	
	2018	2017	2018	2017
Discount rate	(1,880)	(1,930)	2,140	2,200
Projected pension increase	1,190	1,240	(1,080)	(1,130)

An alternative valuation of the defined benefit obligation was performed to determine how changes in the underlying assumptions influence the amount of the defined benefit obligation. A linear extrapolation of these amounts based on alternative changes in the assumptions as well as an addition of combined changes in the individual assumptions is not possible.

Explanation of the amounts in the statement of income and balance sheet

Composition of expenses for pension benefits

Million €

	2018	2017
Expenses for defined benefit plans	416	402
Expenses for defined contribution plans	314	303
Expenses for pension benefits (recognized in income from operations)	**730**	**705**
Net interest expense from underfunded pension plans and similar obligations	133	175
Net interest income from overfunded pension plans	(2)	(2)
Expenses for pension benefits (recognized in the financial result)	**131**	**173**

The interest on the net defined benefit liability is recognized in the financial result. This is the difference between the interest cost of the defined benefit obligation and the standardized return on plan assets as well as the interest cost for the asset ceiling. The expected contribution payments and benefits paid over the course of the fiscal year are taken into account when determining net interest.

Net interest expense of the respective fiscal year is based on the discount rate and the defined benefit obligation at the beginning of the year.

Development of defined benefit obligation

Million €

	2018	2017
Defined benefit obligation as of January 1	26,871	27,603
Current service cost	384	400
Past service cost	32	2
Plan settlements	–	–
Interest cost	553	568
Benefits paid	(1,037)	(1,048)
Employee contributions	47	48
Actuarial gains/losses		
for adjustments relating to financial assumptions	239	1
adjustments relating to demographic assumptions	(163)	(2)
experience adjustments	(139)	(5)
Effects from acquisitions and divestitures	(374)	8
Other changes	1	124
Currency effects	237	(828)
Defined benefit obligation as of December 31	**26,651**	**26,871**

As of December 31, 2018, the weighted average duration of the defined benefit obligation amounted to 15.4 years (previous year: 15.5 years).

Development of plan assets

Million €

	2018	2017
Plan assets as of January 1	20,648	19,460
Standardized return on plan assets	422	393
Deviation between actual and standardized return on plan assets	(1,043)	1,067
Employer contributions	175	1,102
Employee contributions	47	48
Benefits paid	(913)	(919)
Effects from acquisitions and divestitures	(92)	(2)
Past service cost	–	–
Plan settlements	–	–
Other changes	(135)	106
Currency effects	171	(607)
Plan assets as of December 31	**19,280**	**20,648**

The standardized return on plan assets is calculated by multiplying plan assets at the beginning of the year with the discount rate used for existing defined benefit obligations at the beginning of the year, taking into account benefit and contribution payments to be made during the year.

BASF SE disbursed pension payments that are covered by assets of BASF Pensionstreuhand e.V. Reimbursement of these pension payments by BASF Pensionstreuhand e.V. in 2018 is included in other changes in plan assets and relates to the previous year in the amount of €134 million.

The expected employer contributions for 2019 amount to approximately €600 million.

Special contributions were made in 2017 to improve the funding levels of the plans. These primarily related to BASF Pensionstreuhand e.V. (€500 million), BASF Pensionskasse VVaG (€317 million) and the U.S. plans ($143 million).

Development of net defined benefit liability

Million €

	2018	2017
Net defined benefit liability as of January 1	(6,223)	(8,143)
Current service cost	(384)	(400)
Past service cost	(32)	(2)
Interest cost	(553)	(568)
Standardized return on plan assets	422	393
Deviation between actual and standardized return on plan assets	(1,043)	1,067
Actuarial gains/losses of the defined benefit obligation	63	6
Benefits paid by unfunded plans	124	129
Employer contributions	175	1,102
Effects from acquisitions and divestitures	282	(10)
Other changes	(136)	(18)
Currency effects	(66)	221
Net defined benefit liability as of December 31	**(7,371)**	**(6,223)**
of which defined benefit assets	63	70
provisions for pensions and similar obligations	7,434	(6,293)

Regional allocation of defined benefit plans as of December 31

Million €

	Pension obligations		Plan assets		Net defined benefit liability	
	2018	2017	2018	2017	2018	2017
Germany	18,406	18,104	12,621	13,576	(5,785)	(4,528)
United States	3,745	4,053	2,448	2,687	(1,297)	(1,366)
Switzerland	1,953	2,070	1,838	1,889	(115)	(181)
United Kingdom	1,741	1,884	1,733	1,880	(8)	(4)
Other	806	760	640	616	(166)	(144)
Total	**26,651**	**26,871**	**19,280**	**20,648**	**(7,371)**	**(6,223)**

Explanations regarding plan assets

The target asset allocation has been defined by using asset liability studies and is reviewed regularly. Accordingly, plan assets are aligned with the long-term development of the obligations, taking into consideration the risks associated with the specific asset classes and the regulations relating to the investment of plan assets. The existing portfolio structure is based on the target asset allocation. In addition, current market assessments are taken into consideration. In order to mitigate risks and maximize returns, a widely spread global portfolio of individual assets is held.

Liability-driven investment (LDI) techniques, such as hedging the risk of changes in interest rates and inflation, are used in some pension plans, especially for U.K. and U.S. plans.

Structure of plan assets

%	2018	2017
Equities	25	29
Debt instruments	53	52
of which for government debtors	16	16
for other debtors	37	36
Real estate	4	3
Alternative investments	16	15
Cash and cash equivalents	2	1
Total	**100**	**100**

The asset class **debt instruments** comprises promissory notes and debentures (Pfandbriefe) as well as corporate and government bonds. Government bonds primarily relate to bonds from countries with the highest credit ratings, such as the United States, the United Kingdom, Germany and Switzerland. Corporate bonds mainly comprise bonds from creditworthy debtors, although particular high-yield bonds are also held to a limited extent. In connection with the ongoing monitoring of default risk based on a given risk budget and on the observation of the development of the creditworthiness of issuers, the plan asset allocation may be adjusted in the case of a revised market assessment. **Alternative investments** largely comprise investments in private equity, absolute return funds and senior secured loans.

Almost all of the **equities** are priced on active markets. The category **debt instruments** includes promissory notes and debentures (Pfandbriefe) acquired through private placements with a market value in the amount of €394 million as of December 31, 2018, and €575 million as of December 31, 2017. For such securities, especially those held by domestic pension plans, there is no active market. The capital market compensates for this lack of fungibility with yield premiums depending on the maturity. With only a few exceptions, there is no active market for plan assets in **real estate** and **alternative investments**.

Plan assets as of the balance sheet date contained securities issued by BASF Group companies with a market value of €9 million in 2018 and €15 million in 2017. The market value of the properties of legally independent pension funds rented to BASF Group companies amounted to €112 million on December 31, 2018, and €111 million on December 31, 2017.

Since 2010, there has been an agreement between BASF SE and BASF Pensionskasse VVaG on the granting of profit participation capital with a nominal value of €80 million, which is used to strengthen the financing of the BASF Pensionskasse VVaG. In 2017, a number of special endowments were provided to improve the funding levels of the plans. Beyond this, there were no material transactions between the legally independent pension funds and BASF Group companies in 2018 or 2017.

The funding of the plans was as follows:

Current funding situation of the pension plans as of December 31

Million €	2018		2017	
	Defined benefit obligation	Plan assets	Defined benefit obligation	Plan assets
Unfunded pension plans	2,575	–	2,814	–
Funded pension plans	24,076	19,280	24,057	20,648
Total	**26,651**	**19,280**	**26,871**	**20,648**

Defined contribution plans and government pensions

The contributions to defined contribution plans recognized in income from operations amounted to €314 million in 2018 and €303 million in 2017.

Contributions to government pension plans were €634 million in 2018 and €592 million in 2017.

23 Other provisions

Other provisions

Million €

	December 31, 2018		December 31, 2017	
		of which current		of which current
Restoration obligations	86	–	1,296	17
Environmental protection and remediation costs	638	127	600	112
Employee obligations	1,817	1,467	2,173	1,553
Obligations from sales and purchase contracts	1,261	1,253	1,080	1,070
Restructuring measures	121	98	143	119
Litigation, damage claims, warranties and similar obligations	140	85	103	48
Other	1,049	222	1,312	310
Total	**5,112**	**3,252**	**6,707**	**3,229**

Restoration obligations pertain mainly to anticipated costs for dismantling existing plants and buildings. The decrease was due primarily to the reclassification of the oil and gas business to the disposal group.

Provisions for **environmental protection and remediation costs** cover expected costs for rehabilitating contaminated sites, recultivating landfills, removal of environmental contamination at existing production or storage sites and similar measures.

Provisions for **employee obligations** primarily include obligations for the granting of long-service bonuses and anniversary payments, variable compensation including associated social security contributions, as well as provisions for early and phased retirement programs. The decrease was due primarily to releases for the long-term incentive program.

For more information on provisions for the long-term incentive program, see Note 30 from page 263 onward

Provisions for **obligations from sales and purchase contracts** largely comprise obligations arising from rebates granted and other price discounts in the Agricultural Solutions segment, warranties and product liabilities, sales commissions and expected losses on contracts. The increase in provisions resulted from higher accruals for rebate programs.

Provisions for **restructuring measures** include severance payments to departing employees as well as expected costs for site closures, including the costs for demolition and similar measures.

Provisions for **litigation, damage claims, warranties and similar obligations** contain anticipated expenses from lawsuits in which BASF is the defendant party, as well as obligations under damage claims against BASF and fines.

Other largely includes noncurrent tax provisions.

The following table shows the development of other provisions by category. Other changes include reclassifications to disposal groups, changes in the scope of consolidation, acquisitions, divestitures, currency effects and the reclassification of obligations to liabilities when the amount and timing of these obligations become known.

Development of other provisions in 2018

Million €

	January 1, 2018	Additions	Unwinding of discount	Utilization	Releases	Other changes	December 31, 2018
Restoration obligations	1,296	28	20	(17)	(3)	(1,238)	86
Environmental protection and remediation costs	600	100	1	(69)	(11)	17	638
Employee obligations	2,173	1,509	2	(1,521)	(319)	(27)	1,817
Obligations from sales and purchase contracts	1,080	1,055	–	(1,044)	(93)	263	1,261
Restructuring measures	143	35	–	(46)	(15)	4	121
Litigation, damage claims, warranties and similar obligations	103	84	–	(30)	(12)	(5)	140
Other	1,312	243	1	(294)	(160)	(53)	1,049
Total	**6,707**	**3,054**	**24**	**(3,021)**	**(613)**	**(1,039)**	**5,112**

24 Liabilities

Financial indebtedness

Million €

		Currency	Nominal value (million, currency of issue)	Effective interest rate	Carrying amounts based on effective interest method: December 31, 2018	December 31, 2017
BASF SE						
Commercial Paper		USD	2,922		2,549	–
variable	Bond 2013/2018	EUR	300	variable	–	300
1.5%	Bond 2012/2018	EUR	1,000	1.51%	–	999
1.375%	Bond 2014/2019	EUR	750	1.44%	750	750
variable	Bond 2017/2019	EUR	1,250	variable	1,252	1,261
variable	Bond 2013/2020	EUR	300	variable	300	300
1.875%	Bond 2013/2021	EUR	1,000	1.47%	1,008	1,007
2.5%	Bond 2017/2022	USD	500	2.65%	435	414
1.375%	Bond 2018/2022	GBP	250	1.52%	278	–
2%	Bond 2012/2022	EUR	1,250	1.93%	1,254	1,254
0.925%	Bond 2017/2023	USD	850	0.83%	703	664
0.875%	Bond 2016/2023	GBP	250	1.06%	277	279
2.5%	Bond 2014/2024	EUR	500	2.60%	498	497
1.750%	Bond 2017/2025	GBP	300	1.87%	333	335
0.875%	Bond 2018/2025	EUR	750	0.97%	745	–
3.675%	Bond 2013/2025	NOK	1,450	3.70%	146	147
0.875%	Bond 2017/2027	EUR	1,000	1.04%	986	984
2.670%	Bond 2017/2029	NOK	1,600	2.69%	161	162
1.5%	Bond 2018/2030	EUR	500	1.625%	494	–
1.5%	Bond 2016/2031	EUR	200	1.58%	198	198
0.875%	Bond 2016/2031	EUR	500	1.01%	492	492
2.37%	Bond 2016/2031	HKD	1,300	2.37%	145	139
1.450%	Bond 2017/2032	EUR	300	1.57%	296	296

Continued on next page

Continued from last page

Financial indebtedness

Million €

		Currency	Nominal value (million, currency of issue)	Effective interest rate	Carrying amounts based on effective interest method December 31, 2018	Carrying amounts based on effective interest method December 31, 2017
3%	Bond 2013/2033	EUR	500	3.15%	492	491
2.875%	Bond 2013/2033	EUR	200	3.09%	198	198
4%	Bond 2018/2033	AUD	160	4.24%	96	–
1.625%	Bond 2017/2037	EUR	750	1.73%	737	736
3.25%	Bond 2013/2043	EUR	200	3.27%	199	199
1.025%	Bond 2018/2048	JPY	10,000	1.03%	79	–
3.89%	U.S. private placement series A 2013/2025	USD	250	3.92%	218	208
4.09%	U.S. private placement series B 2013/2028	USD	700	4.11%	610	582
4.43%	U.S. private placement series C 2013/2034	USD	300	4.45%	261	250
BASF Finance Europe N.V.						
0.0%	Bond 2016/2020	EUR	1,000	0.14%	997	996
3.625%	Bond 2018/2025	USD	200	3.69%	174	–
0.75%	Bond 2016/2026	EUR	500	0.88%	495	494
Ciba Specialty Chemicals Finance Luxembourg S.A.						
4.875%	Bond 2003/2018	EUR	477	4.88%	–	474
Other bonds					**588**	**547**
Bonds and other liabilities to the capital market					**18,444**	**15,653**
Liabilities to credit institutions					2,397	2,379
Financial indebtedness					**20,841**	**18,032**

Breakdown of financial indebtedness by currency

Million €

	December 31, 2018	December 31, 2017
Euro	12,358	13,326
U.S. dollar	6,160	2,922
Pound sterling	888	614
Norwegian krone	306	309
Chinese renminbi	163	127
Hong Kong dollar	145	139
Japanese yen	139	58
Turkish lira	127	65
Australian dollar	99	–
Ukrainian hryvnia	89	63
South African rand	74	73
Brazilian real	54	53
Indian rupee	48	24
Argentinian peso	44	137
Indonesian rupiah	43	43
Kazakhstani tenge	42	37
Other currencies	62	42
Total	**20,841**	**18,032**

Maturities of financial indebtedness

Million €

	December 31, 2018	December 31, 2017
Following year 1	5,509	2,497
Following year 2	1,335	2,052
Following year 3	1,178	1,845
Following year 4	2,105	1,140
Following year 5	1,155	1,781
Following year 6 and maturities beyond this year	9,559	8,717
Total	**20,841**	**18,032**

Other bonds

Other bonds consist primarily of industrial revenue and pollution control bonds issued by the BASF Corporation group that were used to finance investments in the United States. Both the weighted average interest rate of these bonds and their weighted effective interest rate amounted to 3.0% in 2018 and 3.1% in 2017. The average residual term amounted to 168 months as of December 31, 2018 (December 31, 2017: 183 months).

Liabilities to credit institutions

Liabilities to credit institutions stayed at the previous year's level. The weighted average interest rate on loans amounted to 5.6% in 2018 compared with 4.1% in 2017.

Unused credit lines

BASF SE had committed and unused credit lines with variable interest rates amounting to €6,000 million both as of December 31, 2018, and as of December 31, 2017.

Other liabilities

Million €

	December 31, 2018		December 31, 2017	
	Noncurrent	Current	Noncurrent	Current
Derivatives with negative fair values	230	308	290	274
Liabilities from finance leases	91	43	99	25
Loan and interest liabilities	75	387	283	212
Advances received on orders[1]	–	903	–	564
Miscellaneous liabilities	41	565	94	1,289
Other liabilities that qualify as financial instruments	**437**	**2,206**	**766**	**2,364**
Liabilities related to social security	58	85	67	77
Employee liabilities	28	262	28	253
Liabilities from precious metal trading positions	–	34	–	17
Contract liabilities	155	31	–	–
Deferred income	23	35	197	78
Miscellaneous liabilities	4	345	37	275
Other liabilities that do not qualify as financial instruments	**268**	**792**	**329**	**700**
Other liabilities	**705**	**2,998**	**1,095**	**3,064**

1 Advances received on orders were reported as other liabilities, which do not represent financial instruments, in the previous year.

Other liabilities

The decrease in non-current **loan and interest liabilities** and in current **miscellaneous liabilities** resulted primarily from the reclassification to the disposal group for the oil and gas business. **Advances received on orders** increased due mainly to first-time incorporation of the seed business acquired from Bayer. **Contract liabilities,** which were reported for the first time with the adoption of IFRS 15 in 2018, include mainly customer payments entitling them to access to licenses over an agreed period of time. The majority of existing contracts have terms of six years. Of the contract liabilities reported as of December 31, 2018, €31 million are expected to be recognized as revenue in 2019.

For more information on financial risks and derivative instruments, see Note 27 from page 251 onward

For more information on liabilities arising from leasing contracts, see Note 28 from page 259 onward

Secured liabilities

Million €

	December 31, 2018	December 31, 2017
Liabilities to credit institutions	18	22
Accounts payable, trade	6	6
Other liabilities	166	169
Secured liabilities	**190**	**197**

Liabilities to credit institutions were secured primarily with registered land charges. **Other liabilities** include collateral for derivative instruments with negative fair values. As in the previous year, there were no secured contingent liabilities in 2018.

25 Other financial obligations

The figures listed below are stated at nominal value:

Other financial obligations

Million €

	December 31, 2018	December 31, 2017
Bills of exchange	7	9
Guarantees	75	11
Warranties	50	49
Collateral granted on behalf of third-party liabilities	1	1
Initiated investment projects	7,094	4,109
of which purchase commitments	1,249	1,045
for the purchase of intangible assets	19	16
Payment and loan commitments and other financial obligations	68	19

BASF provides unlimited guarantees, particularly to the Danish government as well as the state-owned company Nordsøfonden, as a precondition for the exploration for and production of hydrocarbons in the Danish concession area by the joint venture Wintershall Noordzee B.V., Rijswijk, Netherlands, which is allocated to the disposal group. BASF's 100% contingent liability under these guarantees is partially countered by the joint venture partner's 50% guarantees in favor of BASF. Drawing on these guarantees was not foreseeable as of December 31, 2018.

Assets used under long-term leases

Assets used under long-term leases primarily concerned buildings, vehicles and transportation equipment.

For more information on liabilities arising from leasing contracts, see Note 28 from page 259 onward

Obligations arising from long-term leases (excluding finance leases)

Million €

2019	403
2020	272
2021	197
2022	140
2023	111
2024 and maturities beyond this year	359
Total	**1,482**

As of December 31, 2018, the companies allocated to the disposal group accounted for €144 million.

Obligations arising from purchase contracts

Obligations arising from purchase contracts resulted primarily from long-term purchase obligations for raw materials. Firm purchase obligations as of December 31, 2018, were as follows:

Obligations arising from purchase contracts

Million €

2019	8,393
2020	5,412
2021	4,424
2022	3,937
2023	2,891
2024 and maturities beyond this year	5,023
Total	**30,080**

As of December 31, 2018, the companies allocated to the disposal group accounted for €5,406 million.

Further possible obligations arising from agreements existing as of December 31, 2018 are shown under Note 2.4, Acquisitions and divestitures.

26 Risks from litigation and claims

BASF Corporation has potential liability under the Comprehensive Response, Compensation and Liability Act of 1980, as amended, and related state laws for investigation and cleanup at certain sites. The Lower Passaic River Study Area (LPRSA) is one such site comprising the lower 17 miles of the Passaic River in New Jersey. BASF Corporation and more than 60 other companies (collectively, the Lower Passaic River Study Area Cooperating Parties Group or CPG) agreed to complete a remedial investigation/feasibility study (RI/FS) of the LPRSA. In 2016, the United States Environmental Protection Agency (USEPA) selected a final remedy for the lower eight miles of the LPRSA. In late 2018, USEPA indicated being amenable to the CPG's approach for remediation work in the upper portion of the LPRSA. Completion of the RI/FS and an agreement with USEPA on a targeted approach for the upper portion of the LPRSA may occur in late 2019.

Between November 2014 and March 2015, a putative class action lawsuit and several additional lawsuits were filed in the United States District Court for the Southern District of New York against BASF Metals Limited (BML), based in the United Kingdom, along with other defendants, alleging violations of antitrust and commodities laws stemming from the price discovery process for platinum and palladium. The lawsuits were consolidated, and a Second Consolidated Amended Class Action Complaint was eventually filed in July 2015. This Complaint also names as a defendant, among others, BASF Corporation. On September 21, 2015, the defendants filed a Joint Motion to Dismiss the Second Consolidated Amended Class Action Complaint, and BML and BASF Corporation filed individual motions to dismiss. On March 28, 2017, the Court dismissed the Second Consolidated Amended Class Action Complaint against BASF Corporation and BML on jurisdictional grounds. On May 15, 2017, the plaintiffs filed an amended Complaint that renews allegations against defendants and BML, while BASF Corporation is not named as a defendant. The defendants filed a renewed Joint Motion to Dismiss, and BML filed a renewed

Motion to Dismiss. In 2018, no further developments in this proceeding occurred. A pro se complaint filed in September 2015 was dismissed by the U.S. District Court on October 19, 2017. The plaintiff filed an appeal to the U.S. Court of Appeals on November 19, 2017. An oral argument took place on October 18, 2018, and the Court's decision is still outstanding.

Furthermore, BASF SE and its affiliated companies are defendants in or parties to a variety of judicial, arbitrational and/or regulatory proceedings on a recurring basis. To our current knowledge, none of these proceedings will have a material effect on the economic situation of BASF.

27 Supplementary information on financial instruments

27.1 Financial risks

Market risks

Foreign currency risks: Changes in exchange rates could lead to losses in the value of financial instruments and adverse changes in future cash flows from planned transactions. Foreign currency risks from financial instruments result from the translation at the closing rate of financial receivables, loans, securities, cash and financial liabilities into the functional currency of the respective Group company. Foreign currency contracts in various currencies are used to hedge foreign exchange risks from nonderivative financial instruments and planned transactions.

The foreign currency risk exposure corresponds to the net amount of the nominal volume of the primary and the derivative financial instruments that are exposed to currency risks. In addition, planned purchase and sales transactions of the respective following year are included if they fall under the currency risk management system. Long and short positions in the same currency are offset against each other.

The sensitivity analysis is conducted by simulating a 10% appreciation of the respective functional currency against the other currencies. The effect on BASF's income before income taxes would have been minus €373 million as of December 31, 2018, and minus €252 million as of December 31, 2017. The effect from the items designated under hedge accounting would have increased shareholders' equity before income taxes by €33 million as of December 31, 2018 (2017: increase of €46 million). This only refers to transactions in U.S. dollars. The foreign currency risk exposure amounted to €3,185 million as of December 31, 2018, and €1,976 million as of December 31, 2017.

Exposure and sensitivity by currency

Million €

	December 31, 2018		December 31, 2017	
	Exposure	Sensitivity	Exposure	Sensitivity
USD	2,119	(236)	1,410	(143)
Other	1,066	(104)	566	(63)
Total	**3,185**	**(340)**	**1,976**	**(206)**

Due to the use of options to hedge currency risks, the sensitivity analysis is not a linear function of the assumed changes in exchange rates.

Interest rate risks: Interest rate risks arise from changes in prevailing market interest rates, which can lead to changes in the fair value of fixed-rate instruments and in interest payments for variable-rate instruments. Interest rate swaps and combined interest rate and currency derivatives are used to hedge these risks. These risks are relevant to BASF's financing activities but are not of material significance for BASF's operating activities.

The variable interest risk exposure, which also includes fixed rate bonds maturing in the following year, amounted to minus €4.802 million as of December 31, 2018 (2017: minus €986 million). An increase in all relevant interest rates by one percentage point would have lowered income before income taxes by €43 million as of December 31, 2018, and raised income before income taxes by €4 million as of December 31, 2017. The effect from the items designated under hedge accounting would have increased shareholders' equity before income taxes by €5 million as of December 31, 2018 (2017: increase of €9 million).

Carrying amount of nonderivative interest-bearing financial instruments

Million €

	December 31, 2018		December 31, 2017	
	Fixed interest rate	Variable interest rate	Fixed interest rate	Variable interest rate
Loans	179	311	569	439
Securities	90	372	88	87
Financial indebtedness	15,597	5,244	14,703	3,329

Nominal and fair values of interest rate swaps and combined interest rate and currency swaps

Million €

	December 31, 2018		December 31, 2017	
	Nominal value	Fair value	Nominal value	Fair value
Interest rate swaps	**300**	**(7)**	**600**	**(13)**
of which payer swaps	300	(7)	600	(13)
Combined interest rate and currency swaps	**4,183**	**(103)**	**3,337**	**(175)**
of which fixed rate	4,183	(103)	3,337	(175)

Commodity price risks: Some of BASF's divisions are exposed to strong fluctuations in raw materials prices. These result primarily from raw materials (for example naphtha, propylene, benzene, lauric oils, cyclohexane, methanol, natural gas, butadiene, LPG condensate and ammonia) as well as from precious metals. BASF takes the following measures to reduce price risks associated with the purchase of raw materials:

- BASF uses commodity derivatives to hedge risks from the volatility of raw materials prices. These are primarily options and swaps on crude oil, oil products and natural gas.
- In the discontinued business, margin risks arise in volatile markets when purchase and sales contracts are priced differently. Corresponding oil and gas derivatives are used to hedge these risks.
- The Catalysts division enters into both short-term and long-term purchase contracts with precious metal producers. It also buys precious metals on spot markets from various business partners. The price risk from precious metals purchased to be sold on to third parties, or for use in the production of catalysts, is hedged using derivative instruments. This is mainly performed using forward contracts, which are settled by either entering into offsetting contracts or by delivering the precious metals.
- In the Agricultural Solutions division, the sales prices of products are sometimes pegged to the price of certain agricultural commodities. To hedge the resulting risks, derivatives on agricultural commodities are concluded.

In addition, BASF holds limited unhedged precious metal and oil product positions, which can also include derivatives, for trading on its own account. The value of these positions is exposed to market price volatility and is subject to constant monitoring.

In connection with carbon emissions trading, various types of carbon certificates are purchased and sold using forward contracts. The goal of these transactions is to benefit from market price differences. These deals are settled by physical delivery. There were no deals outstanding as of December 31, 2018, or as of December 31, 2017.

By holding commodity derivatives and precious metal trading positions, BASF is exposed to price risks. The valuation of commodity derivatives and precious metal trading positions at fair value means that adverse changes in market prices could negatively affect the earnings and equity of BASF.

BASF performs value-at-risk analyses for all commodity derivatives and precious metals trading positions. Using the value-at-risk analysis, we continually quantify market risk and forecast the maximum possible loss within a given confidence interval over a defined period. The value-at-risk calculation is based on a confidence interval of 95% and a holding period of one day. The value-at-risk calculation for precious metals is based on a confidence interval of 99%. BASF uses the variance-covariance approach.

BASF uses value at risk in conjunction with other risk management tools. Besides value at risk, BASF sets volume-based limits as well as exposure and stop-loss limits.

Exposure to commodity derivatives

Million €

	December 31, 2018		December 31, 2017	
	Exposure	Value at Risk	Exposure	Value at Risk
Crude oil, oil products and natural gas	(12)	8	90	1
Precious metals	112	1	36	2
Emission certificates	–	–	–	–
Agricultural commodities	50	1	0	0
Total	**150**	**10**	**126**	**3**

The exposure corresponds to the net amount of all long and short positions of the respective commodity category.

For more information on financial risks and BASF's risk management, see the Report on Opportunities and Risks in the Management's Report from page 123 onward

Default and credit risk

Default and credit risks arise when customers and debtors do not fulfill their contractual obligations. BASF regularly analyzes the creditworthiness of the counterparties and grants credit limits on the basis of this analysis. Due to the global activities and diversified customer structure of the BASF Group, there is no significant concentration of default risk. The carrying amount of all receivables, loans and interest-bearing securities plus the nominal value of financial obligations stemming from contingent liabilities not to be recognized represents the maximum default risk for BASF.

For more information on credit risks, see Note 18 from page 235 onward

Liquidity risks

BASF promptly recognizes any risks from cash flow fluctuations as part of liquidity planning. BASF has ready access to sufficient liquid funds from the ongoing commercial paper program and confirmed lines of credit from banks.

27.2 Maturity analysis

The interest and principal payments as well as other payments for derivative financial instruments are relevant for the presentation of the maturities of the contractual cash flows from financial liabilities. Future cash flows are not discounted here.

Derivatives are included using their net cash flows, provided they have negative fair values and therefore represent a liability. Derivatives with positive fair values are assets and are therefore not taken into account.

Trade accounts payable are generally interest-free and due within one year. As a result, the carrying amount of trade accounts payable equals the sum of future cash flows.

Maturities of contractual cash flows from financial liabilities as of December 31, 2018

Million €

	Bonds and other liabilities to the capital market	Liabilities to credit institutions	Liabilities resulting from derivative financial instruments	Miscellaneous liabilities	Total
2019	4,860	902	138	669	6,569
2020	1,557	18	22	50	1,647
2021	1,249	181	22	30	1,482
2022	2,195	139	41	25	2,400
2023	1,207	175	65	23	1,470
2024 and thereafter	9,922	979	111	33	11,045
Total	**20,990**	**2,394**	**399**	**830**	**24,613**

Maturities of contractual cash flows from financial liabilities as of December 31, 2017

Million €

	Bonds and other liabilities to the capital market	Liabilities to credit institutions	Liabilities resulting from derivative financial instruments	Miscellaneous liabilities	Total
2018	2,097	698	180	1,578	4,553
2019	2,237	34	70	80	2,421
2020	1,527	541	8	82	2,158
2021	1,219	132	–	46	1,397
2022	1,865	113	50	38	2,066
2023 and thereafter	9,234	861	225	278	10,598
Total	**18,179**	**2,379**	**533**	**2,102**	**23,193**

27.3 Classes and categories of financial instruments

For trade accounts receivable, other receivables and miscellaneous assets, cash and cash equivalents, as well as trade accounts payable and other liabilities, the carrying amount approximates the fair value.

The fair value of financial indebtedness is determined on the basis of interbank interest rates. The difference between carrying amounts and fair values results primarily from changes in market interest rates.

Carrying amounts and fair values of financial instruments as of December 31, 2018

Million €

	Carrying amount	Total carrying amount within scope of application of IFRS 7	Valuation category in accordance with IFRS 9[2]	Fair value	of which fair value level 1[3]	of which fair value level 2[4]	of which fair value level 3[5]
Shareholdings[1]	453	453	FVTPL	34	22	12	–
Receivables from finance leases	25	25	n/a	25	–	–	–
Accounts receivable, trade	10,665	10,665	AC	10,665	–	–	–
Accounts receivable, trade	–	–	FVTPL	–	–	–	–
Derivatives – no hedge accounting	252	252	FVTPL	252	1	251	–
Derivatives – hedge accounting	93	93	n/a	93	1	92	–
Other receivables and miscellaneous assets[6]	3,570	1,083	AC	1,083	–	–	–
Other receivables and miscellaneous assets[6]	85	85	FVTPL	85	–	85	–
Securities	13	13	AC	13	–	–	–
Securities	4	4	FVTOCI	4	4	–	–
Securities	445	445	FVTPL	445	445	–	–
Cash equivalents	63	63	FVTPL	63	63	–	–
Cash and cash equivalents	2,237	2,237	AC	2,237	2,237	–	–
Total assets	**17,905**	**15,418**		**14,999**	**2,773**	**440**	**–**
Bonds	15,895	15,895	AC	16,351	–	16,351	–
Commercial papers	2,549	2,549	AC	2,549	–	–	–
Liabilities to credit institutions	2,397	2,397	AC	2,397	–	–	–
Liabilities from finance leases	134	134	n/a	134	–	–	–
Accounts payable, trade	5,122	5,122	AC	5,122	–	–	–
Derivatives – no hedge accounting	531	531	FVTPL	531	6	525	–
Derivatives – hedge accounting	7	7	n/a	7	–	7	–
Other liabilities[6]	3,031	1,971	AC	1,971	–	–	–
Total liabilities	**29,666**	**28,606**		**29,062**	**6**	**16,883**	**–**

1 In general, only significant shareholdings are measured at fair value. All insignificant shareholdings are measured at cost. Fair value level 1 is applied to publicly listed shareholdings. Level 2 is applied to shareholdings for which valuation is based on parameters observable in the market to the greatest extent possible. These may be adjusted to reflect valuation-relevant characteristics of the respective shareholding in the fair value.
2 AC: amortized cost; FVTOCI: fair value through other comprehensive income; FVTPL: fair value through profit or loss; a more detailed description of the categories can be found in Note 1.2 from page 183 onward.
3 Fair value was determined based on quoted, unadjusted prices on active markets.
4 Fair value was determined based on parameters for which directly or indirectly quoted prices on active markets were available.
5 Fair value was determined based on parameters for which there was no observable market data.
6 Does not include separately shown derivatives or receivables and liabilities from finance leases. If miscellaneous receivables are valued at fair value through profit or loss, their valuation is generally based on parameters observable on the market. These are adjusted to reflect valuation-relevant characteristics of the respective assets in the fair value.

Carrying amounts and fair values of financial instruments as of December 31, 2017

Million €

	Carrying amount	Total carrying amount within scope of application of IFRS 7	Valuation category in accordance with IAS 39[2]	Fair Value	of which which fair value level 1[3]	of which which fair value level 2[4]	of which fair value level 3[5]
Shareholdings[1]	482	482	Afs	–	–	–	–
Receivables from finance leases	29	29	n/a	29	–	–	–
Accounts receivable, trade	11,190	11,190	LaR	11,190	–	–	–
Derivatives – no hedge accounting	340	340	aFVtPL	340	14	326	–
Derivatives – hedge accounting	72	72	n/a	72	–	72	–
Other receivables and miscellaneous assets[6]	3,996	1,508	LaR	1,508	–	–	–
Securities	175	175	Afs	175	175	–	–
Securities	1	1	Htm	–	–	–	–
Cash and cash equivalents	6,495	6,495	LaR	6,495	6,495	–	–
Total assets	**22,780**	**20,292**		**19,809**	**6,684**	**398**	**–**
Bonds	15,653	15,653	AmC	16,406	–	16,406	–
Commercial papers	–	–	AmC	–	–	–	–
Liabilities to credit institutions	2,379	2,379	AmC	2,379	–	–	–
Liabilities from finance leases	124	124	n/a	124	–	–	–
Accounts payable, trade	4,971	4,971	AmC	4,971	–	–	–
Derivatives – no hedge accounting	551	551	aFVtPL	551	36	515	–
Derivatives – hedge accounting	13	13	n/a	13	–	13	–
Other liabilities[6]	3,471	2,442	AmC	2,442	–	–	–
Total liabilities	**27,162**	**26,133**		**26,886**	**36**	**16,934**	**–**

1 The difference between carrying amount and fair value results from shareholdings measured at cost, for which the fair value could not be reliably determined (2017: €482 million).
2 Afs: available for sale; LaR: loans and receivables; aFVtPL: at fair value through profit or loss; AmC: amortized cost; Htm: held to maturity; a more detailed description of the categories can be found in Note 1.2 from page 183 onward.
3 Fair value was determined based on quoted, unadjusted prices on active markets.
4 Fair value was determined based on parameters for which directly or indirectly quoted prices on active markets were available.
5 Fair value was determined based on parameters for which there was no observable market data.
6 Not including separately shown derivatives as well as receivables and liabilities from finance leases. Payments received for orders were reported as other liabilities that do not represent financial instruments in the BASF 2017 report. These liabilities were then added to financial instruments.

Offsetting of financial assets and financial liabilities as of December 31, 2018

Million €

	Offset amounts			Amounts that cannot be offset		
	Gross amount	Amount offset	Net amount	Due to global netting agreements	Relating to financial collateral	Potential net amount
Derivatives with positive fair values	264	(20)	244	(163)	(48)	33
Derivatives with negative fair values	483	(20)	463	(163)	(150)	150

Offsetting of financial assets and financial liabilities as of December 31, 2017

Million €

	Offset amounts			Amounts that cannot be offset		
	Gross amount	Amount offset	Net amount	Due to global netting agreements	Relating to financial collateral	Potential net amount
Derivatives with positive fair values	376	(39)	337	(55)	(10)	272
Derivatives with negative fair values	(373)	(39)	(412)	(55)	(139)	(606)

The table "Offsetting of financial assets and financial liabilities" shows the extent to which financial assets and financial liabilities were offset in the balance sheet, as well as potential effects from the offsetting of instruments subject to a legally enforceable global netting agreement (primarily in the form of an ISDA agreement) or similar agreement. For positive fair values of combined interest rate and currency swaps, the respective counterparties provided cash collaterals in an amount comparable to the outstanding fair values.

Deviations from the derivatives with positive fair values and derivatives with negative fair values reported in other receivables and other liabilities at the end of 2018 and 2017 arose from derivatives not subject to any netting agreements as well as from embedded derivatives and are therefore not included in the table above.

Net gains and losses from financial instruments comprise the results of valuations, the amortization of discounts, the recognition and reversal of impairments, results from the translation of foreign currencies as well as interest, dividends and all other effects on the earnings resulting from financial instruments. The line item financial instruments at fair value through profit or loss contains only gains and losses from instruments that are not designated as hedging instruments in acordance with IFRS 9.

The gains and losses from the valuation of securities recognized in equity are shown in development of income and expense recognized in equity attributable to shareholders of BASF SE on page 177

Net gains and losses from financial instruments 2018

Million €

	Total
Financial assets measured at amortized cost	33
of which interest result	58
Financial assets at fair value through profit or loss	(45)
of which interest result	57
Financial assets at fair value through other comprehensive income	(4)
of which interest result	4
Financial liabilities measured at amortized cost	(599)
of which interest result	(450)

Net gains and losses from financial instruments 2017

Million €

	Total
Loans and receivables	(311)
of which interest result	90
Available-for-sale financial assets	(24)
of which interest result	2
Financial liabilities measured at amortized cost	249
of which interest result	(359)
Financial instruments at fair value through profit or loss	(396)

27.4 Derivative instruments and hedge accounting

The use of derivative instruments

BASF is exposed to foreign currency, interest rate and commodity price risks during the normal course of business. These risks are hedged using derivative instruments as necessary in accordance with a centrally determined strategy. Hedging is only employed for existing items from the product business, cash investments and financing as well as for planned sales, raw material purchases and capital measures. The risks from the hedged items and the derivatives are constantly monitored. Where derivatives have a positive market value, BASF is exposed to credit risks from derivative transactions in the event of nonperformance of the other party. To minimize the default risk on derivatives with positive market values, transactions are exclusively conducted with creditworthy banks and partners and are subject to predefined credit limits.

To ensure effective risk management, risk positions are centralized at BASF SE and certain Group companies. The contracting and execution of derivative financial instruments for hedging purposes are conducted according to internal guidelines, and subject to strict control mechanisms.

The fair values of derivative financial instruments are calculated using valuation models that use input parameters observable on the market. Exceptions to this are some commodity derivatives, whose valuation is based directly on market prices.

Fair value of derivative instruments

Million €	December 31, 2018	December 31, 2017
Foreign currency forward contracts	(57)	65
Foreign currency options	13	37
Foreign currency derivatives	**(44)**	**102**
of which designated hedging instruments as defined by IFRS 9 (hedge accounting)	11	34
Interest rate swaps	(7)	(13)
of which designated hedging instruments as defined by IFRS 9 (hedge accounting)	(7)	(13)
Combined interest rate and currency swaps	(103)	(175)
of which designated hedging instruments as defined by IFRS 9 (hedge accounting)	80	38
Interest derivatives	**(110)**	**(188)**
Commodity derivatives	**(39)**	**(66)**
of which designated hedging instruments as defined by IFRS 9 (hedge accounting)	1	1
Derivative financial instruments	**(193)**	**(152)**

Cash flow hedge accounting

BASF is exposed to price risks in the context of procuring naphtha. Some of the planned purchases of naphtha are hedged using swaps and options on oil and oil products. The main contractual elements of these options correspond to the characteristics of the hedged item. These hedges are not presented using cash flow hedge accounting in BASF's 2018 or 2017 financial statements.

Cash flow hedge accounting continues to be used to a minor extent for natural gas purchases exposed to commodity price risks, meaning that gains and losses from hedging instruments are initially recognized in equity. Commodity price-based options serve as hedging instruments, for which contract terms are adjusted to reflect the risks of the hedged item. Gains and losses from hedging instruments are included in cost of sales in the fiscal year in which the hedged item is recognized in profit or loss.

The planned transactions and their effect on earnings occur in the year following the balance sheet date. In 2018, effective changes in the fair value of hedging instruments of €5 million (2017: €200,000) were recognized in the equity of the shareholders of BASF SE. In 2018, effective changes in the fair value of hedging instruments of €4 million were derecognized from the equity attributable to shareholders of BASF SE and recognized in other operating income (2017: €300,000). Ineffective parts required to be accounted for did not arise. In 2017, minus €100,000 was recognized as the ineffective part of value changes of the hedging instruments in other operating expenses. The change in the options' time value is separately recognized in equity and recognized in profit or loss in the year during which the hedged items matured. In 2018, a decrease in fair value of minus €2 million was recognized in equity attributable to shareholders of BASF SE, and €1 million was derecognized, increasing equity.

BASF is exposed to foreign currency risks due to planned sales in U.S. dollars. To some extent, cash flow hedge accounting is applied using currency options. The hedging rate is $1.1563 per euro. The impact on earnings from the hedged transactions will occur in 2019. In 2018, the effective change in the values of the hedges was €8 million (2017: €71 million), which was recognized in the equity of the shareholders of BASF SE. A total of €31 million (2017: €44 million) was derecognized accordingly from the equity attributable to shareholders of BASF SE and was recognized in income from foreign currency and hedging transactions. The hedges were entirely effective. The decrease in the options' time value component arising in the amount of €33 million in 2018 was recognized separately in equity as the cost of hedging and resulted in a reduction in equity. The reclassification of the accumulated changes in the time value of options to profit or loss due to the maturity of hedged items had a countering effect in the amount of €36 million.

The interest rate risk of the variable-rate bonds issued by BASF SE in 2013 was hedged using interest rate swaps, which converted the bonds into fixed-interest rate bonds with a rate of 1.45%. The key terms of the interest rate swap contracts used as hedging instruments largely correspond to the contractual elements of the hedged item. The bond and the interest rate swaps were designated in a hedging relationship. The effective changes in the fair value recognized in BASF SE shareholders' equity amounted to €4 million in 2018 (2017: €6 million). Ineffective parts required to be accounted for did not arise.

Furthermore, BASF SE's fixed-rate U.S. private placement of $1.25 billion, issued in 2013, was converted to euros using cross-currency swaps, because the private placement exposes BASF to a currency risk. The hedging interest rate was 4.13%; and the hedging foreign exchange rate was $1.3589 per euro. This hedge was designated as a cash flow hedge. Recognition of ineffective portions in profit or loss was not required. In 2018, changes in fair value of €42 million were recognized in shareholders' equity (2017: minus €125 million). In 2018, €49 million was derecognized from other comprehensive income and recorded as income in the financial result (2017: expense of €144 million in financial result).

28 Leases

Leased assets

Property, plant and equipment include assets that are considered to be economically owned through a finance lease. They primarily concern the following items:

Leased assets

Million €

	December 31, 2018		December 31, 2017	
	Acquisition cost	Net carrying amount	Acquisition cost	Net carrying amount
Land, land rights and buildings	91	74	22	9
Machinery and technical equipment	127	50	118	43
Miscellaneous equipment and fixtures	111	46	113	44
Total	**329**	**170**	**253**	**96**

The increase in leased assets is due primarily from the additions related to the acquisition of significant parts of Bayer's seed and non-selective herbicide businesses and its vegetable seed business.

Liabilities from finance leases

Million €

	December 31, 2018			December 31, 2017		
	Minimum lease payments	Interest portion	Leasing liability	Minimum lease payments	Interest portion	Leasing liability
Following year 1	47	4	43	32	5	27
Following year 2	28	3	25	37	5	32
Following year 3	24	3	21	22	4	18
Following year 4	17	2	15	19	3	16
Following year 5	8	1	7	12	2	10
More than 5 years	28	5	23	26	5	21
Total	**152**	**18**	**134**	**148**	**24**	**124**

In the current business year and in the previous year, no additional lease payments exceeding minimum lease payments were recognized in the income statement due to contractual conditions for finance leases. In 2018 and in the previous year, leasing liabilities were not offset by any future minimum lease payments from subleases.

In addition, BASF is a lessee under operating lease contracts. The resulting lease commitments totaled €1,482 million in 2018 (2017: €1,410 million) and will become due in the following years:

Future minimum payments from operating lease contracts

Million €

	Nominal value of future minimum lease payments	
	Dec. 31, 2018	Dec. 31, 2017
Less than 1 year	403	362
1–5 years	720	728
More than 5 years	359	320
Total	**1,482**	**1,410**

Future minimum payments from operating lease contracts included €144 million for companies in the oil and gas disposal group as of December 31, 2018.

Future minimum lease payments from subleasing contracts based on existing agreements amounted to €10 million in 2018 (2017: €10 million).

In 2018, minimum lease payments of €494 million (2017: €407 million) were included in income from operations. In 2018, conditional lease payments of €1 million (2017: €1 million) were also included in income from operations. Furthermore, sublease payments of €4 million (2017: €3 million) were included in income from operations in 2018.

BASF as lessor

BASF acts as a lessor for finance leases to a minor extent only. Receivables on finance leases were €25 million in 2018 (2017: €29 million).

In 2018, claims arising from operating leases amounted to €166 million (2017: €93 million).

Future minimum lease payments to BASF from operating lease contracts

Million €

	Nominal value of future minimum lease payments	
	Dec. 31, 2018	Dec. 31, 2017
Less than 1 year	30	19
1–5 years	75	50
More than 5 years	61	24
Total	**166**	**93**

Other Notes

29 Statement of cash flows and capital structure management

Statement of cash flows

Cash flows from operating activities contained the following payments:

Statement of cash flows

Million €	2018	2017
Income tax payments	1,981	2,147
Interest payments	393	409
Dividends received	427	498

In 2018, interest payments comprised interest payments received of €162 million (2017: €161 million) and interest paid of €555 million (2017: €570 million).

In 2017, BASF SE transferred securities in the amount of €500 million to BASF Pensionstreuhand e.V., Ludwigshafen am Rhein, Germany. This transfer was not cash effective and therefore had no effect on the statement of cash flows.

In 2018, the amount of €134 million was taken from plan assets of BASF Pensionstreuhand e.V., Ludwigshafen am Rhein, Germany, for the reimbursement of pension benefits paid pertaining to 2017.

Cash flows from investing activities included €7,362 million in payments made for acquisitions (2017: €150 million).

Payments of €107 million were received for divestitures in 2018 (2017: €177 million).

Payments made for intangible assets and property, plant and equipment amounted to €3,894 million, €102 million lower than in the previous year.

Cash and cash equivalents in the amount of €2,519 million reported in the statement of cash flows as of December 31, 2018 consist of the balance sheet value (€2,300 million) and the value reclassified to the oil and gas business disposal group (€219 million). As in the previous year, cash and cash equivalents were not subject to any utilization restrictions.

For more information on cash flows from acquisitions and divestitures, see Note 2.4 from page 205 onward

For more information on the contribution of discontinued operations on BASF's Statement of Cash Flows, see Note 2.5 from page 209 onward

Reconciliation according to IAS 7

Million €	Dec. 31, 2017	Non-cash-effective changes					Dec. 31, 2018[1]
		Cash effective in cash flows from financing activities	Acquisitions/ divestitures/ changes in scope of consolidation	Currency effects	Other effects	Changes in fair value	
Financial indebtedness	18,032	3,252	–	56	11	–	21,351
Loan liabilities	376	150	7	8	–	–	541
Liabilities from finance leases	124	(35)	9	1	35[2]	–	134
Other financing-related liabilities	1,058	(281)	115	(7)	4	–	889
Financial and similar liabilities	**19,590**	**3,086**	**131**	**58**	**50**	–	**22,915**
Assets/liabilities from hedging transactions	(118)	(120)	–	–	–	303	65
Total	**19,472**	**2,966**	**131**	**58**	**50**	**303**	**22,980**

1 Contributions as of December 31, 2018 include contributions reclassified to the disposal group and therefore deviate from balance sheet values.
2 Includes additions from leasing contracts

The reconciliation breaks down the changes in financial and similar liabilities and their hedging transactions into cash-effective and non-cash-effective changes. The cash-effective changes presented above correspond to the figures in cash flows from financing activities.

Loan liabilities do not contain any interest components.

Other financing-related liabilities primarily comprise liabilities from accounts used for cash pooling with BASF companies not included in the Consolidated Financial Statements. They are reported in miscellaneous liabilities within the balance sheet item other liabilities that qualify as financial instruments.

The **assets/liabilities from hedging transactions** form part of the balance sheet item derivatives with positive or negative fair values and include only those transactions which hedge risks arising from financial indebtedness and financing-related liabilities secured by micro hedges.

For more information on receivables and miscellaneous assets, see Note 18 from page 235 onward
For more information on liabilities, see Note 24 from page 246 onward
For more information on the Statement of Cash Flows, see the Management's Report from page 55 onward

Capital structure management

The aim of capital structure management is to maintain the financial flexibility needed to further develop BASF's business portfolio and take advantage of strategic opportunities. The objectives of the company's financing policy are to ensure solvency, limit financial risks and optimize the cost of capital.

Capital structure management focuses on meeting the requirements needed to ensure unrestricted access to the capital market and a solid "A" rating. The capital structure is managed using selected financial ratios, such as dynamic debt ratios, as part of the company's financial planning.

The equity of the BASF Group as reported in the balance sheet amounted to €36,109 million as of December 31, 2018 (December 31, 2017: €34,756 million); the equity ratio was 41.7% on December 31, 2018 (December 31, 2017: 44.1%).

BASF prefers to access external financing on the capital markets. A commercial paper program is used for short-term financing, while corporate bonds are used for financing in the medium and long term. These are issued in euros and other currencies with different maturities. The goal is to create a balanced maturity profile, achieve a diverse range of investors and optimize our debt capital financing conditions.

BASF currently has the following ratings, which were were most recently confirmed by Moody's on February 15, 2019, by Standard & Poor's on January 11, 2019, and by Scope Ratings on December 11, 2018.

Ratings as of December 31, 2018

	Noncurrent financial indebtedness	Current financial indebtedness	Outlook
Moody's	A1	P-1	stable
Standard & Poor's	A	A-1	stable
Scope	A	S-1	stable

Ratings as of December 31, 2017

	Noncurrent financial indebtedness	Current financial indebtedness	Outlook
Moody's	A1	P-1	stable
Standard & Poor's	A	A-1	stable
Scope	A	S-1	stable

BASF strives to maintain a solid "A" rating, which ensures unrestricted access to financial and capital markets.

For more information on BASF's financing policy, see the Management's Report from page 54 onward

30 Share price-based compensation program and BASF incentive share program

Share price-based compensation program

The BASF Group continued its share price-based compensation program (the long-term incentive (LTI) program) in 2018. The program has been in place since 1999 and approximately 1,200 people, in particular the Board of Executive Directors and senior executives, are currently eligible to participate. It provides for the granting of virtual options, which are settled in cash when exercised.

Participation in the LTI program is voluntary. In order to take part in the program, a participant must make a personal investment: A participant must hold BASF shares amounting to 10% to 30% of his or her individual variable compensation for a two-year period from the granting of the option (holding period). The number of shares to be held is determined by the amount of variable compensation and the volume-weighted average market price for BASF shares on the first trading day after the Annual Shareholders' Meeting, which was €85.45 on May 7, 2018.

The participant receives four option rights per invested share. Each option consists of two parts, right A and right B, which may be exercised if defined thresholds have been met: The threshold of right A is met if the price of the BASF share has increased by more than 30% in comparison with the base price on the option grant date (absolute threshold). The value of right A is the difference between the market price of BASF shares on the exercise date and the base price; it is limited to 100% of the base price. If the cumulative percentage performance of BASF shares exceeds the percentage performance of the MSCI World Chemicals Index^{SM} (MSCI Chemicals), right B may be exercised (relative threshold). The value of right B is the base price of the option multiplied by twice the percentage by which the BASF share outperforms the MSCI Chemicals Index on the exercise date. It is limited to the closing price on the date of exercise less the nominal value of the BASF share. From the 2013 LTI program onward, right B may only be exercised if the price of the BASF share equals at least the base price. The options of the 2018 LTI program were granted as of July 1, 2018, and may be exercised following a two-year vesting period, between July 1, 2020, and June 30, 2026. During the exercise period, there are certain times (closed periods) during which the options may not be exercised. Each option can only be exercised in full. This means that one of the thresholds must be exceeded. If the other threshold is not exceeded and the option is exercised, the other option right lapses. A participant's maximum gain from exercising an option is limited to five times the original individual investment starting with the 2013 LTI program. The maximum gain from exercising an option is limited to 10 times the original individual investment for programs from previous years. Option rights are nontransferable and are forfeited if the option holders no longer work for the BASF Group or have sold part of their individual investment before the expiry of the two-year vesting period. They remain valid in the case of retirement. For the members of the Board of Executive Directors, the long-term orientation of the program is significantly strengthened compared with the conditions applying to the other participants. The members of the Board of Executive Directors are required to participate in the LTI program with at least 10% of their actual annual variable compensation. In view of this binding personal investment (in the form of BASF shares), an extended holding period of four years applies. Members of the Board of Executive Directors may only exercise their options four years after they have been granted at the earliest (vesting period).

The 2011 to 2017 programs were structured in a similar way to the 2018 LTI program.

The models used in the valuation of the option plans are based on the arbitrage-free valuation model according to Black-Scholes. The fair values of the options are determined using the binomial model.

Fair value of options and parameters used as of December 31, 2018

		LTI program of the year	
		2018	2017
Fair value	€	10.5	6.25
Dividend yield	%	5.3	5.3
Risk-free interest rate	%	0.00	(0.12)
Volatility BASF share	%	25.32	23.22
Volatility MSCI Chemicals	%	15.97	14.14
Correlation BASF share price : MSCI Chemicals	%	78.27	75.24

The stated fair values and the valuation parameters relate to the 2018 and 2017 LTI programs. The fair value calculation was based on the assumption that options will be exercised in a manner dependent on their potential gains. For the programs from preceding years, corresponding fair values and valuation parameters were determined/used.

Volatility was determined on the basis of the monthly closing prices over a historical period corresponding to the remaining term of the options.

The number of options granted amounted to 2,010,720 in 2018 (2017: 1,461,113).

As a result of a resolution by the Board of Executive Directors in 2002 to settle option rights in cash, all outstanding option rights under the 2011 to 2018 LTI programs were valued at fair value as of December 31, 2018. A proportionate provision is recognized for programs in the vesting period. The LTI provision decreased from €347 million as of December 31, 2017, to €56 million as of December 31, 2018, due to lower fair values of the outstanding option rights. The utilization of provisions amounted to €22 million in 2018 (2017: €49 million). Income arising from the release of provisions amounted to €268 million in 2018 (2017: €68 million). Of this amount, €6 million was attributable to the disposal group for the discontinued oil and gas business in 2018 (2017: €1 million).

The exercisable options had no intrinsic value as of December 31, 2018; their total intrinsic value as of December 31, 2017 was €145 million.

BASF incentive share program

The "plus" incentive share program was introduced in 1999 and is currently available to employees in Germany, other European countries and Mexico. Simultaneous participation in both the "plus" program and the LTI program is not permitted.

Employees who participate in BASF's "plus" incentive share program acquire shares in BASF from their variable compensation. For every 10 BASF shares purchased in the program, a participant receives one BASF share at no cost after one, three, five, seven and ten years of holding these shares. As a rule, the first and second block of ten shares entitles the participant to receive one BASF share at no extra cost in each of the next 10 years.

The right to receive free BASF shares lapses if a participant sells the individual investment in BASF shares, if the participant stops working for a Group company or one year after retirement. The number of free shares to be granted has developed as follows:

Number of free shares to be granted

Shares	2018	2017
As of January 1	2,811,447	2,849,723
Newly acquired entitlements	693,125	570,465
Bonus shares issued	(477,395)	(479,111)
Lapsed entitlements	(99,334)	(129,630)
As of December 31	2,927.843	2,811.447

The free shares to be provided by the company are measured at the fair value on the grant date. Fair value is determined on the basis of the BASF share price, taking into account the present value of dividends, which are not paid during the term of the program. The weighted-average fair value on the grant date amounted to €85.45 for the 2018 program, and €86.02 for the 2017 program.

The fair value of the free shares to be granted is recognized as an expense with a corresponding increase in capital reserves over the term of the program.

Personnel expenses of €32 million were recorded in 2018 for BASF's "plus" incentive share program (2017: €28 million).

31 Compensation of the Board of Executive Directors and Supervisory Board

Compensation of the Board of Executive Directors and Supervisory Board

Million €

	2018	2017
Non-performance-related and performance-related cash compensation of the Board of Executive Directors	14.3	24.8
Fair value of options granted to the Board of Executive Directors in the fiscal year as of grant date	4.5	2.7
Total compensation of the Board of Executive Directors	**18.8**	**27.5**
Service costs for members of the Board of Executive Directors	6.3	7.0
Compensation of the Supervisory Board	3.3	3.3
Total compensation of former members of the Board of Executive Directors and their surviving dependents[1, 2]	(4.4)	7.6
Pension provisions for former members of the Board of Executive Directors and their surviving dependents	159.5	144.3
Guarantees assumed for members of the Board of Executive Directors and the Supervisory Board	–	–

1 Total compensation of former members of the Board of Executive Directors includes compensation for Dr. Kurt Bock before pension benefits in the amount of approximately €1.1 million.
2 Compensation for Dr. Harald Schwager and Margret Suckale for their active membership on the Board of Executive Directors in 2017 is included under total compensation of former members of the Board of Executive Directors in the amount of approximately €1.0 million each.

The annual variable compensation in effect until the end of 2017 was replaced as of 2018 with a forward-looking performance bonus that is geared to sustainable corporate development and has a three-year deferral component. The performance bonus is based on the performance of the Board of Executive Directors as a whole and the return on capital employed (ROCE) of the BASF Group. Subject to certain conditions, ROCE is adjusted for special items from acquisitions and divestitures. The conditions for the adjustment of ROCE were not met in 2018.

Until December 31, 2017, performance-related compensation of the Board of Executive Directors was based on the return on assets adjusted for special effects, as well as the performance of the Board of Executive Directors as a whole. Return on assets corresponds to income before income taxes plus interest expenses as a percentage of average assets.

The members of the Board of Executive Directors were granted 210,228 option rights under the long-term incentive (LTI) program in 2018. The market valuation of the option rights of active and former members of the Board of Executive Directors resulted in income totaling €28.5 million in 2018 (2017: €5.8 million).

For more information on the compensation of members of the Board of Executive Directors, see the Compensation Report from page 146 onward

For more information on the members of the Supervisory Board and Board of Executive Directors, including their memberships on other boards, see page 142 onward

32 Related party transactions

A related party is a natural person or legal entity that can exert influence on the BASF Group or over which the BASF Group exercises control, joint control or a significant influence. In particular, related parties include nonconsolidated subsidiaries, joint ventures and associated companies.

The following tables show the volume of business with related parties that are included in the Consolidated Financial Statements at amortized cost or accounted for using the equity method. The values include sales, receivables, other receivables, liabilities and other liabilities with respect to the disposal groups and/or discontinued operations.

Since the transfer of the leather chemicals business to the Stahl group as of September 29, 2017, BASF holds a minority interest in the parent company of the Stahl group, over which it can exercise significant influence. Sales, trade accounts receivable and other liabilities resulting from transactions with the Stahl group since then are included in the tables below in the values for associated companies for 2018 and 2017.

Sales and trade accounts receivable from and trade accounts payable to related parties mainly included business with own products and merchandise, agency and licensing businesses, and other operating businesses.

Sales from joint ventures with BASF Group companies amounted to €543 million in 2018, and €598 million in 2017. Sales from associated companies with companies in the BASF Group amounted to €626 million in 2018, and €481 million in 2017.

Sales to related parties

Million €

	2018	2017
Nonconsolidated subsidiaries	530	413
Joint ventures	583	379
Associated companies	380	307

Trade accounts receivable from/trade accounts payable to related parties

Million €

	Accounts receivable, trade		Accounts payable, trade	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Nonconsolidated subsidiaries	175	136	101	77
Joint ventures	91	69	75	75
Associated companies	78	71	42	29

Other receivables from/liabilities to related parties

Million €

	Other receivables		Other liabilities	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Nonconsolidated subsidiaries	247	172	190	180
Joint ventures	284	306	432	734
Associated companies	70	73	271	236

Other receivables and liabilities primarily arose from financing activities, from accounts used for cash pooling, outstanding dividend payments, profit and loss transfer agreements, and other finance-related and operating activities and transactions.

Both the increase in other receivables from nonconsolidated subsidiaries and the decrease in other liabilities to joint ventures in 2018 were due mainly to other finance-related receivables and/or liabilities.

The outstanding balances toward related parties were generally not secured and settled in cash.

The balance of valuation allowances for other receivables from nonconsolidated subsidiaries increased from €74 million as of December 31, 2017 to €76 million as of December 31, 2018. Of this amount, €2 million was recognized as an expense in 2018 (2017: €1 million).

The balance of valuation allowances for trade accounts receivable from associated companies decreased from €9 million as of December 31, 2017 to €8 million as of December 31, 2018.

There were obligations from guarantees and other financial obligations at BASF in favor of nonconsolidated subsidiaries in the amount of €6 million as of December 31, 2018 (December 31, 2017: €5 million), and in favor of associated companies in the amount of €17 million as of December 31, 2018 (December 31, 2017: €23 million).

Obligations arising from purchase contracts with joint ventures amounted to €3 million as of December 31, 2018 and €3 million as of December 31, 2017.

As of December 31, 2018, the present value of the outstanding minimum rental payments for an office building including a parking area payable by BASF SE to BASF Pensionskasse VVaG for the nonterminable basic rental period to 2029 amounted to €52 million.

There were no reportable related party transactions with members of the Board of Executive Directors or the Supervisory Board and their related parties in 2018.

For more information on subsidiaries, joint ventures and associated companies, see the BASF Group list of shares held on page 211

For more information on other financial obligations in favor of joint ventures, see Note 25 from page 249 onward

For more information about defined benefit plants, the division of risk between Group companies, see Provisions for pensions and similar obligations, from page 240 onward

For more information on the members of the Board of Executive Directors and the Supervisory Board, see Management and Supervisory Boards and Compensation Report from page 142 onward

33 Services provided by the external auditor

BASF Group companies used the following services from KPMG:

Services provided by the external auditor

Million €	2018	2017
Annual audit	21.1	18.6
of which domestic	8.2	6.4
Audit-related services	0.7	0.4
of which domestic	0.5	0.1
Tax consultation services	0.3	0.2
of which domestic	0.1	0.1
Other services	–	0.1
of which domestic	–	–
Total	**22.1**	**19.3**

The services provided by the external auditor mainly include services for the annual audit, and to a lesser extent, confirmation services, tax consultation services and other services.

The line item annual audit relates to expenses for the audit of the Consolidated Financial Statements of the BASF Group, the legally required financial statements of BASF SE and of the subsidiaries and joint operations included in the Consolidated Financial Statements as well as the voluntary audit of subgroups and combined financial statements. Tax consultation services refer primarily to fees for completion of unfinished tax returns. Fees for other services primarily include project-related audits in connection with regulatory demands as well as other confirmation services.

34 Declaration of Conformity with the German Corporate Governance Code

Declaration pursuant to section 161 of the German Stock Corporation Act (AktG)

The annual Declaration of Conformity with the German Corporate Governance Code according to section 161 AktG was signed by the Board of Executive Directors and the Supervisory Board of BASF SE in December 2018 and is published online.

For more information, see basf.com/en/corporategovernance

35 Non-adjusting post-balance sheet date events

On January 31, 2019, BASF and Solenis concluded the transfer of BASF's paper and water chemicals business to Solenis that had been announced in May 2018. BASF gained a share of 49% in Solenis as of February 1, 2019. 51% of the shares will be held by funds managed by Clayton, Dubilier & Rice and senior management. The transaction covered production facilities and plants pertaining to BASF's paper and water chemicals business in Bradford and Grimsby, United Kingdom, Suffolk, Virginia, Altamira, Mexico, Ankleshwar, India and Kwinana, Australia. The BASF Paper and Water Chemicals business unit's production plants that are tightly integrated in the Verbund in Ludwigshafen, Germany, and in Nanjing, China, will remain with BASF, supplying the joint company with products and raw materials based on medium and long-term supply agreements. BASF's paper coating chemicals portfolio was not part of the transaction. As of the closing of the transaction, BASF's share of Solenis' income after taxes will be accounted for using the equity method due to BASF's significant influence, and included in EBIT of the BASF Group, presented in Other.