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.