

CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED FINANCIAL STATEMENTS OF COVESTRO AG AS OF DECEMBER 31, 2020

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COVESTRO GROUP CONSOLIDATED INCOME STATEMENT

	Note	2019	2020
		€ million	€ million
Sales	8	12,412	10,706
Cost of goods sold		(9,658)	(8,207)
Gross profit		2,754	2,499
Selling expenses		(1,380)	(1,195)
Research and development expenses		(266)	(262)
General administration expenses		(372)	(310)
Other operating income	9	181	63
Other operating expenses	10	(65)	(99)
EBIT¹		852	696
Equity-method loss		(22)	(13)
Result from other affiliated companies		2	1
Interest income		40	26
Interest expense		(85)	(73)
Other financial result		(26)	(32)
Financial result	12	(91)	(91)
Income before income taxes		761	605
Income taxes	13	(204)	(151)
Income after income taxes		557	454
of which attributable to noncontrolling interest		5	(5)
of which attributable to Covestro AG stockholders (net income)		552	459
		€	€
Basic earnings per share²	14	3.02	2.48
Diluted earnings per share²	14	3.02	2.48

¹ EBIT: income after income taxes plus financial result and income tax expense

² In accordance with IAS 33 (Earnings per Share), earnings per share corresponds to net income divided by the weighted average number of outstanding no-par voting shares of Covestro AG. The calculation is based on 184,912,207 no-par shares (previous year: 182,728,724). For more information, see note 14

"Earnings per share."

COVESTRO GROUP CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Note	2019	2020
		€ million	€ million
Income after income taxes		557	454
Remeasurements to the net defined benefit liability for post-employment benefit plans	22	(439)	(130)
Income taxes	13	103	48
Other comprehensive income from remeasurements of the net defined benefit liability for post-employment benefit plans		(336)	(82)
Changes in fair values of equity instruments	26	–	1
Income taxes	13	–	–
Other comprehensive income from equity instruments		–	1
Other comprehensive income that will not be reclassified subsequently to profit or loss		(336)	(81)
Exchange differences of foreign operations		93	(210)
Reclassified to profit or loss		–	–
Other comprehensive income from exchange differences		93	(210)
Other comprehensive income that may be reclassified subsequently to profit or loss		93	(210)
Total other comprehensive income¹		(243)	(291)
of which attributable to noncontrolling interest		1	(3)
of which attributable to Covestro AG stockholders		(244)	(288)
Total comprehensive income		314	163
of which attributable to noncontrolling interest		6	(8)
of which attributable to Covestro AG stockholders		308	171

¹ Total change recognized outside profit or loss.

COVESTRO GROUP CONSOLIDATED STATEMENT OF FINANCIAL POSITION

	Note	Dec. 31, 2019	Dec. 31, 2020
		€ million	€ million
Noncurrent assets			
Goodwill	15	264	255
Other intangible assets	15	114	109
Property, plant and equipment	16	5,286	5,175
Investments accounted for using the equity method	17	192	173
Other financial assets	18	32	32
Other receivables	20	52	65
Deferred taxes	13	851	925
		6,791	6,734
Current assets			
Inventories	19	1,916	1,663
Trade accounts receivable		1,561	1,593
Other financial assets	18	27	1,144
Other receivables	20	359	295
Claims for income tax refunds		104	55
Cash and cash equivalents		748	1,404
Assets held for sale		12	36
		4,727	6,190
Total assets		11,518	12,924
Equity	21		
Capital stock of Covestro AG		183	193
Capital reserves of Covestro AG		3,487	3,925
Other reserves		1,537	1,489
Equity attributable to Covestro AG stockholders		5,207	5,607
Equity attributable to noncontrolling interest		47	37
		5,254	5,644
Noncurrent liabilities			
Provisions for pensions and other post-employment benefits	22	1,965	2,123
Other provisions	23	230	218
Financial liabilities	24	1,601	2,277
Income tax liabilities	13	95	88
Other liabilities	25	32	31
Deferred taxes	13	206	179
		4,129	4,916
Current liabilities			
Other provisions	23	203	155
Financial liabilities	24	151	622
Trade accounts payable ¹		1,431	1,241
Income tax liabilities	13	69	74
Other liabilities ¹	25	267	262
Liabilities directly related to assets held for sale		14	10
		2,135	2,364
Total equity and liabilities		11,518	12,924

¹ Reference information was restated accordingly, see note 4.1 "Change in presentation of rebates granted to customers."

COVESTRO GROUP CONSOLIDATED STATEMENT OF CASH FLOWS

	Note	2019	2020
		€ million	€ million
Income after income taxes		557	454
Income taxes		204	151
Financial result		91	91
Income taxes paid		(296)	(155)
Depreciation, amortization, impairment losses and impairment loss reversals		752	776
Change in pension provisions		49	25
(Gains)/losses on retirements of noncurrent assets		(51)	8
Decrease/(increase) in inventories		322	160
Decrease/(increase) in trade accounts receivable		238	(106)
(Decrease)/increase in trade accounts payable ¹		(123)	(154)
Change in other working capital ¹ , other noncash items		(360)	(16)
Cash flows from operating activities	29.1	1,383	1,234
Cash outflows for additions to property, plant, equipment and intangible assets		(910)	(704)
Cash inflows from sales of property, plant, equipment and other assets		6	6
Cash inflows from divestments less divested cash		51	(3)
Cash outflows for noncurrent financial assets		(15)	(16)
Cash inflows from noncurrent financial assets		2	7
Cash outflows for acquisitions less acquired cash		(11)	–
Interest and dividends received		40	30
Cash outflows for other current financial assets		(1)	(1,089)
Cash flows from investing activities	29.2	(838)	(1,769)
Capital contributions		–	444
Reissuance of treasury shares		7	4
Dividend payments and withholding tax on dividends		(442)	(221)
Issuances of debt		444	1,775
Retirements of debt		(591)	(719)
Interest paid		(86)	(79)
Cash flows from financing activities	29.3	(668)	1,204
Change in cash and cash equivalents due to business activities		(123)	669
Cash and cash equivalents at beginning of year		865	748
Change in cash and cash equivalents due to changes in scope of consolidation		(1)	1
Change in cash and cash equivalents due to exchange rate movements		7	(14)
Cash and cash equivalents at end of year		748	1,404

¹ Reference information was restated accordingly, see note 4.1 "Change in presentation of rebates granted to customers."

COVESTRO GROUP CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Capital stock of Covestro AG	Capital reserves of Covestro AG	Retained earnings incl. total income	Accumulated other com- prehensive income	Equity attributable to Covestro AG stockholders	Equity attributable to noncontrolling interest	Equity
	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Dec. 31, 2018	183	3,480	1,356	323	5,342	33	5,375
Issuance of treasury shares	–	7			7		7
Dividend payments			(438)		(438)	(3)	(441)
Other changes ¹			(12)		(12)	11	(1)
Income after income taxes			552		552	5	557
Other comprehensive income			(336)	92	(244)	1	(243)
Total comprehensive income			216	92	308	6	314
Dec. 31, 2019	183	3,487	1,122	415	5,207	47	5,254
of which treasury shares	–	(7)			(7)		(7)
Dec. 31, 2019	183	3,487	1,122	415	5,207	47	5,254
Capital increase ²	10	434			444		444
Issuance of treasury shares	–	5			5		5
Dividend payments			(219)		(219)	(2)	(221)
Other changes ³		(1)	–		(1)	–	(1)
Income after income taxes			459		459	(5)	454
Other comprehensive income			(82)	(206)	(288)	(3)	(291)
Total comprehensive income			377	(206)	171	(8)	163
Dec. 31, 2020	193	3,925	1,280	209	5,607	37	5,644
of which treasury shares	–	(2)			(2)		(2)

¹ Other changes result from a step acquisition of shares in April 2019 and the related equity transaction, see note 5.2 "Acquisitions and divestitures" in the 2019 Annual Report.

² After deduction of the cost of raising equity

³ Other changes include the difference between the historical cost of treasury shares and the issue price in November 2020.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS OF THE COVESTRO GROUP

Principles and Methods

1. General Information

Covestro AG (registered at the district trade register, or Amtsgericht, for Cologne, number: HRB 85281) is a stock exchange-listed corporation headquartered at Kaiser-Wilhelm-Allee 60, 51373 Leverkusen, (Covestro AG). The consolidated financial statements of Covestro AG for the period ended December 31, 2020, cover Covestro AG and its subsidiaries, joint arrangements and associated companies. They have been prepared according to the International Financial Reporting Standards (IFRSs) of the International Accounting Standards Board (IASB), London (United Kingdom), as endorsed by the European Union (EU) and in effect at the reporting date, the Interpretations (IFRICs) of the IFRS Interpretations Committee (IFRS IC) and the Interpretations published by the Standing Interpretations Committee (SIC), as well as the additional requirements of German commercial law pursuant to Section 315e (1) of the German Commercial Code (HGB) for the exempting IFRS consolidated financial statements. Reference information for the previous year was restated against the background of the change in presentation of rebates granted to customers.

☐ See note 4 "Change in presentation of rebates granted to customers and trade working capital."

The declaration pertaining to the German Corporate Governance Code pursuant to Section 161 of the German Stock Corporation Act (AktG) has been issued and made available to shareholders.

☐ See "Declaration on corporate governance" in the Group Management Report.

If certain items in the income statement, statement of comprehensive income, statement of financial position, statement of cash flows and statement of changes in equity of the Covestro Group are condensed for the sake of clarity, this is explained in the notes. The income statement has been prepared using the cost-of-sales method. Assets and liabilities are classified by maturity. They are classified as current if they mature within one year or within the Group's normal business cycle, or are held for sale. Inventories, trade accounts receivable and payable and assets held for sale are consistently presented as current. Deferred tax assets, deferred tax liabilities and pension provisions are consistently presented as noncurrent.

The consolidated financial statements are drawn up in euros. Amounts are stated in millions of euros (€ million) except where otherwise indicated.

Exchange rates

In the reporting period, the following exchange rates were used for the major currencies of relevance from the perspective of the Covestro Group:

Average rates for major currencies

		Average Rates	
€1/		2019	2020
BRL	Brazil	4.41	5.80
CNY	China	7.74	7.87
HKD	Hong Kong	8.77	8.84
INR	India	78.82	84.43
JPY	Japan	122.01	121.72
MXN	Mexico	21.55	24.35
USD	United States	1.12	1.14

Closing rates for major currencies

		Closing Rates	
€1/		2019	2020
BRL	Brazil	4.52	6.37
CNY	China	7.82	7.98
HKD	Hong Kong	8.75	9.51
INR	India	80.19	89.66
JPY	Japan	121.94	126.49
MXN	Mexico	21.22	24.42
USD	United States	1.12	1.23

2. Effects of New Financial Reporting Standards

2.1 Financial reporting standards applied for the first time in the reporting period

IFRS pronouncement (published on)	Title	Effective for annual periods beginning on or after
Amendments to IFRS Standards (March 29, 2018)	Amendments to References to the Conceptual Framework in IFRS Standards	January 1, 2020
Amendments to IFRS 3 (October 22, 2018)	Definition of a Business	January 1, 2020
Amendments to IFRS 9, IAS 39 and IFRS 7 (September 26, 2019)	Interest Rate Benchmark Reform	January 1, 2020
Amendments to IAS 1 and IAS 8 (October 31, 2018)	Definition of Material	January 1, 2020

Initial application of the standards listed in the table had no or no material impact on the presentation of the net assets, financial position and results of operations of the Covestro Group.

2.2 Published financial reporting standards that have not yet been applied

The IASB and the IFRS IC have issued the following standards, amendments to standards, and interpretations whose application has not yet been mandatory to date. The application of these IFRS standards is conditional upon their endorsement by the European Union.

IFRS pronouncement (published on)	Title	Effective for annual periods beginning on or after
Endorsed by the EU		
Amendments to IFRS 16 (May 28, 2020)	Covid 19-Related Rent Concessions	June 1, 2020
Amendments to IFRS 4 (June 25, 2020)	Extension of the Temporary Exemption from Applying IFRS 9	January 1, 2021
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 (August 27, 2020)	Interest Rate Benchmark Reform – Phase 2	January 1, 2021
Not yet endorsed by the EU		
Amendments to IFRS 3 (May 14, 2020)	Reference to the Conceptual Framework	January 1, 2022
Amendments to IAS 16 (May 14, 2020)	Property, Plant and Equipment: Proceeds before Intended Use	January 1, 2022
Amendments to IAS 37 (May 14, 2020)	Onerous Contracts – Cost of Fulfilling a Contract	January 1, 2022
Annual Improvements to IFRSs (May 14, 2020)	2018–2020 Cycle	January 1, 2022
IFRS 17 (May 18, 2017)	Insurance Contracts	January 1, 2023
Amendments to IAS 1 (January 23, 2020)	Classification of Liabilities as Current or Non-current	January 1, 2023
Amendments to IFRS 17 (June 25, 2020)	Amendments to IFRS 17 – Insurance Contracts	January 1, 2023
Amendments to IAS 1 (July 15, 2020)	Classification of Liabilities as Current or Non-current – Deferral of Effective Date	January 1, 2023
Amendments to IAS 1 (February 12, 2021)	Disclosure of Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2)	January 1, 2023
Amendments to IAS 8 (February 12, 2021)	Definition of Accounting Estimates (Amendments to IAS 8)	January 1, 2023

The date of initial application of the standards not yet endorsed by the EU is deemed to be the effective date stipulated by the IASB.

The effects of the initial application of the financial reporting standards described below are currently being reviewed. At the time the financial statements were prepared, no material impact on the presentation of the net assets, financial position, and results of operations of the Covestro Group was expected. According to the analysis as it stands currently, initial application of the other standards listed in the table have no effect on the presentation of the net assets, financial position, and results of operations of the Covestro Group.

On August 27, 2020, the IASB published "Interest Rate Benchmark Reform – Phase 2" containing amendments to IFRS 9 (Financial Instruments), IAS 39 (Financial Instruments: Recognition and Measurement), IFRS 7 (Financial Instruments: Disclosures), IFRS 4 (Insurance Contracts), and IFRS 16 (Leases). The amendment pertaining to leases establishes a practical expedient relating (solely) to lease modifications within the meaning of IFRS 16 as a direct consequence of the interest rate benchmark reform.

On May 14, 2020, the IASB issued "Reference to the Conceptual Framework" with amendments to IFRS 3 (Business Combinations). The amendments ensure that IFRS 3 refers to the Conceptual Framework revised in the year 2018 instead of the previous version of the Conceptual Framework. In addition, the amendments require that, for transactions within the scope of IAS 37 (Provisions, Contingent Liabilities and Contingent Assets) or IFRIC 21 (Leases), IAS 37 or IFRIC 21 must be applied to identify the liabilities assumed in a business combination. Moreover, the amendments explicitly state that acquired contingent assets are not recognized. Absent these amendments, according to the IASB, so-called day 2 gains or losses might arise if the Conceptual Framework revised in the year 2018 requires the initial (non-)recognition of a liability or an asset, whereas, for purposes of subsequent recognition, applicable standards would not. The amendments relate to business combinations completed on or after the effective date.

On May 14, 2020, the IASB also released amendments to IAS 16 (Property, Plant and Equipment) in "Property, Plant and Equipment: Proceeds before Intended Use." The amendments to IAS 16 mainly include a change whereby proceeds from selling items produced while bringing an asset to the location and into the condition necessary for it to be capable of operating as intended by management and the corresponding costs according to IAS 2 (Inventories) are recognized directly in profit or loss. Supplementary disclosures in the notes are also prescribed. Specific transition rules apply to the amendments.

On May 14, 2020, the IASB additionally published "Onerous Contracts – Cost of Fulfilling a Contract," which contains amendments to IAS 37 (Provisions, Contingent Liabilities and Contingent Assets). The amendments specify that, for the purpose of assessing whether a contract is onerous, the cost of fulfilling a contract comprises all costs directly related to the contract. Costs directly associated with fulfilling an onerous contract include, for example, directly attributable labor and material costs ("incremental cost") as well as proportionately attributable depreciation charges. Specific transition rules apply to the amendments.

On May 18, 2017, the IASB issued IFRS 17 (Insurance Contracts). IFRS 17 governs the recognition, measurement, and presentation of issued insurance contracts as well as the necessary disclosures in the notes. In addition, IFRS 17 requires the application of similar principles in the case of reinsurance contracts and, insofar as insurance contracts are issued, of investment contracts with a discretionary participation feature. IFRS 17 will replace IFRS 4 (Insurance Contracts). On June 25, 2020, the IASB released amendments to IFRS 17 in addition to other associated amendments and clarifications in respect of other standards with the aim of deferring the effective date of the standard by two years to January 1, 2023 (previously: January 1, 2021). This deferral addresses concerns such as those of insurers and certain financial service providers as those most affected by IFRS 17, and occurs in parallel with the deferral of the effective date of IFRS 9 (Financial Instruments) for this sector. IFRS 17 includes complex transition rules.

On January 23, 2020, the IASB issued amendments to IAS 1 under the title "Classification of Liabilities as Current or Non-current." The amendments define more precisely when a liability is to be classified as current or non-current in the statement of financial position if the settlement date is still uncertain. Due to the added pressure on companies from the coronavirus pandemic and the possible renegotiation of loans, the IASB issued an amendment to this publication on July 15, 2020, deferring the effective date by one year to January 1, 2023 (previously: January 1, 2022). The amendment is to be applied retrospectively.

On February 12, 2021 the IASB issued additional amendments to IAS 1, "Disclosure of Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2)," along with an amendment to the relevant practice statement. These amendments require all companies to disclose those accounting policies in their notes to the consolidated financial statements that are relevant for understanding the financial statements and the underlying transactions ("material accounting policies"), rather than their significant accounting policies in general. The amendments to IFRS Practice Statement 2 provide guidelines for the application of this materiality concept.

Also on February 12, 2021 the IASB issued amendments to IAS 8, "Definition of Accounting Estimates (Amendments to IAS 8)." These amendments are intended to clarify the distinction between changes in accounting policies and changes in accounting estimates. This distinction is generally relevant since changes in accounting policies are, subject to transitional provisions, always applied retrospectively to consolidated financial statements, while changes in accounting estimates are only applied prospectively from the date of the change in estimates.

3. Accounting Policies and Valuation Principles

Covestro's consolidated financial statements are based on the principle of the historical cost of acquisition, construction or production. Exceptions are items measured at fair value, such as certain financial assets, assets held for sale, plan assets, and derivatives.

In preparing the consolidated financial statements, Covestro management has to make assumptions and estimates to a certain extent that may substantially impact the presentation of the Covestro Group's net assets, financial position, and results of operations and could deviate from the actual results. Such estimates, assumptions, and the exercise of discretion mainly relate to the following areas: defining the useful life of noncurrent assets, calculating the discounted cash flows used for impairment testing to be conducted at least annually, purchase price allocations, accounting for income taxes, the assessment of the amount of deferred tax assets recoverable in future periods as well as the recognition of provisions, (e.g., for litigation-related expenses, pensions and other employee benefits, other taxes, environmental compliance and remediation costs, and product liability). In addition, Covestro's management must decide which information is relevant for readers of the IFRS consolidated financial statements and should be included in the notes. Information about exercising discretion in the application of accounting policies that most significantly affect the amounts reported in the consolidated financial statements, and about estimates and assumptions, is disclosed in the following notes.

Consolidation

As of December 31, 2020, the direct and indirect subsidiaries of Covestro AG were fully consolidated in accordance with the principles of IFRS 10 (Consolidated Financial Statements). In addition, joint arrangements as defined by IFRS 11 (Joint Arrangements) were classified as joint operations and consolidated proportionately in the consolidated financial statements, or classified as joint ventures and accounted for in the same way as associated companies using the equity method in accordance with IAS 28 (Investments in Associates and Joint Ventures).

 See note 7.1 "Scope of consolidation and investments."

Joint operations and joint ventures

Joint operations and joint ventures are based on joint arrangements. A joint arrangement is deemed to exist if Covestro AG, through a contractual agreement, indirectly or directly jointly controls an activity together with one or more third parties. Joint control is only deemed to exist if decisions regarding the relevant activities require the unanimous consent of the parties sharing control.

A joint operation is a joint arrangement whereby the parties that have joint control over the arrangement have rights to the assets attributable to the arrangement and obligations with regard to the liabilities attributable to the arrangement. The Covestro Group recognizes the share of assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with its rights and obligations.

A joint venture is a joint arrangement whereby the parties that have joint control over the arrangement have rights to the net assets of the arrangement. Joint ventures are accounted for using the equity method.

Associates over which Covestro AG is able to exercise significant influence, directly or indirectly, generally through an ownership interest between 20% and 50%, are also accounted for using the equity method.

Currency translation

The financial statements of the individual companies for inclusion in the consolidated financial statements are prepared in their respective functional currencies. The majority of consolidated companies carry out their activities autonomously from a financial, economic and organizational point of view, and their functional currencies are therefore the respective local currencies.

In the separate financial statements of the foreign companies, receivables and liabilities in currencies other than the respective functional currency are translated at closing rates. Related exchange differences are recognized in profit or loss and recorded as exchange gains or losses under other financial result.

In the consolidated financial statements, the assets and liabilities of Covestro companies outside the eurozone are translated into euros at closing rates at the start and end of the reporting period, while income and expense items and cash flows are translated into euros at average rates. Equity items are translated at historical rates.

Sales and other operating income

All revenues derived from the selling of products or rendering of services, or from licensing agreements, are recognized as sales. Other operational revenues are recognized as other operating income.

In principle, the amount of consideration from a contract with a customer to which Covestro expects to be entitled in exchange for the transfer of goods or services is recognized as sales when the customer obtains control of the corresponding goods or services.

Sales are generated primarily from the sale of chemical products. In most cases, control over these products is transferred to the customer at a point in time.

Depending on the contractual agreements made and transportation clauses agreed upon with the customer, in the majority of cases control is transferred to the customer upon delivery at the place of destination, furthermore at the point in time of collection by the customer or upon handover to the freight carrier. In some cases, sales are made through consignment warehouses in which customers primarily obtain control over the delivered goods upon delivery to the consignment warehouse.

In principle, control is considered to be transferred when the customer can direct the use of the product to be delivered and obtain substantially all of the remaining benefits from the product, while this is no longer possible for Covestro.

Determining the point in time of the transfer of control involves considering additional indicators. In particular, it is considered at which point in time Covestro has a present right to payment for the product and when physical possession of the product or, in a broader sense, the possibility of sole access to the product, is transferred to the customer. Depending on the transportation clauses, the possibility of sole access to the product may be transferred even prior to arrival or physical handover of the product to the customer. Furthermore, the point in time when the legal title passes to the customer is also considered to the extent that it constitutes more than a protective right. The point in time when the significant rewards and risks of ownership of a product are transferred to the customer is usually linked closely with the aforementioned indicators and is therefore considered with these. Based on experience, it is assumed that products sold fulfill the agreed-upon specifications, thus acceptance by the customer is an indicator that does not generally affect the point in time at which control is transferred.

As a result, depending on the contractual agreements made and transportation clauses agreed upon with the customer, the point in time of the transfer of control is determined.

In the case of products sold through a consignment warehouse, the customer generally obtains physical possession of this product upon delivery to the consignment warehouse. In addition, the right to payment for the delivered goods generally arises upon delivery. To the extent that the other three indicators do not lead to a contrary conclusion, control of the products in the case of a sale through a consignment warehouse transfers to the customer upon delivery to the consignment warehouse. The corresponding sales are therefore realized at the time of delivery.

Certain products are only sold to one customer. Some of these customer-specific products have no alternative use for Covestro. Insofar as Covestro has an enforceable right to payment for performance completed to date, sales are recognized on the basis of progress towards complete satisfaction of the performance obligation. As a rule, control over an individual customer-specific product is considered to be transferred when the generally short production process is completed successfully and the product has been tested to confirm that the agreed-upon specifications have been met.

To the extent that, for certain types of performance obligations that are satisfied over time, there is a right to consideration in an amount that corresponds directly with the value of the performance provided by Covestro to date, revenue will normally be realized in the amount to which Covestro has a right to invoice.

Invoices are usually payable in 0 to 90 days. Contracts may contain early payment discounts or rebates. Rebates are generally retroactively granted sales- or volume-dependent rebates based on the sales or volume of a period customarily spanning up to 12 months. Some contracts include pricing formulas used to determine the billable price at the time of delivery. Moreover, the final prices for certain contracts with customers are not yet fixed at the time of transfer of control. Instead, provisional prices are billed initially.

Sales are recognized in the amount of the transaction price that Covestro is expected to receive. Sales do not include amounts collected on behalf of third parties (e.g., sales tax). Where consideration includes a variable component, for example due to the contract clauses described, this component of the consideration is estimated either based on the expected value method or the most likely amount. The method producing the best estimate is used in this case. However, variable consideration is only taken into account to the extent it is not constrained as defined by IFRS 15. Variable consideration is not constrained if it is highly probable that a significant reversal in the amount of sales will not occur when the corresponding uncertainty is subsequently resolved. The transaction price of a contract is allocated to the performance obligations therein using the relative stand-alone selling prices, which generally correspond to the agreed upon prices. If the conditions are met, variable amounts are completely allocated to individual performance obligations.

Refund liabilities result particularly from rebates granted and total the amount of the rebate expected to be refunded, which is calculated based on the methods described. The rebate deemed to be due is reported in refund liabilities until payment.

As a rule, no warranties are issued beyond normal warranties that products will fulfill the agreed-upon specifications.

In the case of contracts with customers, Covestro generally does not expect more than one year to pass between the transfer of a product to a customer and the payment thereof. As a result, the agreed consideration is not adjusted for significant financing components. When incremental costs of obtaining a contract arise, these are immediately recognized as expenses, if the potential amortization period is one year or less.

Research and development expenses

Research and development expenses are incurred in the Covestro Group for in-house research and development activities as well as research and development collaborations and alliances with third parties.

According to IFRSs, research costs cannot be capitalized. Development costs, on the other hand, must be capitalized according to closely defined conditions. An intangible asset must be recognized if there is reasonable certainty of receiving future cash flows that will cover an asset's carrying amount. Covestro's development projects are often subject to uncertainties, so the conditions for the capitalization of development costs are normally not satisfied. Each project or contract is reviewed to determine potential capitalization requirements. The recognition, measurement, and presentation rules for other intangible assets apply where development costs are capitalized.

Income taxes

Income taxes comprise the taxes levied on taxable income in the individual countries along with changes in deferred tax assets and liabilities that are recognized in profit or loss. The income taxes recognized are reflected at the amounts likely to be payable or reimbursable under the statutory regulations in force, or already enacted in relation to future periods, at the end of the reporting period.

As a rule, deferred taxes are recognized in profit or loss. However, if deferred taxes relate to items recognized outside profit or loss in equity, they, too, are recognized outside profit or loss.

The probability that deferred tax assets resulting from temporary differences, tax credits or loss carryforwards can be utilized in the future is the subject of forecasts by the individual companies regarding the future earnings situation in the respective Covestro companies and other parameters.

Deferred tax liabilities are recognized on planned dividend payments by subsidiaries. Where no dividend payment or disposal of corresponding equity investments is planned for the foreseeable future, no deferred tax liability is recognized on the difference between the proportionate equity according to IFRSs and the tax base of the carrying amount of the investment in the subsidiary (outside basis differences).

The expected effects of uncertain deferred and actual income tax positions are estimated in accordance with IFRIC 23 (Uncertainty over Income Tax Treatments) either based on the expected value method or the most likely amount. The method producing the best estimate is used in this case. Tax audits in which the relevant tax authority could take a view differing from Covestro's legal position are by far the most important sources of estimation uncertainties for uncertain tax positions. Uncertain tax positions are accounted for under the assumption that the tax authorities will investigate all relevant matters and have all relevant information at their disposal.

Goodwill

Goodwill is not amortized. Its carrying amount is subjected to impairment testing annually or more often if there is any indication of possible impairment. Detailed explanations of impairment testing can be found under "Procedure used in global impairment testing and its impact." Once an impairment loss has been recognized on goodwill, it generally cannot be reversed in subsequent periods. In the event of a restructuring, e.g., the reorganization of financial reporting processes, or external portfolio divestments, any associated goodwill is reallocated or only derecognized in part according to the relative fair value principle.

Other intangible assets

Other intangible assets are identifiable nonmonetary assets without physical substance, other than goodwill (such as software or rights). Other intangible assets are recognized at the cost of acquisition or generation. Those with a determinable useful life are amortized accordingly on a straight-line basis over a period of up to 20 years, except where their actual depletion demands a different amortization pattern. Determination of the expected useful lives of other intangible assets is based on estimates of the period for which they will generate cash flows. Other intangible assets with an indefinite useful life and other intangible assets recognized, but not yet available for use, with a specified useful life are tested for impairment, like goodwill.

Property, plant and equipment

Property, plant and equipment are carried at the cost of acquisition or construction and depreciated by the straight-line method over the expected useful life. An impairment loss is recognized in addition if an asset's recoverable amount falls below its carrying amount. Right-of-use assets recognized in accordance with IFRS 16 (Leases) are also included in property, plant and equipment.

If the construction phase or manufacturing process of property, plant or equipment extends over a period of 12 months or more, the interest incurred on borrowed capital up to the date of completion is capitalized as part of the cost of acquisition or construction in accordance with IAS 23 (Borrowing Costs).

Costs for regular, comprehensive maintenance work (such as the major overhaul of a technical facility) are capitalized as a separate component if they satisfy special recognition criteria.

The following depreciation periods are generally applied throughout the Covestro Group:

Useful life of property, plant and equipment

Buildings	20 to 50 years
Infrastructure	10 to 20 years
Storage tanks and pipelines	10 to 20 years
Plant installations	6 to 20 years
Machinery and equipment	6 to 12 years
Furniture and fixtures	4 to 10 years
Vehicles	5 to 8 years
Computer equipment	3 to 5 years
Laboratory and research facilities	3 to 5 years

Significant asset components with different useful lives are accounted for and depreciated separately.

When assets are sold, closed down, or scrapped, the difference between the recoverable amount, which normally amounts to the fair value less costs of disposal, and the net carrying amount of the assets is recognized as a gain or loss in other operating income or expenses, respectively.

Impairment of other intangible assets and property, plant and equipment

If there are indications that an individual item of other intangible assets or property, plant and equipment (including recognized right-of-use assets from leases) may be impaired, the recoverable amount is compared to the carrying amount to determine whether it is higher or lower. The recoverable amount is generally the higher of the value in use or the fair value less costs of disposal. If the recoverable amount does not equal or exceed the respective carrying amount, an impairment loss is recognized in profit or loss in the amount of the difference between the carrying amount and the recoverable amount. If the reasons for a previously recognized impairment loss no longer apply, the impairment loss is reversed in profit or loss provided that the reversal does not cause the carrying amount to exceed the original (amortized) cost of acquisition or generation.

Both depreciation or amortization and impairment losses are recognized in the functional cost in line with the use of the relevant asset.

Inventories

Inventories are recognized at their cost of acquisition or production (production-related full cost) – calculated by the weighted-average method – or at their net realizable value, whichever is lower. The net realizable value is the estimated selling price in the ordinary course of business less estimated cost to complete and selling expenses.

Financial instruments

Contracts are recognized as financial instruments in the financial statements which simultaneously give rise to a financial asset at one entity while resulting in a financial liability or equity instrument at another entity. Accordingly, financial assets are recognized in the consolidated financial statements if the Covestro Group has a contractual right to receive cash or other financial assets from another entity. Regular-way purchases and sales of financial assets are generally posted on the settlement date. Financial liabilities are initially recognized in the consolidated

financial statements if Covestro has a contractual obligation to transfer cash or other financial assets to another entity. With the exception of trade accounts receivable, financial instruments are measured at fair value plus directly attributable transaction costs upon initial recognition. For financial instruments measured at fair value through profit or loss, transaction costs are recognized directly in the income statement. Trade accounts receivable are recognized at their transaction price. Subsequent measurement of financial instruments is based on their classification in the categories stipulated by IFRS 9 (Financial Instruments).

Financial assets

Financial assets comprise loans, acquired equity and debt instruments, cash and cash equivalents, other financial assets, and derivatives with positive fair values. The classification and measurement of financial assets is based on the business model pursued by the Covestro Group with regard to the management of its financial assets for the purpose of collecting cash flows, and on the characteristics of the contractual cash flows from the relevant financial assets (cash flow condition). Subsequent measurement takes place according to the measurement rules for the respective category, as described below.

Financial assets carried at amortized cost comprise nonderivative financial assets that are held as part of a business model that aims to collect contractual cash flows and that additionally fulfill the cash flow condition, i.e., the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. This category comprises trade accounts receivable, the loans included in other financial assets, the additional financial receivables reflected in other receivables, and cash and cash equivalents. Interest income from financial assets assigned to this category is determined using the effective interest method.

Financial assets carried at fair value through other comprehensive income encompass debt instruments held as part of a business model that aims to obtain cash flows from the instrument both by collecting contractual payments as well as through the sale thereof, and that additionally fulfill the cash flow condition. Acquired bonds may be classified in this category to the extent that they are intended to be sold before they mature. Interest income, foreign currency gains and losses, and impairment losses or impairment loss reversals are recognized in the income statement for financial assets in this category. The remaining fair value changes are recognized in other comprehensive income. Upon derecognition, the cumulative net gains or losses included in other comprehensive income are reclassified to the income statement.

The Covestro Group exercises the option of recognizing changes in the fair value of equity instruments that are not held for trading in other comprehensive income. In contrast to the treatment of debt instruments, the gains and losses recognized in other comprehensive income are not reclassified to the income statement upon derecognition, and no impairment losses are recognized in profit or loss.

Financial assets carried at fair value through profit or loss are all financial assets not assigned to any of the above categories and particularly include derivatives with positive fair values. The Covestro Group does not opt to measure financial assets at fair value, e.g., for the purpose of avoiding or minimizing accounting mismatches.

Financial assets are derecognized when contractual rights to receive cash flows from the financial assets expire or the financial assets are transferred together with all significant risks and rewards.

Cash and cash equivalents

Cash and cash equivalents comprise cash, checks received, and balances with banks. Cash equivalents are highly liquid short-term financial investments that are subject to an insignificant risk of changes in value, are easily convertible into a known amount of cash, and have a maturity of three months or less from the date of acquisition or investment.

Derivatives

Derivatives – such as forward exchange contracts – are used to mitigate the risk of fluctuations in exchange rates. Derivatives are recognized at the trade date.

Contracts concluded in order to receive or deliver nonfinancial goods for the company's own purposes are not accounted for as derivatives but treated as pending transactions. Where embedded derivatives are identified that are required to be separated from the pending transactions, they are accounted for separately. To cover possible peak demand, a nonmaterial volume of transactions may be entered into for which the possibility of immediate resale cannot be excluded. Such transactions are allocated to separate portfolios upon acquisition and accounted for as or like derivatives according to IFRS 9 (Financial Instruments).

Derivatives are carried at fair value. This relates to what are known as standalone derivatives as well as derivatives embedded in certain types of contracts and therefore required to be accounted for separately from their host contracts. Positive fair values at the end of the reporting period are reflected in financial assets, negative fair values in financial liabilities. Changes in the fair values of these derivatives are recognized directly in profit or loss in the other operating result. Changes in the fair values of forward exchange contracts and currency options serving as hedging instruments for items in the statement of financial position are divided into an interest and a currency component. The interest component is recognized in interest expense or income and the currency component is recognized as exchange gains or losses in the other financial result. Changes in the fair value of forward exchange contracts used to hedge forecasted transactions in foreign currencies are recognized in other operating result.

Covestro does not apply hedge accounting.

Financial liabilities

Financial liabilities generally comprise primary financial liabilities and negative fair values of derivatives.

In subsequent periods, such nonderivative liabilities are measured at amortized cost using the effective interest method. The Covestro Group does not opt to measure financial liabilities at fair value, e.g., to avoid or minimize accounting mismatches.

Financial liabilities are derecognized when the contractual obligation is discharged, cancelled, or has expired.

Provisions for pensions and other post-employment benefits

Within the Covestro Group, post-employment benefits are provided under defined contribution and defined benefit plans. In the case of defined contribution plans, the company pays contributions to publicly or privately administered pension plans on a mandatory, contractual or voluntary basis. Once the contributions have been paid, the company has no further payment obligations. The regular contributions constitute expenses for the year in which they are due and as such are included in the functional cost items, and thus in income after income taxes plus financial result and income tax expense (EBIT). All other post-employment benefit systems are defined benefit plans, which may be either unfunded, i.e., financed by provisions, or funded, i.e., financed through pension funds.

The present value of the defined benefit obligations and the resulting expense are calculated in accordance with IAS 19 (Employee Benefits) by the projected unit credit method. The future benefit obligations are valued by actuarial methods and spread over the entire employment period on the basis of specific assumptions regarding beneficiary structure and the economic environment. These relate mainly to the discount rate, future salary and pension increases, variations in health care costs, and mortality rates.

The discount rates used are calculated from the yields of high-quality corporate bond portfolios in specific currencies with cash flows approximately equivalent to the expected cash outflows from the pension plans. The uniform discount rate derived from this interest rate structure is thus based on the yields, at the closing date, of a portfolio of corporate bonds with at least an AA or AAA rating whose weighted residual maturities approximately correspond to the duration necessary to cover the entire benefit obligation.

The fair value of plan assets is deducted from the present value of the defined benefit obligation for pensions and other post-employment benefits to determine the net defined benefit liability. Plan assets in excess of the benefit obligation are reflected in other receivables, subject to the asset ceiling specified in IAS 19. Comprehensive actuarial valuations for all major plans are performed annually as of December 31.

The balance of all income and expenses relating to defined benefit plans, except the net interest on the net liability, is recognized in EBIT. The net interest is reflected in the financial result.

The effects of remeasurements of the net defined benefit liability are reflected in other comprehensive income. They consist of actuarial gains and losses, the return on plan assets and changes in the effects of the asset ceiling, less the respective amounts included in net interest for the last two components. Deferred taxes relating to the effects of remeasurements are also recognized in other comprehensive income.

Other provisions

Other provisions are measured in accordance with IAS 37 (Provisions, Contingent Liabilities and Contingent Assets) or, where applicable, IAS 19 (Employee Benefits). Where the cash outflow to settle an obligation is expected to occur after one year, the provision is recognized at the present value of the expected cash outflow. Claims for reimbursements from third parties are separately reflected in other receivables if their realization is virtually certain.

If the projected obligation declines as a result of a change in the estimate, the provision is reversed by the corresponding amount and the resulting income generally recognized in the operating expense item(s) in which the original charge was recognized.

To enhance the information content of the estimates, certain provisions that could have a material effect on the net assets, financial position and results of operations are selected and tested for their sensitivity to changes in the underlying parameters using sensitivity analysis. To reflect uncertainty about the likelihood of the assumed events actually occurring, the impact of a five-percentage-point change in the probability of occurrence is examined in each case.

Provisions for environmental protection are recorded if future cash outflows are likely to be necessary to ensure compliance with environmental regulations or to carry out remediation work based on an obligation, such costs can be reliably estimated, and no future benefits are expected from such measures.

Estimating the future costs of environmental protection and remediation involves many uncertainties, particularly with regard to the status of laws, regulations and the information available about conditions in the various countries and at the individual sites. Significant factors in estimating the costs include previous experiences in similar cases, the conclusions in expert opinions obtained for existing environmental programs, current costs, and new developments affecting these costs. Also taken into consideration are management's interpretation of current environmental laws and regulations, the number and financial position of third parties that may become obligated to participate in any remediation costs on the basis of joint liability, and the remediation methods likely to be deployed. Changes in these assumptions could impact future reported results.

Taking into consideration experience gained to date regarding environmental matters of a similar nature, Covestro's management believes the existing provisions to be adequate based upon currently available information. Given the businesses in which the Covestro Group operates and the difficulties inherent in accurately estimating liabilities for environmental protection, it remains possible that material additional costs will be incurred beyond the amounts accrued. It may transpire during remediation work that additional expenditures are necessary over an extended period and that these exceed existing provisions and cannot be reasonably estimated.

Provisions for restructuring are based either on a legal or a constructive external obligation. They only cover expenses that arise directly from restructuring measures, are necessary for restructuring, and are not related to future business operations. Such expenses include severance payments to employees and compensation payments in respect of rented property that can no longer be used. Prior to recognition of this type of provision, the associated assets are tested for impairment.

Restructuring measures may include the sale or termination of business units, site closures, relocations of business activities or fundamental reorganizations of business units. The respective provisions are established when a detailed restructuring plan has been drawn up, resolved by the responsible decision-making level of management, and communicated to the affected employees and/or their representatives. Provisions for restructuring are generally established at the present value of future cash outflows.

As a company with international operations, the Covestro Group is exposed to numerous legal risks for which provisions for litigation must be established under certain conditions – including especially in the areas of product liability, competition and antitrust law, patent disputes, tax law, environmental law, and compliance issues such as corruption and export control.

Litigation and other judicial proceedings often raise complex issues and are subject to many uncertainties and complexities including, but not limited to, the facts and circumstances of each particular case, the jurisdiction in which each suit is brought and differences in applicable law. The outcomes of currently pending and future proceedings generally cannot be predicted. Judgment in court proceedings, regulatory decisions or the conclusion of a settlement may result in the Covestro Group incurring charges for which no accounting measures have been taken for lack of reasonable estimate or which exceed established provisions and insurance coverage.

The Covestro Group considers the need for accounting measures in respect of pending or future litigations, and the extent of any such measures, on the basis of the information available to its legal department and in close consultation with legal counsel acting for the Covestro Group.

Where it is more likely than not that such a litigation will result in an outflow of resources that is already reasonably estimable, a provision for litigation is normally recorded in the amount of the present value of the expected cash outflows. Such provisions cover the estimated unavoidable payments to the plaintiffs, court and procedural costs, attorney costs, and the cost of potential settlements.

It is often impossible to reliably determine the existence of a present obligation or reasonably estimate the probability that a potential outflow of resources will result from a pending or future litigation. Due to the special nature of these litigations, provisions generally are not established until initial settlements allow an estimate of potential amounts or judgments have been issued and not before at least a range of possible legal outcomes of such litigations is possible. Provisions for legal defense costs are established if it is probable that material costs will have to be incurred for external legal counsel to defend the company's legal position.

Internal and external legal counsels evaluate the current status of the material legal risks of the Covestro Group at the end of each reporting period. The need to establish or adjust a provision and the amount of the provision or adjustment are determined on this basis. Adjusting events are reflected up to the date of preparation of the consolidated financial statements.

 See note 28 "Legal risks."

Personnel-related provisions are mainly those recorded for variable one-time payments, individual performance awards, long-service awards, severance payments in connection with early retirement arrangements, surpluses on long-term accounts and other personnel costs.

Obligations under stock-based compensation programs that provide for awards payable in cash are also included in personnel-related provisions. The compensation of the Board of Management of Covestro AG and of managerial employees includes stock-based compensation components that are earned with lock-up periods and are reflected in profit or loss as personnel expenses in line with the consideration paid in the performance period. They are measured using a subscription price model at the time of granting and at each reporting date in accordance with IFRS 2 (Share-based Payment).

Miscellaneous provisions include those for other liabilities, product liability, warranties, and insurance payments. Rebates to be granted to customers are reported in refund liabilities, however.

Other receivables and liabilities

Grants and subsidies from third parties that serve to promote investment are reflected in the statement of financial position under other liabilities, and amortized to income over the useful lives of the respective investments.

Leases

A lease exists when the lessor grants the lessee the contractual right to control an identified asset for a specified period of time and in return the lessor receives consideration from the lessee.

When Covestro is the lessee in a lease, as a rule a right-of-use asset and a corresponding liability (lease liability) are recognized in the statement of financial position on the date the underlying asset is made available for use to Covestro.

The right-of-use asset represents a lessee's right to use the asset being leased in return for payment. Upon initial recognition, the right-of-use asset is generally capitalized at the amount of the corresponding lease liability plus any initial direct costs, any dismantling obligations and lease payments made prior to the commencement date less any lease incentives received. For subsequent measurement, the right-of-use asset is depreciated over the lease term. Contract modifications, as long as these are not measured as separate leases, and reassessment of the lease liability are also reflected in the right-of-use asset. The right-of-use asset is included in the line item property, plant and equipment in the statement of financial position. Impairment testing and reporting of any impairment losses are carried out for the right-of-use assets in the statement of financial position in accordance with the regulations applicable to property, plant and equipment.

The lease liability represents the company's obligation to make contractual lease payments and is measured as the present value of precisely these outstanding lease payments. While IFRS 16 (Leases) requires use of the interest rate implicit in the lease in order to calculate the present value, it is frequently not possible to ascertain this interest rate. Accordingly, the incremental borrowing rate is generally applied in discounting the lease payments. If the outstanding lease payments include fixed payments or variable lease payments that depend on an index or an interest rate, these are taken into consideration in the lease liabilities. Variable lease payments that depend on an index or an interest rate are measured at the underlying index or interest rate as soon as this is to be applied. If, as an exception, there are residual value guarantees, purchase options or penalty fees, these are to be recognized accordingly in the lease liability to the extent that they are anticipated. At Covestro, lease agreements usually include fixed contract terms. Additionally, options to extend and terminate the lease exist particularly for the rental of production and logistics infrastructure and of real estate. In order to assess whether options to extend or terminate the lease are reflected in the lease term, all relevant facts are examined to determine the existence of economic incentives to exercise or not to exercise these options. The lease term is only adjusted to reflect changes in the expectations regarding whether or not such options will be exercised if there is reasonable certainty. The effective interest method is used for the subsequent measurement of lease liabilities. Using this method, periodic lease payments with an effect on cash flows are divided into an interest portion which affects profit or loss and a repayment portion not affecting profit or loss. Lease liabilities are reported in financial liabilities classified as current or noncurrent according to their maturity.

Overall, effects on income from leases to be recognized in accordance with IFRS 16 comprise depreciation of the right-of-use asset and any impairment losses on the right-of-use asset (operating result), discounting and subsequent measurement of the lease liability (financial result) and in cases in which a lease agreement is modified. Such lease modifications can result, for instance, from options to terminate or extend a lease which were previously not explicitly stipulated in the contract. Contractual lease payments for leases accounted for in accordance with IFRS 16 are shown solely under cash flows from financing activities.

IFRS 16 provides exemptions for applying the recognition and measurement rules for leases with a term of less than 12 months, those with a low-value underlying asset, or if the underlying asset is an intangible asset. Covestro considers an asset to be of low value if the new value is less than €5,000. Leases are not recognized as a depreciable right-of-use asset on the balance sheet or as a lease liability at Covestro for the exceptions referenced above. Corresponding contractual payments are instead shown in the cash flows from operating activities and the same amount is recognized as an expense in the operating result.

For leases in which Covestro is the lessor, a differentiation is made between finance lease and operating lease in accordance with IFRS 16. Leases that transfer substantially all the risks and rewards incidental to ownership of the leased asset to the lessee are treated as finance leases. At the commencement date, the lessor recognizes a lease receivable in the statement of financial position in the amount of the net investment in the lease and derecognizes the underlying asset from the noncurrent assets. The net investment routinely comprises the present value of future contractual lease payments. Any lease incentives or variable lease payments that depend on an index or an interest rate to be paid by the lessee, as well as any residual value guarantees or other contractual payment claims against the lessee can be included in the net investment. The lessor applies the interest rate implicit in the lease for initial measurement of the net investment or the lease receivable. Using this method, periodic lease payments with an effect on cash flows are divided into an interest portion which affects profit or loss and a repayment portion not affecting profit or loss; the interest portion is shown in the financial result. The effective interest method is applied for the subsequent measurement of the net investment or lease receivable. In an operating lease, the underlying asset continues to be shown under the lessor's property, plant and equipment and depreciated over the useful life. Lease payments received are recorded as sales.

Acquisition accounting

Businesses acquired pursuant to IFRS 3 (Business Combinations) are accounted for using the acquisition method, which requires that all identifiable assets acquired and all (contingent) liabilities assumed be recorded at their respective fair values on the date control is obtained. Ancillary acquisition costs are recognized as expenses in the periods in which they occur.

Procedure used in global impairment testing and its impact

Global impairment testing is performed at the level of cash-generating units for reported goodwill. A cash-generating unit (CGU) is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The Covestro Group regards its strategic business units as cash-generating units with goodwill and subjects them to global impairment testing. The cash-generating units usually constitute the first financial reporting level below the reportable segments.

The Polyurethanes (PUR) reportable segment includes the diphenylmethane diisocyanate (MDI), toluene diisocyanate (TDI), and polyether polyols (PET) as cash-generating units. In the Polycarbonates (PCS) segment, impairment testing is conducted at the level of the PCS cash-generating unit. The composition of the cash-generating units changed in fiscal year 2020 as a result of reorganization of the financial reporting processes of the Coatings, Adhesives, Specialties (CAS) reportable segment's strategic business units. Coatings, Adhesives, Specialties continues to include the Specialty Films (SF) strategic business unit. The business of the Base & Modified Isocyanates (BMI) and Resins (RES) strategic business units included in the segment in the previous year was divided into the Aliphatics (ALI), Aromatics (ARO), Thermoplastic Polyurethanes (TPU), Elastomers (ELA), and Performance Resins & Dispersions (PRD) cash-generating units starting this year.

Cash-generating units are globally tested if there is an indication of possible impairment. Strategic business units or groups of strategic business units to which goodwill or another item of other intangible assets with an indefinite useful life is allocated are tested at least annually.

In the case of impairment, the resulting expense is reflected for goodwill in other operating expenses and for other assets in the functional item of the income statement in which the depreciation or amortization of the respective assets is recognized. The same applies to income from impairment loss reversals, although impairment losses on goodwill may not be reversed.

The recoverable amount is generally determined on the basis of the fair value less costs of disposal, taking into account the present value of the future cash flows as market prices for the individual units are normally not available. The forecasts of future cash flows generally have a planning horizon of three to five years and are based on the Covestro Group's current planning. Forecasting involves making assumptions based on internal Group estimates and external sources, especially regarding future selling prices, sales volumes, costs, market growth rates, economic cycles, and exchange rates. Where the recoverable amount is the fair value less costs of disposal, the cash-generating unit is measured from the viewpoint of an independent market participant. Cash flows beyond the planning period are determined on the basis of long-term business expectations using the respective individual growth rates derived from market information. The measurement of fair value less costs of disposal is based on unobservable inputs (Level 3 of the fair value hierarchy).

The net cash inflows are discounted at the weighted average cost of capital (WACC), which is calculated as the weighted average cost of equity and cost of debt. To take into account the risk and return profile of the Covestro Group, an after-tax cost of capital is calculated and a specific capital structure is defined by benchmarking against comparable companies in the same industry sector ("peer group"). The cost of equity corresponds to the return expected by shareholders, while the cost of debt is based on the terms at which the peer group can obtain long-term financing. In principle, both components are derived from capital market information.

The growth rates for the terminal value applied for impairment testing in fiscal 2020 amounted to 1% (previous year: 1%) for the PET cash-generating unit and 2% (previous year: 2%) for the other cash-generating units. These growth assumptions reflect in particular economic cycles over several years as well as expectations for capacity and the market for each cash-generating unit. The after-tax capital cost factor used to discount the expected cash flows was 6.5% (previous year: 6.4%).

As in the previous year, no impairment losses were recognized on reported goodwill in the reporting period on the basis of the global annual impairment testing of the cash-generating units. In the fiscal year, impairment losses on property, plant and equipment and intangible assets amounted to €20 million (previous year: €28 million) and impairment loss reversals on property, plant and equipment and intangible assets amounted to €0 million (previous year: €1 million). Details are provided in notes 15 "Goodwill and Other Intangible Assets" and 16 "Property, Plant and Equipment."

 See note 15 "Goodwill and other intangible assets" and note 16 "Property, plant and equipment."

Although the estimates of the useful lives of certain assets, assumptions concerning the macroeconomic environment and developments in the industries in which the Covestro Group operates, and estimates of the discounted future cash flows are believed to be appropriate, changes in assumptions or circumstances could require changes in the analysis. This could lead to additional impairment losses in the future or – except in the case of goodwill – to reversals of previously recognized impairment losses if developments are contrary to expectations.

The sensitivity analysis for cash-generating units to which goodwill is allocated was based on a 10% reduction in the future free operating cash flow, a 10% increase in the WACC, or a one-percentage-point reduction in the long-term growth rate. On this basis, there would be no need to recognize an impairment loss for any of the cash-generating units except PET and TPU. The same applies at the measurement date to other deviations from the assumptions used in the impairment testing that were deemed possible.

In the case of PET, the recoverable amount would correspond to its carrying amount at the measurement date if the discounted cash flows were €161 million lower, the WACC were 0.8 percentage points higher or the long-term growth rate were 1.0 percentage points lower. For TPU, this would be the case if the discounted cash flows were €34 million lower, the WACC increased by 0.6 percentage points or the long-term growth rate decreased by 0.8 percentage points. When applied to TPU or PET, the reduction in free operating cash flow assumed for the other cash-generating units as part of the sensitivity analysis would not have resulted in a need to recognize an impairment loss in either case.

Fair value

According to IFRS 13 (Fair Value Measurement), fair value is the price that would be received to sell an asset or paid to transfer a liability at the measurement date in an orderly transaction in a primary market or, if such is not available, in the most favorable market to which the Covestro Group has access at that time. In essence, the fair value of a liability reflects the risk of nonfulfillment.

If available, the Covestro Group calculates the fair value of a financial instrument based on quoted prices in an active market for this instrument. A market is regarded as active when transactions for the respective asset or liability take place with sufficient frequency and volume to provide regular pricing information at the reporting date.

If no quoted prices on an active market exist, measurement methods are used which maximize the use of relevant observable inputs and minimize the use of non-observable inputs. All factors taken into account by market participants in pricing such a transaction are incorporated into the relevant method of measurement.

Depending on the asset or liability category, specific information is provided about the principles for using or determining fair value. In the Covestro Group, this generally applies to items in the financial statements as well as disclosures in the notes.

Impairment losses

The Covestro Group calculates a risk provision for expected credit losses for the following items:

- Financial assets measured at amortized cost;
- Debt instruments measured at fair value through other comprehensive income;
- Financial guarantees and loan commitments;
- Contract assets.

For financial instruments without a significant increase in credit risk since initial recognition, the amount of the risk provision for expected credit losses equals the credit losses expected to occur within the next twelve months. For financial instruments with a significant increase in credit risk, a risk provision is calculated in the amount of the credit losses expected over their residual maturity.

Relevant data from within and outside the company that can be obtained with reasonable effort is considered when determining whether the credit risk has increased substantially since initial recognition. For instance, the financial data of counterparties or customers, ratings, the payment histories of counterparties or customers, and forward-looking information are all assessed. It is assumed that a significant increase in credit risk has occurred when the financial asset is more than 30 days past due.

A default event has occurred when the Covestro Group comes to the conclusion that the counterparty is highly unlikely to be able to meet its payment obligations in full.

In the case of trade accounts receivable and contract assets, the amount of the risk provision is equal to the credit losses expected over their remaining term.

At each reporting date, the Covestro Group determines whether financial assets measured at amortized cost or at fair value through other comprehensive income are credit impaired. Indicators of possible credit impairment of a financial asset include observable data regarding the following events:

- Significant financial difficulties of the issuer or borrower;
- A breach of contract, such as default or delinquency;
- Concessions that Covestro makes to the borrower for financial or legal reasons relating to the financial difficulties of the borrower that it would not otherwise make;
- It is becoming probable that the borrower will enter bankruptcy or other financial reorganization;
- The loss of an active market for this financial asset.

The gross carrying amount of a financial asset is derecognized when the Covestro Group comes to the conclusion that the counterparty is no longer able to meet its payment obligations. Following derecognition, the Covestro Group assumes that it will no longer be able to recover any significant amounts.

4. Change in Presentation for Rebates Granted to Customers and Trade Working Capital

4.1 Change in presentation of rebates granted to customers

According to IFRS 15 (Revenue from Contracts with Customers), recognition of a refund liability is required if an entity receives consideration from a customer and expects this consideration to be refunded to the customer in whole or in part (i.e., amounts not included in the transaction price). Most refund liabilities result from rebates granted and comprise the amount of the rebate expected to be returned to the customer based on a reasonable estimate.

The presentation of refund liabilities relating to rebates granted was modified as of December 31, 2020, to reduce complexity while remaining in compliance with reporting guidelines under IFRS 15. Refund liabilities relating to rebates granted are no longer reclassified to trade accounts payable as soon as the uncertainty associated with the payment is eliminated. Instead, the rebate deemed to be due is reported in refund liabilities until payment.

As a result, refund liabilities increase by the same amount as customer rebates previously reclassified, whereas trade accounts payable decrease by this amount.

The prior-year figures were restated in accordance with IAS 1.41.

The following tables illustrate the effects of the change in presentation of refund liabilities relating to rebates granted:

Change in presentation of rebates granted to customers in fiscal 2020

	Dec. 31, 2020 pre-change	Change in presentation	Dec. 31, 2020 post-change
	€ million	€ million	€ million
Refund liabilities	22	65	87
Trade account payables	1,306	(65)	1,241

Change in presentation of rebates granted to customers in fiscal 2019

	Jan. 01, 2019 pre-change	Change in presentation	Jan. 01, 2019 post-change	Dec. 31, 2019 pre-change	Change in presentation	Dec. 31, 2019 post-change
	€ million	€ million	€ million	€ million	€ million	€ million
Refund liabilities	33	101	134	30	76	106
Trade account payables	1,637	(101)	1,536	1,507	(76)	1,431

4.2 Change in presentation of trade working capital

Covestro modified its definition of trade working capital as of December 31, 2020. Contract assets, contract liabilities, and refund liabilities are considered current items resulting from the ordinary course of business and were therefore added to Covestro's definition of trade working capital. The prior-year figures were restated accordingly pursuant to IAS 1.41.

The following tables illustrate the effects of the change in presentation of trade working capital:

Change in presentation of trade working capital in fiscal 2020

	Dec. 31, 2020 pre-change	Change in presentation	Dec. 31, 2020 post-change
	€ million	€ million	€ million
Inventories	1,663	–	1,663
Trade accounts receivable	1,593	–	1,593
Trade accounts payable	(1,306)	65	(1,241)
Contract assets		43	43
Contract liabilities		(22)	(22)
Refund liabilities		(87)	(87)
Trade working capital	1,950	(1)	1,949

Change in presentation of trade working capital in fiscal 2019

	Jan. 01, 2019 pre-change	Change in presentation	Jan. 01, 2019 post-change	Dec. 31, 2019 pre-change	Change in presentation	Dec. 31, 2019 post-change
	€ million	€ million	€ million	€ million	€ million	€ million
Inventories	2,213	–	2,213	1,916	–	1,916
Trade accounts receivable	1,786	–	1,786	1,561	–	1,561
Trade accounts payable	(1,637)	101	(1,536)	(1,507)	76	(1,431)
Contract assets		52	52		43	43
Contract liabilities		(28)	(28)		(18)	(18)
Refund liabilities		(134)	(134)		(106)	(106)
Trade working capital	2,362	(9)	2,353	1,970	(5)	1,965

5. Effects of the Coronavirus Pandemic on Financial Reporting

Business performance in the year 2020 as a whole was heavily influenced by the coronavirus pandemic. During this period, Covestro saw sales decline sharply due to a lower level of selling prices and total volumes sold. Whereas the APAC region's sales had dropped considerably in the first quarter of 2020, sales in the EMLA and NAFTA regions did not begin their steep decline until the second quarter of 2020. In contrast, the slowdown in sales in the APAC region, particularly China, was much less severe than in the other regions in the second quarter of 2020. Starting in the third quarter of 2020, a strong recovery took shape in all regions, particularly APAC and EMLA. These two regions closed out the fourth quarter of 2020 with significant sales growth, mainly due to a higher level of selling prices and a positive effect stemming from total volumes sold. The NAFTA region saw sales drop considerably in the fourth quarter of 2020. This development was attributable to exchange rate and price effects, whereas total volumes sold rose slightly.

The significant declines in sales in fiscal 2020 affected all reportable segments, largely on account of a lower level of selling prices and total volumes sold. The change in total volumes sold resulted from weaker demand in all main customer industries.

Additional disclosures on the effects of the coronavirus pandemic and the countermeasures taken by Covestro are presented in the Group Management Report.

 See "Report on Economic Position" in the Group Management Report.

In view of the aforementioned changes in the business environment, preparation of the consolidated financial statements required Covestro to make assumptions and estimates to a certain extent that affected the measurement of reported assets and liabilities, as well as income and expenses, and that could deviate from the actual results in individual cases. Such estimates, assumptions and the exercise of discretion related primarily to the following areas:

- Impairment testing of non-financial assets, particularly goodwill;
- Assessment of the probability that deferred tax assets can be utilized in the future;
- Calculation of impairment losses on trade accounts receivable.

The method applied and effects of global impairment testing as of December 31, 2020, are outlined in the corresponding note:

 See note 3 "Accounting policies and valuation principles."

The probability that deferred tax assets resulting from temporary differences, tax credits or loss carryforwards can be utilized in the future is the subject of forecasts by the individual companies regarding the future earnings situation in the respective Covestro companies and other parameters. These forecasts have been updated to reflect the effects of the coronavirus pandemic and did not result in any impairment losses on deferred tax assets in the current financial statements.

The level of default risk associated with the Covestro Group's trade accounts receivable depends mainly on the creditworthiness of our customers. The coronavirus pandemic heightened industry risk (equivalent to the default risk relating to the companies in a particular industry), because demand, and subsequently sales revenues, in certain industries declined sharply. This can directly affect the creditworthiness of customers in these industries. In order to appropriately reflect the increased default risk when measuring trade accounts receivable, industry risk was additionally considered when assessing the creditworthiness of customers. The expected losses in trade accounts receivable therefore increased by €3 million.

 See note 26.2 "Financial risk management and information on derivatives."

In addition, attention is drawn to the following accounting issue associated with the coronavirus pandemic:

Covestro received public subsidies abroad in accordance with IAS 20 (Accounting for Government Grants and Disclosure of Government Assistance) for managing sales losses resulting from the coronavirus pandemic. These subsidies related mainly to a reduction in personnel costs and amounted to €8 million in fiscal 2020.

6. Segment and Regional Reporting

The Board of Management of Covestro AG, as the chief operating decision maker of the Covestro Group, allocates resources to the operating segments and assesses their performance. The reportable segments and regions are identified, and the disclosures selected, in line with the internal financial reporting system (management approach). These are based on the same accounting policies as described for the Covestro Group.

 See note 3 “Accounting policies and valuation principles.”

As of December 31, 2020, the Covestro Group comprises three reportable segments with the following activities:

Polyurethanes

The Polyurethanes segment develops, produces and markets high-quality precursors for polyurethanes. These precursors are toluene diisocyanate (TDI), diphenylmethane diisocyanate (MDI) and polyether polyol. Flexible polyurethane foam based on TDI is used primarily in the furniture and automotive industries (e.g., in upholstered furniture, mattresses and car seats). Rigid foam based on MDI is used mainly in the construction industry as an insulating material as well as along the entire refrigeration chain. The segment operates production facilities worldwide for formulating and supplying customized polyurethane systems.

Polycarbonates

The Polycarbonates segment develops, produces and markets the high-performance plastic polycarbonate in the form of granules, composite materials and semifinished products. The material is used primarily in the automotive industry (e.g., in the passenger compartment and for vehicle lighting) and in the construction industry (e.g., for roof structures). It is also used in the electrical and electronics industry (e.g., for connector housings and laptop cases), the medical technology sector, and the lighting industry (e.g., for LED components). The Covestro Group produces polycarbonate all around the world and processes it at compounding centers to meet specific customer requirements.

Coatings, Adhesives, Specialties

The Coatings, Adhesives, Specialties segment develops, produces and markets precursors for coatings, adhesives and sealants as well as specialties. They include polymer materials and aqueous dispersions mainly based on the isocyanates hexamethylene diisocyanate (HDI) and isophorone diisocyanate (IPDI), which are produced at facilities located throughout the world. The main areas of application are automotive and transportation, infrastructure and construction, wood processing, and furniture. The specialties comprise specialty elastomers, high-quality films and precursors for the cosmetics, textiles, and health care sectors.

Business activities that cannot be allocated to any of the aforementioned segments are reported under **“All other segments.”** The external sales from these activities are generated mainly from by-products of chlorine production and use.

The costs of Corporate Center functions and higher or lower expenses for long-term stock-based compensation arising from fluctuations in the performance of Covestro AG stock are presented in the segment reporting as **“Corporate Center and reconciliation.”**

The segment data is calculated as follows:

- Core volume growth* refers to the core products in the Polyurethanes, Polycarbonates and Coatings, Adhesives, Specialties segments. It is calculated as the percentage change in externally sold volumes in thousand metric tons compared with the prior year. Covestro also takes advantage of business opportunities outside its core business, for example the sale of precursors and by-products such as hydrochloric acid, sodium hydroxide solution, and styrene. These transactions are not included in core volume growth.
- EBIT and EBITDA are not defined in the International Financial Reporting Standards. EBIT is equal to income after income taxes plus financial result and income taxes. EBITDA is the EBIT as reported in the income statement plus depreciation and impairment losses on property, plant, and equipment and amortization and impairment losses on intangible assets, less impairment loss reversals.
- Free operating cash flow is the operating cash flows less cash outflows for additions to property, plant, and equipment and intangible assets. As a component of operating cash flows, income taxes paid are not directly attributed to any particular unit of the company. For purposes of calculating operating cash flows, the income taxes paid of a reportable segment are determined according to the management approach by multiplying the effective tax rate (ETR) expected for the fiscal year by that segment's EBIT.
- Trade working capital comprises inventories, trade accounts receivable, and contract assets, less trade accounts payable, contract liabilities, and refund liabilities.

The following tables show the segment reporting data:

Key data by segment

	Other/Consolidation					Covestro Group
	Polyurethanes	Polycarbonates	Coatings, Adhesives, Specialties	All other segments	Corporate Center and reconciliation	
	€ million	€ million	€ million	€ million	€ million	€ million
2020						
Sales	5,021	2,985	2,039	661	–	10,706
Core volume growth ¹	–6.1%	–3.0%	–8.9%			–5.6%
EBITDA	625	553	341	22	(69)	1,472
EBIT	197	332	215	21	(69)	696
Free operating cash flow	14	327	189	57	(57)	530
Cash outflows for additions to property, plant and equipment and intangible assets	409	157	138	–	–	704
Depreciation, amortization and impairment losses	(428)	(221)	(126)	(1)	–	(776)
of which impairment losses	(14)	(2)	(4)	–	–	(20)
of which impairment loss reversals	–	–	–	–	–	–
Research and development expenses	(91)	(78)	(92)	(1)	–	(262)
2019						
Sales	5,779	3,473	2,369	791	–	12,412
Core volume growth ¹	+2.3%	+2.7%	–1.0%			+2.0%
EBITDA	648	536	469	13	(62)	1,604
EBIT	250	300	352	12	(62)	852
Free operating cash flow	32	404	191	(87)	(67)	473
Cash outflows for additions to property, plant and equipment and intangible assets	543	209	158	–	–	910
Depreciation, amortization and impairment losses	(398)	(236)	(117)	(1)	–	(752)
of which impairment losses	(5)	(22)	(1)	–	–	(28)
of which impairment loss reversals	–	1	–	–	–	1
Research and development expenses	(94)	(81)	(95)	3	1	(266)

¹ Reference values calculated based on the definition of the core business effective March 31, 2020. Not an IFRS KPI, reported voluntarily.

* Not an IFRS KPI, reported voluntarily

Working capital by segment

	Dec. 31, 2019 ¹	Dec. 31, 2020
	€ million	€ million
Polyurethanes	839	900
Polycarbonates	580	550
Coatings, Adhesives, Specialties	483	444
Total of reportable segments	1,902	1,894
All other segments	73	66
Corporate Center and reconciliation	(10)	(11)
Trade working capital	1,965	1,949
of which inventories	1,916	1,663
of which trade accounts receivable	1,561	1,593
of which trade accounts payable	(1,431)	(1,241)
of which IFRS 15 items ²	(81)	(66)

¹ Reference information was restated accordingly, see note 4 "Change in presentation of rebates granted to customers and trade working capital."

² The item includes contract assets, contract liabilities, and refund liabilities.

Information by geographical areas

The following table shows information by geographical area. The EMLA region consists of Europe, the Middle East, Africa, and Latin America except Mexico, which together with the United States and Canada forms the NAFTA region. The APAC region includes Asia and the Pacific region.

Regional reporting¹

	EMLA	NAFTA	APAC	Total
	€ million	€ million	€ million	€ million
2020				
Sales (external) by market	4,600	2,554	3,552	10,706
Sales (external) by point of origin	4,554	2,613	3,539	10,706
2019				
Sales (external) by market	5,289	3,141	3,982	12,412
Sales (external) by point of origin	5,239	3,209	3,964	12,412

¹ No further presentation of interregional sales is provided, as these are neither reported separately to, nor do they influence the EBIT and EBITDA reported to the Board of Management of Covestro AG.

The following table provides a breakdown by countries of external sales by market and of property, plant and equipment as well as intangible assets:

Sales (external) by market and property, plant and equipment and intangible assets by country

	Sales (external) by market	Property, plant and equipment and intangible assets
	€ million	€ million
2020		
Germany	1,342	1,925
United States	2,128	1,129
China	2,250	1,355
Other	4,986	1,130
Total	10,706	5,539
2019		
Germany	1,557	1,834
United States	2,604	1,298
China	2,456	1,429
Other	5,795	1,103
Total	12,412	5,664

Information on major customers

Revenues from transactions with a single customer in no case exceeded 10% of Covestro Group sales in fiscal 2020 or the previous year.

Reconciliation

The following table shows the reconciliation of EBITDA of the segments to income before income taxes of the Group:

Reconciliation of segments' EBITDA to group income before income taxes

	2019	2020
	€ million	€ million
EBITDA of reportable segments	1,653	1,519
EBITDA of all other segments	13	22
EBITDA of Corporate Center and reconciliation	(62)	(69)
EBITDA	1,604	1,472
Depreciation, amortization, impairment losses and impairment loss reversals of reportable segments	(751)	(775)
Depreciation, amortization, impairment losses and impairment loss reversals of all other segments	(1)	(1)
Depreciation, amortization, impairment losses and impairment loss reversals	(752)	(776)
EBIT of reportable segments	902	744
EBIT of all other segments	12	21
EBIT of Corporate Center and reconciliation	(62)	(69)
EBIT	852	696
Financial result	(91)	(91)
Income before income taxes	761	605

7. Changes in the Scope of Consolidation

7.1 Scope of consolidation and investments

As of December 31, 2020, the scope of consolidation comprised Covestro AG and 47 (previous year: 47) consolidated companies.

Effective January 1, 2020, Asellion B.V., Amsterdam (Netherlands), was included in the consolidated financial statements for the first time as a result of growth in business activities. Previously, the company had been classified as an immaterial subsidiary. Asellion B.V. provides a digital platform for online direct sales where manufacturers, suppliers and service providers can do business in a flexible, secure and private environment.

Covestro (Tielt) NV, Tielt (Belgium), and Covestro S.p.A., Milan (Italy), were deconsolidated in the course of the sale of the European polycarbonate sheets business to Munich-based Serafin Group concluded on January 2, 2020.

Effective June 1, 2020, Covestro International Re, Inc., Colchester, Vermont (United States), was included in the consolidated financial statements as a fully consolidated company. This is Covestro's own insurance company, which received a license from the state of Vermont to act as a reinsurer for the external primary insurer and to provide coverage for certain insurance risks to which the Covestro Group is exposed.

The Covestro Group holds 100% of the voting rights in the fully consolidated subsidiary Pearl Covestro Polyurethane Systems L.L.C, Dubai (United Arab Emirates), pursuant to a contractual agreement with the noncontrolling shareholders.

As in the previous year, the scope of consolidation as of December 31, 2020, included the joint operation LyondellBasell Covestro Manufacturing Maasvlakte V.O.F, Rotterdam (Netherlands). Pursuant to IFRS 11 (Joint Arrangements), Covestro's shares of this company's assets, liabilities, revenues and expenses are included in the consolidated financial statements in accordance with Covestro's rights and obligations. The main purpose of LyondellBasell Covestro Manufacturing Maasvlakte V.O.F is the joint production of propylene oxide (PO) for Covestro and its partner LyondellBasell.

Additionally, two associated companies (previous year: two) are accounted for in the consolidated financial statements using the equity method.

Nine (previous year: seven) subsidiaries and two (previous year: two) associated companies that in aggregate are immaterial to the Covestro Group's net assets, financial position and results of operations are not consolidated but recognized at cost. The immaterial subsidiaries each accounted for no more than 0.1% of Group sales, equity or total assets.

The consolidated financial statements of Covestro are submitted to the operator of the Federal Gazette (Bundesanzeiger).

Fully consolidated companies

Company name	Place of business	Covestro's interest in %
EMLA		
Pearl Covestro Polyurethane Systems FZCO	Dubai (United Arab Emirates)	51
Pearl Covestro Polyurethane Systems L.L.C	Dubai (United Arab Emirates)	49 ¹
Asellion B.V.	Amsterdam (Netherlands)	100
Covestro (France) SNC	Fos-sur-Mer (France)	100
Covestro (Slovakia) Services s.r.o.	Bratislava (Slovakia)	100
Covestro Brunsbüttel Energie GmbH	Brunsbüttel (Germany)	100
Covestro Deutschland AG	Leverkusen (Germany)	100
Covestro Elastomers SAS	Romans-sur-Isère (France)	100
Covestro First Real Estate GmbH	Leverkusen (Germany)	100
Covestro GmbH	Leverkusen (Germany)	100
Covestro Indústria e Comércio de Polímeros Ltda.	São Paulo (Brazil)	100
Covestro Intellectual Property GmbH & Co. KG	Leverkusen (Germany)	100
Covestro International SA	Fribourg (Switzerland)	100
Covestro NV	Antwerp (Belgium)	100
Covestro Polyurethanes B.V.	Nieuwegein (Netherlands)	100
Covestro Procurement Services GmbH & Co. KG	Leverkusen (Germany)	100
Covestro S.r.l.	Filago (Italy)	100
Covestro Second Real Estate GmbH	Leverkusen (Germany)	100
Covestro Thermoplast Composite GmbH	Markt Bibart (Germany)	100
Covestro UK Limited	Cheadle Hulme (United Kingdom)	100
Covestro, S.L.	La Canonja (Spain)	100
Epurex Films GmbH & Co. KG	Walsrode (Germany)	100
MS Global AG	Köniz (Switzerland)	100
MS Holding B.V.	Nieuwegein (Netherlands)	100
NAFTA		
Covestro International Re, Inc.	Colchester, Vermont (United States)	100
Covestro International Trade Services Corp.	Wilmington, Delaware (United States)	100
Covestro LLC	Pittsburgh, Pennsylvania (United States)	100
Covestro PO LLC	Pittsburgh, Pennsylvania (United States)	100
Covestro S.A. de C.V.	Mexico City (Mexico)	100
APAC		
Covestro (Hong Kong) Limited	Hong Kong (China)	100
Covestro (India) Private Limited	Thane (India)	100
Covestro (Shanghai) Investment Company Limited	Shanghai (China)	100
Covestro (Taiwan) Ltd.	Kaohsiung City (Taiwan)	95.5
Covestro (Thailand) Co., Ltd.	Bangkok (Thailand)	100
Covestro (Viet Nam) Company Limited	Ho Chi Minh City (Vietnam)	100
Covestro Far East (Hong Kong) Limited	Hong Kong (China)	100
Covestro Japan Ltd.	Tokyo (Japan)	100
Covestro Korea Corporation	Seoul (South Korea)	100
Covestro Polymers (China) Co., Ltd.	Shanghai (China)	100
Covestro Polymers (Qingdao) Co., Ltd.	Qingdao (China)	100
Covestro Polymers (Shenzhen) Co., Ltd.	Shenzhen (China)	100
Covestro Pty Ltd	Mulgrave (Australia)	100
DIC Covestro Polymer Ltd.	Tokyo (Japan)	80
Guangzhou Covestro Polymers Co., Ltd.	Guangzhou (China)	100
PT Covestro Polymers Indonesia	Jakarta (Indonesia)	99.9
Sumika Covestro Urethane Company, Ltd.	Amagasaki (Japan)	60

¹ Fully consolidated subsidiary pursuant to IFRS 10.B39

In addition, the following joint operation was included in the consolidated financial statements in line with Covestro's shares of its assets, liabilities, revenues and expenses:

Joint operation

Company name	Place of business	Covestro's interest in %
LyondellBasell Covestro Manufacturing Maasvlakte V.O.F	Rotterdam (Netherlands)	50

The following associated companies are accounted for in the consolidated financial statements using the equity method:

Associates accounted for using the equity method

Company name	Place of business	Covestro's interest in %
Paltough Industries (1998) Ltd.	Kibbuz Ramat Yochanan (Israel)	25
PO JV, LP	Wilmington, Delaware (United States)	39.4

The following subsidiaries were reflected in the consolidated financial statements at amortized cost due to their immateriality:

Immaterial subsidiaries

Company name	Place of business	Covestro's interest in %
Asellion (Shanghai) Information Technology Co., Ltd.	Shanghai (China)	100
Covestro Intellectual Property Verwaltungs GmbH	Leverkusen (Germany)	100
Covestro Middle East FZ-LLC	Dubai (United Arab Emirates)	100
Covestro Polimer Anonim Şirketi	Istanbul (Turkey)	100
Covestro Polymers (Tianjin) Co., Ltd.	Tianjin (China)	100
Covestro Procurement Services Verwaltungs GmbH	Leverkusen (Germany)	100
Covestro sp. z o.o.	Warsaw (Poland)	100
Epurex Films Geschäftsführungs-GmbH	Walsrode (Germany)	100
OOO Covestro	Moscow (Russia)	100

The following associated companies are accounted for in the consolidated financial statements at cost due to their immateriality:

Immaterial associate

Company name	Place of business	Covestro's interest in %
Pure Salt Baytown LLC	Houston, Texas (United States)	0
Technology JV, L.P.	Wilmington, Delaware (United States)	33.3

The 41.2% investment in Crime Science Technology SAS, Loos (France), is classified as a debt instrument in accordance with IAS 32 (Financial Instruments: Presentation) and is measured at fair value through profit or loss in accordance with IFRS 9 (Financial Instruments).

The following domestic subsidiaries availed themselves in fiscal 2020 of certain exemptions granted under Section 264, Paragraph 3 or Section 264b of the German Commercial Code (HGB) regarding the preparation, auditing and publication of financial statements:

German exempt subsidiaries

Company name	Place of business	Covestro's interest in %
Covestro GmbH	Leverkusen (Germany)	100
Covestro Intellectual Property GmbH & Co. KG	Leverkusen (Germany)	100
Covestro Procurement Services GmbH & Co. KG	Leverkusen (Germany)	100
Epurex Films GmbH & Co. KG	Walsrode (Germany)	100

7.2 Acquisitions and divestitures

Acquisitions

On September 30, 2020, Covestro signed an agreement to acquire the Resins & Functional Materials (RFM) business of Koninklijke DSM N.V., Heerlen (Netherlands). The acquisition of RFM will make Coatings, Adhesives, Specialties into one of the leading suppliers of sustainable coating resins and enable the segment to add clear value for its customers thanks to a more comprehensive and highly innovative product portfolio. In fiscal 2019, the core RFM business generated sales of €1.0 billion and EBITDA of €141 million, based on published company figures in each case. Moreover, the transaction also includes the Additive Manufacturing, Advanced Solar Coatings, and Niaga innovation projects. Covestro and Koninklijke DSM N.V. agreed on a preliminary purchase price of €1.6 billion. Funding for the acquisition was initially secured for Covestro with an acquisition financing agreement featuring a combination of equity and debt instruments and cash generation by Covestro. However, on account of the successful capital increase in October 2020, and the very positive performance of free operating cash flow in the fourth quarter of 2020, Covestro now has sufficient liquidity to pay the full purchase price in cash. The transaction is expected to close in the first quarter of 2021 subject to regulatory approval, including approval under the Merger Regulation and other standard authorizations.

Divestitures

On January 2, 2020, Covestro concluded the sale of the assets and liabilities (disposal group) of the European polycarbonate sheets business, belonging to the Polycarbonates segment, to the Serafin Group, Munich (Germany). Polycarbonate sheets are extremely strong and are used primarily in the areas of industrial protection, construction systems and for advertising applications. The European polycarbonate sheets business comprises production sites in Belgium and Italy as well as central management and distribution functions in Europe. Within the scope of the sale, net liabilities totaling €2 million were transferred to the buyer and net payments amounting to €3 million were made by Covestro to Serafin. The loss on the disposal of this business totaling €1 million was recognized in other operating result.

In the fourth quarter of 2020, Covestro decided to sell the assets and liabilities (disposal group) of the systems house business in the Middle East to the current co-shareholder Pearl Industries Overseas Ltd., Dubai (United Arab Emirates). The sale of this systems house business is the next step in Covestro's portfolio streamlining process, which has already led to divestment of the only systems house business in North America in April 2017 and the system house business in Europe in November 2019. The systems house business belongs to the Polyurethanes segment and produces customer-specific polyurethane systems, primarily for the construction industry. The transaction is structured as a share deal. The expected sale price is lower than the value of the net assets to be sold, for which impairment losses were recognized. The impairment led to losses totaling €16 million reported in the cost of production, selling expenses, and general administration expenses. In connection with this divestiture, current assets amounting to €19 million and liabilities of €10 million were classified as "held for sale" in accordance with IFRS 5 (Non-current Assets Held for Sale and Discontinued Operations). The transaction is expected to close in the first half of 2021 subject to regulatory approval.

Notes to the Income Statement

8. Sales

Net sales are categorized according to "geographical regions and key countries" and mainly comprise sales from contracts with customers and an insignificant amount of rental and leasing sales. The table also contains a breakdown of sales by reportable segments.

Disaggregation of sales

	Polyure- thanes	Polycar- bonates	Coatings, Adhesives, Specialties	Other/Consolidation		Covestro Group
				All other segments	Corporate Center and reconciliation	
	€ million	€ million	€ million	€ million	€ million	€ million
2020						
EMLA	2,189	942	908	561	–	4,600
of which Germany	405	198	394	345	–	1,342
NAFTA	1,389	610	469	86	–	2,554
of which United States	1,108	508	428	84	–	2,128
APAC	1,443	1,433	662	14	–	3,552
of which China	899	998	349	4	–	2,250
2019						
EMLA	2,487	1,146	1,052	604	–	5,289
of which Germany	471	271	448	367	–	1,557
NAFTA	1,680	734	562	165	–	3,141
of which United States	1,336	597	507	164	–	2,604
APAC	1,612	1,593	755	22	–	3,982
of which China	997	1,076	378	5	–	2,456

The following table presents the opening and closing balances of trade accounts receivable, contract assets, and contract liabilities:

Contract balances

	Jan. 1, 2019	Dec. 31, 2019	Dec. 31, 2020
	€ million	€ million	€ million
Trade accounts receivable	1,786	1,561	1,593
Contract assets	52	43	43
Contract liabilities	28	18	22

Contract assets are recognized in case the right to consideration in exchange for goods or services that have been transferred to a customer is conditional. This occurs primarily in the event of goods delivered to consignment warehouses of external customers. Where sales are made through consignment warehouses, customers primarily obtain control over the delivered goods upon delivery to the consignment warehouse. Contract assets are recognized as receivables upon invoicing.

Contract liabilities are recognized for advance payments received from customers prior to transferring goods or services. These contract liabilities are recognized as sales when the goods or services have been transferred.

Sales from performance obligations satisfied (or partially satisfied) in previous periods and recognized in fiscal 2020 amounted to €2 million (previous year: €5 million).

The changes in contract assets and contract liabilities in the reporting period resulted from the following circumstances:

Reconciliation of contract assets

	2019	2020
	€ million	€ million
Transfers from contract assets recognized at the beginning of the period to trade accounts receivable	(51)	(40)
Increases due to performance obligations fulfilled but not billed at the reporting date	39	43
Catch-up adjustments to revenue that affect the corresponding contract asset	3	(3)
Total	(9)	–

Reconciliation of contract liabilities

	2019	2020
	€ million	€ million
Revenue recognized that was included in the contract liability balance at the beginning of the period	(28)	(18)
Increases due to cash received, excluding amounts recognized as revenue during the period	18	22
Catch-up adjustments to revenue that affect the corresponding contract liability	–	–
Total	(10)	4

The following table provides the transaction price allocated to the remaining performance obligations as of the balance sheet date. The total amount is divided according to the reporting period when it is expected to be recognized:

Transaction price allocated to the remaining performance obligations

	Dec. 31, 2019		Dec. 31, 2020
	€ million		€ million
2020	448	2021	648
2021	386	2022	633
2022	426	2023	465
2023	283	2024	323
2024	182	2025	102
2025 or later	83	2026 or later	155
Total	1,808	Total	2,326

The disclosures on the transaction price allocated to the remaining performance obligations is based on long-term supply contracts according to IFRS 15 (Revenue from Contract with Customers) which stipulate minimum volumes to be purchased as agreed between both parties.

Performance obligations from contracts with an original expected term of twelve months or less are excluded. Similarly, the disclosure of the transaction price excludes performance obligations satisfied over time for which Covestro has the right to consideration in an amount that corresponds directly with the value to the customer of the performance completed to date and for which Covestro may recognize revenue in the amount to which Covestro has the right to invoice.

The transaction price only includes variable consideration arising from contracts with customers, like sales- or volume-based rebates or price formulas, for which the prices are derived from external, market based indices, to the extent that they are not constrained as defined in IFRS 15.

9. Other Operating Income

Other operating income was comprised as shown in the following table:

Other operating income

	2019	2020
	€ million	€ million
Gains on retirements of noncurrent assets	6	3
Gains from derivatives	2	2
Reversals of impairment losses on receivables	7	4
Reversals of unutilized provisions	2	–
Miscellaneous operating income	164	54
Total	181	63

Gains from derivatives in fiscal years 2019 and 2020 resulted from embedded derivatives.

Miscellaneous operating income in the reporting period mainly included insurance reimbursements of €21 million (previous year: €63 million) and insurance premiums of €13 million received by Covestro International Re, Inc., Colchester (USA).

See note 7.1 "Scope of consolidation and investments" for further information regarding Covestro International Re, Inc.

10. Other Operating Expenses

Other operating expenses were comprised as shown in the following table:

Other operating expenses

	2019	2020
	€ million	€ million
Losses on retirements of noncurrent assets	(7)	(12)
Impairment losses on receivables	(7)	(7)
Losses from derivatives	(5)	(3)
Miscellaneous operating expenses	(46)	(77)
Total	(65)	(99)

The losses from derivatives resulted from embedded derivatives in fiscal 2020. In fiscal 2019, the losses resulted from embedded derivatives as well as currency hedging transactions.

Miscellaneous operating expenses in fiscal 2020 largely comprised nonrecurring expenses of €32 million in connection with the planned acquisition of the Resins & Functional Materials (RFM) business from Koninklijke DSM N.V., Heerlen (Netherlands), and insurance expenses of €20 million (previous year: €13 million).

See note 7.2 "Acquisitions and divestitures."

11. Personnel Expenses and Employee Numbers

Personnel expenses in fiscal 2020 were comprised as shown in the following table:

Personnel expenses

	2019	2020
	€ million	€ million
Salaries	(1,388)	(1,341)
Social expenses and expenses for pensions and other benefits	(374)	(382)
of which for defined contribution pension plans	(96)	(95)
of which for defined benefit and other pension plans	(107)	(122)
Total	(1,762)	(1,723)

Personnel expenses decreased in fiscal 2020 primarily due to the lower headcount, a decline in expenses associated with the Perspective efficiency program, and lower expenses for short-term variable compensation under the Group-wide Covestro Profit Sharing Plan (Covestro PSP).

 See "Compensation Report" in the Group Management Report for further information on the components of Covestro PSP.

Average number of employees

	2019	2020
Production	10,955	10,885
Marketing and distribution	3,438	3,181
Research and development	1,210	1,213
General administration	1,539	1,457
Total	17,142	16,736
Employees in vocational training	515	514

The number of employees on either permanent or temporary contracts is stated in full-time equivalents (FTE). Part-time employees are included on a pro-rated basis in line with their contractual working hours. The figures do not include employees in vocational training.

The joint venture LyondellBasell Covestro Manufacturing Maasvlakte V.O.F, Rotterdam (Netherlands), had an average of 178 employees in the 2020 reporting year.

12. Financial Result

12.1 Result from investments in affiliated companies

The result from investments in affiliated companies comprised mainly the loss of €20 million (previous year: loss of €23 million) from PO JV, LP, Wilmington, Delaware (USA), an associate accounted for using the equity method, and the gain of €7 million from Paltough Industries (1998) Ltd., Kibbutz Ramat Yochanan (Israel), accounted for using the equity method (previous year: gain of €1 million). In addition, this item includes €1 million (previous year: €2 million) in dividend income from other investments.

☐ See note 17 "Investments accounted for using the equity method."

12.2 Net interest expense

Net interest expense was comprised as shown in the following table:

Net interest expense

	2019	2020
	€ million	€ million
Expenses		
Interest and similar expenses	(48)	(50)
Interest expenses for FX derivatives	(37)	(23)
Income		
Interest and similar income	7	6
Interest income from FX derivatives	33	20
Total	(45)	(47)

Interest and similar expenses primarily resulted from interest expenses from leases totaling €28 million (previous year: €33 million) and bonds issued by Covestro AG totaling €20 million (previous year: €14 million). Interest expense and interest income from forward exchange contracts included interest rate-induced fair value changes and the forward element.

12.3 Other financial result

The other financial result was comprised as shown in the following table:

Other financial result

	2019	2020
	€ million	€ million
Interest portion of interest-bearing provisions	(27)	(19)
Exchange gain	5	3
Miscellaneous financial expenses	(4)	(16)
Total	(26)	(32)

The interest portion of interest-bearing provisions mainly comprised €24 million (previous year: €31 million) in interest expense for pension and other post-employment benefit provisions plus €5 million in effects of interest income (previous year: €4 million) from interest rate fluctuations for other provisions and corresponding overfunding in fiscal 2020.

Miscellaneous financial expenses included losses from the decline in the fair values of money market funds and a contingent purchase price receivable (€4 million), expenses from the early termination of the syndicated credit facility (€2 million), expenses for financing the purchase price associated with the announced acquisition of the Resins & Functional Materials (RFM) business of Koninklijke DSM N.V., Heerlen (Netherlands), (€2 million), and negative interest income from money market funds (€2 million).

13. Taxes

The breakdown of tax expenses by type is shown in the table below:

Income taxes

	2019	2020
	€ million	€ million
Current taxes	(126)	(199)
of which tax expense current year	(174)	(199)
of which tax expense prior years	48	–
Deferred taxes	(78)	48
of which from temporary differences	(82)	14
of which from tax loss carryforwards and tax credits	4	34
Total	(204)	(151)

The deferred tax assets and liabilities were allocated to the items in the statements of financial position as shown in the table below:

Deferred tax assets and liabilities

	Dec. 31, 2019			Dec. 31, 2020		
	Deferred tax assets	Deferred tax liabilities	of which recognized in profit or loss	Deferred tax assets	Deferred tax liabilities	of which recognized in profit or loss
	€ million	€ million	€ million	€ million	€ million	€ million
Intangible assets	38	(15)	23	27	(13)	14
Property, plant and equipment ¹	129	(318)	(188)	119	(258)	(139)
Financial assets	1	(75)	(73)	1	(43)	(42)
Inventories	42	(1)	41	41	(1)	40
Receivables	17	(5)	12	6	(24)	(18)
Provisions for pensions and other post-employment benefits	632	(23)	(12)	710	(16)	24
Other provisions	39	(18)	22	62	(19)	43
Liabilities ¹	195	(1)	194	116	(3)	113
Tax loss carryforwards	8	–	8	41	–	41
Total	1,101	(456)	25	1,123	(377)	76
of which noncurrent	1,002	(415)		1,060	(345)	
Offsetting	(250)	250		(198)	198	
Recognition	851	(206)		925	(179)	

¹ The figures include right-of-use assets and lease liabilities from application of IFRS 16.

Of the total tax loss carryforwards of €277 million (previous year: €42 million), an amount of €277 million (previous year: €42 million) is expected to be usable within a foreseeable period. The increase in loss carryforwards was mainly due to the growth of tax loss carryforwards in the reporting year and tax reassessments for prior years. Deferred tax assets of €41 million (previous year: €8 million) were recognized for the amount of loss carryforwards expected to be usable.

As in the previous year, no use of tax loss carryforwards was subject to legal or economic restrictions with regard to its usability.

No material tax credits were recorded in either the reporting year or the prior year.

In fiscal 2020, subsidiaries that reported losses for the reporting year or the previous year recognized net deferred tax assets totaling €719 million (previous year: €627 million) from temporary differences and tax loss carryforwards, of which €39 million (previous year: €5 million) were recognized from tax loss carryforwards. All of the deferred tax assets were considered to be unimpaired because the companies concerned were expected to generate taxable income sufficient to utilize them. The planning anticipates stable, positive business performance in future business cycles.

In the reporting year, deferred tax liabilities of €8 million (previous year: €31 million) were recognized for planned dividend distributions by subsidiaries. No deferred tax liabilities were recognized for temporary differences of €88 million (previous year: €48 million) relating to shares in subsidiaries, as the parent company can control the timing of the reversal of the temporary differences, and it is unlikely that these temporary differences will reverse in the foreseeable future.

The reported tax expense of €151 million (previous year: €204 million) for fiscal 2020 was €25 million higher (previous year: €15 million) than the expected tax expense of €126 million (previous year: €189 million) that would have resulted from applying an expected weighted average tax rate to the pre-tax income of the Covestro Group. This average tax rate was derived from the expected tax rates of the individual Group companies and amounted to 20.8% in fiscal 2020 (previous year: 24.8%). The effective tax rate was 25.0% (previous year: 26.8%).

The Covestro Group operates in various countries. The tax rates range from 13.9% to 34% (previous year: 9.2% to 34.4%) due to national regulations.

The reconciliation of expected to actual income tax expense and of the expected to the effective tax rate for the Covestro Group is shown in the following table:

Reconciliation of expected to actual income tax expense

	2019		2020	
	€ million	%	€ million	%
Expected income tax expense and expected tax rate	189	+24.8	126	+20.8
Reduction in taxes due to tax-free income	(33)	-4.3	(12)	-2.0
Increase in taxes due to non-tax-deductible expenses	47	+6.1	19	+3.2
Tax income (-) and expenses (+) relating to other periods	(19)	-2.5	(1)	-0.2
Tax effects of change in tax rates	5	+0.7	-	-
Other tax effects	15	+2.0	19	+3.2
Actual income tax expense and effective tax rate	204	+26.8	151	+25.0

14. Earnings per Share

Earnings per share are calculated according to IAS 33 (Earnings per Share) as the relationship of the Group's income after income taxes (net income) for the fiscal year to the weighted average number of outstanding no-par voting shares of Covestro AG. A total of 10,200,000 new, no-par value bearer shares were issued by way of a resolution dated October 13, 2020. In fiscal 2020, a weighted average number of outstanding no-par voting shares of 184,912,207 was used to calculate earnings per share, while in fiscal 2019, these shares amounted to 182,728,724.

Earnings per share

	2019	2020
	€ million	€ million
Income after income taxes	557	454
of which attributable to noncontrolling interest	5	- 5
of which attributable to Covestro AG stockholders (net income)	552	459
	Shares	Shares
Weighted average number of outstanding no-par voting shares of Covestro AG	182,728,724	184,912,207
	€	€
Basic earnings per share	3.02	2.48
Diluted earnings per share	3.02	2.48

Notes to the Statement of Financial Position

15. Goodwill and Other Intangible Assets

Changes in intangible assets in fiscal 2020

	Acquired goodwill	Patents and technologies	Marketing and distribution rights	Production rights	Software	Other rights	Advance payments	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Cost of acquisition or generation, December 31, 2019	265	28	92	90	156	205	36	872
Acquisitions	–	–	–	–	–	–	–	–
Capital expenditures	–	–	–	–	2	1	14	17
Retirements	–	–	–	–	(4)	(2)	–	(6)
Transfers	–	–	(48)	48	16	–	(16)	–
Transfers (IFRS 5)	–	–	(4)	(4)	–	–	–	(8)
Exchange differences	(8)	–	–	(2)	–	(1)	–	(11)
Cost of acquisition or generation, December 31, 2020	257	28	40	132	170	203	34	864
Accumulated amortization, impairment losses and impairment loss reversals, December 31, 2020	2	14	33	130	150	171	–	500
Carrying amounts, December 31, 2020	255	14	7	2	20	32	34	364
Amortization and impairment losses in fiscal 2020	1	1	6	2	7	5	–	22
Amortization	–	1	6	2	7	5	–	21
Impairment losses	1	–	–	–	–	–	–	1
Impairment loss reversals in fiscal 2020	–	–	–	–	–	–	–	–

The impairment losses amounted to €1 million in the reporting year (previous year: €1 million) and related to goodwill previously recognized on a pro rata basis for the systems house business in the Middle East held for sale in the Polyurethanes reportable segment. No reversals of impairment losses were recognized either in the reporting period or in the reference period.

☞ See note 7.2 "Acquisitions and divestitures."

The impairment testing procedure for goodwill and other intangible assets is explained under "Procedure used in global impairment testing and its impact."

☞ See note 3 "Accounting policies and valuation principles."

Changes in intangible assets in fiscal 2019

	Acquired goodwill	Patents and technologies	Marketing and distribution rights	Production rights	Software	Other rights	Advance payments	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Cost of acquisition or generation, December 31, 2018	256	28	105	97	157	176	15	834
Acquisitions	10	–	–	–	–	29	–	39
Capital expenditures	–	–	–	–	2	1	23	26
Retirements	–	–	–	–	(2)	–	–	(2)
Transfers	–	–	1	–	1	–	(2)	–
Transfers (IFRS 5)	(3)	–	(14)	(8)	(4)	–	–	(29)
Exchange differences	2	–	–	1	2	(1)	–	4
Cost of acquisition or generation, December 31, 2019	265	28	92	90	156	205	36	872
Accumulated amortization, impairment losses and impairment loss reversals, December 31, 2019	1	14	78	86	147	168	–	494
Carrying amounts, December 31, 2019	264	14	14	4	9	37	36	378
Amortization and impairment losses in fiscal 2019	1	1	7	2	5	4	–	20
Amortization	–	1	7	2	5	4	–	19
Impairment losses	1	–	–	–	–	–	–	1
Impairment loss reversals in fiscal 2019	–	–	–	–	–	–	–	–

Goodwill that is of material significance for the Covestro Group was allocated to the following cash-generating units at the end of the reporting period:

Material goodwill by cash-generating unit

	Cash-generating unit	Dec. 31, 2019	Dec. 31, 2020
Reporting segment		€ million	€ million
Polyurethanes (PUR)	MDI	60	56
Polyurethanes (PUR)	PET	22	21
Polycarbonates (PCS)	PCS	121	119
Coatings, Adhesives, Specialties (CAS)	ALI	25	25
Coatings, Adhesives, Specialties (CAS)	PRD	10	10
Coatings, Adhesives, Specialties (CAS)	TPU	17	16

16. Property, Plant and Equipment

Changes in property, plant and equipment in fiscal 2020

	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
	€ million	€ million	€ million	€ million	€ million
Cost of acquisition or construction, December 31, 2019	3,427	11,856	766	1,188	17,237
Changes in scope of consolidation	–	–	–	–	–
Acquisitions	–	–	–	–	–
Capital expenditures	105	199	90	451	845
Retirements	(41)	(115)	(71)	(1)	(228)
Transfers	127	637	15	(779)	–
Transfers (IFRS 5)	(12)	(3)	(1)	–	(16)
Exchange differences	(107)	(390)	(30)	(15)	(542)
Cost of acquisition or construction, December 31, 2020	3,499	12,184	769	844	17,296
Accumulated depreciation, impairment losses and impairment loss reversals, December 31, 2020	2,101	9,519	500	1	12,121
Carrying amounts, December 31, 2020	1,398	2,665	269	843	5,175
Depreciation and impairment losses in fiscal 2020	163	507	82	2	754
Depreciation	150	504	81	–	735
Impairment losses	13	3	1	2	19
Impairment loss reversals in fiscal 2020	–	–	–	–	–

In the fourth quarter of 2020, Covestro completed construction of the new Group headquarters in Leverkusen. The construction in progress and advance payments item totaling €76 million was therefore reclassified as land and buildings.

No impairment losses were reversed for property, plant, and equipment in the reporting year (previous year: €1 million).

Borrowing costs of €8 million were capitalized in property, plant, and equipment in the reporting year as part of the cost of qualifying assets (previous year: €6 million). The capitalization rate applied amounted to 2.1% on average (previous year: 1.4%).

Changes in property, plant and equipment in fiscal 2019

	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
	€ million	€ million	€ million	€ million	€ million
Cost of acquisition or construction, December 31, 2018	3,098	11,486	533	850	15,967
Changes in scope of consolidation	–	(73)	–	–	(73)
Initial application IFRS 16	268	154	238	–	660
Acquisitions	5	7	1	2	15
Capital expenditures	63	165	56	698	982
Retirements	(46)	(253)	(75)	–	(374)
Transfers	28	321	17	(366)	–
Transfers (IFRS 5)	(39)	(81)	(11)	(1)	(132)
Exchange differences	50	130	7	5	192
Cost of acquisition or construction, December 31, 2019	3,427	11,856	766	1,188	17,237
Accumulated depreciation, impairment losses and impairment loss reversals, December 31, 2019	2,026	9,425	500	–	11,951
Carrying amounts, December 31, 2019	1,401	2,431	266	1,188	5,286
Depreciation and impairment losses in fiscal 2019	149	499	84	1	733
Depreciation	138	485	83	–	706
Impairment losses	11	14	1	1	27
Impairment loss reversals in fiscal 2019	–	(1)	–	–	(1)

16.1 Leasing

Covestro as lessee

The reported right-of-use assets from leases are recorded under property, plant and equipment.

The following table shows the changes in carrying amounts of right-of-use assets from January 1, 2020, to December 31, 2020.

Changes in right-of-use assets in fiscal 2020

	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Total
	€ million	€ million	€ million	€ million
Carrying amounts, January 1, 2020	329	250	178	757
Additions	31	57	67	155
Retirements	(19)	(3)	(5)	(27)
Depreciation and impairment losses	(63)	(52)	(46)	(161)
Other changes	(11)	(11)	(13)	(35)
Carrying amounts, December 31, 2020	267	241	181	689

Right-of-use assets relate mainly to leases for production and logistics infrastructure and real estate leases. Leases for production and logistics infrastructure are mainly related to the rental of tanks and containers as well as rail cars. For tanks and containers, the average lease term is 15 years and for rail cars, 12 years. Leases for renting real estate, particularly buildings, are for an average lease term of 10 years. Some of the underlying leases include variable lease payments as well as options to extend or terminate the lease.

See note 3 "Accounting policies and valuation principles."

The following table shows the amounts for all leases shown in the statement of cash flows and income statement:

Expenses and cash outflows for leases

	2019	2020
	€ million	€ million
Amounts reported in the statement of cash flows		
Total cash outflow for leases	196	196
Amounts reported in the income statement		
Depreciation and impairment losses	157	161
Interest expense	33	28
Expenses relating to short-term leases	16	11
Expenses relating to leases of low-value assets	3	3
Expenses relating to variable lease payments not included in the lease liability	1	2

The lease commitments for current leases not recognized on the balance sheet amount to €3 million (previous year: €2 million).

Further information on the lease liabilities arising from leases and details on payments from leases are described in the following notes:

Note 24 "Financing and financial liabilities."

Note 29 "Notes to the statement of cash flows."

Covestro as lessor

In the reporting year, leasing income generated from lease contracts under IFRS 16 (Leases) was €14 million (previous year: €12 million). These are mainly related to real estate. In addition, lease payments from rentals of €7 million (previous year: €8 million) are expected to be received in the following year, not including the investment property as outlined below. Lease payments totaling €7 million are expected to be received in 2022–2025, and lease payments totaling €4 million after the year 2025.

At Covestro, risks from renting real estate are usually limited by building insurance policies and by the contractual obligation of the renter to return the real estate to its original condition. In addition, price adjustments based mainly on the consumer price index mechanisms are contractually agreed.

16.2 Investment property

Internal valuations are used as the primary basis for determining the fair values of investment property. The income approach is used for buildings and developed sites, and the market comparison approach is used for undeveloped sites.

The total carrying amount of investment property as of December 31, 2020, amounted to €24 million (previous year: €31 million), and its fair value totaled €210 million (previous year: €211 million). The rental income from investment property was €17 million (previous year: €17 million) and the operating expenses directly allocable to this property amounted to €14 million (previous year: €14 million). In the reporting period and in the previous year, there were no operating expenses recognized for investment property not generating any rental income.

Rental income generated from the leasing of properties classified as investment properties stemmed in part from contracts for hereditary building rights and leases granted by the Covestro Group. These contracts with a weighted average remaining term of 35 years relate to space used by companies and contractual partners in the chemical industry at production sites in Germany. Based on current rental prices, around €5 million in compensation will be received annually from these long-term contracts for the use of this space in the coming years.

17. Investments Accounted for Using the Equity Method

The two following tables contain summarized data from the income statement and statement of financial position of the associate PO JV, LP, Wilmington, Delaware (United States), which is accounted for using the equity method, and show the respective amounts recognized in the financial statements of the Covestro Group.

See note 7.1 "Scope of consolidation and investments" for an overview of the companies accounted for using the equity method.

In year 2000, the polyols business and parts of the propylene oxide (PO) production operations of former Lyondell Chemicals Company, Houston, Texas (USA), were acquired with the objective of ensuring access to patented technologies and safeguarding the long-term supply of PO, a precursor for polyurethanes. As part of this strategy, a company was established to jointly produce PO (PO JV, LP, in which Covestro continues to hold a 39.4% interest). Covestro benefits from fixed long-term supply quotas/volumes of PO from this company's production.

Income statement data of PO JV, LP, Wilmington, Delaware (United States)

	2019	2020
	€ million	€ million
Sales	1,413	1,231
Net loss after taxes	(59)	(59)
Share of net loss after taxes	(23)	(20)
Share of total comprehensive loss after taxes	(23)	(20)

Data from the statements of financial position of PO JV, LP, Wilmington, Delaware (United States)

	Dec. 31, 2019	Dec. 31, 2020
	€ million	€ million
Noncurrent assets	436	358
Equity	436	358
Share of equity	185	157
Other	(15)	(12)
Carrying amount	170	145

The item "Other" mainly comprised differences arising from adjustments of data to Covestro's uniform accounting policies, purchase price allocations and their subsequent measurement.

The following table contains the income statement data and the carrying amount of the other associates accounted for using the equity method:

Income statement data and carrying amounts of other investments accounted for using the equity method

	2019	2020
	€ million	€ million
Income after taxes	5	29
Share of income after taxes	1	7
Share of total comprehensive income after taxes	1	7
Carrying amount	22	28

18. Other Financial Assets

The other financial assets were comprised as follows:

Other financial assets

	Dec. 31, 2019		Dec. 31, 2020	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Money market funds	–	–	771	771
Loans and bank deposits	16	11	365	360
Other investments	13	–	14	–
Receivables from derivatives	22	16	18	13
Receivables under lease agreements	8	–	8	–
Total	59	27	1,176	1,144

Receivables from derivatives included €13 million (previous year: €15 million) in forward exchange contracts and €5 million (previous year: €7 million) in embedded derivatives.

See note 26.2 "Financial risk management and information on derivatives."

See note 26.1 "Financial instruments by category" for further information regarding money market funds, loans and bank deposits and other investments.

Receivables under lease agreements relate to finance leases where Covestro is the lessor and the economic owner of the leased assets is the contractual partner. Receivables under lease agreements are based on expected lease payments of €33 million (previous year: €34 million) including an interest component of €25 million (previous year: €26 million). In the reporting period, interest income for finance leases of €1 million (previous year: €1 million) was recognized. Of the expected lease payments, €1 million is due within one year (previous year: €1 million), €3 million is due within the following four years (previous year: €3 million) and €29 million is due in subsequent years (previous year: €30 million).

19. Inventories

Inventories were comprised as follows:

Inventories

	Dec. 31, 2019	Dec. 31, 2020
	€ million	€ million
Raw materials and supplies	592	537
Work in process, finished goods and goods purchased for resale ¹	1,323	1,123
Advance payments	1	3
Total	1,916	1,663

¹ In fiscal 2020, work in process comprises approximately 19% (previous year: approximately 19%).

In fiscal 2020, impairment losses on inventories of €24 million (previous year: €32 million) and reversals of impairment losses of €6 million (previous year: €9 million) were recognized through profit or loss in cost of goods sold.

20. Other Receivables

The other receivables were comprised as follows:

Other receivables

	Dec. 31, 2019		Dec. 31, 2020	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Other tax receivables	197	175	108	104
Deferred charges	75	70	81	75
Contract Assets	43	43	43	43
Reimbursement claims	–	–	2	2
Net defined benefit asset	2	–	2	–
Receivables from employees	9	9	6	6
Receivables from divestments	17	3	11	–
Miscellaneous receivables	68	59	107	65
Total	411	359	360	295

The miscellaneous receivables included an advance payment in the amount of €4 million (previous year: €7 million), which is offset against monthly purchases. Other receivables included €31 million (previous year: €41 million) in financial receivables. The impairment losses calculated for financial receivables as of the reporting date are immaterial.

 See note 8 "Sales" for further information on contract assets.

21. Equity

The individual components of equity and changes in equity in fiscal years 2019 and 2020 are presented in the Covestro Group consolidated statement of changes in equity.

Capital stock

The capital stock of Covestro AG changed as follows in fiscal 2020:

Change in capital stock

	Number of shares	of which treasury shares	Shares carrying dividend rights	Capital stock
	number	number	number	€ million
Dec. 31, 2019	183,000,000	(135,315)	182,864,685	183
Capital increase	10,200,000		10,200,000	10
Issuance of treasury shares		95,859	95,859	–
Dec. 31, 2020	193,200,000	(39,456)	193,160,544	193

The Covestro AG's capital stock as of December 31, 2020, is divided into 193,200,000 (previous year: 183,000,000) no-par value bearer shares and is fully paid up. Each share confers the right to one vote.

On October 13, 2020, the Board of Management, with the approval of the Supervisory Board, partially utilized the Authorized Capital 2020 created by resolution of the Annual General Meeting (AGM) on July 30, 2020, to increase the company's capital stock by €10.2 million by issuing 10,200,000 new, no-par value bearer shares with a proportionate interest in the capital stock of €1.00 each against cash contributions, while disapplying the subscription rights of shareholders.

Treasury shares

Covestro AG issued 95,859 (previous year: 160,083) treasury shares to employees of the German legal entities under the Covestment stock participation program. As of December 31, 2020, the company held 39,456 (previous year: 135,315) treasury shares. This corresponds to 0.02% (previous year: 0.07%) of the capital stock.

The cost of the treasury shares held by Covestro AG at the end of the fiscal year was €2 million. This was based on a price of €49.22 per share. They are valued using the FIFO method.

Authorized and conditional capital

The authorized capital and conditional capital as of December 31, 2020, were comprised as follows:

Authorized and conditional capital

	€ million	Purpose ¹
Authorized capital 2020	73.2	Increase in capital stock against cash contributions and/or contributions in kind (by July 29, 2025)
Conditional capital 2020	2,000	Issue of warrants or conversion rights (by July 29, 2025)

¹ Requires in each case Supervisory Board approval.

After partial use of the authorized capital 2020, this amounted to €63 million as of December 31, 2020.

On July 30, 2020, the AGM additionally authorized the Board of Management to issue bonds with conversion or exchange rights or warrants, or with conversion obligations, or a combination of these instruments on up to 18,300,000 no-par value bearer shares of Covestro AG. Based on this authorization, convertible/warrant bonds can be issued up to a total nominal value of €2 billion by the company or a Group company in the period up to July 29, 2025. The 2020 AGM also resolved to conditionally increase the capital stock by up to €18.3 million by issuing up to 18,300,000 no-par value bearer shares to grant shares to the holders or creditors of such convertible/warrant bonds (Conditional Capital 2020).

Conditional capital has not been used to date.

Capital reserves

Covestro AG's capital reserves as of December 31, 2020, amounted to €3,925 million (previous year: €3,487 million). The increase is attributable to the capital increase and the issuance of treasury shares under the Covestment program. The capital increase amounted to €434 million after the costs of raising equity were deducted.

Dividend

The dividend available for distribution is based on the distributable profit reported in the annual financial statements of Covestro AG, which were prepared according to the provisions of the German Commercial Code (HGB). The dividend proposed for fiscal 2020 amounts to €1.30 per share carrying dividend rights for a total distribution of €251 million based on the number of shares carrying dividend rights as of December 31, 2020, and depends on authorization by the shareholders at the Annual General Meeting. It is therefore not recognized as a liability in the consolidated financial statements. For fiscal 2019, a dividend of €1.20 per share carrying dividend rights was paid in August 2020.

Equity attributable to noncontrolling interest

The equity attributable to noncontrolling interest mainly relates to the equity of Pearl Covestro Polyurethane Systems FZCO, Dubai (United Arab Emirates), Sumika Covestro Urethane Company, Ltd., Amagasaki (Japan), DIC Covestro Polymer Ltd., Tokyo (Japan), and Covestro (Taiwan) Ltd., Kaohsiung City (Taiwan).

The changes in equity attributable to noncontrolling interest are presented in the following table:

Components of noncontrolling interest in equity

	2019	2020
	€ million	€ million
January 1	33	47
Change in equity not recognized in profit or loss		
Exchange differences on translation of operations outside the eurozone	1	(3)
Other changes in equity	11	–
Dividend payments	(3)	(2)
Change in equity recognized in profit or loss	5	(5)
December 31	47	37

Accumulated other comprehensive income

Accumulated other comprehensive income were comprised as follows:

Accumulated other comprehensive income

	Currency translation	Accumulated other comprehensive income
	€ million	€ million
Jan. 1, 2019	323	323
Other comprehensive income	92	92
Total comprehensive income	92	92
Dec. 31, 2019	415	415
Other comprehensive income	(206)	(206)
Total comprehensive income	(206)	(206)
Dec. 31, 2020	209	209

22. Provisions for Pensions and Other Post-employment Benefits

Provisions for pensions and other post-employment benefits were recognized for defined benefit obligations.

See note 11 "Personnel expenses and employee numbers" for the expenses for defined contribution obligations.

The net defined benefit liability for post-employment benefit plans was accounted for as follows:

Net defined benefit liability reflected in the statement of financial position

	Pensions		Other post-employment benefits		Total	
	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020
	€ million	€ million	€ million	€ million	€ million	€ million
Provisions for pensions and other post-employment benefits	1,818	1,977	147	146	1,965	2,123
Germany	1,699	1,862	–	–	1,699	1,862
Other countries	119	115	147	146	266	261
Net defined benefit asset	2	2	–	–	2	2
Germany	2	2	–	–	2	2
Other countries	–	–	–	–	–	–
Net defined benefit liability	1,816	1,975	147	146	1,963	2,121
Germany	1,697	1,860	–	–	1,697	1,860
Other countries	119	115	147	146	266	261

The expenses for defined benefit plans and for other post-employment benefits included the components described as follows:

Expenses for defined benefit plans

	Pension plans						Other post-employment benefit plans	
	Germany		Other countries		Total		Other countries	
	2019	2020	2019	2020	2019	2020	2019	2020
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Current service cost	83	97	15	11	98	108	2	2
Past service cost	16	12	–	–	16	12	–	–
Plan settlements	–	–	(9)	–	(9)	–	–	–
Service cost	99	109	6	11	105	120	2	2
Interest expense from defined benefit obligation	61	41	24	15	85	56	5	4
Interest income from plan assets	(40)	(24)	(20)	(12)	(60)	(36)	–	–
Net interest	21	17	4	3	25	20	5	4
Total expenses	120	126	10	14	130	140	7	6

In fiscal 2020, a total of €130 million (previous year: €439 million) in effects of remeasurements of the net defined benefit liability was also recognized in other comprehensive income. Of this amount, €119 million (previous year: €427 million) relates to pension obligations and €11 million (previous year: €12 million) to other post-employment benefit obligations.

The changes in the net defined benefit liability for post-employment benefit plans were as follows:

Changes in defined benefit obligation

	2019			2020		
	Germany	Other countries	Total	Germany	Other countries	Total
	€ million	€ million	€ million	€ million	€ million	€ million
January 1	3,390	825	4,215	4,154	790	4,944
Divestment	(4)	–	(4)	(3)	(3)	(6)
Current service cost	83	17	100	97	13	110
Past service cost	16	–	16	12	–	12
(Gains)/losses from plan settlements	–	(9)	(9)	–	–	–
Net interest	61	30	91	41	19	60
Net actuarial (gain)/loss	647	85	732	225	69	294
of which due to change in financial assumptions	644	92	736	223	64	287
of which due to change in demographic assumptions	–	(4)	(4)	–	(4)	(4)
of which due to experience adjustments	3	(3)	–	2	9	11
Employee contributions	9	1	10	10	1	11
Payments due to plan settlements ^{1,2}	–	(123)	(123)	8	(8)	–
Benefits paid out of plan assets ²	(21)	(44)	(65)	(28)	(41)	(69)
Benefits paid by the company	(27)	(10)	(37)	(29)	(17)	(46)
Exchange differences	–	18	18	–	(52)	(52)
December 31	4,154	790	4,944	4,487	771	5,258
of which other post-employment benefits	–	148	148	–	147	147

¹ Payments due to plan settlements may include transfers from and to other companies in the course of employee transfers for which benefits are granted as part of a multi-employer plan managed as a pension plan by the transferring and receiving company.

² Previous year adjusted due to a plan settlement in the United States

Changes in fair value of plan assets

	2019			2020		
	Germany	Other countries	Total	Germany	Other countries	Total
	€ million	€ million	€ million	€ million	€ million	€ million
January 1	2,202	571	2,773	2,457	526	2,983
Divestment	–	–	–	(1)	(3)	(4)
Net interest	40	20	60	24	12	36
Return or (expense) on plan assets excluding amounts recognized as interest result	210	83	293	116	47	163
Employer contributions	17	9	26	43	10	53
Employee contributions	9	1	10	10	1	11
Payments due to plan settlements ^{1,2}	–	(123)	(123)	6	(7)	(1)
Benefits paid out of plan assets ²	(21)	(44)	(65)	(28)	(41)	(69)
Exchange differences	–	9	9	–	(35)	(35)
December 31	2,457	526	2,983	2,627	510	3,137
of which other post-employment benefits	–	1	1	–	1	1

¹ Payments due to plan settlements may include transfers from and to other companies in the course of employee transfers for which benefits are granted as part of a multi-employer plan managed as a pension plan by the transferring and receiving company.

² Previous year adjusted due to a plan settlement in the United States

Effects of the asset ceiling

	2019			2020		
	Germany	Other countries	Total	Germany	Other countries	Total
	€ million	€ million	€ million	€ million	€ million	€ million
January 1	–	2	2	–	2	2
Remeasurement of asset ceiling	–	–	–	–	(1)	(1)
Exchange differences	–	–	–	–	(1)	(1)
December 31	–	2	2	–	–	–
of which other post-employment benefits	–	–	–	–	–	–

Development of the net defined benefit liability

	2019			2020		
	Germany	Other countries	Total	Germany	Other countries	Total
	€ million	€ million	€ million	€ million	€ million	€ million
January 1	1,188	256	1,444	1,697	266	1,963
Divestment	(4)	–	(4)	(2)	–	(2)
Current service cost	83	17	100	97	13	110
Past service cost	16	–	16	12	–	12
(Gains) / losses from plan settlements	–	(9)	(9)	–	–	–
Net interest	21	10	31	17	7	24
Net actuarial (gain) / loss	647	85	732	225	69	294
(Return) or expense on plan assets excluding amounts recognized as interest result	(210)	(83)	(293)	(116)	(47)	(163)
Remeasurement of asset ceiling	–	–	–	–	(1)	(1)
Employer contributions	(17)	(9)	(26)	(43)	(10)	(53)
Employee contributions	–	–	–	–	–	–
Payments due to plan settlements ¹	–	–	–	2	(1)	1
Benefits paid out of plan assets	–	–	–	–	–	–
Benefits paid by the company	(27)	(10)	(37)	(29)	(17)	(46)
Plan administration cost paid out of plan assets	–	–	–	–	–	–
Exchange differences	–	9	9	–	(18)	(18)
December 31	1,697	266	1,963	1,860	261	2,121
of which other post-employment benefits	–	147	147	–	146	146

¹ Payments due to plan settlements may include transfers from and to other companies in the course of employee transfers for which benefits are granted as part of a multi-employer plan managed as a pension plan by the transferring and receiving company.

The benefit obligations pertained mainly to Germany (85%; previous year: 84%) and the United States (11%; previous year: 12%). In Germany, current employees accounted for about 61% (previous year: 63%) of entitlements under defined benefit plans, retirees or their surviving dependents for about 31% (previous year: 29%), and former employees with vested pension rights for about 8% (previous year: 8%). In the United States, current employees accounted for about 40% (previous year: 40%) of entitlements under defined benefit plans, retirees or their surviving dependents for about 53% (previous year: 53%), and former employees with vested pension rights for about 7% (previous year: 7%).

The actual income from assets of defined benefit plans for pensions or other post-employment benefits amounted to €199 million (previous year: €353 million) and €0 million (previous year: €0 million), respectively.

A third-party consulting firm began calculating the discount rate for pension obligations in the euro area using a standard methodology as of the first quarter of 2020. Adjusted for the change in calculation procedure, the discount rate would have amounted to 0.50% for Germany as of December 31, 2020. Measurement using the original discount rate would have resulted in a pension obligation €203 million higher as of December 31, 2020. The net interest for the coming reporting year will be €3 million higher than if the discount rate had been calculated using the original methodology.

The following table shows the defined benefit obligations for pensions and other post-employment benefits along with the funded status of the funded obligations:

Defined benefit obligation and funded status

	Pension obligations		Other post-employment benefit obligations		Total	
	2019	2020	2019	2020	2019	2020
	€ million	€ million	€ million	€ million	€ million	€ million
Defined benefit obligation	4,796	5,111	148	147	4,944	5,258
Unfunded ¹	90	94	145	144	235	238
Funded ¹	4,706	5,017	3	3	4,709	5,020
Funded status of funded obligations						
Overfunding	4	2	–	–	4	2
Underfunding ¹	1,728	1,883	2	2	1,730	1,885

¹ Previous year adjusted for other post-employment benefit obligations in the United States

Pension entitlements and other post-employment benefit obligations

The Covestro Group provides retirement benefits for most of its employees, either directly or by contributing to privately or publicly administered funds. The way these benefits are provided varies according to the legal, tax and economic conditions of each country, the benefits generally being based on employee compensation and years of service. The obligations relate both to existing retirees' pensions and to pension entitlements of future retirees.

Funded pension plans exist for employees in various countries. In principle, an individual investment strategy is determined for each of the Covestro Group's defined benefit pension plans taking into account the risk structure of the obligations (especially demographics, the current funded status, the structure of the expected future cash flows, interest sensitivity, biometric risks, etc.), the regulatory environment and the existing level of risk tolerance or risk capacity. A strategic target investment portfolio is then developed in line with the plan's risk structure, taking capital market factors into consideration. Further determinants are risk diversification, portfolio efficiency and the need for both a country-specific and a global risk/return profile centered on ensuring the payment of all future benefits. In principle, as the capital investment strategy for each pension plan is developed individually in light of the plan-specific conditions listed above, the investment strategies for different pension plans may vary considerably. The investment strategies are generally aligned less toward maximizing absolute returns and more toward the reasonable assurance of financing pension commitments over the long term. For plan assets, stress scenarios are simulated and other risk analyses (such as value at risk) are undertaken with the aid of risk management systems.

Bayer-Pensionskasse VVaG, Leverkusen (Germany), (Bayer-Pensionskasse), is the most significant of the pension plans for Covestro. It has been closed to new members since January 1, 2005. This legally independent fund is regarded as a life insurance company and is therefore subject to the German Insurance Supervision Act. The benefit obligations covered by Bayer-Pensionskasse comprise retirement, surviving dependents' and disability pensions. It is financed with contributions by the active members and by their employers. The company contribution is a certain percentage of the employee contribution. This percentage is the same for all participating employers and is set by agreement between the plan's executive committee and supervisory board, acting on a proposal from the responsible actuary. It takes into account the differences between the actuarial estimates and the actual values for the factors used to determine liabilities and contributions. Bayer AG, Leverkusen (Germany), (Bayer AG), may adjust the company contribution in agreement with the plan's executive committee and supervisory board, acting on a proposal from the responsible actuary. The plan's liability is governed by Section 1, Paragraph 1, Sentence 3 of the German Law on the Improvement of Occupational Pensions (BetrAVG). This

means that if the pension plan exercises its right under the articles of association to reduce benefits, each participating employer has to make up the resulting difference. Covestro is not liable for the obligations of other participating employers, even if they cease to participate in the plan.

Pension entitlements for people hired in Germany on or after January 1, 2005, are granted via Rheinische Pensionskasse VVaG, Leverkusen (Germany), (Rheinische Pensionskasse). Future pension payments from this plan are based among other things on contributions and the return on plan assets; a guaranteed interest rate applies.

The Bayer-Pensionskasse and Rheinische Pensionskasse pension obligations are classified as multi-employer plans as defined by IAS 19 (Employee Benefits). A defining characteristic of multi-employer plans is that assets from various employers not under common control are pooled at plan level and used to collectively grant pension benefits to employees. Allocation mechanisms that would permit an exact distribution of the plan assets managed by the pension plan to individual employers often do not exist, as in the case of Bayer-Pensionskasse and Rheinische Pensionskasse. Covestro therefore applies an estimation method that is adequately suited to this purpose to calculate its proportional share of the assets of the pension plans.

Another important pension provision vehicle is Metzler Trust e.V., Frankfurt am Main (Germany), (Metzler Trust). This vehicle covers further retirement provision arrangements for German employees of the Covestro Group, such as the conversion of salary entitlements into pension entitlements, pension obligations and components of other direct commitments.

The defined benefit pension plans in the U.S. have been frozen for some years, and no significant new entitlements can be earned under these plans. The assets of all the United States pension plans are held by a master trust for reasons of efficiency. The applicable regulatory framework is based on the Employee Retirement Income Security Act (ERISA). In particular, these stipulate a statutory 80% minimum funding requirement to avoid benefit restrictions. The actuarial risks, such as investment risk, interest rate risk and longevity risk, remain with the company.

The risk management concept aligned with the benefit obligations (asset-liability matching) is regularly revised for the German direct commitments as well as the U.S. defined benefit pension plan. First, the actuarial obligations were analyzed and updated. On this basis, statistical methods are applied to this information to determine investment strategies that would ensure a suitable risk-return profile. The factors considered here are expected returns for the various asset classes and anticipated balance sheet volatility. A new investment strategy for German direct commitments was defined in fiscal 2019 and further implemented in the reporting year. The changes in the investment strategy were subsequently carried out by third-party asset managers. Environmental social governance (ESG) criteria were given consideration for around 50 % of the investment volume. In the year under review, the investment strategy for the U.S. defined benefit pension plan remained unchanged.

The other post-employment benefit obligations outside Germany are mainly related to retirees' health care benefit payments in the United States.

The fair value of the plan assets to fund pensions and other post-employment benefit obligations was as follows:

Fair value of plan assets as of December 31

	Pension obligations				Other post-employment obligations	
	Germany		Other countries		Other countries	
	2019	2020	2019	2020	2019	2020
	€ million	€ million	€ million	€ million	€ million	€ million
Plan assets based on quoted prices in active markets						
Real estate and special real estate funds	–	–	7	6	–	–
Equities and equity funds	526	556	57	52	–	–
Callable debt instruments	–	–	8	9	–	–
Noncallable debt instruments	725	782	74	72	–	–
Bond funds	408	415	245	233	–	–
Derivatives	2	1	–	–	–	–
Cash and cash equivalents	80	154	10	8	–	–
Other	–	–	10	9	–	–
	1,741	1,908	411	389	–	–
Plan assets for which quoted prices in active markets are not available						
Real estate and special real estate funds	120	145	–	–	–	–
Equities and equity funds	25	29	–	–	–	–
Callable debt instruments	238	199	–	–	–	–
Noncallable debt instruments	314	331	–	–	–	–
Bond funds	–	–	–	–	–	–
Derivatives	–	–	–	–	–	–
Cash and cash equivalents	–	–	–	–	–	–
Other	19	15	114	120	1	1
	716	719	114	120	1	1
Total plan assets	2,457	2,627	525	509	1	1

No properties leased by Group companies were included in the fair value of the domestic plan assets. Likewise there were no Covestro shares or bonds held through funds. The other plan assets comprise mortgage loans granted, other receivables and qualified insurance policies.

Risks

The risks from defined benefit plans arise partly from the defined benefit obligations and partly from the investment in plan assets. The risks lie in the possibility that higher direct pension payments will have to be made to the beneficiaries and/or that additional contributions will have to be made to plan assets in order to meet current and future pension obligations.

Demographic/biometric risks

Since a large proportion of the defined benefit obligations comprises lifelong pensions or surviving dependents' pensions, longer claim periods or earlier claims may result in higher benefit obligations, higher benefit expense and/or higher pension payments than previously anticipated.

Investment risks

If the actual return on plan assets were below the return anticipated on the basis of the discount rate, the net defined benefit liability would increase, assuming there were no changes in other parameters. This could happen as a result of a drop in share prices, increases in market rates of interest, default of individual debtors or the purchase of low-risk but low-interest bonds, for example.

Interest rate risks

Declining capital market interest rates, especially for high-quality corporate bonds, would increase the defined benefit obligation. This effect would be at least proportionately offset by the ensuing increase in the market values of the debt instruments held in plan assets.

Measurement parameters and their sensitivities

The bond portfolio consists exclusively of high-quality corporate bonds with a rating of at least AA or AAA. The portfolio does not include any government-guaranteed or secured bonds. The following weighted parameters were used to measure the pension obligations as of December 31 and the expense for pensions and other post-employment benefits in the respective reporting year.

Parameters for benefit obligations

	Germany		Other countries		Total	
	2019	2020	2019	2020	2019	2020
	%	%	%	%	%	%
Pension obligations						
Discount rate ¹	1.00	0.70	2.52	1.70	1.20	0.80
Projected future salary increases	2.75	2.75	3.08	2.95	2.80	2.75
Projected future benefit increases	1.70	1.60	3.25	2.72	1.90	1.75
Other post-employment benefit obligations						
Discount rate	–	–	3.10	2.30	3.10	2.30

¹ A third-party consulting firm began calculating the discount rate for pension obligations in the euro area using a standard methodology as of the first quarter of 2020. Adjusted for the change in calculation procedure, the discount rate would have amounted to 0.50 % for Germany as of December 31, 2020.

In Germany, the Heubeck 2018 G mortality tables were used, in the United States the MP-2020 Mortality Tables. The parameters for measuring the benefit expense are the same as those used to measure the benefit obligations in the most recent annual financial statements.

The parameter sensitivities were computed by expert actuaries based on a detailed evaluation similar to that performed to determine the net defined benefit liability. Altering individual parameters by 0.5 percentage points (mortality by 10% per beneficiary) while leaving the other parameters unchanged would have impacted pension and other post-employment benefit obligations as of the end of fiscal 2020 as follows:

Sensitivity analysis of benefit obligations

	Germany		Other countries		Total	
	Increase	Decrease	Increase	Decrease	Increase	Decrease
	€ million	€ million	€ million	€ million	€ million	€ million
Pension obligations						
0.5 percentage points change in discount rate	(457)	533	(36)	40	(493)	573
0.5 percentage points change in projected future salary increases	37	(34)	3	(3)	40	(37)
0.5 percentage points change in projected future benefit increases	269	(242)	3	(2)	272	(244)
10% change in mortality	(145)	164	(12)	13	(157)	177
Other post-employment benefit obligations						
0.5 percentage points change in discount rate	–	–	(9)	10	(9)	10
10% change in mortality	–	–	(4)	5	(4)	5

Sensitivity analysis of benefit obligations (previous year)

	Germany		Other countries		Total	
	Increase	Decrease	Increase	Decrease	Increase	Decrease
	€ million	€ million	€ million	€ million	€ million	€ million
Pension obligations						
0.5 percentage points change in discount rate	(423)	493	(36)	40	(459)	533
0.5 percentage points change in projected future salary increases	37	(34)	3	(3)	40	(37)
0.5 percentage points change in projected future benefit increases	251	(226)	3	(2)	254	(228)
10% change in mortality	(131)	148	(12)	13	(143)	161
Other post-employment benefit obligations						
0.5 percentage points change in discount rate	–	–	(9)	10	(9)	10
10% change in mortality	–	–	(4)	4	(4)	4

Provisions are also set up for the obligations, mainly of the U.S. subsidiary, to provide post-employment benefits in the form of health care cost payments to retirees. The valuation of health care costs was based on the assumption that they will increase at a rate of 7% (previous year: 7%), which should gradually decline to 5% (previous year: 5%) by 2032. The following table shows the impact on other post-employment benefit obligations and total benefit expense of a one percentage point change in the assumed cost increase rates:

Sensitivity analysis of health care cost increases

	2019		2020	
	Increase of one percentage point	Decrease of one percentage point	Increase of one percentage point	Decrease of one percentage point
	€ million	€ million	€ million	€ million
Impact on other post-employment benefit obligations	13	(11)	13	(10)

Employer contributions made or expected

The following payments or transfers correspond to the employer contributions made or expected to be made to funded benefit plans:

Employer contributions made or expected

	Germany				Other countries			
	2019	2020 expected	2020	2021 expected	2019	2020 expected	2020	2021 expected
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Pension obligations	17	41	43	38	9	12	8	7
Other post-employment benefit obligations	–	–	–	–	–	–	2	–
Total	17	41	43	38	9	12	10	7

Pensions and other post-employment benefits payable in the future from funded and unfunded plans are estimated as follows:

Future benefit payments

	Payments out of plan assets				Payments by the Company			
	Pensions		Other post-employment benefits	Total	Pensions		Other post-employment benefits	Total
	Germany	Other countries	Other countries		Germany	Other countries	Other countries	
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
2021	33	32	–	65	38	6	6	50
2022	36	34	–	70	37	5	6	48
2023	39	32	–	71	40	6	6	52
2024	42	39	–	81	43	6	7	56
2025	45	34	–	79	46	8	7	61
2026–2030	276	198	1	475	268	43	37	348

The weighted average term of the pension obligations is 23.3 years (previous year: 22.8 years) in Germany and 12.4 years (previous year: 12.2 years) in other countries. The weighted average term of the obligations for other post-employment benefits in other countries is 12.8 years (previous year: 12.4 years).

23. Other Provisions

Changes in the various provision categories in fiscal 2020 were as follows:

Changes in other provisions

	Taxes	Environ- mental protection	Restruc- turing	Trade- related commit- ments	Litigations	Personnel commit- ments	Miscella- neous	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
December 31, 2019	9	48	18	14	2	310	32	433
Additions	5	1	47	14	5	208	45	325
Utilization	(10)	(2)	(39)	(15)	(2)	(221)	(28)	(317)
Reversal	(1)	(1)	(24)	(1)	(1)	(29)	(5)	(62)
Reclassifications	–	–	–	–	–	(1)	–	(1)
Interest cost	–	–	–	–	–	3	–	3
Exchange differences	–	(2)	1	–	–	(3)	(4)	(8)
December 31, 2020	3	44	3	12	4	267	40	373
thereof long-term	–	41	1	–	–	156	20	218

Taxes

Provisions for taxes comprise provisions for other types of taxes amounting to €3 million (previous year: €9 million).

Environmental protection

Provisions for environmental protection mainly relate to the rehabilitation of contaminated land and recultivation of landfills as well as water protection measures at sites in the United States and Spain.

Restructuring

As of December 31, 2020, provisions for restructuring included €2 million (previous year: €17 million) for severance payments. The utilizations related primarily to the completion of the "Perspective" efficiency program, which aimed to improve the cost structures in the medium term and expired at the end of the reporting year.

Personnel commitments

Personnel-related provisions are mainly those recorded for variable one-time, short-term and long-term incentive payments and other personnel-related provisions.

Long-term incentive programs

The long-term incentive programs of the Covestro Group entail commitments offered collectively to different groups of employees. In principle, all obligations from long-term compensation programs are covered by provisions. As of the reporting date, their amount corresponds to the fair value of the entitlement earned of the respective commitments to the employee groups. All resulting valuation adjustments are recognized in profit or loss.

Senior executives and other managerial employees at Covestro are entitled to participate in the stock-based compensation program Prisma. A percentage of the employee's annual base salary – based on his/her position – is defined as a target for variable payments (Prisma target opportunity). The payout is calculated by multiplying the Prisma target opportunity by the total shareholder return (total of Covestro's closing share price* and all of the dividends distributed in the respective performance period divided by the opening share price) and the performance of Covestro stock relative to the STOXX Europe 600 Chemicals benchmark index. The payout is capped at 200% of the Prisma target opportunity. If Covestro's shares were to significantly underperform the STOXX Europe 600 Chemicals index (e.g., if the price of the stock went down while the index increased in value), Prisma target attainment could amount to zero, in which case there would be no payout. The target achievement for the first tranche 2016–2019 amounted to 179.1% and was distributed in the amount of €39 million in January 2020.

* Calculated as the average price for the last 30 days of trading in the relevant performance period

The net expense for all long-term incentive programs amounted to €23 million (previous year: €16 million), of which €3 million (previous year: €5 million) was attributable to the stock participation program Covestment, explained in greater detail in the following section.

The fair value for the stock-based incentive program Prisma recognized in the provision amounted to €35 million as of December 31, 2020 (previous year: €53 million). The fair value was calculated using the Monte Carlo simulation method on the basis of the following key parameters pertaining to the reporting date:

Monte Carlo simulation parameters

	Tranche		
	2018	2019	2020
Risk-free interest rate	-0.57%	-0.56%	-0.55%
Stock price volatility	+42.86%	+38.55%	+37.07%
STOXX Europe 600 Chemicals volatility	+28.64%	+23.52%	+21.20%
Correlation between stock price and STOXX Europe 600 Chemicals	0.79	0.77	0.75

Stock participation program (Covestment)

Under the Covestment program, employees of numerous Group companies could invest a fixed amount of their compensation in Covestro shares in fiscal 2020, which Covestro supplemented through an employer subsidy. The discount granted for fiscal 2020 was generally 20%–30% of the subscription amount and is set every year. The total individual investment amount was capped at €3,600, depending on the Group company and the employee's position. Overall, around 98% of Covestro's global workforce was authorized to participate in Covestment.

Around 239,000 shares were purchased by employees at a weighted average share price of €40.87 under the Covestment program in fiscal 2020. Depending on the Group company, the purchased shares are subject to a vesting period of at least one year from the subscription date.

24. Financing and Financial Liabilities

The €5.0 billion Debt Issuance Program launched in the first quarter of 2016 is a key form of external financing. In fiscal 2016, Covestro placed euro bonds totaling €1.5 billion, of which two fixed-rate tranches with terms until October 2021 (a coupon of 1.00% and a volume of €500 million) and September 2024 (a coupon of 1.75% and a volume of €500 million) remain in the portfolio. An additional €1.0 billion in euro bonds was placed on June 5, 2020. The fixed-rate bonds have terms expiring in February 2026 (a coupon of 0.875% and a volume of €500 million) and June 2030 (a coupon of 1.375% and a volume of €500 million). The proceeds of the bond placement serve to further reinforce Covestro's liquidity in view of the economic effects of the coronavirus pandemic and to provide funds to repay the existing bond maturing in fiscal 2021.

Effective March 17, 2020, Covestro obtained a new syndicated revolving credit facility totaling €2.5 billion with a term of five years, including two options for extending the term by one year in each case. An important new feature of the credit line is its link to an ESG (environment, social, governance) rating: The better (worse) the externally calculated ESG score is, the lower (higher) the interest component of the credit facility. The new facility replaced the existing revolving credit line of €1.5 billion and, like it, functions as a backup liquidity reserve. On September 30, 2020, Covestro AG arranged another syndicated credit facility in the original amount of €1.7 billion. This second credit facility was reduced on October 26, 2020, and stood at €1.2 billion as of December 31, 2020. This credit facility was used for bridge financing of the purchase price of the announced acquisition of the Resins & Functional Materials (RFM) business from Koninklijke DSM N.V., Heerlen (Netherlands), and was terminated as of January 29, 2021, thanks to Covestro's strong liquidity position.

Furthermore, Covestro AG obtained a €225 million loan for research and development from the European Investment Bank (EIB) in March 2020. The focus here is, in particular, on sustainability and the circular economy in the European Union. The term of the EIB loan runs until September 30, 2025.

As of December 31, 2020, the Group had total credit facilities of €3,969 million (previous year: €1,510 million) at its disposal. Of this amount, €227 million (previous year: €10 million) was drawn down while €3,742 million (previous year: €1,500 million) remained unused.

Financial liabilities were comprised as follows:

Financial liabilities

	Dec. 31, 2019		Dec. 31, 2020	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Bonds	997	–	1,990	500
Liabilities to banks	10	10	227	2
Lease liabilities	735	131	672	111
Liabilities from derivatives	10	10	9	9
Other financial liabilities	–	–	1	–
Total	1,752	151	2,899	622

Maturities of financial liabilities

Dec. 31, 2019		Dec. 31, 2020	
Maturity	€ million	Maturity	€ million
2020	151	2021	622
2021	608	2022	115
2022	96	2023	90
2023	83	2024	554
2024	545	2025	268
2025 or later	269	2026 or later	1,250
Total	1,752	Total	2,899

The financial liabilities of the Covestro Group are mainly unsecured.

Lease liabilities

Lease payments of €782 million (previous year: €876 million) are to be made to the respective lessors in future years; of this amount, the interest component amounts to €110 million (previous year: €141 million). The lease liabilities mature as follows:

Lease liabilities

Dec. 31, 2019				Dec. 31, 2020			
Maturity	Lease payments	Interest component	Lease liabilities	Maturity	Lease payments	Interest component	Lease liabilities
	€ million	€ million	€ million		€ million	€ million	€ million
2020	155	24	131	2021	131	20	111
2021	131	22	109	2022	132	17	115
2022	112	16	96	2023	104	14	90
2023	96	13	83	2024	67	11	56
2024	56	9	47	2025	51	8	43
2025 or later	326	57	269	2026 or later	297	40	257
Total	876	141	735	Total	782	110	672

See note 26.2 "Financial risk management and information on derivatives" for further information on the accounting for liabilities from derivatives.

25. Other Liabilities

Other liabilities were comprised as follows:

Other liabilities

	Dec. 31, 2019		Dec. 31, 2020	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Other tax liabilities	83	83	63	63
Deferred income	1	1	13	13
Grants and subsidies received from governments	11	4	11	2
Liabilities to employees	34	30	25	21
Liabilities for social expenses	11	11	11	11
Accrued interest on liabilities	5	5	12	12
Contract liabilities	18	18	22	22
Refund liabilities ¹	106	106	87	87
Miscellaneous liabilities	30	9	49	31
Total	299	267	293	262

¹ Reference information was restated accordingly. See note 4.1 "Change in presentation of rebates granted to customers."

The miscellaneous liabilities included €3 million (previous year:€3 million) in liabilities from derivatives.

 See note 8 "Sales" for further information on contract liabilities.

26. Financial Instruments

26.1 Financial instruments by category

The following tables show the carrying amounts and fair values of the individual financial assets and liabilities based on IFRS 9 (Financial Instruments):

Carrying amounts of financial instruments and their fair values as of December 31, 2020

	Measurement according to IFRS 9				Measurment according to IFRS 16	Fair value
	Carrying amount	Carried at amortized cost	Fair value through other comprehensive income	Fair value recognized in profit or loss		
	€ million	€ million	€ million	€ million		€ million
Financial assets						
Trade accounts receivable	1,593	1,593	–	–		1,593
Other financial assets	1,176					
Money market funds	771	–	–	771		771
Loans and bank deposits	365	360	–	5		365
Other investments	14		14	–		14
Receivables under lease agreements	8				8	21
Derivatives that do not qualify for hedge accounting	18			18		18
Other receivables ¹	31	25	–	6		31
Cash and cash equivalents	1,404	1,404	–	–		1,404
Financial liabilities						
Financial debt	2,899					
Bonds	1,990	1,990		–		2,107
Lease liabilities	672				672	
Liabilities to banks	227	227		–		234
Other financial liabilities	1	1		–		1
Derivatives that do not qualify for hedge accounting	9			9		9
Trade accounts payable ³	1,241	1,241		–		1,241
Other liabilities ²	150					
Derivatives that do not qualify for hedge accounting	3			3		3
Refund liabilities ³	87	87		–		87
Miscellaneous other liabilities	60	60		–		60

¹ The other receivables recognized in the consolidated statement of financial position also include nonfinancial assets totaling €329 million.

² The other liabilities recognized in the consolidated statement of financial position also include nonfinancial liabilities totaling €143 million.

³ Reference information was restated accordingly, see note 4.1 "Change in presentation of rebates granted to customers."

Carrying amounts of financial instruments and their fair values as of December 31, 2019

	Measurement according to IFRS 9				Measurement according to IFRS 16	Fair value
	Carrying amount	Carried at amortized cost	Fair value			
			through other comprehensive income	Fair value recognized in profit or loss		
	€ million	€ million	€ million	€ million		€ million
Financial assets						
Trade accounts receivable	1,561	1,561	–	–		1,561
Other financial assets	59					
Money market funds		–	–	–		–
Loans and bank deposits	16	16	–	–		16
Other investments	13		13	–		13
Receivables under lease agreements	8				8	19
Derivatives that do not qualify for hedge accounting	22			22		22
Other receivables ¹	41	32	–	9		41
Cash and cash equivalents	748	748	–	–		748
Financial liabilities						
Financial debt	1,752					
Bonds	997	997		–		1,045
Lease liabilities	735				735	
Liabilities to banks	10	10		–		10
Other financial liabilities	–	–		–		–
Derivatives that do not qualify for hedge accounting	10			10		10
Trade accounts payable ³	1,431	1,431		–		1,431
Other liabilities ²	140					
Derivatives that do not qualify for hedge accounting	3			3		3
Refund liabilities ³	106	106		–		106
Miscellaneous other liabilities	31	31		–		31

¹ The other receivables recognized in the consolidated statement of financial position also include nonfinancial assets totaling €370 million.

² The other liabilities recognized in the consolidated statement of financial position also include nonfinancial liabilities totaling €159 million.

³ Reference information was restated accordingly, see note 4.1 "Change in presentation of rebates granted to customers."

The fair values of financial instruments are determined and reported in accordance with IFRS 13 (Fair Value Measurement) on the basis of the fair value hierarchy described below:

Level 1 covers fair values determined on the basis of unadjusted prices which exist in active markets.

Level 2 comprises fair values determined on the basis of parameters which are observable in an active market.

Level 3 applies to fair values determined using parameters whose input factors are not based on observable market data.

The following table shows the assignment of the financial instruments to the three-level fair value hierarchy:

Fair value hierarchy of financial instruments

	Fair value				Fair value			
	Dec. 31, 2019	Level 1	Level 2	Level 3	Dec. 31, 2020	Level 1	Level 2	Level 3
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Financial assets carried at fair value								
Money market funds	–	–	–	–	771	–	771	–
Loans and bank deposits	–	–	–	–	5	–	–	5
Other investments	13	5	–	8	14	5	–	9
Derivatives that do not qualify for hedge accounting	22	–	15	7	18	–	13	5
Other receivables	9	–	–	9	6	–	–	6
Financial assets not carried at fair value								
Receivables under lease agreements	19	–	–	19	21	–	–	21
Financial liabilities carried at fair value								
Derivatives that do not qualify for hedge accounting	13	–	10	3	12	–	9	3
Financial liabilities not carried at fair value								
Bonds	1,045	1,045	–	–	2,107	2,107	–	–
Liabilities to banks	10	–	10	–	234	–	234	–
Other financial liabilities	–	–	–	–	1	–	1	–

Reallocation between the different levels of the fair value hierarchy takes place at the end of the reporting period in which the change occurred. During the fiscal year, no transfers were made between the levels of the fair value hierarchy.

Because of the generally short maturities of cash and cash equivalents, loans and bank deposits, trade accounts receivable and payable, and other receivables and liabilities, their carrying amounts do not significantly differ from the fair values.

The fair value of the bonds issued by Covestro AG is based on quoted, unadjusted prices in active markets and therefore assigned to Level 1 of the fair value hierarchy. The fair value of some of the other investments is also based on quoted prices in active markets (Level 1).

The fair values stated for noncurrent financial assets and liabilities are the present values of the respective future cash inflows or outflows. These are determined by discounting the cash flows at a reporting-date interest rate that takes into account the term of the assets or liabilities and the creditworthiness of the counterparty. For this reason, these values are assigned to Level 2 of the fair value hierarchy.

The fair values of money market funds correspond to the quoted prices of the funds in accordance with Article 29 in conjunction with Article 33 of EU Regulation 2017/1131 on money market funds (Level 2).

The fair values of derivatives for which no publicly quoted market prices exist are determined using valuation techniques based on observable market data as of the reporting date (Level 2). Credit value adjustments and debt value adjustments are determined to allow for both the contracting party's credit risk and Covestro's own credit risk. The currency forward contracts are measured individually at their forward rates or forward prices as of the reporting date. These depend on spot rates or prices including time spreads.

Fair values measured using unobservable inputs are categorized within Level 3 of the fair value hierarchy. The fair values of noncurrent receivables under lease agreements are calculated on the basis of interest curves observable in the market. Additionally, a discount for cash flows that are very far in the future is applied as an unobservable factor.

Covestro works with and invests in start-ups under the auspices of the Covestro Venture Capital (COVeC) approach, which was newly developed in fiscal 2020. Debt instruments associated with COVeC activities are recognized at fair value through profit and loss. The fair value is calculated as the present value of the future cash flows estimated based on available performance indicators. The cash flows are discounted at a current interest rate for the appropriate term on the reporting date and reflecting the creditworthiness of the venture capital company. The main input factors are not based on observable market data (Level 3). The estimated fair value of the debt instruments classified in Level 3 would rise (fall) if the expected cash inflows were to be higher (lower) or if the risk-adjusted discount rate were to be lower (higher).

Other financial investments are recognized at fair value directly in equity because they are held for the long term for strategic reasons. The fair value of some of the other investments is based on quoted prices in active markets (Level 1). Where there are no quoted, unadjusted prices in an active market for identical or similar instruments, and there is no suitable valuation method where all major input factors are based on observable market data, the fair value of the other investments is determined using a market price-oriented valuation method where the main input factors are not based on observable market data (Level 3). The valuation of certain other investments is based on available performance indicators as well as on market valuation multipliers. The estimated fair value of the equity instruments categorized within Level 3 would rise (fall) if the multiple applied were to be greater (smaller).

Further, the fair values of embedded derivatives are determined on the basis of unobservable input factors (Level 3). They are separated from their respective host contracts, which are purchase agreements relating to the operational business. The embedded derivatives cause the cash flows from the contracts to vary with fluctuations in exchange rates, or regional and industry-specific price indices, for example. The internal measurement of embedded derivatives is mainly performed using the discounted cash flow method, which is based on unobservable inputs. These include prices or price indices derived from market data. The estimated fair value of the embedded derivative would rise (fall) if the expected payment flows were to be higher (lower) as a result of fluctuations in exchange rates or prices.

Other receivables include a contingent purchase price receivable from divestments. The fair value of the receivable is measured as the present value of the future cash inflows. The basis is the expected EBITDA of the business unit sold for fiscal 2021. The cash flows are discounted at the current interest rate for the appropriate term on the reporting date and reflecting the creditworthiness of the buyer. The contingent purchase price receivable is assigned to Level 3 of the fair value hierarchy. The estimated fair value would rise (fall) if the expected cash inflows were to be higher (lower) or if the risk-adjusted discount rate were to be lower (higher).

The table below shows the reconciliation of Level 3 financial instruments:

**Changes in the net amount of financial assets and liabilities
recognized at fair value based on unobservable inputs**

	2019	2020
	€ million	€ million
Net carrying amounts, Jan. 1	9	21
Gains (losses) recognized in profit or loss	–	(5)
of which related to assets/liabilities recognized in the statement of financial position	–	(5)
Gains (losses) recognized outside profit or loss	–	1
Additions of assets (liabilities)	12	5
Net carrying amounts, Dec. 31	21	22

Gains and losses from embedded derivatives (Level 3) recognized in profit or loss are reported in other operating expenses or income.

Other financial investments amount to €14 million, of which €4 million is attributable to Hi-Bis GmbH, Bitterfeld-Wolfen, and €4 million to Hydrogenious LOHC Technologies GmbH, Erlangen. In fiscal 2020, the Covestro Group received dividends of €1 million (previous year: €2 million) from other financial investments, all of which was attributable to Hi-Bis GmbH.

The following table shows income, expenses, gains and losses from financial instruments assigned to the measurement categories in accordance with IFRS 9:

Net result by measurement category in accordance with IFRS 9

	2019	2020
	€ million	€ million
Financial assets at amortized cost	(1)	(56)
of which net interest	4	1
Financial instruments measured at fair value through other comprehensive income	2	1
of which net interest	–	–
Financial instruments measured at fair value through profit or loss	–	23
of which net interest	(4)	(3)
Liabilities carried at amortized cost	(45)	(20)
of which net interest	(46)	(46)

26.2 Financial risk management and information on derivatives

Capital management

The main purpose of financial management is to ensure solvency at all times, continuously optimize capital costs and reduce the risks of financing measures. Financial management for the Covestro Group is performed centrally by Covestro AG.

Covestro AG currently holds a Baa2 investment-grade rating with a negative outlook from the rating agency Moody's Investors Service, London (United Kingdom). Covestro uses the debt ratios published by prominent rating agencies in managing its capital and pursues a conservative debt policy along with a balanced financing portfolio. This is based for the most part on bonds, syndicated credit facilities, and bilateral loan agreements.

Credit risk

Credit risk is the risk of a loss for the Covestro Group when a counterparty is unable to meet its payment obligations arising from a financial instrument as contractually stipulated. The payment obligations to the Covestro Group primarily comprise trade accounts receivable, debt instruments, other financial assets and contract assets.

The carrying amount of the financial assets and the contract assets represents the maximum credit risk exposure.

The impairment loss for financial assets and contract assets recognized during the year resulted almost exclusively from impairment losses on trade accounts receivable. The net impairment loss amounted to €3 million (previous year: €0 million) in the reporting year.

Trade accounts receivable and contract assets

The credit risk the Covestro Group is exposed to through its trade accounts receivable and contract assets depends largely on the creditworthiness of the customer. In order to manage this risk, the Covestro Group's Credit Management implemented a process that uses internal and external data to assess each customer in terms of its creditworthiness. Quantitative and qualitative data are evaluated during the assessment process. The assessment reflects financial data, ratings, payment history and data on the customer's environment. The customer is allocated to one of five risk categories on the basis of the final assessment. The categories range from A to E, with risk category A representing the most creditworthy companies and risk category E the least.

Meaningful data is used to determine an expected loss rate for each risk category. Data such as default probabilities from rating agencies and credit insurance firms, historical impairment losses recognized by the Covestro Group and the empirical data from Credit Management are used to determine the expected loss rates. In addition, forward-looking information such as the country rating is also used in determining the expected loss rates. The coronavirus pandemic heightened industry risk (equivalent to the default risk relating to the companies in a particular industry), because demand, and subsequently sales revenues, in certain industries declined sharply. To appropriately reflect the increased default risk when measuring trade accounts receivable, the industry rating was additionally considered as other forward-looking information. Every year the expected and actual losses are compared (backtesting).

The following table presents the gross carrying amounts and the expected losses for trade receivables and contract assets:

Expected credit loss by category as of December 31

	Cluster					
2020	A	B	C	D	E	Total
Expected loss rate (%)	0.03	0.14	0.51	1.79	9.37	
Gross amount (€ million)	337	535	582	175	18	1,647
Expected loss (€ million)	–	(1)	(5)	(3)	(2)	(11)
2019	A	B	C	D	E	Total
Expected loss rate (%)	0.03	0.14	0.51	1.79	9.37	
Gross amount (€ million)	350	543	547	155	16	1,611
Expected loss (€ million)	–	(1)	(3)	(4)	(1)	(9)

The accumulated impairment losses amounted to €24 million (previous year: €28 million) for those customers that the Covestro Group considers credit impaired on the basis of this assessment. The corresponding gross carrying amount amounted to €24 million (previous year: €29 million). Indicators that trade accounts receivable and contract assets are at risk of credit impairment include significant financial difficulties of the customer and a breach of contract such as default or delinquency. Determining that a customer is credit impaired does not occur automatically when payments are overdue for more than 90 days, but is instead always based on the individual assessment conducted by Credit Management.

Total impairment losses for trade accounts receivable and contract assets changed as follows:

Reconciliation expected credit loss

	2019	2020
	€ million	€ million
Valuation allowances, Jan. 1	(42)	(36)
Net remeasurement impairment loss	–	(3)
Write offs	6	3
Foreign exchange differences	–	1
Valuation allowances, Dec. 31	(36)	(35)

The Covestro Group limits the credit risk exposure from trade accounts receivable by stipulating the shortest payment terms possible. In addition, the Covestro Group has a widely diversified customer portfolio. In order to avoid concentration of risk, customer limits are set, regularly monitored and exceeded only in agreement with Credit Management.

Receivables of €27 million (previous year: €27 million) are secured mainly by letters of credit.

Debt instruments

The Covestro Group pursues a conservative investment policy based on a strategy of maintaining liquidity and safeguarding value. Consequently, the investments are limited to counterparties with investment grade ratings, simple debt instruments and short-term investment horizons. Credit risks, particularly concentration of risk with individual counterparties, are managed by means of a Group-wide limit system in conjunction with ongoing monitoring.

The general approach for calculating and recording impairment losses in accordance with IFRS 9 applies to all debt instruments, loan commitments and financial guarantees recognized at amortized cost or at their fair values directly in equity. Covestro uses a general, three-stage approach for measuring the risk provision for expected credit losses as follows:

- Stage 1: The risk provision is calculated as the 12-month expected credit loss, whereby the default probability is derived from historical data published by prominent rating agencies. The Covestro Group assumes that investment grade ratings imply a low level of credit risk.
- Stage 2: The amount of the risk provision is the expected credit loss over the lifetime of the debt instrument if the credit risk has increased significantly since its initial recognition. Changes in credit risk are assessed using the actual payment history and external information. Whenever available, Covestro uses credit default swap prices and other forward-looking information such as ratings outlooks in addition to external ratings.
- Stage 3: If Covestro determines that the collectability of a debt instrument has deteriorated, it is reclassified to stage 3. This is the case, for instance, when a counterparty has obtained insolvency status; when there is sufficient information available to show that the counterparty has applied for insolvency proceedings; or when debt instruments are more than 90 days overdue.

No reclassification between the stages of the general impairment approach took place either in the reporting period or in the reference period, and the Covestro Group holds no collateral to secure its debt instruments.

Because of the low credit risk profile, the Covestro Group is not exposed to significant credit risk from debt instruments. For fiscal 2020 and for the previous year, the risk provision calculated using the general approach is immaterial both overall and for the individual stages.

Currency risks

Currency opportunities and risks for the Covestro Group result from changes in exchange rates and the related changes in the value of financial instruments (including receivables and payables) and of anticipated payment receipts and disbursements in foreign currencies. Material receivables and payables in liquid currencies from operating and financial activities are generally fully hedged through forward exchange contracts. A value-at-risk approach is used to manage foreign currency exposures arising from planned receivables and liabilities. As in the previous year, the planned foreign currency exposure was not hedged. They will be hedged using forward contracts if the foreign currency risk increases significantly. The extent of the currency risk is represented below by a sensitivity analysis.

The currency risk shown in the sensitivity analysis results from the following:

- The unsecured portion of receivables and payables in nonfunctional currencies
- Unsecured bank deposits and liabilities to banks in nonfunctional currencies
- Currency risks from embedded derivatives

Sensitivities were determined based on a hypothetical scenario in which the euro depreciates by 10% against all other currencies compared with the year-end exchange rates. Under this scenario, the estimated hypothetical gains recognized in profit or loss as of December 31, 2020, would have totaled €7.1 million (previous year: €7.7 million). The table below shows the distribution of these effects among the individual currencies:

Sensitivity by currency

2019		2020	
Currency	€ million	Currency	€ million
CNY	3.9	CNY	3.5
USD	2.7	USD	2.7
RUB	0.3	AUD	0.2
Other	0.8	Other	0.7
Total	7.7	Total	7.1

Liquidity risk

Liquidity risk is the risk of not being able to meet existing or future payment obligations. The liquidity status of all material Group companies is continuously planned and monitored. Liquidity is secured by cash pooling agreements as well as internal and external financing. The syndicated, revolving credit facility amounting to €2.5 billion and running until March 2025 offers additional financial flexibility.

The liquidity risks to which the Covestro Group was exposed from its financial instruments can be divided into obligations for interest and repayment installments on financial liabilities and payment obligations arising from derivatives. The following tables show the maturity structure of the nondiscounted contractually agreed payments arising from these line items:

Maturity analysis of financial liabilities and derivative financial instruments

	Carrying amount	Contractual cash flows					
	Dec. 31, 2020	2021	2022	2023	2024	2025	after 2025
	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Financial liabilities							
Bonds	1,990	523	20	20	520	11	1,039
Liabilities to banks	227	3	1	1	1	226	–
Lease liabilities	672	131	132	104	67	51	297
Other financial liabilities	1	–	–	–	–	–	1
Trade accounts payable ¹	1,241	1,241	–	–	–	–	–
Other liabilities							
Accrued interest on liabilities	12	12	–	–	–	–	–
Refund liabilities ¹	87	87	–	–	–	–	–
Miscellaneous other liabilities	48	32	2	2	–	–	12
Liabilities from derivatives							
Derivatives that do not qualify for hedge accounting	12	10	1	1	–	–	–
Receivables from derivatives							
Derivatives that do not qualify for hedge accounting	18	15	2	1	–	–	–
Loan commitments	–	219	–	–	–	–	–

	Carrying amount	Contractual cash flows					
	Dec. 31, 2019	2020	2021	2022	2023	2024	after 2024
	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Financial liabilities							
Bonds	997	14	514	9	9	509	–
Liabilities to banks	10	10	–	–	–	–	–
Lease liabilities	735	155	131	112	96	56	326
Other financial liabilities	–	–	–	–	–	–	–
Trade accounts payable ¹	1,431	1,431	–	–	–	–	–
Other liabilities							
Accrued interest on liabilities	5	5	–	–	–	–	–
Refund liabilities ¹	106	106	–	–	–	–	–
Miscellaneous other liabilities	26	10	2	1	1	–	12
Liabilities from derivatives							
Derivatives that do not qualify for hedge accounting	13	11	1	1	–	–	–
Receivables from derivatives							
Derivatives that do not qualify for hedge accounting	22	17	2	2	1	–	–
Loan commitments	–	208	–	–	–	–	–

¹ Reference information was restated accordingly, see note 4.1 "Change in presentation of rebates granted to customers".

In addition to the primary financial liabilities and derivative financial instruments, there was an obligation under certain conditions to make a loan totaling €219 million (previous year: €208 million) to the effective initial fund of Bayer-Pensionskasse VVaG, Leverkusen (Germany), and Rheinische Pensionskasse VVaG, Leverkusen (Germany), which may result in payments by Covestro AG in subsequent years. This is reflected in the loan commitments shown in the table above.

☐ See note 27 "Contingent liabilities and other financial commitments."

In this analysis, foreign currencies were translated at the closing rates. Derivative financial instruments are reported as net amounts.

Interest rate risks

Interest rate opportunities and risks for the Covestro Group result from changes in capital market interest rates, which could lead to changes in the fair value of fixed-rate financial instruments and in interest payments in the case of floating-rate instruments. To minimize adverse effects, interest rate risk is managed centrally based on an optimized debt maturity structure.

A sensitivity analysis based on our net floating-rate receivables and payables position at year-end 2020, taking into account the interest rates relevant for our receivables and payables in all principal currencies, produced the following result: A hypothetical increase in the interest rates by 100 basis points or one percentage point would (assuming currency exchange rates remain constant) result in an increase in interest expense of €4.8 million (previous year: €0.0 million).

Raw material price risks

The Covestro Group requires significant quantities of different forms of energy and petrochemical feedstocks for its production processes. Procurement prices for energy and raw materials may fluctuate significantly. Important raw materials are procured on the basis of long-term supply agreements and active supplier management to minimize substantial price fluctuations. In steam and electricity generation, we aim for market-based price indexing, a diversification of fuels and a mix of external procurement and captive production to minimize the price fluctuation risk for energies. During the past fiscal year, derivative financial instruments were not used to hedge raw material price risks.

Derivatives

As of the reporting date, the nominal volume of the forward exchange contracts used to hedge currency risk amounted to €1,722 million (previous year: €2,015 million). Other market risks are not hedged as of the reporting date.

Covestro has entered into master netting agreements or similar agreements for derivative financial instruments. These take effect in particular in the event of the insolvency of one of the contractual partners involved. The derivative financial instruments covered by netting agreements from the perspective of the Covestro Group are presented in the table below:

Disclosures for netting of financial assets and liabilities as of December 31

	Gross amounts of financial assets/ liabilities	Net amounts of financial assets/ liabilities presented in the balance sheet	Balance sheet amounts eligible for netting covered by netting agreements	Net amounts after possible netting
	€ million	€ million	€ million	€ million
2020				
Receivables from derivatives	13	13	2	11
Liabilities from derivatives	9	9	2	7
2019				
Receivables from derivatives	15	15	3	12
Liabilities from derivatives	10	10	3	7

27. Contingent Liabilities and Other Financial Commitments

Contingent liabilities

The following table presents warranty contracts as well as other contingent liabilities existing as of the reporting date:

Contingent liabilities

	Dec. 31, 2019	Dec. 31, 2020
	€ million	€ million
Warranties	2	3
Other contingent liabilities	3	3
Total	5	6

Other financial commitments

The other financial commitments were as follows:

Other financial commitments

	Dec. 31, 2019	Dec. 31, 2020
	€ million	€ million
Purchase agreement in regard to the acquisition of RFM from Koninklijke DSM N.V. ¹	–	1,629
Orders already placed for started or planned investment projects	340	236
Loan commitments to pension funds	208	219
Total	548	2,084

¹ For additional information, see note 7.2 "Acquisitions and divestitures."

Some of the pension obligations allocable to the Covestro Group are funded through pension institutions used jointly with other companies (especially Bayer AG). In such cases, it can generally be contractually ensured that Covestro participates accordingly in funding measures that serve to guarantee adequate funding status and/or adequate solvency capital of these pension institutions for the long term. To this end, Covestro AG agreed to grant interest-bearing loans of up to €208 million for Bayer-Pensionskasse VVaG, Leverkusen (Germany), and up to €11 million for Rheinische Pensionskasse VVaG, Leverkusen (Germany), for the effective initial fund to be drawn down as required.

28. Legal Risks

As a company with international operations, the Covestro Group is exposed to numerous legal risks, particularly in the areas of product liability, competition and antitrust law, patent disputes, tax law, environmental law, and compliance issues such as corruption and export control. The outcome of any current or future proceedings cannot be predicted. It is therefore possible that legal judgments or regulatory decisions or future settlements could give rise to expenses that are not covered, or not fully covered, by insurers' compensation payments and could significantly affect the earnings of the Covestro Group.

Legal proceedings currently considered to involve material risks are outlined below. The legal proceedings referred to do not necessarily represent an exhaustive list:

Carbon monoxide pipeline from Dormagen to Krefeld-Uerdingen

The carbon monoxide pipeline is intended to connect the chemical production sites at Dormagen and Krefeld-Uerdingen and complement the network already existing between Dormagen and Leverkusen. The aim is to ensure a safe and reliable supply of carbon monoxide to and across all sites. Although the pipeline was almost completed by the end of year 2009, it cannot currently be put into operation because of ongoing court proceedings. Following confirmation by the Düsseldorf Administrative Court in year 2011 that there were no grounds to challenge the material aspects of the planning permission decision, in particular the safety of the materials used and the legal conformity of the relevant pipeline act (Rohrleitungsgesetz), the plaintiffs and the regional government against which legal proceedings had been instituted lodged appeals before the Higher Administrative Court in Münster. In year 2014, the Münster Higher Administrative Court raised no objections in principle to the safety and routing of the pipeline, but questioned the constitutionality of the pipeline act which forms the legal basis for the project. On December 21, 2016, the German Federal Constitutional Court dismissed the corresponding constitutionality question referred to it by Münster Higher Administrative Court as inadmissible and confirmed the legal opinion of the Covestro Group. Subsequently, Münster Higher Administrative Court again considered the facts of the appeal and, in a decision handed down on August 31, 2020, dismissed the actions against the planning permission decision. The Higher Administrative Court did not permit an appeal against its decision. The plaintiffs can now file a complaint against the denial of leave to appeal with the Federal Administrative Court.

Civil class action lawsuits over diisocyanates (in the United States)

On July 9, 2018, Covestro LLC, Pittsburgh, Pennsylvania (United States) – as one of numerous other defendants – was served the first of now 12 class action lawsuits initiated by various U.S. Diphenylmethane Diisocyanate (MDI) and Toluene Diisocyanate (TDI) customers. The plaintiffs allege that the defendants have violated various provisions of the Sherman Antitrust Act since January 1, 2015, by acting in coordination to limit production capacities of MDI and TDI and, at the same time, raising prices for these products in the market. On October 3, 2018, the Judicial Panel on Multidistrict Litigation ruled that all class action lawsuits in pretrial proceedings would be centralized in the District Court for the Western District of Pennsylvania. Based in essence on the same assertions and the violations of federal consumer protection and antitrust laws allegedly resulting from them, the attorney general of the state of Mississippi filed a separate civil complaint against Covestro LLC and numerous other defendants on behalf of the state and its citizens in September 2019. In November 2020, the parties suspended these lawsuits without prejudice for a period of two years. Covestro currently considers these claims without merit and will therefore use all legal means to defend itself against these allegations – also in light of the official conclusion in November 2018 of the six-month investigation by the U.S. Department of Justice into possible anticompetitive practices in relation to MDI.

Other Information

29. Notes to the Statement of Cash Flows

29.1 Cash flows from operating activities

The net cash of €1,234 million (previous year: €1,383 million) provided by operating activities comprises the cash surplus from operating activities and reflects the changes in working capital and other noncash transactions.

The €149 million (–10.8%) year-over-year decrease in net cash provided by operating activities was chiefly the result of lower EBIT by €156 million. The outflows from working capital of €116 million (previous year: inflows of €77 million) were partially offset by lower income tax payments by €141 million.

29.2 Cash flows from investing activities

Net cash outflow for investing activities in fiscal 2020 amounted to €1,769 million (previous year: €838 million).

These mainly included cash outflows for additions to property, plant, equipment and intangible assets of €704 million (previous year: €910 million) and expenses for other current financial assets of €1,089 million (previous year: €1 million).

29.3 Cash flows from financing activities

The net cash inflow from financing activities amounted to €1,204 million in fiscal 2020 (previous year: net cash outflow from financing activities of €668 million). Net credit assumed amounted to €1,056 million (previous year: net credit repaid of €147 million). Short-term debt assumed and repaid was netted.

The issuance of 10,200,000 new, no-par value bearer shares resulted in net cash (after deduction of the costs of raising equity) of €444 million.

In August 2020, dividend totaling €219 million was paid to Covestro AG shareholders (previous year: €438 million).

The interest paid totaling €79 million (previous year: €86 million) reflected in cash flows from financing activities relates mainly to lease liabilities of €28 million (previous year: €33 million), forward exchange contracts used to hedge foreign currency risks of €27 million (previous year: €39 million), and bonds of €14 million (previous year: €14 million).

Reconciliation of financial debt in fiscal 2020

	Carrying amounts Dec. 31, 2019	Changes cash flows realized	Changes cash flows not realized				Carrying amounts Dec. 31, 2020
			Changes due to exchange rate movements	Changes in measurement	New contracts	Other changes	
	€ million	€ million	€ million	€ million	in Mio. €	€ million	€ million
Bonds	997	991	–	2		–	1,990
Liabilities to banks	10	218	(1)	–		–	227
Lease liabilities	735	(152)	(35)	–	127	(3)	672
Other financial liabilities	–	(1)	–	–		2	1
Financial debt¹	1,742	1,056	(36)	2	127	(1)	2,890

¹ Not including forward exchange contracts used to hedge currency risks

30. Related Companies and Persons

30.1 Related companies

Related entities as defined in IAS 24 (Related Party Disclosures) are those legal entities that are able to exert at least significant influence on Covestro AG and its subsidiaries or over which Covestro AG or its subsidiaries exercise control or have at least a significant influence. They include nonconsolidated subsidiaries, joint ventures, associated companies and post-employment benefit plans.

Receivables from and liabilities to related parties

	Dec. 31, 2019		Dec. 31, 2020	
	Receivables	Liabilities	Receivables	Liabilities
	€ million	€ million	€ million	€ million
Nonconsolidated subsidiaries and associates	–	5	3	8
Associates	3	–	6	–

Sales and purchases of goods and services to/from related parties

	2019		2020	
	Sales of goods and services	Purchases of goods and services	Sales of goods and services	Purchases of goods and services
	€ million	€ million	€ million	€ million
Nonconsolidated subsidiaries and associates	40	67	33	46
Associates	11	569	14	493

The goods and services provided by associated companies mainly result from the ongoing operating business with PO JV, LP, Delaware (United States). Covestro benefits from fixed long-term supply quotas/volumes of propylene oxide (PO) from this company's production.

 See note 17 "Investments accounted for using the equity method."

Receivables from and payables to related parties mainly comprise leasing and financing matters, trade in goods and services, and other transactions. No impairment losses were recorded on receivables from related parties either in the reporting period or in the reference period.

30.2 Related persons

Related persons as defined in IAS 24 are those natural persons who, on account of their function in the Covestro Group, are responsible for Covestro's global business operations. These persons include the corporate officers of Covestro AG, who are the members of the Board of Management and Supervisory Board.

Compensation of the corporate officers

The compensation for key management personnel in fiscal 2020 amounted to €9,163 thousand (previous year: €9,486 thousand), including the compensation of the Supervisory Board amounting to €1,679 thousand (previous year: €1,747 thousand).

This compensation is shown below:

Board members compensation according to IFRSs

	2019	2020
	€ thousand	€ thousand
Total short-term compensation	5,308	5,277
Total stock-based compensation (long-term incentive)	2,827	2,443
Service cost for pension entitlements earned in the respective year	1,351	1,443
Total (IFRSs)	9,486	9,163

Aggregate compensation of the members of the Board of Management (according to the German Commercial Code (HGB)) amounted to €6,947 thousand (previous year: €6,274 thousand).

 See "Compensation Report" in the Group Management Report.

Since 2016, the members of the Board of Management have been entitled to participate in the Prisma long-term stock-based compensation program, as long as they are employed by the Covestro Group, and acquire for their own account and hold an individually defined number of Covestro shares as specified by the guidelines. The fair value of the long-term stock-based compensation (Prisma) granted to the Board of Management in fiscal 2020 was €3,349 thousand (previous year: €2,724 thousand).

Provisions of €3,883 thousand (previous year: €5,103 thousand) were recognized for the short-term variable cash compensation and long-term stock-based cash compensation for the members of the Board of Management serving during the 2020 reporting period. At the end of the year, the present value of the defined benefit pension obligations for the current members of the Board of Management was €12,095 thousand (previous year: €9,818 thousand). Provisions of €1,015 thousand (previous year: €6,027 thousand) were recognized for long-term stock-based cash compensation for former members of the Board of Management. The present value of the defined benefit pension obligations for former members of the Board of Management was €8,270 thousand (previous year: €7,818 thousand).

The compensation of the Supervisory Board is exclusively non-performance-related. In addition to their compensation as members of the Supervisory Board, those employee representatives who are employees of Covestro Group companies receive compensation unrelated to their service on the Supervisory Board. The total amount of such compensation was €652 thousand (previous year: €883 thousand). Pension obligations for employee representatives on the Supervisory Board amounted to €3,798 thousand (previous year: €3,346 thousand).

There were no advances or loans to members of the Board of Management or the Supervisory Board outstanding in fiscal 2020 or the previous year.

31. Auditor's Fees

Since fiscal 2018 KPMG AG Wirtschaftsprüfungsgesellschaft, Düsseldorf, (KPMG AG) has been the elected statutory auditor of Covestro AG and Covestro Group. Dr. Markus Zeimes is the auditor responsible for carrying out the audit. Dr. Markus Zeimes and Oliver Geier first signed the Independent Auditor's Report as of December 31, 2018. The following fees were recognized as expenses for the services provided by KPMG AG:

Auditor's fees

	2019	2020
	€ million	€ million
Audit services	2.1	2.3
Other attestation services	0.2	0.2
Tax services	0.2	0.1
Other services	–	0.1
Total	2.5	2.7

The fees for audit services for fiscal 2020 mainly comprise those for the statutory audit of the consolidated financial statements of the Covestro Group, the review of the Covestro Group's interim report for the period ended June 30, 2020, and the audit of the financial statements of Covestro AG and its subsidiaries in Germany.

The fees for other attestation services in fiscal 2020 particularly contain the assurance of sustainability information and special audits concerning energy-related topics. Tax services include mainly consultancy services for the preparation of tax reports and matters related to VAT. Other services essentially comprise fees for IT security audits.

32. Events after the End of the Reporting Period

The syndicated credit facility arranged by Covestro AG on September 30, 2020, which originally served as bridge financing for the purchase price of the announced acquisition of the Resins & Functional Materials (RFM) business of Koninklijke DSM N.V., Heerlen (Netherlands), and amounted to €1.2 billion as of December 31, 2020, was terminated as of January 29, 2021, due to Covestro's strong liquidity situation.

 See note 24 "Financing and financial liabilities."

Leverkusen, February 17, 2021
Covestro AG
The Board of Management