SARTORIUS

Consolidated Financial Statements and Notes

03

Statement of Profit or Loss | Other Comprehensive Income

€ in K	Notes	**2020**	2019
Sales revenue	[9]	2,335,657	1,826,966
Cost of sales	[10]	–1,129,855	–885,867
Gross profit on sales		**1,205,802**	**941,099**
Selling and distribution expenses	[10]	–438,723	–369,751
Research and development expenses	[10]	–108,425	–95,591
General administrative expenses	[10]	–125,940	–107,206
Other operating income and expenses	[11]	–76,607	–33,071
Earnings before interest and taxes (EBIT)		**456,106**	**335,480**
Financial income	[12]	57,697	9,398
Financial expenses	[12]	–67,120	–41,888
Financial result		**–9,424**	**–32,490**
Profit before tax		**446,682**	**302,989**
Income taxes	[13]	–125,210	–84,392
Net profit for the period		**321,472**	**218,597**
Attributable to:			
Equity holders of Sartorius AG		226,274	156,692
Non-controlling interest		95,198	61,905
Earnings per share	**[14]**		
Earnings per ordinary share (€) (basic)		3.30	2.29
Earnings per ordinary share (€) (diluted)		3.30	2.29
Earnings per preference share (€) (basic)		3.31	2.30
Earnings per preference share (€) (diluted)		3.31	2.30

The figures for the reporting period 2019 have been restated due to the finalization of the purchase price allocation for the acquisition of Biological Industries (see note 8).

The Notes to the Consolidated Financial Statements are an integral part of these statements.

Statement of Comprehensive Income

€ in K	**2020**	2019
Net profit for the period	**321,472**	**218,597**
Cash flow hedges	12,179	−3,521
Of which effective portion of the changes in fair value	3,707	−5,989
Of which reclassified to profit or loss	8,472	2,468
Income tax on cash flow hedges	−3,654	1,056
Net investment in a foreign operation	−46,389	7,441
Income tax on net investment in a foreign operation	12,404	−1,998
Currency translation differences	−79,848	10,577
Items that may be reclassified to profit or loss, net of tax	**−105,308**	**13,555**
Remeasurements of the net defined benefit liability	−4,942	−11,626
Income tax on remeasurements of the net defined benefit liability	97	3,328
Items that will not be reclassified to profit or loss, net of tax	**−4,845**	**−8,298**
Other comprehensive income after tax	**−110,153**	**5,257**
Total comprehensive income	**211,319**	**223,854**
Attributable to:		
Equity holders of Sartorius AG	124,826	161,156
Non-controlling interest	86,493	62,698

The figures for the reporting period 2019 have been restated due to the finalization of the purchase price allocation for the acquisition of Biological Industries (see note 8).

Statement of Financial Position

€ in K	Notes	**Dec. 31, 2020**	Dec. 31, 2019
Non-current assets			
Goodwill	[15]	1,381,386	695,772
Other intangible assets	[15]	1,053,477	431,569
Property, plant and equipment	[16][17]	971,227	832,942
Financial assets	[34]	34,120	30,008
Other assets		1,532	1,482
Deferred tax assets	[18]	45,022	25,767
		3,486,763	**2,017,541**
Current assets			
Inventories	[19]	558,556	412,676
Trade receivables	[28]	314,260	302,715
Other financial assets	[29]	40,334	21,643
Current tax assets		15,243	16,400
Other assets		78,757	43,130
Cash and cash equivalents	[27]	203,435	54,441
		1,210,584	**851,006**
		4,697,347	**2,868,547**

€ in K	Notes	**Dec. 31, 2020**	Dec. 31, 2019
Equity			
Equity attributable to Sartorius AG shareholders		**1,047,619**	**810,350**
Issued capital	[20]	68,416	68,388
Capital reserves	[21]	41,987	40,691
Other reserves and retained earnings	[21]	937,216	701,271
Non-controlling interest	**[22]**	**354,593**	**282,826**
		1,402,212	**1,093,176**
Non-current liabilities			
Pension provisions	[23]	80,368	76,552
Other provisions	[24]	11,868	8,437
Loans and borrowings	[30]	1,826,337	822,157
Lease liabilities	[17][30]	65,374	58,792
Other financial liabilities	[31]	306,360	56,134
Deferred tax liabilities	[18]	133,885	90,688
		2,424,192	**1,112,759**
Current liabilities			
Provisions	[24]	29,504	15,422
Trade payables	[32]	330,742	225,155
Loans and borrowings	[30]	175,438	168,937
Lease liabilities	[17][30]	19,895	18,573
Employee benefits		96,268	68,133
Other financial liabilities	[33]	48,706	51,678
Current tax liabilities		87,708	57,463
Other liabilities	[25]	82,682	57,249
		870,943	**662,611**
		4,697,347	**2,868,547**

The figures for the reporting period 2019 have been restated due to the finalization of the purchase price allocation for the acquisition of Biological Industries (see note 8).

Statement of Cash Flows

€ in K	Notes	**2020**	2019
Profit before tax		446,682	302,989
Financial result	[12]	9,424	32,490
Depreciation | amortization of intangible and tangible assets	[15][16][17]	180,593	132,720
Gains | losses on disposal of fixed assets		137	-1,033
Change in provisions	[23][24]	3,906	-1,607
Change in receivables	[28][29]	-59,260	18,173
Change in inventories	[19]	-114,755	-77,108
Change in liabilities	[25][31][32][33]	162,720	38,208
Income taxes paid	[13]	-120,052	-69,318
Other non-cash transactions		2,130	1,672
Cash flow from operating activities		**511,525**	**377,186**
Capital expenditures	[15][16]	-240,254	-225,568
Proceeds from the disposal of fixed assets		0	2,783
Other payments		-8,133	-4,433
Cash flow from investing activities before acquisitions		**-248,387**	**-227,218**
Acquisitions of subsidiaries and other business operations	[8]	-1,022,150	-41,466
Cash flow from investing activities		**-1,270,537**	**-268,684**
Interest received	[12]	6,963	2,349
Interest paid and other financial charges	[12]	-25,032	-27,452
Dividends paid to:			
- Shareholders of Sartorius AG		-24,278	-42,059
- Non-controlling interest		-8,860	-14,861
Changes in non-controlling interest	[8][22]	-30,473	-6,941
Loans and borrowings raised	[6][30]	1,186,040	173,202
Loans and borrowings repaid	[6][30]	-196,892	-185,785
Cash flow from financing activities		**907,467**	**-101,547**
Change in cash and cash equivalents		**148,455**	**6,955**
Cash and cash equivalents at the beginning of the period		54,441	45,164
Changes in scope of consolidation		0	2,479
Net effect of currency translation on cash and cash equivalents		539	-157
Cash and cash equivalents at the end of the period	**[27]**	**203,435**	**54,441**

The figures for the reporting period 2019 have been restated due to the finalization of the purchase price allocation for the acquisition of Biological Industries (see note 8).

Statement of Changes in Equity

€ in K	Issued capital	Capital reserves	Cash flow hedging reserves
Balance at Jan. 1, 2019	**68,388**	**40,161**	**3,337**
Net profit for the period	0	0	0
Cash flow hedges	0	0	–2,708
Remeasurements of the net defined benefit liability	0	0	0
Currency translation differences	0	0	0
Net investment in a foreign operation	0	0	0
Tax effects	0	0	811
Other comprehensive income after tax	0	0	–1,897
Total comprehensive income	**0**	**0**	**–1,897**
Share-based payments	0	530	
Dividends			
Acquisition of BI Israel / Sartorius Israel			
Purchase price liability BI Israel			
Changes in scope of consolidation			
Change in non-controlling interest			
Other changes in equity			
Balance at Dec. 31, 2019	**68,388**	**40,691**	**1,440**
Balance at Jan. 1, 2020	**68,388**	**40,691**	**1,440**
Net profit for the period	0	0	0
Cash flow hedges	0	0	9,772
Remeasurements of the net defined benefit liability	0	0	0
Currency translation differences	0	0	0
Net investment in a foreign operation	0	0	0
Tax effects	0	0	–2,931
Other comprehensive income after tax	0	0	6,841
Total comprehensive income	**0**	**0**	**6,841**
Share-based payments	28	1,296	
Dividends			
Issue of treasury shares for the purchase of BIA Separations			
Purchase price liability BI Israel			
Purchase of additional shares in subsidiaries			
Other changes in equity			
Balance at December 31, 2020	**68,416**	**41,987**	**8,281**

The figures for the reporting period 2019 have been restated due to the finalization of the purchase price allocation for the acquisition of Biological Industries (see note 8).

Pension reserves	Retained earnings	Foreign currency translation reserves	Equity attributable to Sartorius AG shareholders	Non-controlling interest	Total equity
−19,178	**639,813**	**8,046**	**740,568**	**232,822**	**973,389**
0	156,692	0	156,692	61,905	218,597
0	0	0	−2,708	−813	−3,521
−9,591	0	0	−9,591	−2,035	−11,626
0	0	7,768	7,768	2,809	10,577
0	7,441	0	7,441	0	7,441
2,741	−1,998	0	1,554	832	2,386
−6,850	5,443	7,768	4,464	793	5,257
−6,850	**162,135**	**7,768**	**161,156**	**62,698**	**223,854**
	0		530	0	530
	−42,059		−42,059	−14,861	−56,920
	590		590	17,743	18,333
	−45,306		−45,306	−15,704	−61,010
	−4,743		−4,743	0	−4,743
	−205		−205	205	0
	−180		−180	−77	−257
−26,028	**710,045**	**15,814**	**810,351**	**282,826**	**1,093,177**
−26,028	**710,045**	**15,814**	**810,351**	**282,826**	**1,093,177**
0	226,274	0	226,274	95,198	321,472
0	0	0	9,772	2,407	12,179
−4,071	0	0	−4,071	−870	−4,942
0	0	−70,088	−70,088	−9,760	−79,848
0	−46,389	0	−46,389	0	−46,389
−144	12,404	0	9,329	−482	8,847
−4,216	−33,985	−70,088	−101,448	−8,705	−110,153
−4,216	**192,289**	**−70,088**	**124,826**	**86,493**	**211,319**
	0		1,324	0	1,324
	−24,278		−24,278	−8,860	−33,138
	132,725		132,725	0	132,725
	19,800		19,800	0	19,800
	−14,733		−14,733	−8,629	−23,362
	−2,396		−2,396	2,764	368
−30,243	**1,013,452**	**−54,274**	**1,047,619**	**354,593**	**1,402,212**

The dividends paid per share are as follows:

	Per share in €	**2020 total € in K**	Per share in €	2019 total € in K
Dividend for ordinary shares	0.35	11,974	0.61	20,869
Dividend for preference shares	0.36	12,303	0.62	21,189
		24,278		**42,059**

Notes to the Financial Statements

1. General Information

Sartorius AG is a listed joint stock corporation established in accordance with German law and is the ultimate parent company of the Sartorius Group. The company is recorded in the German Commercial Register of the District Court of Göttingen (HRB 1970) and has its registered office at Otto-Brenner-Str. 20 in Goettingen, Federal Republic of Germany.

The Sartorius Group is a leading international partner of biopharmaceutical research and the industry. With innovative laboratory instruments and consumables, the Group's Lab Products & Services Division (LPS) concentrates on serving the needs of laboratories performing research and quality control at pharma and biopharma companies and those of academic research institutes. The Bioprocess Solutions Division (BPS), with its broad product portfolio focusing on single-use solutions, helps customers manufacture biotech medications and vaccines safely and efficiently.

In accordance with Section 315e (1), of the German Commercial Code (HGB) in conjunction with Article 4 of Regulation (EC) No. 1606/2002 of the European Parliament and of the Council of July 19, 2002 (OJ L243 p. 1), the consolidated financial statements of the Sartorius Group for the year ended December 31, 2020, were prepared in accordance with the IFRS and IFRIC Standards and Interpretations of the International Accounting Standards Board (IASB) as required to be applied by the European Union. These are available on the following website:

https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/financial-reporting_en#ifrs-financial-statements

The consolidated financial statements are prepared in euros. Unless otherwise specified, all amounts are disclosed in thousands of euros (abbreviated as € in K). In some cases, the sums of the figures given in this report may not precisely equal the stated totals, and percentages may not be exact due to rounding.

The Executive Board is scheduled to submit the consolidated financial statements to the Supervisory Board on February 11, 2021.

2. Effects of New or Amended Standards

Standards to Be Applied for the First Time in 2020
The following new accounting rules were applicable for the first time to the present financial statements and had no material impact on the presentation of the company's financial position and financial performance:

- Amendments to IFRS 3, Business Combinations, Definition of a Business

The amendments change the definition of a business. The new guidance includes especially an optional so-called concentration test. If this test indicates that a group of assets has been acquired rather than a business, no further assessment regarding the potential acquisition of a business is necessary. Furthermore, the new guidance requires as a minimum one substantive process to be present in order to conclude that a business has been acquired.

- Amendments to IAS 1, Presentation of Financial Statements, and IAS 8, Accounting Policies, Changes in Accounting Estimates and Errors, Definition of Material

The changes to IAS 1 and IAS 8 clarify the definition of “material” and align the various definitions used across the standards and the Conceptual Framework.

- Amendments to IFRS 9, Financial Instruments, IAS 39, Financial Instruments: Recognition and Measurement, and IFRS 7, Financial Instruments: Disclosures, Interest Rate Benchmark Reform

The amendments to IFRS 9 and IAS 39 were made due to the reform of reference interest rates (replacement of existing reference interest rates by alternatives) and should address the questions and consequences in the context of hedge accounting. IFRS 7 has been amended with regard to additional disclosure requirements concerning the uncertainty about IBOR reform.

- Amendments to the Conceptual Framework for Financial Reporting in various IFRSs

In the course of the revision of the Conceptual Framework, references to the Conceptual Framework in various IFRSs were amended as well. These amendments were applicable in the reporting period for the first time.

- Amendments to IFRS 16, Leases, regarding COVID-19-related rent concessions

The amendment allows lessees to use an exemption from assessing whether a COVID-19-related debt concession needs to be considered as a lease modification under IFRS 16. This relief is applicable to lease payments which were originally due by June 30, 2021. The rent concession therefore does not have to be accounted for as a lease modification. The voluntary early application of this amendment did not have any material impact.

New Standards and Interpretations not yet Applied

The following Standards, Interpretations, and Amendments to Standards were not yet applied to the consolidated financial statements of the reporting year as they had not yet been adopted by the EU or their application was not mandatory for 2020:

Standard | Interpretation	Title	Applicable for financial years from [1]	Endorsement by the EU Commission
IFRS 14	Regulatory Deferral Accounts	January 1, 2016	No
Amendments to IFRS 4	Deferral of IFRS 9	January 1, 2021	Yes
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16	Interest Rate Benchmark Reform - Phase 2	January 1, 2021	No
Amendments to IFRS 3, IAS 16 and IAS 37	Annual Improvements to IFRSs 2018 - 2020 Cycle (issued in May 2020)	January 1, 2022	No
Amendments to IAS 1	Classification of Liabilities as Current or Non-Current	January 1, 2023	No
IFRS 17	Insurance Contracts	January 1, 2023	No
Amendments to IFRS 10 and IAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture	n/a	No

1 Application mandatory as adopted by the EU Commission. The Standards themselves may require earlier application. The Group does not plan to adopt any Standard early.

3. Significant Accounting Policies

Basis of Preparation

The consolidated financial statements of the Group are based on the principle of the historical cost of acquisition, construction, or production, with the exception of items measured at fair value, such as derivative financial instruments.

Scope of Consolidated Financial Statements

The consolidated financial statements of the Sartorius AG include the annual financial statements of all major companies controlled directly or indirectly by Sartorius AG. Under IFRS 10, Consolidated Financial Statements, control exists if the following criteria are met:

- Power, i.e., an investor must have existing rights that give it the current ability to direct the relevant activities of an investee that affect the latter's returns

- Exposure, or rights, to variable returns from the involvement with an investee

- Ability to use power in a way that significantly affects the investor's returns from the investee.

Such investees are included in the consolidated financial statements from the time when Sartorius AG or its subsidiaries acquire such control. They are no longer included as of the time control is lost to an entity outside the Group.

Subsidiaries are included on the basis of their annual financial statements for the same reporting period as the parent company, using uniform Group-wide accounting policies.

All intragroup assets and liabilities, equity, income, expenses, and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

Business Combinations

Business combinations are accounted for using the acquisition method. The identifiable assets acquired and liabilities and contingent liabilities assumed by the Group are recognized at fair value at the acquisition date.

For significant acquisitions, the purchase price allocation is generally carried out with the assistance of independent third-party valuation specialists. The valuations are based on the information available at the acquisition date.

Expenses directly related to business combinations are reported in profit or loss of the period.

Foreign Currency Translation

Subsidiaries’ annual financial statements prepared in foreign currencies have been translated pursuant to IAS 21, The Effects of Changes in Foreign Exchange Rates, in accordance with the concept of functional currency. Foreign subsidiaries are regarded as independent subdivisions of the Sartorius Group. Items in the statement of financial position are translated at the exchange rates on the reporting date. An exception to this is the equity of consolidated subsidiaries, which is translated at historical cost. Income and expense items are converted at average rates. Any translation differences resulting from the use of different exchange rates for items in the statement of financial position and the statement of profit or loss are recognized in the other comprehensive income in shareholders’ equity.

In the individual financial statements of the consolidated companies, transactions in foreign currencies are translated into the functional currency of the company at the exchange rate on the date of the transaction.

Monetary assets and liabilities denominated in a foreign currency are translated at the closing rate on the reporting date. Gains and losses on foreign currency transactions are recognized in other operating income or expenses. By contrast, currency gains and losses in connection with financing activities, such as loans in a foreign currency, are recognized in the financial result.

For certain defined loans granted on a long-term basis and for which repayment is neither planned nor probable, the Group applies the principle of "net investments in a foreign operation." The foreign currency translation differences resulting from these loans are recognized in other comprehensive income according to IAS 21.32.

The exchange rates for major currencies against the euro were applied as follows:

	Year-end exchange rates		Average annual exchange rates	
	2020	2019	**2020**	2019
USD	1.22785	1.12340	1.14196	1.11956
GBP	0.89808	0.85080	0.88951	0.87787
CHF	1.08198	1.08540	1.07042	1.11255
JPY	126.52000	121.94000	121.80849	122.01949
SGD	1.62260	1.51110	1.57408	1.52746
KRW	1334.0800	1296.2800	1345.63574	1305.50569
CNY	8.03140	7.8205	7.87300	7.73613

4. Critical Accounting Judgment and Key Sources of Estimation Uncertainty

During the preparation of consolidated financial statements, management uses estimates and assumptions based on their best knowledge of the current situation, including expectations of future developments. However, actual results may differ from these estimates. Therefore, these estimates and assumptions are revised on a regular basis, and the impact of all changes is immediately recognized in the statement of profit or loss for the period.

In addition, Group management exercises its judgment in defining the accounting treatment of specific transactions when the existing standards and interpretations do not explicitly treat the accounting problems concerned.

Assumptions and estimates primarily concern the following facts:

COVID-19 Pandemic Crisis
The economic development of the Group has been very robust during the pandemic. Therefore, no significant revisions were made to accounting estimates and assumptions as a result of the pandemic. However, the general level of uncertainty that is inherent in accounting estimates and assumptions increased as a result of the ongoing COVID-19 pandemic crisis.

In fiscal 2020 the Group achieved double-digit revenue growth and a corresponding order intake. There were no significant shortages on the procurement and supply side so that the continuity of production operations was ensured. The biopharma industry, which is of particular relevance for the Group, is largely independent of economic fluctuations. This was again demonstrated in the reporting period and is especially true of the BPS Division, a total solutions provider for the biopharma industry, which experienced increased demand in connection with increasing production capacities for coronavirus vaccines and COVID-19 therapeutics.

For the LPS Division, which also serves customer segments outside the biopharma industry, a more differentiated picture emerged regarding its products. Based on qualitative assessments during the reporting period for the LPS Division, there were no indications of impairment. This assessment was confirmed by the goodwill impairment tests conducted (see note 15).

Business Combinations

Accounting for acquisitions requires certain estimates and assumptions to be made, especially about the fair value of the consideration transferred as well as the fair values of intangible assets and the property, plant, and equipment acquired, liabilities assumed at the acquisition date, as well as the useful lives of intangible assets and property, plant, and equipment acquired.

Their measurement is largely based on projected cash flows. Differences between the expected and actual cash flows may have a material impact on future Group results.

Impairment of Assets

The carrying amounts of property, plant, and equipment and intangible assets are examined to determine whether there is any indication that an asset might be impaired, pursuant to IAS 36, Impairment of Assets. If there is any indication that an asset is impaired, the recoverable amount of the asset is estimated. The recoverable amount of an asset or cash-generating unit is the higher of its fair value – less costs of disposal – and its value in use. If the individual asset’s recoverable amount cannot be estimated, the recoverable amount of the asset’s cash-generating unit (CGU) is estimated.

If the estimated recoverable amount of an asset (or a CGU) goes below its book value (carrying amount), this carrying amount must be reduced to the recoverable amount.

If the causes of the asset impairment no longer apply, the carrying amount of the asset (or the CGU) is increased to the new estimate (except for goodwill). However, the increase is limited to the value that the asset (or CGU) would have had if no impairment loss had been recognized in previous fiscal years.

The calculation of the value in use is generally based on discounted cash flow methods which use cash flow projections of up to five years. These projections take into account past experience and represent management's best estimate about future sales revenue and cost developments. Cash flows after the planning period are extrapolated using individual growth rates. Key assumptions on which management has based its determination of the value in use include estimated growth rates, weighted average cost of capital and tax rates. These estimates can have a material impact on the respective values and ultimately on the amount of any impairment.

Intangible Assets

The capitalization of internally-generated intangible assets includes a certain level of estimates and assumptions, e.g., the assessment of the technical feasibility of a development project, its expected market prospects, and the determination of useful lives.

Employee Benefits – Provisions for Pension Obligations

Obligations for pensions and other post-employment benefits are determined in accordance with actuarial valuations. These valuations rely on key assumptions including discount rates, expected salary increases and mortality rates. The discount rate assumptions are determined by reference to market yields on high-quality, fixed-interest corporate bonds of appropriate duration and currency at the end of the reporting period.

Due to changing market and economic conditions, the underlying key assumptions may differ from actual developments and may lead to significant changes in pension and other post-employment benefit obligations.

Such differences are recognized in full directly in equity in the period in which they occur without affecting profit or loss. For a sensitivity analysis, see note 23 "Pension and Employee Benefits Provisions."

Provisions, Contingent Liabilities, and Contingent Assets

Provisions are recognized for legal or constructive obligations that exist with respect to third parties at the end of the reporting date. To determine the amount of the obligations, certain estimates and assumptions need to be applied, including an evaluation of the probability that such an obligation could occur, and the amount of costs incurred. Typically, significant uncertainties are involved in the determination of provisions related to onerous contracts, warranty costs, closure of business locations, asset retirement obligations and legal proceedings.

Income Taxes

The Group operates in various tax jurisdictions and therefore has to determine tax positions under respective local tax laws and tax authorities' views, which can be complex and subject to different interpretations by taxpayers and local tax authorities. The amount of uncertain tax positions is determined on the basis of the best estimate of expected tax payments (most likely value of the tax uncertainty).

Deferred tax assets have to be recognized for all deductible temporary differences and unused tax losses to the extent that it is probable that future taxable profit will be available against which the deductible temporary differences and unused tax losses can be utilized. As future developments are uncertain and partly beyond management's control, assumptions are necessary to estimate future taxable profits as well as the period in which deferred tax assets will be recovered.

Estimates are revised in the period in which there is sufficient evidence to revise the assumption. If management considers it probable that all or a portion of a deferred tax asset cannot be realized, a corresponding valuation allowance is taken into account.

Fair Value Measurement

A number of the Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities, including Level 3 fair values (unobservable inputs).

If third-party information, such as broker quotes or pricing services, is used to measure fair values, then management assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of IFRSs, including the level in the fair value hierarchy at which the valuations should be classified.

When measuring the fair value of an asset or a liability, the Group uses observable market data as far as possible.

If the inputs used to measure the fair value of an asset or a liability fall into different levels of the fair value hierarchy, then the fair value measurement is categorized in its entirety at the same level of the fair value hierarchy as the lowest-level input that is significant to the entire measurement.

5. Operating Segments

According to IFRS 8, Operating Segments, the identification of reportable operating segments is based on the "management approach"; i.e., the segments are defined analogously to the internal control and reporting structure of an entity. Therefore, an area of activity is to be considered an operating segment if its business activities may result in revenues and expenses, its operating results are regularly reviewed by the entity's chief operating decision maker (= the Executive Board of Sartorius AG), and discrete financial information is available in its internal reporting. Consequently, the divisions called Bioprocess Solutions and Lab Products & Services are considered operating segments. Essential criteria for their definition are the products sold in the divisions.

“Underlying EBITDA” is the key performance indicator of the operating segments of the Group, as management uses this performance measure to control the Group and segments. EBITDA corresponds to earnings before interest (financial result), taxes, depreciation, and amortization. “Underlying EBITDA” means EBITDA adjusted for extraordinary items. Extraordinary items are expenses and income in connection with acquisitions, restructuring activities, large Group projects and gains or losses from the disposal of fixed assets and investments which distort the sustainable profitability of a segment.

“Underlying EBITDA” is not a defined performance measure in IFRSs. The Group’s definition of underlying EBITDA may not be comparable with similarly titled performance measures and disclosures by other entities.

Apart from that, the recognition and measurement methods for the reportable segments conform to the general Group accounting principles.

For intersegment receivables and payables, internal transfer prices are set at prices corresponding to those that would have been agreed with external third parties in the particular situation and under the given framework conditions. Essentially, these prices are calculated by applying the cost-plus method and the resale price method or a combination of the two methods. The methods for determining the internal transfer prices are documented promptly and updated continuously. The volume of such intersegment receivables and payables is immaterial.

Segment assets and segment liabilities are not reported to the chief operating decision maker on a regular basis and are therefore not part of the segment report.

	Sales revenue		Underlying EBITDA	
€ in K	**2020**	2019	**2020**	2019
Bioprocess Solutions	1,782,622	1,350,470	575,906	393,100
Lab Products & Services	553,035	476,496	116,314	102,737
Total	**2,335,657**	**1,826,966**	**692,220**	**495,836**
Reconciliation to the profit before tax				
Depreciation and amortization (excl. extraordinary items)			−179,088	−131,895
Extraordinary items			−57,026	−28,461
Earnings before interest and taxes (EBIT)			**456,106**	**335,480**
Financial result			−9,424	−32,490
Profit before tax			**446,682**	**302,989**

	Depreciation and amortization	
€ in K	**2020**	2019
Bioprocess Solutions	−109,565	−79,398
Lab Products & Services	−71,028	−53,323
Total	**−180,593**	**−132,720**

Geographical Information

External revenue and non-current assets are regionally distributed as follows:

	Sales revenue		Non-current assets	
€ in K	**2020**	2019	**2020**	2019
EMEA	**935,078**	**733,425**	**2,285,439**	**1,332,178**
Of which Germany	210,205	188,615	784,323	668,743
Of which France	96,075	91,537	425,173	371,890
Americas	**812,212**	**629,884**	**1,045,721**	**572,023**
Of which USA	755,263	570,730	1,043,038	569,529
Asia | Pacific	**588,368**	**463,657**	**74,930**	**56,082**
Of which China	224,198	150,709	32,962	12,282
Of which South Korea	130,325	97,417	14,853	14,409
Group	**2,335,657**	**1,826,966**	**3,406,089**	**1,960,283**

The regional allocation of non-current assets refers to the particular company location; sales revenue is reported according to the customer's location. The non-current assets correspond to property, plant, and equipment as well as to intangible assets (including goodwill).

In fiscal 2020 and the prior year, none of our customers accounted for more than 5% of sales revenue.

6. Statement of Cash Flows

The statement of cash flows shows the impact of cash inflows and outflows on the cash and cash equivalents of the Group. The cash flows are classified by operating, investing and financing activities according to IAS 7, Statement of Cash Flows.

In this context, cash and cash equivalents are assets that can be converted into cash in the short term (generally within three months). The amount disclosed in the statement of cash flows primarily includes cash on hand, bank balances, and similar items; it equals the amount presented in the statement of financial position.

The following non-cash transactions were concluded that are not presented in the statement of cash flows:

- Additions to non-current assets related to leases according to IFRS 16 are presented in note 17.
- The expenses incurred by granting shares to the CEO and Executive Board Chairman totaled €1,324 K in 2020 and €530 K in 2019.
- In connection with the acquisition of BIA Separations, one component of the purchase price was transferred in shares of Sartorius Stedim Biotech S.A.. Furthermore, a contingent consideration liability was recognized in the course of the acquisition that has to be settled in shares of Sartorius Stedim Biotech S.A. in the future. For further details, see note 8.
- The liability for the acquisition of the non-controlling interest in Sartorius Israel was eliminated on acquisition of Biological Industries in the prior period (see note 8).

Financial liabilities resulting from financing activities changed as follows:

	Balance at Dec. 31, 2018 € in K	Initial application of IFRS 16	Cash flows	Currency effects	Other non-cash changes	Balance at Dec. 31, 2019 € in K
Loans and borrowings	985,852	0	5,240	1	0	991,094
Lease liabilities	18,772	49,881	−17,829	296	26,245	77,365
Liability for the acquisition of non-controlling interest in Sartorius Israel	6,735	0	0	662	−7,397	0
Liabilities for the acquisition of non-controlling interest in Biological Industries	0	0	0	0	61,010	61,010
Liability for phantom stock units in connection with the AllPure acquisition	8,739	0	0	168	2,610	11,517
Total financial liabilities from financing activities	**1,020,098**	**49,881**	**−12,589**	**1,127**	**82,468**	**1,140,986**

	Balance at Dec. 31, 2019 € in K	Cash flows	Currency effects	Other non-cash changes	**Balance at Dec. 31, 2020 € in K**
Loans and borrowings	991,094	1,008,876	–41	1,846	2,001,775
Lease liabilities	77,365	–19,729	–3,056	30,690	85,270
Liabilities for the acquisition of non-controlling interest in Biological Industries	61,010	0	0	–19,504	41,506
Contingent consideration in relation to acquisition of Watersep	0	0	–68	4,955	4,887
Liability for phantom stock units in connection with the AllPure acquisition	11,517	–6,931	–429	834	4,991
Total financial liabilities from financing activities	**1,140,986**	**982,217**	**–3,595**	**18,820**	**2,138,427**

7. Scope of Consolidation

	Ownership in %	Consolidated
Sartorius AG, Goettingen, Germany	Parent company	X
Sartorius Stedim Biotech S.A., Aubagne, France, along with its subsidiaries:	73.8	X
EMEA		
Sartorius Stedim Belgium N.V., Brussels, Belgium	100.0	X
Distribo GmbH, Goettingen, Germany	26.0	
Sartorius Stedim Biotech GmbH, Goettingen, Germany	100.0	X
Sartorius Stedim Plastics GmbH, Goettingen, Germany	100.0	X
Sartorius Stedim North America Holding GmbH, Goettingen, Germany	100.0	X
Sartorius Stedim Systems GmbH, Guxhagen, Germany	100.0	X
Sartorius Stedim Cellca GmbH, Ulm, Germany	100.0	X
Sartorius Stedim Nordic Oy, Helsinki, Finland	100.0	X
Sartorius Stedim FMT S.A.S., Aubagne, France	100.0	X
Sartorius Stedim France S.A.S., Aubagne, France	100.0	X
Sartorius Stedim Chromatography Resins S.A.S., Cergy, France	100.0	X
Sartorius Stedim Aseptics S.A.S., Lourdes, France	100.0	X
Sartorius Stedim Ireland Ltd., Dublin, Ireland	100.0	X
Biological Industries Israel Beit Haemek Ltd., Kibbutz Beit Haemek, Israel	70.0	X
Beit Haemek Import and Marketing Agricultural Cooperative Society Ltd., Kibbutz Beit Haemek, Israel	100.0	
Sartorius Stedim Italy S.p.A., Florence, Italy	100.0	X
Sartorius Stedim Netherlands B.V., Amersfoort, Netherlands	100.0	X
Sartorius Stedim Austria GmbH, Vienna, Austria	100.0	X
Sartorius Stedim Poland Sp. z o.o., Kostrzyn, Poland	100.0	X
LLC Sartorius Stedim RUS, St. Petersburg, Russia	100.0	X
Sartorius Stedim Data Analytics AB, Umeå, Sweden	100.0	X
Sartorius Stedim Switzerland AG, Tagelswangen, Switzerland	100.0	X
BIA Separations Podjetje za separacijske tehnologije d.o.o., Ajdovščina, Slovenia	100.0	X
Sartorius Stedim Spain S.A., Madrid, Spain	100.0	X
Sartorius Stedim Bioprocess S.A.R.L., M'Hamdia, Tunisia	100.0	X
Sartorius Stedim Hungária Kft., Budapest, Hungary	100.0	X
Sartorius Stedim BioOutsource Ltd., Glasgow, UK	100.0	X
Sartorius Stedim UK Ltd., Epsom, UK	100.0	X
Sartorius Stedim Lab Ltd., Stonehouse, UK	100.0	X
Sartorius Stedim Chromatography Systems Ltd., Royston, UK	100.0	X
TAP Biosystems Group Ltd., Royston, UK	100.0	X
The Automation Partnership Cambridge Ltd., Royston, UK	100.0	X
Americas		
Sartorius Stedim Filters Inc., Yauco, Puerto Rico	100.0	X
WaterSep BioSeparations LLC, Boston, Massachusetts, USA	100.0	X
Sartorius Stedim North America Inc., Dova, Delaware, USA	100.0	X
Asia | Pacific		
Sartorius Stedim Australia Pty. Ltd., Dandenong South, Victoria, Australia	100.0	X
Sartorius Stedim Biotech (Beijing) Co. Ltd., Beijing, China	100.0	X
Sartorius Stedim (Shanghai) Trading Co. Ltd., Shanghai, China	100.0	X

	Ownership in %	Consolidated
Biological Industries Hong Kong Ltd., Kowloon, Hong Kong	100.0	
Sartorius Stedim India Pvt. Ltd., Bangalore, India	100.0	X
Sartorius Stedim Japan K.K., Tokyo, Japan	100.0	X
Sartorius Stedim Malaysia Sdn. Bhd., Kuala Lumpur, Malaysia	100.0	X
Sartorius Stedim Singapore Pte. Ltd., Singapore, Singapore	100.0	X
Sartorius Korea Biotech Co. Ltd., Seoul, South Korea	69.0	X
Sartonets Taiwan Inc., New Taipei City, Taiwan	100.0	X
EMEA		
Sartorius Belgium N.V., Brussels, Belgium	100.0	X
Curexsys GmbH, Goettingen, Germany	22.3	
Sartorius Weighing Technology GmbH, Goettingen, Germany	100.0	X
Sartorius Corporate Administration GmbH, Goettingen, Germany	100.0	X
SI Weende-Verwaltungs-GmbH, Goettingen, Germany	100.0	X
SIV Weende GmbH & Co. KG, Goettingen, Germany	100.0	X
SI Grone 1-Verwaltungs-GmbH, Goettingen, Germany	100.0	X
SIV Grone 1 GmbH & Co. KG, Goettingen, Germany	100.0	X
SIV Grone 2 GmbH, Goettingen, Germany	100.0	X
SWT Treuhand GmbH, Goettingen, Germany	100.0	X
Sartorius Ventures GmbH, Goettingen, Germany	100.0	X
LabTwin GmbH, Berlin, Germany	85.4	
Life Science Factory gGmbH, Goettingen, Germany	100.0	
Life Science Factory Management GmbH, Goettingen, Germany	100.0	
Sartorius Lab Holding GmbH, Goettingen, Germany	100.0	X
Sartorius Lab Instruments GmbH & Co. KG, Goettingen, Germany	100.0	X
Sartorius Biohit Liquid Handling Oy, Helsinki, Finland	100.0	X
Sartorius Nordic Oy, Helsinki, Finland	100.0	X
Sartorius France S.A.S., Dourdan, France	100.0	X
Sartorius Ireland Ltd., Dublin, Ireland	100.0	X
Sartorius Israel Ltd., Kibbutz Beit Haemek, Israel	100.0	X
Sartorius Italy S.r.l., Florence, Italy	100.0	X
Sartorius Netherlands B.V., Amersfoort, Netherlands	100.0	X
Sartorius Austria GmbH, Vienna, Austria	100.0	X
Sartorius Poland Sp. z o.o., Kostrzyn, Poland	100.0	X
LLC Sartogosm, St. Petersburg, Russia	100.0	X
LLC Sartorius RUS, St. Petersburg, Russia	100.0	X
Sartorius Spain S.A., Madrid, Spain	100.0	X
Sartorius South Africa (Pty) Ltd., Midrand, South Africa	80.0	
Sartorius Hungária Kft., Budapest, Hungary	100.0	X
Essen BioScience Ltd., Hertfordshire, UK	100.0	X
Sartorius UK Ltd., Epsom, UK	100.0	X
Americas		
Sartorius Argentina S.A., Buenos Aires, Argentina	100.0	X
Sartorius do Brasil Ltda., São Paulo, Brazil	100.0	X
Sartorius Canada Inc., Oakville, Canada	100.0	X
Sartorius de México S.A. de C.V., Tepotzotlán, Mexico	100.0	X
Essen Instruments Inc., Ann Arbor, Michigan, USA	100.0	X
Sartorius BioAnalytical Instruments Inc., Dover, Delaware, USA	100.0	X

	Ownership in %	Consolidated
Sartorius North America Inc., Dover, Delaware, USA	100.0	X
Sartorius Corporation, Dover, Delaware, Delaware, USA	100.0	X
Asia | Pacific		
Sartorius Australia Pty. Ltd., Dandenong South, Victoria, Australia	100.0	X
Sartorius Scientific Instruments (Beijing) Co. Ltd., Beijing, China	100.0	X
Sartorius ForteBio (Shanghai) Co. Ltd., Shanghai, China	100.0	X
Sartorius (Shanghai) Trading Co. Ltd., Shanghai, China	100.0	X
Sartorius Hong Kong Ltd., Kowloon, Hong Kong	100.0	X
Sartorius India Pvt. Ltd., Bangalore, India	100.0	X
Essen BioScience K.K., Tokyo, Japan	100.0	X
Sartorius Japan K.K., Tokyo, Japan	100.0	X
Sartorius Malaysia Sdn. Bhd., Kuala Lumpur, Malaysia	100.0	X
Sartorius Singapore Pte. Ltd., Singapore, Singapore	100.0	X
Sartorius Korea Ltd., Seoul, South Korea	100.0	X
Sartorius (Thailand) Co. Ltd., Bangkok, Thailand[1]	32.7	X
Sartorius Vietnam Co. Ltd., Ho Chi Minh City, Vietnam	100.0	X

1 The company Sartorius Thailand is included in the scope of consolidation due to contractual agreements (see also note 22).

The companies marked as non-consolidated in the above table were not included in the scope of consolidation, because the figures were of minor importance for assessing the actual net worth, financial position, and profitability of the Sartorius Group. The sales revenue and total assets of the non-consolidated companies taken together account for less than 2% of the Group figures. No associates or joint ventures were consolidated; all companies identified by an "X" are fully consolidated.

The following companies were included in the scope of consolidation for the first time in fiscal 2020:

- Sartorius BioAnalytical Instruments, Inc., Delaware, U.S.A.
- Sartorius ForteBio (Shanghai) Co., Ltd., Shanghai, China
- Sartorius Stedim Chromatography Systems Ltd., Royston, U.K.
- Sartorius Stedim Chromatography Resins S.A.S., Cergy, France
- BIA Separations Podjetje za separacijske tehnologije d.o.o., Ajdovščina, Slovenia
- WaterSep BioSeparations LLC, Massachusetts, U.S.A.

The entities BI Shanghai Co. Ltd., Shanghai, China, Biological Industries Hong Kong Ltd., Kowloon, Hong Kong and Biological Industries USA Inc., Cromwell, Connecticut, U.S.A. joined the Group as a result of the acquisition of a majority interest in Biological Industries Israel Beit Haemek Ltd. in December 2019. Following the finalization of the purchase price allocation in 2020, the entities were included in the scope of consolidation as of December 15, 2019. The majority interest in Biological Industries Beit Haemek Ltd. was increased by 20% to just above 70% in December 2020 (see note 22). The shares in BI Shanghai Co. Ltd. were sold in December 2020 and the entity was deconsolidated. The non-controlling interests in Biological Industries USA Inc. were acquired in 2020. On November 15, 2020, the company was merged into Sartorius Stedim North America Inc..

Sartorius BioAnalytical Instruments, Inc., Sartorius Stedim Chromatography Systems Ltd., and Sartorius Stedim Chromatography Resins S.A.S. were established for the acquisition of selected life science assets from Danaher. The assets were purchased on April 30, 2020. In the course of this acquisition, Sartorius ForteBio (Shanghai) Co., Ltd. was acquired on the basis of a share deal. The shares in BIA Separations were acquired on November 2, 2020. The shares in WaterSep BioSeparations LLC were acquired on December 9, 2020. See note 8 for details on the acquisition of the assets from Danaher and on the acquisitions of Biological Industries, BIA Separations and WaterSep BioSeparations LLC.

The investment in Curexsys GmbH, Goettingen, Germany was acquired in December 2020 and is classified as an associate pursuant to IAS 28. The cost of acquisition amounted to around €4.1 million.

The immaterial entities TAP ESOP Management Ltd., Royston, U.K., TAP Biosystems (PHC) Ltd., Royston, U.K., TAP Biosystems Ltd., Royston, U.K., Sartorius Peru S.A.C., Lima, Peru, and Denver Instruments (Beijing) Co. Ltd., Beijing, China were liquidated in fiscal 2020.

8. Business Combinations

Acquisition of Biological Industries in 2019

On December 15, 2019, the Group acquired just over 50% of the shares in the Israeli cell culture media developer and manufacturer Biological Industries. In the course of the transaction, the Group obtained control based on contractual arrangements.

Biological Industries focuses on cell culture media, particularly for cell and gene therapy, regenerative medicine and other advanced therapies. Founded in 1981, the company employed approximately 130 people at the acquisition date, mainly at its headquarters, R&D, and manufacturing site near Haifa, Israel, and at sales locations in the U.S.A., Europe, and China.

The determination of the acquisition-date fair values of the consideration transferred as well as of the assets acquired and liabilities assumed was completed in 2020. Non-controlling interests are measured at their proportionate share of the net assets.

The following table presents the preliminary and final valuations:

	Preliminary purchase price allocation € in K	**Final purchase price allocation € in K**
Other intangible assets	0	28,451
Property, plant and equipment	5,201	8,527
Inventories	4,982	5,883
Trade receivables	5,121	4,547
Other assets	1,386	891
Cash and cash equivalents	3,209	3,734
Deferred taxes - net	0	–6,314
Other liabilities	–6,981	–9,719
Net assets acquired	**12,918**	**36,000**
Purchase price	40,634	42,395
Non-controlling interest	6,459	18,532
Goodwill	**34,175**	**24,927**

The purchase price for the acquired shares was approximately €42.4 million and was fully paid in cash with the exception of a liability assumed amounting to €2.2 million. The directly attributable acquisition-related costs amounted to €0.3 million and were recognized in other expenses in the prior reporting period. The other intangible assets recognized separately relate mainly to technologies and customer relationships.

The resulting goodwill represents synergies, e.g., arising from the integration of the acquiree into the Group's global sales and distribution network, and the expansion of the product offering of both of the Group's divisions, as well as further non-separable intangible assets, such as the know-how of the workforce. Based on the expected synergy potential, goodwill was allocated to the Bioprocess Solutions Division (60%) and the Lab Products & Services Division (40%). Goodwill is not expected to be tax deductible.

Acquisition of Selected Life Science Assets from Danaher

On April 30, 2020, the Group completed the acquisition of selected life science businesses from Danaher Corporation after receiving the required regulatory approvals. The assets and liabilities related to the businesses were mainly acquired via asset deals. In the course of the transaction, about 300 employees were assimilated into the Sartorius Group workforce.

The businesses acquired by the Group generated revenue of approximately $170 million in 2019 and cover various laboratory and bioprocessing technologies, which are complementary to the product portfolio of both divisions. The broader product offering will support customers even more comprehensively in the development of biotech medicines and vaccines, as well as in the safe and efficient production of such pharmaceuticals. Sartorius is thus extending its market position in bioanalytics as well as in key areas of the manufacture of biotech medications.

The FortéBio business for label-free biomolecular characterization includes innovative protein analysis instruments, biosensors, and reagents that are used in drug discovery and will be integrated into the bioanalytics portfolio of the Lab Products & Services Division. The products are based on patented biolayer interferometry technology and perform real-time analysis of various biomolecular interactions. FortéBio employs approximately 200 people at its production sites in Fremont, California, U.S.A., and Shanghai, China, as well as at various sales locations worldwide.

Following the acquisition of the chromatography systems and resins business, the Group is expanding the portfolio of its Bioprocess Solutions Division in the downstream processing area. This business addresses an essential step in the purification of biopharmaceuticals and encompasses both reusable and single-use equipment, columns, and resins. Furthermore, selected product groups in the areas of stainless steel hollow-fiber and single-use technology tangential flow filtration systems and single-use flow kits will additionally strengthen the Group's portfolio in downstream processing. The various units employ approximately 100 people at their sites in Portsmouth, U.K.; Cergy, France; Ann Arbor, Michigan, U.S.A.; and Hopkinton, Massachusetts, U.S.A..

The purchase price of approximately €774.6 million was fully paid in cash. Expenses of €7.2 million directly attributable to the acquisition were recognized as other expenses in profit or loss.

The purchase price allocation is as follows:

	Final purchase price allocation € in K
Technologien	288,464
Kundenbeziehungen	109,509
Brand names	9,969
Property, plant and equipment	13,915
Inventories	46,160
Trade receivables	3,859
Other assets	394
Cash and cash equivalents	6,842
Deferred taxes - net	–1,604
Trade payables	–7,960
Loans and borrowings	–5,682
Other liabilities	–10,206
Net assets acquired	**453,659**
Purchase price	774,595
Goodwill	**320,936**

Goodwill resulting from the acquisition represents the broadening of the product offering for biopharmaceutical customers, synergies, and intangible assets that are not separately recognized, such as the know-how of the workforce. On this basis, goodwill was allocated to the Bioprocess Solutions Division (60%) and the Lab Products & Services Division (40%). Due to the transaction structure, the Group expects that goodwill amounting to approximately €299 million will be tax deductible.

In October 2019, the Group entered into a bridge loan agreement with BNP Paribas Fortis SA/NV to finance the acquisition. This agreement provided the Group with the financing needed at the time the acquisition was closed. The foreign currency exchange risk related to the financing of the acquisition has been hedged with options of a notional value of $750 million. The value changes of the options amounting to +€4.7 million since December 31, 2019, were recognized in profit or loss in the reporting period.

Effective May 1, 2020, the acquired businesses were included in the consolidated financial statements. They contributed sales revenue of approximately €105 million, the respective operating margin was on a level comparable to the Group.

Acquisition of BIA Separations

On November 2, 2020, the Group acquired 100% of the shares in the Slovenian purification specialist BIA Separations Podjetje za separacijske tehnologije d.o.o. ("BIA Separations"). BIA Separations has about 120 employees at its headquarters in Ajdovščina, Slovenia.

The company develops and manufactures market-leading products for the purification and analysis of large biomolecules, such as viruses, plasmids and mRNA, which are used in cell and gene therapies and other advanced therapies. It is therefore complementary to the existing product portfolio for biopharma customers and will be integrated in the Bioprocess Solutions Division. BIA's technology for manufacturing-scale purification is already used in the production of the first commercialized advanced therapeutics. The company also has a strong presence with such novel drug candidates in the clinical pipeline.

Due to the short time period between the acquisition date and the reporting date and the uncertainties with regard to the measurement of the intangible assets and the contingent consideration, the determination of the acquisition-date fair values of the assets acquired and liabilities assumed as well as the consideration transferred has not yet been completed. Therefore, the purchase price allocation is preliminary and based on management's current knowledge. The following valuations were considered:

	Preliminary purchase price allocation € in K
Other intangible assets	308,014
Property, plant and equipment	13,834
Inventories	3,317
Trade receivables	1,696
Other assets	679
Cash and cash equivalents	2,176
Deferred taxes - net	–58,100
Other liabilities	–10,074
Net assets acquired	**261,542**
Purchase price (transferred at acquisition date)	366,891
Contingent consideration	285,530
Goodwill	**390,879**

The main asset included in other intangible assets is BIA Separations' technology for manufacturing-scale purification. In addition to that, the Group acquired further intangible assets such as customer relations and brands.

The consideration transferred includes a cash payment of €234.2 million and 405,887 shares in the listed subsidiary Sartorius Stedim Biotech S.A., whose fair value was approximately €132.7 million at the acquisition date. In addition, the parties have further agreed on three tranches of earn-out payments based on the sales performance of BIA Separations over the next five fiscal years. Depending on the sales performance, the sellers are entitled to receive additional shares in Sartorius Stedim Biotech S.A. However, until settlement, the agreement is classified as a financial liability and measured at fair value through profit or loss at each reporting date. At the acquisition date, the contingent consideration component was measured in an amount of €285.5 million. This estimate reflects the expected future sales performance and the assumed number of shares to be transferred as well as the present value of the expected future share prices at the expected settlement dates. The lower end of the bandwidth of possible outcomes of the contingent consideration is zero, while the upper limit cannot be quantified due to the settlement in shares.

At the reporting date of December 31, 2020, the fair value of the contingent consideration liability was measured at €253.9 million. This change reflects mainly the decrease in the share price of Sartorius Stedim Biotech S.A. during the time from the acquisition date to December 31, 2020 as starting point of the estimation of the future share price at the settlement dates of the obligations. Furthermore, the discount rates applied to calculate the present value of the future obligation were adjusted to reflect the market rates at December 31, 2020. The difference between the valuation as of the acquisition date and the reporting date amounting to about €31.6 million has been recognized in the financial result. The range of possible outcomes of the contingent consideration did not change since the acquisition date.

The key input parameters for the valuation are the sales revenue expectations for the planning period as well as the share price of Sartorius Stedim Biotech S.A. at the respective valuation date. The valuation results are less sensitive to realistic changes of other valuation parameters, e.g. the discount rates applied. Assuming 10% higher (lower) sales revenues in each of the five years of the plan period would result in an increase of the liability to be reported at the reporting date of approximately €29 million (decrease of approximately €24 million). If the share price had been 10% higher (lower) at the reporting date, the liability would have been €25 million higher (€25 million lower). The actual future outcomes may differ from these sensitivities that have been considered in isolation.

Expenses of €3.6 million directly attributable to the acquisition were recognized as other expenses in profit or loss. The resulting goodwill represents synergies such as those arising from BIA Separations' access to the Group's worldwide sales and distribution network, the completion of the Bioprocess Solutions Division's product portfolio, and intangible assets which are not recognized separately, e.g. the know-how of the workforce. Goodwill is not expected to be tax deductible.

Due to the short time period since initial consolidation, BIA Separations did not contribute materially to the Group's sales revenue and earnings of the reporting period 2020 with the exception of the measurement gain on the contingent consideration described above.

Acquisition of WaterSep BioSeparations LLC

On December 9, 2020, the Group acquired 100% of the shares in the U.S.-based entity WaterSep BioSeparations LLC. The company has about 15 employees in Marlborough, Massachusetts, U.S.A. WaterSep BioSeparations develops, manufactures and markets hollow-fiber membrane devices and pre-sterilized assemblies for upstream and downstream biopharmaceutical applications. This acquisition complements the Group's portfolio for cell and gene therapy applications, cell harvesting and various solutions for intensified bioprocessing and will be integrated into the Bioprocess Solutions Division.

Due to the short time period between the acquisition date and the approval of the consolidated financial statements, the full difference between the consideration transferred and the net assets acquired before their fair value measurement is provisionally presented as goodwill.

	Preliminary purchase price allocation € in K
Other intangible assets	3
Property, plant and equipment	236
Inventories	362
Trade receivables	362
Other assets	85
Cash and cash equivalents	111
Other liabilities	–68
Net assets acquired	**1,091**
Purchase price (transferred at acquisition date)	22,518
Contingent consideration	4,887
Goodwill	**26,313**

The purchase price amounts to €27.4 million, of which €22.5 million was paid in cash. The parties further agreed on an earn-out component which depends on the future sales revenue in the years 2021 to 2023 and is due in 2024. Until the settlement of this contingent consideration, the agreement is classified as a financial liability and is measured at fair value through profit or loss at each reporting date. On a provisional basis, the contingent consideration was measured at a fair value of €4.9 million at the acquisition date. The lower end of the bandwidth of possible outcomes of the contingent consideration is zero, the upper limit is $9 million. The contingent consideration was not significantly adjusted at the reporting date as no relevant changes were observed.

Expenses of €0.3 million directly attributable to the acquisition were recognized as other expenses in profit or loss. The resulting goodwill represents synergies such as those arising from WaterSep BioSeparations' access to the Group's worldwide sales and distribution network, the completion of the Bioprocess Solutions Division's product portfolio, and intangible assets that are not recognized separately, e.g., the know-how of the workforce. Goodwill is expected to be tax deductible. The individual intangible assets to be recognized are expected to represent mainly technologies, customer-relationships, and brands.

Due to the short time between the acquisition date and the reporting date, sales revenue and earnings of the acquired entity did not contribute materially to the Group's sales revenue and earnings of the 2020 reporting period.

The impact on the consolidated financial statements, based on the assumption that all businesses acquired in 2020 were consolidated as from January 1, 2020, can only be approximately estimated, in particular due to the transaction structure of the acquisition of the Life Science businesses from Danaher as asset deals, and the impact of the COVID-19 pandemic. Under these limitations, consolidated sales revenue would have been estimated at approximately €2,411 million, with no material impact on the Group's operating margin.

Notes to the Statement of Profit or Loss

9. Sales Revenue

Revenue recognition follows IFRS 15, Revenue from Contracts with Customers. The Standard defines a comprehensive model to determine when to recognize revenue and in what amount. Under IFRS 15, revenue recognized from contracts with customers is disaggregated into the categories of the "nature of products" as well as "geographical regions" and shown in the following table. The categorization by "nature of products" corresponds to the reportable segments as the identification of the reportable segments is based in particular on the different products sold. Regional disaggregation of revenue is based on the customer's location.

			2020			2019
€ in K	**Group**	**Bioprocess Solutions**	**Lab Products & Services**	Group	Bioprocess Solutions	Lab Products & Services
Sales revenue	**2,335,657**	**1,782,622**	**553,035**	**1,826,966**	**1,350,470**	**476,496**
EMEA	935,078	698,476	236,601	733,425	524,835	208,590
Americas	812,212	651,268	160,943	629,884	501,137	128,746
Asia | Pacific	588,368	432,878	155,490	463,657	324,498	139,159

The Group produces and sells instruments and consumables as well as related services in its segments BPS and LPS. The Group satisfies its performance obligations depending on the goods to be transferred and the promised services. The far majority of revenues from sales of products is recognized at a point in time when the customer obtains control over the goods. This is typically the case when the significant risks and rewards of ownership of the goods are transferred to the customer. Therefore, the point in time may vary depending on the agreement with the individual customer.

For complex products that require installation at the customer's site, revenue is recognized upon formal customer acceptance. To a small extent, revenue is recognized over time in the customer-specific project business. In these cases, revenue is recognized according to project progress, which is measured based on the percentage of costs to date compared to total estimated contract costs. The amount of actual costs incurred to date reflects the progress and the transfer of control to the customer appropriately as the Group has a right to receive a reimbursement of costs to date plus an appropriate margin, if the project is cancelled by the customer without cause. Revenue from services is generally recognized when the services are performed or have been performed. When the services are performed continuously over a period of time, the Group recognizes the related revenue over time. In this case, revenue is generally recognized pro rata in relation to the total contract period. Product sales are typically accompanied by the legally required warranty. Any material extended warranties are accounted for as separate performance obligations.

According to the general payment terms, customer payments are due in the short term, typically within 30 days. To some extent, the Group obtains advance payments, e.g., to avoid credit risks. Therefore, the Group regularly has contract liabilities (payments received on account of orders). In addition, the Group recognizes contract liabilities in connection with service contracts (deferred revenues) when customers pay in advance.

There are no material effects from contracts with significant financing components. The Group uses the practical expedient provided by IFRS 15 regarding the existence of a significant financing component. This means that a financing component is only taken into consideration when the length of time between the transfer of goods or services and the receipt of consideration is expected to exceed one year and the effect is material.

The aggregate amount of the transaction price allocated to the performance obligations that are unsatisfied (or partially unsatisfied) at the end of the reporting period amounted to €1,223.9 million (2019: €661.1 million). The Group expects that these unsatisfied performance obligations will be satisfied for the most part in 2021.

There were no extraordinary changes in the carrying amounts of the contract liabilities and contract assets in the reporting period. Revenue in the amount of €79,234 K was recognized in the reporting period that was included in the contract liability balance at the beginning of the reporting period (2019: 62,577 K).

The balances of trade receivables and contract assets are presented in note 28. For details on the impairment losses on trade receivables and contract assets recognized in the reporting period, see note 39. The following table shows the balances of the Group's contract liabilities.

€ in K	Line item in statement of financial position	**Carrying amount Dec. 31, 2020**	Carrying amount Dec. 31, 2019
Deferred revenue	Other liabilities	37,400	27,208
Payments received on account of orders	Trade payables	140,931	84,008
Total contract liabilities		**178,331**	**111,216**

10. Functional Costs

The statement of profit or loss is prepared according to the function of expense method, also known as "cost of sales". The expenses are allocated to the respective functional areas of production, sales and distribution, research and development, as well as to general administration.

Expenses relating to cross-functional initiatives or projects are assigned to the respective functional costs based on an appropriate allocation principle.

The "Cost of sales" item includes the cost of products sold and the cost of merchandise sold. In addition to directly attributable expenses, such as raw materials and supplies, employee benefits expense, and energy expenses, cost of sales also includes overheads that can be attributed to the manufacturing area, and the corresponding depreciation and amortization.

The selling and distribution expenses relate in particular to the costs of the sales organization, distribution, and marketing.

Research and development expenses comprise the cost of research and product and process development, provided they are not capitalized.

The "General administrative expenses" item primarily comprises employee benefits expense and the cost of materials of the general administrative area.

All profit and loss items that cannot be allocated to one of the functional areas mentioned are recognized as other operating income and expenses. These essentially include effects from currency translation, disposal of non-current assets, allowances on trade receivables, and extraordinary expenses. Income from grants related to expenses is recognized as other income, when there is reasonable assurance that the conditions attached to the grants will be complied with and the grants will be received.

The total expenses incurred by the functional areas for materials and employee benefits are as follows:

Raw Materials and Supplies

€ in K	**2020**	2019
Expenses for raw materials and supplies and for purchased goods (incl. changes in inventories)	439,673	346,025
Cost of purchased services	159,063	127,500
	598,736	**473,525**

Employee benefits can be broken down as follows:

Employee Benefits

€ in K	**2020**	2019
Wages and salaries	609,007	496,151
Social security	119,988	103,012
Expenses for retirement benefits and pensions	13,847	9,866
	742,842	**609,029**

11. Other Operating Income and Expenses

€ in K	**2020**	2019
Currency translation gains	34,632	13,021
Income from the decrease in allowances for bad debts	3,381	1,301
Income from grants	2,458	1,101
Other income	4,026	7,521
Other operating income	**44,496**	**22,944**
Extraordinary expenses	−57,026	−28,461
Currency translation losses	−32,227	−12,440
Allowances for bad debts	−9,103	−4,735
Other expenses	−22,749	−10,379
Other operating expenses	**−121,104**	**−56,015**
Other operating income and expenses	**−76,607**	**−33,071**

The item reported as income from grants discloses the grants for expenses (essentially related to research and development projects), which are recognized as income as soon as there are sufficiently reliable indications that the necessary prerequisites have been met.

The main extraordinary items of fiscal 2019 and 2020 related to various strategic Group projects as well as integration and acquisition costs.

In 2020, currency translation gains include €8,472K from the reclassification of amounts in relation to hedging relationships that had previously been recognized in equity (see note 36).

12. Financial Result

€ in K	**2020**	2019
Interest and similar income	414	341
- of which from affiliated companies	135	170
Income from derivative financial instruments	11,650	4,388
Other financial income	45,633	4,669
Financial income	**57,697**	**9,398**
Interest and similar expenses	−21,676	−14,685
Expenses for derivative financial instruments	−9,143	−12,794
Interest for pensions and other retirement benefits	−594	−1,268
Other financial charges	−35,708	−13,140
Financial expenses	**−67,120**	**−41,888**
	−9,424	**−32,490**

Other financial expenses and income cover the effects of compound interest and the measurement of loans and other financial liabilities denominated in foreign currencies. For further information on income of €31.6 million on the remeasurement of the contingent consideration in connection with the acquisition of BIA Separations, which is also reported in other financial income, see note 8. In the prior period, the other financial charges had also included the effect of adjusting the liability in connection with the acquisition of AllPure phantom units (see note 31).

13. Income Taxes

€ in K	**2020**	2019
Current income taxes	−150,135	−87,365
Deferred taxes	24,925	2,973
- of which from tax losses	6,485	−1,032
- of which from temporary differences	18,440	4,005
	−125,210	**−84,392**

Current income taxes are calculated based on the particular national taxable income for the year, as well as according to national tax regulations. In addition, current taxes may contain adjusted amounts to cover any tax payments or refunds for years not yet assessed.

Based on the German average tax rate of approximately 30% and the different rates in other countries in which the Group operates, the expected tax rate for the Group is around 27%. The following table explains the differences between the tax expense expected and the income tax expenses reported for the particular fiscal year:

€ in K	**2020**	2019
Expected tax rate	**27%**	27%
Expected tax expense	–120,604	–81,807
Difference from the Group average income tax rate	14,858	13,233
Effects from intragroup dividends and other non-deductible expenses	–13,411	–9,449
Steuerfreie Erträge und Steuergutschriften	13,253	4,111
Deductible temporary differences and tax losses not capitalized	–7,426	–5,451
Taxes from previous years and adjustments from the revised evaluation of the recoverability of deferred tax assets	–9,973	–2,731
Withholding and similar taxes	–2,351	–1,364
Changes in tax rates	244	–741
Other	200	–193
	–125,210	**–84,392**
Effective tax rate	**28.0%**	**27.9%**

14. Earnings per Share

IAS 33, Earnings per Share, requires earnings per share to be calculated separately for each class of share. The undiluted earnings per share (basic EPS) are calculated based on the weighted average number of ordinary shares outstanding during the period. Treasury shares are not included in the calculation of the average number of shares outstanding.

	2020	2019
Ordinary shares		
Basis for calculating basic earnings per ordinary share (net profit after non-controlling interest), € in K	113,026	78,216
Weighted average number of shares outstanding	34,212,224	34,212,224
Basic earnings per ordinary share in €	**3.30**	**2.29**
Weighted average number of shares outstanding for calculating the diluted earnings per share	34,212,224	34,212,224
Diluted earnings per ordinary share, in €	3.30	2.29
Preference shares		
Basis for calculating basic earnings per preference share (net profit after minority interest), € in K	113,248	78,476
Weighted average number of shares outstanding	34,176,068	34,176,068
Basic earnings per preference share in €	**3.31**	**2.30**
Weighted average number of shares outstanding for calculating the diluted earnings per share	34,176,068	34,176,068
Diluted earnings per preference share, in €	3.31	2.30

Notes to the Statement of Financial Position

15. Goodwill and Intangible Assets

Goodwill

€ in K	Goodwill
Gross book values at Jan. 1, 2019	**662,229**
Currency translation	5,373
Acquisitions through business combinations	28,170
Gross book values at Dec. 31, 2019	**695,772**
Amortization and impairment losses at Jan. 1, 2019	**0**
Currency translation	0
Amortization and impairment losses in 2019	0
Amortization and impairment losses at Dec. 31, 2019	0
Net book values at Dec. 31, 2019	**695,772**
Gross book values at Jan. 1, 2020	**695,772**
Currency translation	–52,514
Acquisitions through business combinations	738,128
Gross book values at Dec. 31, 2020	**1,381,386**
Amortization and impairment losses at Jan. 1, 2020	**0**
Currency translation	0
Amortization and impairment losses in 2020	0
Amortization and impairment losses at Dec. 31, 2020	0
Net book values at Dec. 31, 2020	**1,381,386**

The item reported as goodwill in the amount of €1,381,386K (2019: €695,772K) generally results from the difference between the consideration transferred and the fair value of the net assets acquired in business combinations. The additions in fiscal 2020 were attributable to the acquisitions of WaterSep BioSeparations LLC, BIA Separations, and the selected Life Sciences businesses of Danaher (see note 8). The additions in the prior reporting period were attributable to the acquisitions of Biological Industries and Sartonets Taiwan. Under IAS 36, goodwill may not be amortized, but rather must be tested annually for impairment.

Because of the integration of our businesses into the Bioprocess Solutions and Lab Products & Services divisions and our respective positioning as a total solutions provider, several cash-generating units at this level are combined for the impairment test.

Thus, goodwill is allocated to the segments as follows:

€ in K	Dec. 31, 2020	Dec. 31, 2019
Bioprocess Solutions	1,052,293	517,263
Lab Products & Services	329,093	178,509
	1,381,386	**695,772**

The impairment tests for fiscal 2020 were conducted as of November 30, as in prior periods. The calculations measure the recoverable amount on the basis of the value in use of the particular cash-generating unit. Our cash flow forecasts consider previous experience and are generally based on the current projections of Group management for a period of four years. For the Bioprocess Solutions Division, calculations were based on an average terminal growth rate of 2.5% for the fiscal years after 2024. This terminal growth rate is derived from market expectations, which forecast medium-term growth rates in the high upper single-digit range for the biopharmaceutical market targeted by the division. The major growth drivers will be, among others, the aging population, the increase in population and improved access to pharmaceuticals in emerging-market countries, as well as the ongoing paradigm shift toward the utilization of single-use products in the manufacture of biopharmaceuticals. For the Lab Products & Services Division, a terminal growth rate of 1.5% was used for fiscal years after 2024.

The discount rates of the cash-generating units correspond to their weighted average cost of capital (WACC) and were recognized as follows:

		2020		2019
	Before tax	**After tax**	Before tax	After tax
Bioprocess Solutions	7.7%	6.3%	9.1%	7.3%
Lab Products & Services	8.6%	6.7%	9.7%	7.6%

In fiscal 2020, these impairment tests did not result in the recognition of impairment losses. Even realistic changes in the basic assumptions on which measurement of value in use is based would not result in the carrying amount of the cash-generating units exceeding their value in use.

Other Intangible Assets

€ in K	Patents, licenses, technologies and similar rights	Brand names	Customer relationships	Capitalized development costs	Payments on account	Total
Gross book values at Jan. 1, 2019	296,140	40,311	205,995	153,040	258	695,744
Currency translation	3,393	469	3,195	795	4	7,857
Acquisitions through business combinations	11,707	2,295	16,550	0	0	30,552
Capital expenditures	14,166	0	245	40,059	0	54,469
Disposals	−4,859	0	0	0	−38	−4,896
Transfers	−281	0	0	−267	−11	−559
Gross book values at Dec. 31, 2019	**320,265**	**43,076**	**225,984**	**193,627**	**214**	**783,166**
Amortization and impairment losses at Jan. 1, 2019	−111,073	−6,292	−112,811	−64,542	0	−294,718
Currency translation	−1,104	−63	−1,297	−192	0	−2,656
Amortization and impairment losses in 2019	−25,771	−1,904	−17,266	−14,821	0	−59,763
Disposals	4,811	0	0	0	0	4,811
Transfers	468	0	0	263	0	730
Amortization and impairment losses at Dec. 31, 2019	−132,670	−8,259	−131,375	−79,293	0	−351,596
Net book values at Dec. 31, 2019	**187,596**	**34,817**	**94,610**	**114,334**	**214**	**431,570**

€ in K	Patents, licenses, technologies and similar rights	Brand names	Customer relationships	Capitalized development costs	Payments on account	**Total**
Gross book values at Jan. 1, 2020	320,265	43,076	225,984	193,627	214	783,166
Currency translation	-39,549	-3,092	-15,606	-2,587	-18	-60,853
Acquisitions through business combinations	581,712	10,225	121,002	3,020	0	715,959
Capital expenditures	6,084	0	947	43,601	0	50,632
Disposals	-213	0	-822	-1,090	0	-2,125
Transfers	50	0	569	532	-7	1,144
Gross book values at Dec. 31, 2020	**868,349**	**50,208**	**332,075**	**237,103**	**189**	**1,487,924**
Amortization and impairment losses at Jan. 1, 2020	-132,670	-8,259	-131,375	-79,293	0	-351,596
Currency translation	4,520	509	4,072	488	0	9,589
Amortization and impairment losses in 2020	-43,388	-2,732	-25,355	-22,497	0	-93,972
Disposals	194	0	822	1,090	0	2,106
Transfers	-3	0	-569	0	0	-573
Amortization and impairment losses at Dec. 31, 2020	-171,348	-10,482	-152,405	-100,212	0	-434,446
Net book values at Dec. 31, 2020	**697,001**	**39,727**	**179,670**	**136,891**	**189**	**1,053,477**

Intangible assets acquired are reported at cost less accumulated, regular amortization calculated according to the straight-line method. The useful life of an intangible asset is the period over which this asset is expected to contribute directly or indirectly to the cash flows of that entity.

Costs incurred within the scope of the development of new products and methods are capitalized as internally generated intangible assets if the following criteria are met:

- The technical feasibility of completing the intangible assets so that it will be available for use or sale;
- The intention to complete the intangible asset and use or sell it;
- The ability to use or sell the intangible asset;
- The demonstration of how the intangible asset will generate probable future economic benefits;
- The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset;
- The ability to measure reliably the expenditure attributable to the intangible asset during its development.

The capitalized development costs essentially cover the costs attributable to the staff involved in R&D, raw materials and supplies, external services and directly attributable overheads. Internally generated intangible assets are amortized over their useful lives on a straight-line basis.

If an internally generated intangible asset cannot be capitalized, the development costs are recognized as expenses in the period in which they are incurred. Costs for research activities are reported as expenses in the period in which they are incurred.

Amortization of intangible assets is based on the following periods of useful life:

Software	2 to 10 years
Customer relationships and technologies	5 to 20 years
Capitalized development expenses	4 to 6 years
Brand name	2 years to an indefinite period

The brand name acquired in the Stedim transaction (carrying amount: €10,779 K) is considered to have an indefinite useful life as there is no foreseeable limit to the period over which it is expected to generate net cash inflows for the company. Because of the integration of the "Stedim" brand into the name of the "Sartorius Stedim Biotech" sub-group and the name of that sub-group's parent entity, the relevant cash flows cannot be measured separately, however. The recoverability of the brand name was considered at the next-higher level of the cash-generating unit (CGU), i.e., the Bioprocess Solutions Division.

The useful lives of the remaining brand names acquired through business combinations are estimated at up to 20 years.

Amortization of intangible assets is allocated to the corresponding functions in the statement of profit or loss. For capitalized development costs, amortization is reported in the cost of sales.

In fiscal 2020, development costs of €43,601 K (2019: 40,059 T€) were recognized as assets.

In fiscal 2020, impairment losses of €0.0 million were recognized (2019: 3.0 Mio.€).

16. Property, Plant and Equipment

€ in K	Land, buildings and improvements	Technical machinery and equipment	Factory and office equipment and other equipment	Payments on account and construction in progress	Total
Gross book values at Jan. 1, 2019	310,444	216,038	156,737	248,160	931,380
Currency translation	1,325	1,473	616	2,324	5,738
Acquisitions through business combinations	3,185	1,494	1,431	0	6,110
Capital expenditures	62,947	27,262	24,480	47,441	162,130
Disposals	645	−4,718	−4,761	−41	−8,875
Transfers	162,035	9,948	10,868	−188,380	−5,529
Gross book values at Dec. 31, 2019	**540,581**	**251,498**	**189,371**	**109,505**	**1,090,955**
Depreciation and impairment losses at Jan. 1, 2019	−74,474	−119,881	−95,456	−8	−289,819
Currency translation	−456	−810	−449	0	−1,714
Amortization and impairment losses in 2019	−16,023	−18,250	−20,256	−167	−54,696
Disposals	−920	4,529	4,224	0	7,833
Transfers	350	5,405	−257	0	5,498
Depreciation and impairment losses at Dec. 31, 2019	−91,522	−129,007	−112,194	−175	−332,898
Net book values at Dec. 31, 2019	**449,059**	**122,491**	**77,177**	**109,330**	**758,056**
Net book values of right-of-use assets at Dec. 31, 2019	62,334	2,174	10,379	0	74,886
Total book values property plant & equipment at Dec. 31, 2019	**511,392**	**124,664**	**87,556**	**109,330**	**832,942**

€ in K	Land, buildings and improvements	Technical machinery and equipment	Factory and office equipment and other equipment	Payments on account and construction in progress	**Total**
Gross book values at Jan. 1, 2020	540,581	251,498	189,371	109,505	1,090,955
Currency translation	−9,895	−6,315	−2,781	−4,248	−23,239
Acquisitions through business combinations	6,948	5,656	716	8,982	22,303
Capital expenditures	39,681	27,239	21,376	105,782	194,079
Disposals	−683	−3,754	−6,360	539	−10,258
Transfers	19,332	23,556	9,156	−52,733	−689
Gross book values at Dec. 31, 2020	**595,964**	**297,881**	**211,477**	**167,828**	**1,273,150**
Depreciation and impairment losses at Jan. 1, 2020	−91,522	−129,007	−112,194	−175	−332,898
Currency translation	1,709	2,662	1,700	3	6,075
Amortization and impairment losses in 2020	−21,080	−22,157	−21,904	0	−65,141
Disposals	547	2,657	5,675	0	8,880
Transfers	−296	−12	275	164	131
Depreciation and impairment losses at Dec. 31, 2020	−110,642	−145,857	−126,447	−8	−382,953
Net book values at Dec. 31, 2020	**485,323**	**152,024**	**85,030**	**167,820**	**890,196**
Net book values of right-of-use assets at Dec. 31, 2020	67,957	1,344	11,729	0	81,030
Total book values property plant & equipment at Dec. 31, 2020	**553,280**	**153,368**	**96,759**	**167,820**	**971,227**

The "Property, plant and equipment" item is reported at cost and, if subject to depreciation, reduced by regular depreciation. Impairment tests are conducted when impairment indicators are identified. The straight-line method is applied to depreciation reported in the consolidated financial statements.

Depreciation of non-current assets is based on the following periods of useful life:

Buildings	15 to 50 years
Machinery	5 to 15 years
Factory and office equipment	3 to 13 years

Depreciation is presented in the statement of profit or loss according to how the assets are used, in the cost of sales, selling and distribution expenses, research and development expenses, administrative expenses, and other operating expenses.

Borrowing costs are expensed as incurred unless they are directly attributable to the acquisition, construction, or production of a qualifying asset and are therefore part of the cost of that asset. An asset is deemed to be a qualifying asset if a substantial period of time (6 or 12 months) is required to ensure that it will be in the intended state ready for use or sale.

Grants related to assets are generally deducted from the cost of assets.

17. Leases

Since 2019, lease accounting follows IFRS 16, Leases. A lease is a contract, or part of a contract, that conveys the right to use an asset for a period of time in exchange for consideration. For the financing structure of the Sartorius Group, leases are not of high relevance. In the past, the Group made large own investments in its sites. The main considerations for leases are therefore generally of a practical nature, for example, with regard to the company's management of IT hardware or its fleet management. Accordingly, leases of IT hardware and cars represent the majority of the Group's lease contracts. The lease term of such leases is generally fixed and typically covers three to five years.

Furthermore, at some sites, the Group has long-term leases of buildings, which are negotiated and managed locally. These contracts may contain extension options, which are included in the lease term according to IFRS 16 when the Group is reasonably certain that the option will be exercised. The Group does not act as a lessor to a material extent.

The Standard formulates a standardized accounting model according to which leases are generally to be recognized in the lessee's statement of financial position. A lessee recognizes a right-of-use asset as well as a lease liability, which represents its obligation to make lease payments.

The Group makes use of the exemptions for short-term leases and leases of low-value assets and recognizes the corresponding lease payments as an expense generally on a straight-line basis over the particular lease term. Accordingly, no right-of-use assets and no lease liabilities are recognized for these leases. Furthermore, no right-of-use assets and no liabilities are recognized for leases between Group entities. The Group does not apply this Standard to leases of intangible assets.

In the statement of financial position, the Group presents right-of-use assets according to the nature of the underlying lease assets under "Property, plant, and equipment." Right-of-use assets are recognized at cost less accumulated depreciation and any impairment losses. The cost of the right-of-use assets comprises the present value of the future lease payments, any payments paid upon or before commencement of the lease, any initial direct costs, and costs for dismantling or removing the lease asset. The right-of-use assets are typically depreciated over the lease term. If the transfer of legal ownership of a lease asset is planned at the end of the lease term, the right-of-use asset is depreciated over the economic useful life of the lease asset. In the statement of profit or loss, depreciation is recognized within functional costs.

The lease liabilities are disclosed separately on the face of the statement of financial position. Lease liabilities are initially recognized at an amount equal to the present value of the future lease payments. The lease payments do generally not include any payments in relation to non-lease components. In general, the specific applicable incremental borrowing rate of the Group is used for discounting. Subsequently, the carrying amount of the lease liabilities is increased by interest expenses and reduced by lease payments. Interest expenses are reported in the financial result and, to the extent they are paid, in the financing section of the cash flow statement together with "Interest paid".

As of December 31, 2020, lease liabilities stood at €85 million (2019: €77 million). The maturities of the future lease payments are presented in note 38. The composition of the right-of-use assets included in "Property, plant, and equipment" as of December 31, 2020 as well as of the preceding reporting date and the main changes are presented in the table below.

€ in K	Land, buildings and improvements	Technical machinery and equipment	Factory and office equipment and other equipment	Total
Gross book values at Jan. 1, 2019	63,899	2,538	10,450	76,887
Currency translation	851	21	82	954
Acquisitions through business combinations	3,661	0	247	3,908
Additions	13,450	889	7,998	22,337
Disposals	-1,585	-600	-3,273	-5,458
Transfers	-389	224	174	9
Gross book values at Dec. 31, 2019	**79,887**	**3,072**	**15,677**	**98,637**
Depreciation and impairment losses at Jan. 1, 2019	-6,417	-380	-2,162	-8,959
Currency translation	-119	-3	-5	-127
Amortization and impairment losses in 2019	-12,076	-891	-5,294	-18,261
Disposals	906	600	2,240	3,746
Transfers	152	-224	-76	-149
Depreciation and impairment losses at Dec. 31, 2019	-17,554	-899	-5,298	-23,751
Net book values at Dec. 31, 2019	**62,334**	**2,174**	**10,379**	**74,886**

€ in K	Land, buildings and improvements	Technical machinery and equipment	Factory and office equipment and other equipment	**Total**
Gross book values at Jan. 1, 2020	79,887	3,072	15,677	98,637
Currency translation	-3,818	-31	-284	-4,133
Acquisitions through business combinations	5,682	0	0	5,682
Additions	17,552	180	8,645	26,377
Disposals	-700	-12	-2,466	-3,178
Transfers	0	-107	57	-49
Gross book values at Dec. 31, 2020	**98,603**	**3,102**	**21,630**	**123,335**
Depreciation and impairment losses at Jan. 1, 2020	-17,554	-899	-5,298	-23,751
Currency translation	934	17	130	1,081
Amortization and impairment losses in 2020	-14,690	-882	-5,908	-21,480
Disposals	663	0	1,145	1,809
Transfers	0	5	30	36
Depreciation and impairment losses at Dec. 31, 2020	-30,646	-1,758	-9,901	-42,305
Net book values at Dec. 31, 2020	**67,957**	**1,344**	**11,729**	**81,030**

The table below shows the interest expenses presented in the financial result, the total cash outflows for existing leases, and expenses recognized for short-term leases and leases of low value assets during the reporting period. No material expenses were recognized for variable lease payments in the reporting period.

€ in K	**2020**	2019
Interest expenses for leases	2,710	2,497
Expenses for short-term leases	2,468	4,054
Expenses for leases of low value assets	5,111	2,917
Total cash outflow for leases	30,018	27,297

18. Deferred Taxes

	Deferred tax assets		Deferred tax liabilities	
€ in K	**Dec. 31, 2020**	Dec. 31, 2019	**Dec. 31, 2020**	Dec. 31, 2019
Other intangible assets	812	313	142,858	93,411
Tangible assets	0	0	14,552	9,466
Inventories	17,677	13,955	0	0
Receivables and other current assets	4,730	3,553	0	0
Provisions	16,808	12,264	0	0
Liabilities	17,903	7,492	0	6,828
Gross amount	**57,929**	**37,577**	**157,410**	**109,705**
Taxable losses carried forward	12,697	6,883	0	0
Interest carry-forwards	770	2,674	0	0
Tax on non-distributed earnings of subsidiaries	0	0	2,850	2,350
Offset	–26,376	–21,367	–26,376	–21,367
	45,022	**25,767**	**133,885**	**90,688**

Deferred tax assets and liabilities are determined based on temporary differences between the carrying amounts and the tax bases of assets and liabilities, including differences from consolidation. In addition, loss carry-forwards and tax credits are considered. Measurement is based on the tax rates expected to be effective in the period in which the asset is realized or liability settled. Changes in deferred tax assets and liabilities are reflected in income taxes in the statement of profit or loss. Exceptions are changes to be recognized in other comprehensive income directly in equity, as well as effects from acquisitions and currency effects.

On principle, the tax rates and tax rules are used that have been enacted or substantively enacted at the reporting date. Deferred tax assets are recognized to the extent that it is probable that taxable profit at the level of the relevant tax authority will be available for the utilization of the deductible temporary differences or losses carried forward.

Deferred Tax Assets

On the reporting date, the Group had unused tax loss amounts carried forward of about €175 million (2019: around €142 million) to be deducted from future taxable profits. For German companies, the average of the loss carry-forward calculated from corporate income tax and from commercial income tax was taken into account. A deferred tax amount was reported on about €50 million (2019: about €30 million) of these losses. Concerning the remaining losses to be carried forward, no deferred tax amounts were recognized because of the lack of foreseeability of future taxable profits. Of the unused tax losses, €9.1 million can still be carried forward for a limited time (2019: €12.6 million) and of this carry-forward amount, €9.1 million will expire in the next five years (2019: €12.6 million).

Deferred tax assets of about €2 million (2019: about €1 million) relate to companies that reported losses in the year under review or in the prior reporting period. These losses carried forward were reported as assets because it is assumed that taxable profits will be available in the future, against which the unused tax losses and the deductible temporary differences can be offset.

In addition, the Group had unused interest carry-forwards from German Group companies in the amount of €6 million (2019: €11 million). Deferred tax assets of €0.8 million were considered for these carry-forwards in the reporting year (2019: €2.7 million).

Deferred Tax Liabilities

The deferred tax liabilities in connection with intangible assets essentially relate to assets acquired in business combinations and, consequently, are mainly linked to customer relationships and technologies.

For temporary differences in connection with shares in subsidiaries, which amounted to €1,462 million (2019: €1,017 million), deferred tax liabilities were not recognized on these differences as the realization of such liabilities is not expected or planned within the foreseeable future. If these retained earnings were to be distributed, they would be subject to taxation at a rate of 5% in Germany; in addition, foreign withholding tax may be incurred.

In fiscal 2020, as in previous years, the tax effect from reporting derivative financial instruments recognized outside the statement of profit or loss according to the hedge accounting rules of IFRS 9, and the deferred tax assets from the recognition of actuarial gains and losses were recognized in other comprehensive income. Likewise, the amount of current income taxes attributable to net investments in a foreign operation was recognized in other comprehensive income. The income taxes recognized in other comprehensive income are disclosed in the following table:

€ in K	**2020**	2019
Cash flow hedges	-3,654	1,055
Remeasurements of the net defined benefit liability	97	3,329
Net investment in a foreign operation	12,404	-1,998
Total	**8,847**	**2,386**

The change in deferred tax assets and liabilities in fiscal years 2019 and 2020 is as follows:

€ in K	Deferred tax assets	Deferred tax liabilities
Balance at Jan. 1, 2019	20,606	83,684
Currency translation	-22	980
Change in the scope of consolidation	514	6,714
Recognized in profit or loss in 2019	2,687	-285
Recognized in other comprehensive income	1,981	-405
Balance at Dec. 31, 2019	**25,767**	**90,688**

€ in K	**Deferred tax assets**	**Deferred tax liabilities**
Balance at Jan. 1, 2020	25,767	90,688
Currency translation	-1,274	-3,057
Change in the scope of consolidation	41	59,540
Recognized in profit or loss in 2020	12,616	-12,309
Recognized in other comprehensive income	7,871	-976
Balance at Dec. 31, 2020	**45,021**	**133,885**

19. Inventories

€ in K	**Dec. 31, 2020**	Dec. 31, 2019
Raw materials and supplies	156,913	115,553
Work in progress	159,867	119,608
Finished goods and merchandise	234,932	174,170
Payments on account	6,843	3,346
	558,556	**412,676**

€ in K	**Dec. 31, 2020**	Dec. 31, 2019
Gross amount of inventories	595,890	438,144
Write-downs	–37,334	–25,468
Net amount of inventories	**558,556**	**412,676**

Raw materials and supplies, including merchandise, are reported under "Inventories" at average cost. In principle, finished goods and work in progress are reported at cost of conversion. This cost includes direct costs attributable to these materials and the appropriate portion of production and materials handling overheads, general administrative expenses, and depreciation and | or amortization of non-current asset at normal rates, provided that these expenses are caused by production.

Inventories must be measured at the lower of cost and the net realizable value. The net realizable value represents the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary for marketing, sales, and distribution. Where inventory risks exist, such as the risk of reduced shelf life as a result of storage periods or limited usability, inventories are marked down accordingly.

20. Issued Capital

The issued capital of Sartorius AG is divided into 37,440,000 bearer ordinary shares and the same number of non-voting preference shares, each with a calculated par value of €1.00. Preference share owners receive an increased dividend (surplus dividend) of €0.01 per preference share from the distributable profit; however, the dividend must amount to at least €0.02 per preference share. All shares are fully paid up.

Sartorius AG exercised the authority granted at the Annual Shareholders' Meeting on June 21, 2000, to repurchase treasury shares in the amount of €16,082 K pursuant to Section 71 (1), no. 8 of the German Stock Corporation Act (AktG). As required by IAS 32, treasury shares were deducted from equity and capital reserves.

These shares are held in particular as currency for future acquisitions of companies. From October 27, 2000, to the reporting date, a total of 831,944 ordinary shares were repurchased at an average price of €11.27 and a total of 840,983 preference shares at an average price of €7.98. In December 2015, 25,000 ordinary shares and 25,000 preference shares were issued to the CEO and Executive Board Charmain Dr. Joachim Kreuzburg in accordance with his 2014 remuneration agreement. In November 2020, 13,785 ordinary shares and 13,785 preference shares were issued to the CEO and Executive Board Charmain Dr. Joachim Kreuzburg in accordance with his 2019 remuneration agreement.

Following the stock split carried out in 2016, 3,213,991 ordinary shares and 3,250,147 preference shares remain as treasury stock, representing a proportion of €6,464 K (8.6%) of the share capital.

No treasury shares were purchased in fiscal 2020.

21. Reserves

Capital Reserves

Capital reserves include the amounts generated above the nominal amount in previous years, when Sartorius AG issued shares. As part of the stock split, an amount of €51,291 K was reclassified from capital reserves to issued capital in fiscal 2016.

In fiscal 2020, capital reserves rose by €1,296 K (2019: €530 K) due to the employee benefits expense to be offset in connection with the share-based remuneration agreement with Dr. Kreuzburg.

Cash Flow Hedging Reserves

Amounts recognized in other comprehensive income as part of an effective hedging relationship are transferred to the cash flow hedging reserves. In particular, these are fluctuations in the fair value of currency hedges as well as their respective tax effects. The cumulative amount transferred to other comprehensive income as of the reporting date stands at €14,362 K (2019: 2,183 K).

Pension Reserves

Actuarial gains and losses from defined benefit plan commitments, including their respective tax effects, are included in pension reserves. For further details, see note 23.

22. Non-Controlling Interest

The Sartorius Stedim Biotech subgroup headquartered in Aubagne, France, accounts for the majority of non-controlling interest in the Sartorius Group. The latter holds approximately 74% of the capital and 85% of the voting rights in this subgroup. In fiscal 2020, 405,887 shares in Sartorius Stedim Biotech S.A. were transferred to the sellers in the course of the acquisition of BIA Separations (see note 8). The following subsidiaries account for further non-controlling interest amounts:

- Sartorius Korea Biotech based in Seoul, South Korea, with a 69% share in capital
- Sartorius Thailand located in Bangkok (33%)
- Biological Industries, Kibbutz Beit Haemek, Israel (50%)

The interest in Biological Industries was increased by 20% in fiscal 2020, from just above 50% to just above 70%. In exchange for the acquisition of these 20% in Biological Industries, the holders of the non-controlling interests received a payment of approximately €22.5 million in cash. The liability amounting to approximately €19.8 million which had been recognized for the put option of the non-controlling interests has been reclassified to retained earnings. The impact on the non-controlling interests and the equity of the owners of the Group are presented in the statement of changes in equity. Sartorius Thailand is consolidated due to contractual arrangements to ensure control.

€ in K	**2020**	2019
Cumulative non-controlling interest as of Dec. 31		
Sartorius Stedim Biotech	332,907	254,021
Other	21,686	28,805
	354,593	**282,826**
Profit or loss allocated to non-controlling interest		
Sartorius Stedim Biotech	93,685	60,361
Other	1,513	1,544
	95,198	**61,905**
Dividends paid to non-controlling interest		
Sartorius Stedim Biotech	8,068	13,526
Other	792	1,335
	8,860	**14,861**

The following condensed financial information refers to the Sartorius Stedim Biotech Group:

Condensed Statement of Financial Position

€ in K	**Dec. 31, 2020**	Dec. 31, 2019
Non-current assets	2,194,120	1,209,134
Current assets	875,216	636,229
	3,069,336	**1,845,362**
Equity	1,482,917	1,188,883
Non-current liabilities	1,018,726	228,117
Current liabilities	567,693	428,363
	3,069,336	**1,845,362**

Condensed Statement of Profit or Loss and Other Comprehensive Income

€ in K	**2020**	2019
Sales revenue	1,910,081	1,440,570
Profit before tax	482,630	317,419
Income taxes	-122,114	-81,383
Net profit for the period	**360,516**	**236,036**
Other comprehensive income after tax	-30,927	1,303
Total comprehensive income	**329,589**	**237,339**

Condensed Statement of Cash Flows

€ in K	2020	2019
Cash flow from operating activities	**416,878**	**310,130**
Cashflow aus Investitionstätigkeit	–621,116	–184,373
Cash flow from financing activities	234,066	–122,160
Net increase | decrease in cash and cash equivalents	**29,829**	**3,597**
Cash and cash equivalents at the beginning of the period	28,166	23,975
Net effect of currency translation on cash and cash equivalents	1,767	593
Cash and cash equivalents at the end of the period	**59,762**	**28,166**

23. Pension and Employee Benefits Provisions

Pension provisions and similar obligations are recognized in the consolidated financial statements of the Sartorius Group in accordance with actuarial principles. IAS 19, Employee Benefits, stipulates the projected unit credit method as the method of measurement. In addition to known pensions and life expectancies, this expected cash value method takes into account future salary and pension increases.

Defined Contribution Plans

Most of the companies of the Group have defined contribution plans, frequently in the form of government-backed retirement insurance. In fiscal 2020, an amount of €36.7 million was recognized for defined contribution plans (2019: €32.0 million).

Defined Benefit Plans

Pension provisions and similar obligations have been recognized in the consolidated financial statements of the Sartorius Group in accordance with actuarial principles. All actuarial gains and losses are shown directly in other comprehensive income according to IAS 19. The actuarial losses, which were transferred to the pension reserves, essentially resulted from a change in the discount rate and totaled €–44,507K (2019: €–39,646 K).

An amount of €60,947 K (2019: €59,512 K) relates in particular to the net amount of pension provisions for retirement pension plans in Germany. These provisions are based on direct commitments under defined benefit pension plans. Under these commitments, the employees earn benefits for each year of service rendered to the company. The pension benefits are generally not funded by assets. A substantial portion of these provisions relates to Sartorius AG. In this case, the obligations measured pertain, firstly, to the General Pension Plan ("Allgemeine Versorgungsordnung") for employees whose employment commenced prior to January 1, 1983. Secondly, individual commitments have been made to current and former Executive Board members and executives.

Measurement of the post-employment benefit obligations of the German Group companies is based on the following actuarial assumptions:

	2020	2019
Discount rate	0.45%	0.89%
Future salary increases	3.00%	3.00%
Future pension increases	2.00%	2.00%

The assumed discount factors reflect the interest rates that were paid on the reporting date for prime corporate (industrial) bonds with matching maturities and denominated in the relevant currencies. If such corporate bonds are not available with matching long-term maturities or are insufficiently available, their matching interest rates are determined by extrapolation.

Concerning the assumptions on mortality and invalidity, the actuarial tables (RT) 2018 G compiled by Klaus Heubeck were used.

The following parameters were used for the French companies:

	2020	2019
Discount rate	0.50%	0.70%
Future salary increases	2.00%	2.00%
Future pension increases	2.00%	2.00%

The amounts reported in the statement of profit or loss and in the statement of comprehensive income consist of the following:

€ in K	**2020**	2019
Service cost	1,985	2,147
Net interest cost	570	1,093
Components of defined benefit costs recognized in profit or loss	**2,555**	**3,240**
Return on plan assets (excl. interest)	–58	–12
Actuarial gains | losses	5,000	11,638
Components of defined benefit costs recognized in other comprehensive income	**4,942**	**11,626**
Total defined benefit costs	**7,497**	**14,867**

In the statement of profit or loss, the current service cost is disclosed according to the assignment of employees to the respective functions.

The net amount or present value included in the consolidated statement of financial position arising from the Group's obligation in respect of defined benefit plans is as follows:

€ in K	**Dec. 31, 2020**	Dec. 31, 2019
Present value of obligations	98,421	91,369
Fair value of the plan assets	18,052	14,818
Net liability	**80,368**	**76,552**

Defined Benefit Obligation

€ in K	**2020**	2019
Present value of obligations as of Jan. 1	**91,369**	**76,658**
Current service cost	2,705	2,541
Past service cost	–720	–394
Interest cost	697	1,268
Actuarial gains | losses	5,001	11,621
Currency translation differences	–205	450
Retirement benefits paid in the reporting year	–4,044	–2,764
Employer contributions	260	290
Employee contributions	449	357
Change in the scope of consolidation	513	0
Contributions by the plan participants	1,949	1,286
Other changes	446	56
Present value of obligations as of Dec. 31	**98,421**	**91,369**

The actuarial gains and losses of the defined benefit obligation are allocated as follows:

€ in K	**2020**	2019
Experience adjustments	1,498	616
Changes in demographic assumptions	171	–486
Changes in financial assumptions	3,332	11,491
Total	**5,001**	**11,621**

Plan Assets

€ in K	**2020**	2019
Plan assets at Jan. 1	**14,818**	**11,935**
Interest income	128	175
Return on plan assets (excl. interest)	58	12
Actuarial gains | losses	1	–17
Group contribution & payments	–1,724	–946
Employee contributions	449	357
Currency translation differences	–100	283
Employer contributions	2,066	1,734
Contributions by the plan participants	1,949	1,286
Other changes	408	0
Plan assets as of Dec. 31	**18,052**	**14,818**

Composition of Plan Assets

Plan assets essentially consist of insurance contracts with insurance companies in Germany and Switzerland. An amount of €6.2 million (2019: €3.6 million) is held by local banks as securities for subsidiaries in South Korea.

Risks

The defined benefit plans do not entail any significant entity-specific or plan-specific risks. Due to the rather low coverage of the defined benefit obligation by plan assets, liquidity risks arise in principle, which are immaterial for the Group due to their low monetary amount.

Sensitivity Analysis

An increase or a decrease in the actuarial assumptions would have the following impacts on the defined benefit obligations for the year ended December 31,2020 (a plus sign before the number indicates an increase in the obligation):

Demographic assumptions

Change in life expectancy	−1 year	+1 year
Effect	−4,000	4,106

Financial assumptions

Change in discount rate	−100 bps	+100 bps
Effect	15,018	−12,431
Change in future salary increase	−50 bps	+50 bps
Effect	−2,983	3,208
Change in future pension increase	−25 bps	+25 bps
Effect	−3,229	3,382

Present value of the defined benefit obligations for the year ended December 31, 2019:

Demographic assumptions

Change in life expectancy	−1 year	+1 year
Effect	−3,730	3,823

Financial assumptions

Change in discount rate	−100 bps	+100 bps
Effect	13,684	−11,507
Change in future salary increase	−50 bps	+50 bps
Effect	−2,325	2,500
Change in future pension increase	−25 bps	+25 bps
Effect	−3,046	3,191

The sensitivity analysis presented above may not be representative of the actual change in the defined benefit obligation as it is unlikely that changes in assumptions occur in isolation. Furthermore, the present value of the defined benefit obligation was calculated using the same method that was applied in calculating the defined benefit obligation liability recognized in the statement of financial position (projected unit credit method).

Maturity Analysis
The undiscounted cash flows from defined benefit obligations can be allocated to maturities as follows:

€ in K	**Dec. 31, 2020**	Dec. 31, 2019
< 1 year	4,302	3,373
1-5 years	15,388	14,918
6-10 years	23,976	21,998
>10 years	119,595	120,038

The weighted average duration of the defined benefit obligations is 16.4 years (2019: 16.7 years).

For fiscal 2021, payments of €5.2 million for defined benefit plan commitments are expected (prior year: €4.4 million). These cover contributions to plan assets and payment of retirement benefits.

24. Other Non-Current Provisions

Provisions are recognized if a legal or constructive obligation or liability to third parties exists and if an outflow of resources is probable and the expected obligation can be reliably estimated. The amount recognized for a provision represents the best estimate of the obligation at the reporting date.

Restructuring provisions are recognized in connection with measures that materially change the scope of business performed by a segment or business unit or the manner in which business is conducted. In most cases, these measures give rise to expenses related to termination benefits due to the termination of employment contracts or leases as well as to compensation payments to dealers, distributors, and suppliers. Restructuring provisions are recognized if the company has begun or already communicated a detailed and formal plan.

Non-Current Provisions

€ in K	Payments to employees on early retirement plan	Other	Total
Balance at Jan. 1, 2019	4,087	3,732	7,820
Currency translation	5	74	79
Consumption	−2,007	−351	−2,358
Reversals | Utilization	0	−84	−84
Additions	2,247	734	2,980
Balance at Dec. 31, 2019	**4,332**	**4,105**	**8,437**

€ in K	Payments to employees on early retirement plan	Other	**Total**
Balance at Jan. 1, 2020	4,332	4,105	8,437
Change in the scope of consolidation	0	2,744	2,744
Currency translation	−5	−89	−94
Consumption	−2,083	−192	−2,275
Reclassifications	0	0	0
Reversals | Utilization	−4	−179	−183
Additions	2,833	406	3,239
Balance at Dec. 31, 2020	**5,073**	**6,795**	**11,868**

The non-current provisions comprise mainly provisions for partial retirement agreements, a type of early retirement plan, and employee bonuses for their company anniversaries. These obligations arise mainly at German Group companies. The early retirement plans are partial retirement plans that permit employees to work part-time for 3 to 5 years directly before they are due to retire at the legal retirement age and that are financially supported by the company.

According to IAS 19, the expenses related to severance payments to be earned in future periods must be spread over the active employee's respective remaining period of service. Actuarial gains and losses, as well as past service costs, are to be recognized as income or expense(s).

Bonuses for service anniversaries are generally granted to employees who have completed 20, 25, 30, and 40 years of service and cover additional special vacation as well as relatively small amounts of money.

Non-current provisions are reported at their present value on the reporting date. The discount rate is -0.3% (2019: 0.0%) for employees on the early retirement plan and 0.28% (2019: 0.54%) for provisions recognized for service anniversaries. In fiscal 2019 and 2020, the effect of compounding non-current provisions, including the effects of changes in the interest rate, were immaterial.

Current Provisions

€ in K	Warranties	Other	Total
Balance at Jan. 1, 2019	8,284	7,976	16,260
Currency translation	79	18	97
Change in the scope of consolidation	0	0	0
Consumption	−631	−1,791	−2,422
Reversals	−3,204	−3,125	−6,329
Additions	3,027	4,790	7,817
Balance at Dec. 31, 2019	**7,555**	**7,867**	**15,422**

€ in K	Warranties	Other	**Total**
Balance at Jan. 1, 2020	7,555	7,867	15,422
Currency translation	−322	−46	−367
Change in the scope of consolidation	696	1,400	2,096
Consumption	−330	−809	−1,140
Reversals	−1,748	−1,748	−3,496
Additions	7,334	9,654	16,988
Balance at Dec. 31, 2020	**13,186**	**16,318**	**29,504**

Provisions for warranties cover expected replacement deliveries and repairs. Such provisions are recognized to cover individual risks, provided that their occurrence is more likely than not, as well as to cover general warranty risks based on past experience.

Other provisions include those for pending losses on onerous contracts and for uncertain obligations concerning employee benefits, as well as provisions for interest in connection with tax risks.

25. Other Liabilities

€ in K	**Dec. 31, 2020**	Dec. 31, 2019
Tax and social security	36,075	26,966
Other	46,607	30,284
Other liabilities	**82,682**	**57,249**

Financial Instruments | Financial Risks
Financial instruments are any contracts that give rise to a financial asset of one entity and a financial liability or equity instrument of another entity. Such financial instruments are recognized on the trade date. The following sections provide a comprehensive overview of the financial instruments used at Sartorius and additional information on the items including financial instruments of the statement of financial position.

Financial assets are primarily comprised of cash and cash equivalents, trade receivables and receivables from loans, as well as derivatives with a positive fair value.

Financial liabilities of the Group mainly comprise loans from banks, trade payables, lease liabilities and derivative financial instruments with a negative fair value. Furthermore, material financial liabilities result from contingent consideration according to IFRS 3. Except for derivative financial instruments and contingent consideration, financial liabilities are measured at amortized cost using the effective interest method.

26. Financial Instruments: Significant Accounting Policies

IFRS 9, Financial Instruments, contains rules for the classification and measurement of financial instruments, including a model of expected credit losses for the calculation of impairments of financial assets, as well as guidelines for hedge accounting. This standard also contains guidance on the recognition and derecognition of financial instruments.

Under IFRS 9, the classification and measurement approach for financial assets reflects both the entity's business model (held-to-collect, held-to-collect-and-sell, other) within the scope of which assets are held and the contractual cash flow characteristics ("SPPI" criterion: solely payments of principal and interest). There were no reclassifications of financial instruments during the reporting period.

With regard to the impairment of financial assets, IFRS 9 sets out an expected-loss model. Financial assets are generally regarded as credit-impaired when there are objective indications that cast doubt about the full collection of the cash flows of the respective financial assets. With regard to the financial assets of the Group, the simplified approach applied to trade receivables is of particular importance.

Besides trade receivables, cash and cash equivalents are the most material financial assets on the Group's statement of financial position as of the reporting date, December 31, 2020. No impairment is recognized for these financial assets due to materiality considerations. As on the last reporting date, for the remaining financial assets that are measured at amortized cost, no impairment is recognized as of December 31, 2020, for the 12-month expected credit losses, given the Group's immaterial historical losses.

Derivatives such as forward contracts on foreign currencies are measured at fair value. In this context, the mark-to-market method in which recognized mathematical methods are used is applied. The fair values are based on the market data available at the time the value of these derivatives is calculated. Instruments that are not designated as hedging instruments and to which no hedge accounting is applied are classified as held for trading. Changes in the fair values of derivative financial instruments are either recognized in profit or loss or, in the case of hedging relationships, in other comprehensive income.

The Group applies the hedge accounting rules of IFRS 9. The Group uses forward transactions to hedge cash flow risks that result from changes in foreign exchange rates in relation to sales of products and the production activities, and designates only the spot element of the hedging instrument.

Financial Assets

27. Cash and Cash Equivalents

The Group considers all highly liquid investments with up to three months' maturity from the date of acquisition to be cash or cash equivalents. These mainly comprise checks, cash on hand, and especially deposits in banks. Cash and cash equivalents are measured at cost. As of the reporting date on December 31, 2020, cash and cash equivalents stood at around €203,435 K (2019: €54,441 K).

28. Current Trade and Other Receivables

€ in K	**Dec. 31, 2020**	Dec. 31, 2019
Trade receivables from third parties	306,727	293,647
Amounts due from customers for contract work [1]	6,159	8,531
Receivables from non-consolidated affiliates	1,374	537
Trade receivables	**314,260**	**302,715**

1 Contract assets according to IFRS 15 (see note 9).

The carrying amounts of trade receivables approximate the receivables' fair value due to their short maturities. Contract assets result from customer-specific construction contracts that meet the criteria for recognition of revenue over time in accordance with IFRS 15 (see note 9). The amount of trade receivables presented as of December 31, 2020, is reduced by €121.5 million as result of factoring, because substantially all risks and rewards in relation to the financial assets sold were transferred to the buyer (2019: €37.1 million). In particular, credit risk and any foreign exchange rate risks were transferred completely.

Impairment losses on trade and other receivables are recognized using separate allowance accounts. For information on how these allowances were determined, see note 39.

29. Other Financial Assets

€ in K	**Dec. 31, 2020**	Dec. 31, 2019
Derivative financial instruments	13,428	2,164
Loan receivables from affiliates	12,694	7,045
Miscellaneous other financial assets	14,212	12,434
Other financial assets	**40,334**	**21,643**

The carrying amount of derivatives represents the positive market values of currency hedges. The remaining other financial assets are measured at amortized cost, less any impairment losses, by application of the effective interest method.

Financial Liabilities

30. Loans and Borrowings and Lease Liabilities

€ in K	**Balance at Dec. 31, 2020**	**Of which non-current**	Balance at Dec. 31, 2019	Of which non-current
Loans and borrowings	2,001,775	1,826,337	991,094	822,157
Lease liabilities	85,270	65,374	77,365	58,792
	2,087,044	**1,891,711**	**1,068,459**	**880,949**

A major pillar of financing for the Sartorius Group is the syndicated credit line of €600 million concluded in December 2020 with a minimum maturity until 2023, which can be extended twice by one year upon unanimous agreement of the parties. Further elements of the company's financing are various note loans ("Schuldscheindarlehen") placed in 2012, 2016, 2017, and 2020, respectively, with a total volume of approximately €1,320 million and original maturities of up to 10 years. Furthermore, the company has several current and non-current loans in place that total around €670 million.

These predominantly long-term financing instruments are supplemented by various short-term credit lines totaling around €260 million.

31. Other Non-Current Liabilities

€ in K	**Dec. 31, 2020**	Dec. 31, 2019
Other liabilities	306,360	56,134
Total	**306,360**	**56,134**

Other non-current liabilities mainly include the liabilities resulting from the contingent consideration agreements in connection with the acquisitions of BIA Separations and WaterSep BioSeparations LLC in 2020 (€258.8 million in total, see note 8). Furthermore, this item includes the liabilities in connection with the possible acquisition of the non-controlling interests in Biological Industries due to the put options of the current holder amounting to €35.6 million as well as the remaining liability for phantom units that was incurred in connection with the acquisition of the non-controlling interests in the company AllPure Technologies, LLC (€5.0 million).

The liability in relation to AllPure depends on the expected future sales revenues. Considering the continued positive performance, the expected payments are determined by considering future revenue at an annual growth rate of about 20% on average. An increase (decrease) in sales revenue by 10% in each of the following years would lead to an increase (decrease) of €0.6 million (€0.6 million) in the liability.

32. Trade Payables

€ in K	Dec. 31, 2020	Dec. 31, 2019
Payments received on account of orders[1]	140,931	84,008
Trade payables to third parties	188,782	140,775
Payables to affiliated companies	1,030	372
Trade payables	**330,742**	**225,155**

1 Contract liabilities according to IFRS 15 (see note 9).

33. Other Current Financial Liabilities

€ in K	Dec. 31, 2020	Dec. 31, 2019
Derivative financial instruments	26	1,105
Other	48,680	50,573
Other financial liabilities	**48,706**	**51,678**

“Other liabilities” as of December 31, 2020, include the current portion of the liabilities in connection with the possible acquisition of the non-controlling interests in Biological Industries (€5.9 million). Furthermore, as of December 31, 2020 the Group had refund liabilities in accordance with IFRS 15 in the amount of €10,858 K (2019: €6,690 K).

The current financial liability in connection with the acquisition of further non-controlling interests in Biological Industries which was reported in 2019 has been derecognized in 2020 in the course of the acquisition of the additional 20% of the shares in Biological Industries (see note 22).

34. Carrying Amounts and Fair Values

The following table shows the carrying amounts and fair values of financial assets and liabilities by category of financial instrument according to IFRS 9 as of December 31, 2020, and as of December 31, 2019:

€ in K	Category acc. to IFRS 9	**Carrying amount Dec. 31, 2020**	**Fair value Dec. 31, 2020**	Carrying amount Dec. 31, 2019	Fair value Dec. 31, 2019
Investments in non-consolidated subsidiaries	n/a	15,162	15,162	11,023	11,023
Financial investments	Equity instruments at fair value through profit or loss	4,460	4,460	4,414	4,414
Financial investments	Debt instruments at fair value through profit or loss	11,545	11,545	10,707	10,707
Financial assets	Measured at amortized cost	2,953	2,953	3,864	3,864
Financial assets (non-current)		**34,120**	**34,120**	**30,008**	**30,008**
Amounts due from customers for contract work (contract assets)	n/a	6,159	6,159	8,530	8,530
Trade receivables	Measured at fair value through other comprehensive income	119,414	119,414	38,269	38,269
Trade receivables	Measured at amortized cost	188,687	188,687	255,915	255,915
Trade receivables		**314,260**	**314,260**	**302,715**	**302,715**
Receivables and other assets	Measured at amortized cost	26,906	26,906	19,479	19,479
Derivative financial instruments	Held for trading	0	0	692	692
Derivative financial instruments in hedge relationships[1]	n/a	13,428	13,428	1,472	1,472
Other financial assets (current)		**40,334**	**40,334**	**21,643**	**21,643**
Cash and cash equivalents	**Measured at amortized cost**	**203,435**	**203,435**	**54,441**	**54,441**
Loans and borrowings	Financial liabilities at cost	2,001,775	2,009,789	991,094	1,000,305
Trade payables	Financial liabilities at cost	189,812	189,812	141,147	141,147
Trade payables | payments received for orders (contract liabilities)	n/a	140,931	140,931	84,008	84,008
Trade payables		**330,742**	**330,742**	**225,155**	**225,155**
Derivative financial instruments in hedge relationships[1]	n/a	26	26	1,105	1,105
Other financial liabilities	Finanzielle Verbindlichkeiten zum beizulegenden Zeitwert bewertet (erfolgswirksam)	258,772	258,772	0	0
Other financial liabilities	Financial liabilities at cost	96,268	96,376	106,707	106,553
Other financial liabilities		**355,066**	**355,174**	**107,812**	**107,658**

1 The amounts each contain the non-designated part of derivatives of a total of -€1.0 million (2019: -€1.8 million).

The fair values of the financial instruments were determined on the basis of the market information available on the reporting date and are to be allocated to one of the three levels of the fair value hierarchy in accordance with IFRS 13.

Level 1 financial instruments are measured on the basis of prices quoted on active markets for identical assets and liabilities. In Level 2, financial instruments are measured on the basis of input factors that can be derived from observable market data or on the basis of market prices for similar instruments. Level 3 financial instruments are measured on the basis of input factors that cannot be derived from observable market data.

The financial instruments recognized at fair value on the reporting date (December 31, 2020) relate specifically to the contingent consideration in connection with the acquisitions of BIA Separations and WaterSep BioSeparations. Both business combinations were completed at the end of the reporting period and reported on a preliminary basis. Accordingly, the measurement of the financial liabilities representing the contingent consideration is preliminary as well. Since the valuations depend on, among other factors, the future sales revenue performance of the acquired businesses, the valuations are regarded as Level 3 inputs. For further information about the acquisitions and the measurement of contingent consideration at the respective acquisition dates and as of the reporting date, see note 8.

The remaining financial instruments recognized at fair value on the reporting date are mainly derivatives in the form of forward contracts. They were measured on the basis of their quoted exchange rates and market yield curves (Level 2).

The “financial investments” measured at fair value are measured on the basis of the most recent reliable indicators available as of the reporting date, e.g., on the basis of the most recent financing round or historical cost of acquisition (Level 3).

The fair values disclosed for financial liabilities recognized at amortized cost, especially liabilities to banks and those related to note loans ("Schuldscheindarlehen"), were measured on the basis of the yield curve, taking the current indicative credit spreads into account (Level 2).

The fair values of the remaining financial assets and liabilities to be disclosed approximate the carrying amounts because of their predominantly short maturities. The maximum default risk is reflected by the carrying amounts of the financial assets recognized in the statement of financial position.

The Group recognizes transfers between the levels of the fair value hierarchies at the end of the reporting period during which the change has occurred. In the current reporting period, there were no transfers between the levels.

35. Net Result for Financial Instruments

The net gains and losses of the various categories of financial instruments are presented in the following table:

Category acc. to IFRS 9 € in K	**2020**	2019
Financial assets at amortized cost	−14,725	122
Financial assets and liabilities at fair value through profit or loss	30,412	−3,528
Financial liabilities at cost	−8,850	−6,566

The net result of financial assets measured at amortized cost primarily consists of currency translation effects as well as changes in allowances.

The net result of financial assets and liabilities measured at fair value through profit or loss consists primarily of changes in the fair value of derivative financial instruments as well as of interest income and expenses for these instruments and, in 2020, changes in the value of contingent consideration in connection with the business combinations in the reporting period (see note 8).

The net result of liabilities measured at amortized cost mainly consists of the effects of foreign currency translation.

The total interest income and expenses for financial assets and liabilities that are not recognized at fair value through profit and loss are as follows:

€ in K	**2020**	2019
Interest income	1,289	1,132
Interest expenses	–23,323	–16,429

Capital and Financial Risk Management
Capital Management

In the Sartorius Group, capital is managed in order to maximize earnings of the company's stakeholders by optimizing the ratio of equity to liabilities.

Furthermore, we ensure that all Group companies operate under the premise of the going-concern principle.

The financial liabilities described in note 30 are regarded as managed capital as are the cash and cash equivalents and equity capital.

Goals of Financial Risk Management
The Treasury Management unit of the Group coordinates access to national and international financial markets. In addition, the Treasury Management unit monitors and controls financial risks, which essentially entail currency, interest rate, liquidity, and credit risks.

The Sartorius Group strives to minimize the impact of currency and interest rate risks using (derivative) financial instruments. Hedging transactions and their control are carried out by different staff members. Moreover, the Group's Internal Auditing Department regularly monitors the use of such financial instruments. Derivative financial instruments are traded for hedging purposes only.

36. Management of Exchange Rate Risks and Hedge Accounting

The Group is exposed to currency risks as approximately two thirds of its sales revenue is generated in foreign currencies and, of this amount, two thirds is generated in U.S. dollars or currencies linked to the U.S. dollar. At the same time, Sartorius' global manufacturing network enables the company to offset the lion's share of sales revenues received in foreign currency within the Group against costs likewise incurred in foreign currency. The remaining net currency exposure is hedged to a large extent (generally 50% to 80%) by derivative financial instruments. Our hedging strategy generally involves hedging the remaining net currency exposure up to 12 months ahead. These hedging measures are reviewed at regular intervals in the light of current market risk parameters and adapted where necessary.

On the basis of the material forward contracts concluded by the end of the reporting date, we secure the right, and simultaneously create the obligation, to sell an established foreign currency amount on the exercise date at a specific exchange rate against the euro, independently of the actual exchange rate on that date. The profit or loss resulting from the difference between the current and the previously agreed exchange rate is generally measured as income or expense in the statement of profit or loss.

As of the reporting date, the company had forward contracts for a total volume of U.S. $225 million (2019: $170 million) to hedge against the risk of fluctuation in the EUR | USD exchange rate. Smaller volumes of other currencies were hedged as well. The remaining net currency exposure related to the U.S. dollar is approx. €180 million for 2021.

In October 2019, the Group concluded a bridge loan agreement with BNP Paribas Fortis SA/NV to finance the acquisition of selected businesses from Danaher Life Science. This agreement provided the Sartorius Group with the financing needed at the time the acquisition was closed. The foreign currency exchange risk related to the financing of the acquisition has been hedged with options of a nominal value of U.S. $750 million. As of the reporting date on December 31, 2019, the fair value of these options amounted to €691 K.

December 31, 2019	Currency	Volume	Maturity	Fair value € in K
Forward contract	USD	170,000	2020	164
	USD	**170,000**		**164**
Forward contract	JPY	2,150,000	2020	227
	JPY	**2,150,000**		**227**
Forward contract	AUD	-6,000	2020	-67
	AUD	**-6,000**		**-67**
Forward contract	GBP	9,000	2020	48
	GBP	**9,000**		**48**
Forward contract	SEK	9,000	2020	-5
	SEK	**9,000**		**-5**

December 31, 2020	Currency	Volume	Maturity	**Fair value € in K**
Forward contract	USD	225,000	2021	12,669
	USD	**225,000**		**12,669**
Forward contract	JPY	1,550,000	2021	152
	JPY	**1,550,000**		**152**
Forward contract	CAD	-2,000	2021	11
	CAD	**-2,000**		**11**
Forward contract	GBP	43,000	2021	570
	GBP	**43,000**		**570**

Derivative financial instruments are measured at the time of acquisition at cost and on subsequent reporting dates at fair value. The changes in value of the derivative financial instruments are generally recognized in the statement of profit or loss on the reporting date.

If the derivative financial instruments are used to hedge cash flow risks arising from exchange rate risks and a qualifying hedging relationship exists based on the criteria of IFRS 9, the valuation adjustments for the effective portion are recognized in other comprehensive income. Only the change in the spot element of the forward contracts used as cash flow hedges are regularly designated. Amounts accumulated in equity are reclassified to profit or loss in other income and other expenses (see note 11) in the same periods in which the hedged item affects profit or loss. The changes in the cash flow hedging reserves are shown in the statement of changes in equity and in the statement of comprehensive income. The non-designated or ineffective part is recognized immediately through profit or loss in the financial result.

The critical terms match method is used to test the effectiveness of a hedging relationship; in other words, the economic relationship between the hedging instrument and the underlying hedged item is determined based on the consistency of the significant contractual features of the transactions. To this extent, the Group conducts a qualitative assessment. Hedge ineffectiveness may possibly arise if the timing of future transactions deviates from the original assumptions or the credit risk of the counterparties of a hedging instrument, i.e., forward contract, changes.

The following table shows the impact of foreign currency hedges on the net worth, financial position, and earnings of the Group:

Currency	Carrying amount (assets) Dec. 31, 2019 € in K	Carrying amount (liabilities) Dec. 31, 2019 € in K	Hedge ratio	Change in value of hedging instruments € in K	Change in value of hedged items € in K	Nominal amount in each foreign currency in K	Maturity: 1 - 6 months	Maturity: 7 - 12 months	Average exercise price
USD	1,682	294	100%	1,388	1,388	170,000	125,000	45,000	1.13
JPY	227	0	100%	227	227	2,150,000	2,150,000	0	120.47
GBP	44	0	100%	44	44	9,000	9,000	0	0.85
SEK	0	5	100%	–5	–5	9,000	9,000	0	10.44
AUD	0	60	100%	–60	–60	6,000	6,000	0	1.63

Currency	Carrying amount (assets) Dec. 31, 2020 € in K	Carrying amount (liabilities) Dec. 31, 2020 € in K	Hedge ratio	Change in value of hedging instruments € in K	Change in value of hedged items € in K	Nominal amount in each foreign currency in K	Maturity: 1 - 6 months	Maturity: 7 - 12 months	Average exercise price
USD	13,673	3	100%	13,670	13,670	225,000	155,000	70,000	1.15
CAD	11	0	100%	11	11	2,000	2,000	0	1.55
JPY	166	10	100%	156	156	1,550,000	1,550,000	0	124.65
GBP	524	0	100%	524	524	43,000	23,000	20,000	0.91

In the statement of financial position, hedging instruments with a positive fair value are disclosed under "Financial assets (non-current)" and "Other financial assets (current)," while instruments with a negative fair value are reported under "Other financial liabilities (non-current)" and "Other financial liabilities (current)."

The following sensitivities have been identified for the exchange rate of the U.S. dollar against the euro: If the U.S. dollar had depreciated by 10% against the euro, equity would have been €14.4 million higher (2019: €13.7 million higher) than actually reported and annual profit before tax would have been €6.9 million lower (2019: €3.9 million lower) than the currently disclosed figure. Conversely, if the U.S. dollar had appreciated by 10% against the euro, the resulting impact on annual profit before tax would have been +€8.5 million (2019: +€53.4 million) and the impact on equity -€17.7 million (2019: -€16.7 million). These impacts include effects from the Group's intercompany loans, which are partially compensated for by translation effects recognized in the currency reserve.

37. Interest Risk Management

The entire Sartorius Group is generally financed through Sartorius AG, which uses internal Group loans to ensure the financing of all Group companies. The Sartorius Group is exposed to interest rate risks as some loans are taken out at variable interest rates. As of the reporting date on December 31, 2020, the Group predominantly obtained financing at fixed interest rates (approx. 85%) so the risk of interest rates is of minor significance for the Group's net worth, financial position, and earnings. The interest rate hedges concluded by the Group in the past are not currently being used.

As of the reporting date of December 31, 2020, the volume of variable interest loans was around €319 million (2019: €270 million). For the financial instruments held as of the reporting date, a sensitivity analysis yields the following results: If the market interest rate had been 1.0 percentage point higher, this would have had an impact on annual profit of €-3.5 million resulting from the variable interest loans (2019: €-3.1 million).

A decrease in the base interest rate to 0% was used to measure the sensitivities of declining interest rates. Under this condition, the corresponding effect on profit before tax would have been slightly positive (2020: €0.3 million; 2019: €1.2 million).

38. Liquidity Risk Management

The following table shows the liquidity analysis for financial liabilities, excluding derivatives, in the form of contractually agreed undiscounted cash flows based on conditions as of the reporting date:

€ in K	Carrying amount Dec. 31 2019	Cash flow Dec. 31, 2019	< 1 year	1 to 5 years	> 5 years
Loans and borrowings	991,094	1,033,577	177,714	701,863	154,000
Lease liabilities	77,365	94,225	19,991	42,480	31,754
Trade payables	141,147	141,147	141,147	0	0
Other liabilities (excluding derivatives)	106,707	108,231	50,573	36,470	21,188
Financial liabilities	**1,316,313**	**1,377,181**	**389,426**	**780,813**	**206,942**

€ in K	**Carrying amount Dec. 31, 2020**	**Cash flow Dec. 31, 2020**	< 1 year	1 to 5 years	> 5 years
Loans and borrowings	2,001,775	2,103,959	195,126	1,174,436	734,397
Lease liabilities	85,270	103,516	22,482	51,168	29,866
Trade payables	189,812	189,812	189,812	0	0
Other liabilities (excluding derivatives)	355,040	354,027	48,777	187,569	117,681
Financial liabilities	**2,631,896**	**2,751,313**	**456,196**	**1,413,173**	**881,944**

The carrying amounts and cash flows for the derivatives are shown as follows:

€ in K	Carrying amount Dec. 31, 2019	Cash flow Dec. 31, 2019	< 1 year	1 to 5 years	> 5 years
Gross fulfillment					
Forward contracts	**1,105**	**1,105**	**1,105**	**0**	**0**
Payment obligation			75,585	0	0
Payment claim			–74,479	0	0
Derivatives	**1,105**	**1,105**	**1,105**	**0**	**0**

€ in K	**Carrying amount Dec. 31, 2020**	**Cash flow Dec. 31, 2020**	< 1 year	1 to 5 years	> 5 years
Gross fulfillment					
Forward contracts	**26**	**26**	**26**	**0**	**0**
Payment obligation			15,044	0	0
Payment claim			–15,018	0	0
Derivatives	**26**	**26**	**26**	**0**	**0**

The Group controls liquidity risks by maintaining credit lines and additional facilities with banks, continuously tracking the forecasted and actual cash flows and by managing the maturity profiles of financial assets and liabilities.

It is not expected that cash outflows will occur at materially different reporting dates or in materially different amounts.

Local cash funds in certain countries (e.g. China, India) are only available to the Group for cross-border transactions subject to exchange controls.

As in the previous year, there was no offsetting potential for financial instruments due to global netting agreements as of December 31, 2020 (German Master Agreement for Financial Futures).

The syndicated credit line agreed in December 2020, which is available until at least 2023, amounting to €600 million at variable interest rates had not been used as of December 31, 2020 (use of syndicated credit line 2019: €40 million). In addition, the Group had further bilateral credit lines at variable interest rates available amounting to €260 million as of December 31, 2020 (2019: €96 million), of which approximately €7 million was drawn at the reporting date (2019: €76 million).

As explained in note 30, the Group is essentially financed by a syndicated loan, note loans ("Schuldscheindarlehen") and bilateral loans. In selected loan agreements, the Group is required to comply with standard financial key ratios, or covenants. In this context, the ratio of net debt to underlying EBITDA may not be greater than 3.75 until March 31, 2021, 3.50 until September 30, 2021, and not greater than 3.25 thereafter. In fiscal 2020, the Group achieved a ratio of net debt to underlying EBITDA of 2.6 compared with 2.0 in 2019. Non-compliance with the covenants may lead to the termination of existing loans. Based on current knowledge, the company considers it extremely unlikely that it will not comply with these covenants.

39. Credit Risk Management

Credit risk is the risk of financial loss to the Sartorius Group if a counterparty to a financial instrument fails to meet its contractual obligations. Credit risks arise in particular from cash and cash equivalents as well as from trade receivables. Moreover, the Group is exposed to credit risks arising from derivatives with a positive fair value and, to a low degree, to other contractual cash flows from debt securities.

Credit risk is managed centrally for the Group by the Treasury Management unit. The creditworthiness of banks and financial institutions as counterparties of the Group is continuously monitored in order to detect increases in credit risks at an early stage. If no new information is obtained, the Group assumes that its related financial assets still have only a low credit risk.

Customers are assigned to different risk limits, which are essentially based on business volume, past experience, and the net worth and financial situation of these customers. Management responsible for these customers regularly reviews that their assigned customers comply with these credit limits. In some cases, advance payments are required for deliveries to avoid credit risks. There are no significant concentrations of credit risks arising from individual customers or regions.

For some trade receivables, the Group has collateral, such as guarantees, financial securities and suretyship contracts to which the Group can resort under the contractual arrangements should a counterparty default on its payment obligations.

Impairment of Financial Assets

Trade Receivables and Contract Assets

Trade receivables and contract assets, in particular, are required to be measured according to the model for recognition of expected credit losses.

The Sartorius Group applies the simplified impairment approach according to IFRS 9 for trade receivables and contract assets, thus taking lifetime expected credit losses into account. The impairment model starts with an analysis of the actual historical credit loss rates. These are adjusted, taking into consideration forward-looking information and the effects of current changes in the macroeconomic environment, if significant. Due to the immaterial level of historical credit losses, the Group currently determines the expected credit losses for its portfolio of trade receivables as a whole. However, historical loss rates are analyzed regularly in more detail in order to apply different loss rates to different portfolios. Contract assets refer to projects for typical Sartorius customers so the Group assumes that the loss rates applied to trade receivables appropriately approximate the loss rates of the contract assets. Accordingly, there is no further differentiation between trade receivables and contract assets.

On this basis, the allowances for trade receivables and contract assets were determined as follows for the year ended December 31, 2020, and as of the previous reporting date on December 31, 2019:

Dec. 31, 2019	Not due	1 - 30 days overdue	31 - 60 days overdue	61 - 90 days overdue	More than 90 days overdue	Total
Gross carrying amount of trade receivables	199,773	34,193	22,371	9,938	37,596	303,870
Gross carrying amount of contract assets	8,530	0	0	0	0	8,530
Impairment loss allowance	145	58	549	165	8,769	9,686

Dec. 31, 2020	Not due	1 - 30 days overdue	31 - 60 days overdue	61 - 90 days overdue	More than 90 days overdue	Total
Gross carrying amount of trade receivables	259,304	16,431	3,187	8,682	36,391	323,995
Gross carrying amount of contract assets	6,159	0	0	0	0	6,159
Impairment loss allowance	388	245	702	226	14,333	15,895

The impairments in 2020 include those related to trade receivables measured at fair value though other comprehensive income which amount to approximately €4 million.

The expected credit losses are determined based on a loss rate of 0.05%. In addition, impairments are determined on the basis of individual assessments. Days overdue are one essential criterion in this context. A default is generally presumed when there is no longer any reasonable expectation of recovering a financial asset. In such a case, the respective receivables are derecognized.

The movements in the allowance for impairment losses on trade receivables and contract assets are presented below:

€ in K	**2020**	2019
Valuation allowances at January 1	**–9,686**	**–6,089**
Net remeasurement of loss allowance recognized in profit or loss	–9,103	–4,734
Derecognition and consumption	507	323
Recoveries of amounts previously impaired	3,381	1,300
Currency effects	394	–27
Changes in scope of consolidation	–1,388	–460
Valuation allowances at December 31	**–15,895**	**–9,686**

Impairment of Other Financial Assets

Besides trade receivables, cash and cash equivalents are the most material financial assets in the Group's statement of financial position as of the reporting date on December 31, 2020, as was the case in the previous year. The expected credit losses are monitored at regular intervals. Due to the high creditworthiness of the counterparties and the short maturities or contract terms, which are short by definition, any impairment that would theoretically have to be recognized for these financial assets is immaterial. Therefore, no impairment is recognized for cash and cash equivalents.

For the other financial assets measured at amortized cost, impairment was not recognized as of December 31, 2020, just as was the case in the previous year, for the twelve months of expected credit losses due to immaterial historical credit losses. In the event of a significant increase in credit risk, which is generally presumed when a payment is more than 30 days past due, the lifetime expected credit losses are recognized for the respective financial asset. A default is generally presumed if there is no longer any reasonable expectation of recovering a financial asset. This is generally presumed when payments are more than 90 days past due. As of the reporting date, there are no indications of increases in credit risk to a material extent. The carrying amounts of the financial assets reflect the maximum credit loss for these assets at the end of the fiscal year.

40. Other Risks Associated with Financial Instruments

As of the reporting date December 31, 2020, the Sartorius Group was exposed to risks arising from the volatility of the share price of Sartorius Stedim Biotech S.A. because of the contingent consideration in connection with the acquisition of BIA Separations (see note 8). As of the reporting date, there were no other significant risks of volatility in share prices; only vested portions of share-based payments are linked directly to the price development of Sartorius stock.

For details on other types of risk, please refer to the Group Management Report.

41. Share-based Payments

Within the Sartorius Group, share-based payments are made in the form of so-called phantom stock units at Sartorius AG.

The phantom stock units are virtual options on the shares of Sartorius AG. Specifically, the company's phantom stock plan credits each member of the Executive Board at the beginning of every year with phantom stock units valued at an agreed amount. These phantom stock options may be exercised no earlier than four years after this sum has been credited and only if certain conditions with respect to the performance of Sartorius AG shares are met. If an Executive Board member exercises an option, the number of phantom stock units granted is evaluated at the current stock exchange price. The amount paid out is capped at 2.5 times the grant price. The fair value of the phantom stock units was measured using a Black-Scholes model and is disclosed as follows:

Components with a long-term incentive effect	Number of phantom stock units	**Fair value at year-end on Dec. 31, 2020 € in K**	Fair value at year-end on Dec. 31, 2019 € in K	Paid out € in K
Tranche for fiscal 2016	7,076	0	1,015	1,015
Tranche for fiscal 2017	6,620	1,167	1,167	0
Tranche for fiscal 2018	5,647	1,134	1,038	0
Tranche for fiscal 2019	5,413	1,541	928	0
Tranche for fiscal 2020	3,332	1,236	0	0
	28,088	**5,078**	**4,148**	**1,015**

In fiscal 2020, expenses relating to granting and measuring phantom stock units amounted to €1,787 K (2019: €2,286 K). As in the prior year, no phantom stock units were exercisable on the reporting date. All phantom stock units granted in the reporting year were attributable to members of the Executive Board.

Based on resolutions of the Supervisory Board on December 16, 2014, and on December 5, 2019, Dr. Kreuzburg was granted a supplementary compensation component, which provides for transferring shares of the company to him. These share-based payments are subject to the rules of IFRS 2. Based on the agreed conditions, the resulting amounts are to be spread as an employee benefits expense from the respective grant date over the full vesting period of the respective plan. In fiscal 2020, an amount of €1,323 K (2019: €531 K) was therefore recognized as an employee benefits expense resulting from the grant of shares. For further details on the phantom stocks and the share-based remuneration of Dr. Kreuzburg, please refer to the Remuneration Report.

Other Disclosures

The consolidated financial statements were prepared on a going-concern basis.

The exemption options provided by Section 264 (3) of the German Commercial Code (HGB) with regard to the disclosure requirements under Sections 325 et. seq. of the HGB were applied to the annual financial statements reported by Sartorius Lab Holding GmbH, Sartorius Weighing Technology GmbH, and Sartorius Corporate Administration GmbH, all based in Goettingen, Germany, for the year ended December 31, 2020.

The exemption options provided by Section 264b of the HGB with regard to the disclosure requirements under Sections 325 et. seq. of the HGB were applied to the annual financial statements reported by SIV Weende GmbH & Co. KG, SIV Grone 1 GmbH & Co. KG, and Sartorius Lab Instruments GmbH & Co. KG, all based in Goettingen, Germany, for the year ended December 31, 2020.

Material Events after the Reporting Date

No material events occurred up to the end of the preparation of these consolidated financial statements.

Declaration According to Section 314 (1) No. 8 of the German Commercial Code (HGB)

The declaration prescribed by Section 161 of the German Stock Corporation Act (AktG) was submitted on December 3, 2020, and made available to the shareholders of Sartorius AG on the company's website at www.sartorius.com.

Members of the Supervisory Board and the Executive Board

The members of the Supervisory Board and the Executive Board are listed at the end of this section as are the further additional disclosures pursuant to Section 285 no. 10 of the German Commerical Code (HGB).

Number of Employees

This table shows the average workforce employed during the fiscal year:

	2020	2019
Bioprocess Solutions	7,067	5,961
Lab Products & Services	2,827	2,799
Total	**9,894**	**8,760**

Auditors' Fee

In fiscal 2019 and 2020, the following fees were incurred by the Group for the auditors, KPMG AG:

€ in K	**2020**	2019
Audits	766	765
Tax consultation services	0	0
Other attestation services	63	52
Other services	0	10
	829	**827**

The fees for statutory audits include the audit review fee of €100 K (2019: €91 K) for the first-half financial report pursuant to Section 115 (5) of the German Securities Trading Act (WpHG), as well as other services directly prompted by the audit.

Related Companies and Persons

The Group companies included in the consolidated financial statements carry out business activities and transactions in related party relationships as defined by IAS 24. In particular, this concerns transactions with non-consolidated subsidiaries that are generally entered into on an arm's length basis. A long-term service contract exists with an affiliated company. For this contract, expenses of €8.5 million were incurred and reported in the statement of profit or loss in the reporting year (2019: €7.6 million). Details on the transactions completed in the reporting year and the balances outstanding on the reporting date are provided in the relevant sections of these notes to the Financial Statements, specifically in note 28.

According to IAS 24, related persons are those who are responsible for planning, management and control of a reporting entity. In particular, such persons include the members of the Executive Board and of the Supervisory Board of Sartorius AG. In the reporting year, the total remuneration of the Supervisory Board members was €1,049 K (2019: €1,024 K); that of the Executive Board members amounted to €4,749 K (2019: €9,486 K). The remuneration of former managing directors and members of the Executive Board and their surviving dependents was €1,427 K (2019: €499 K). The pension obligations to former managing directors and members of the Executive Board and their surviving dependents totaled €8,764 K (2019: €9,537 K). For details on remuneration, please refer to the Remuneration Report, which is an integral part of the combined Group Management Report. In addition to their Supervisory Board remuneration, the employee representatives who are employees of the Sartorius Group receive compensation that is not related to their service on the Supervisory Board.

The total remuneration of the Executive Board members according to IFRS is shown in the following table:

€ in K	**2020**	2019
Short-term benefits (excl. share-based remuneration)	3,792	3,584
Post-employment benefits	389	389
Other long-term benefits	323	281
Share-based payments	1,957	1,070
Total remuneration	**6,461**	**5,324**

Partial payments on multi-year variable remuneration of the Executive Board members:

€ in K	**2020**	2019
Balance as of Jan. 1 of a fiscal year	375	354
Partial payments deducted	–185	–169
Partial payments effected	280	190
Balance as of Dec. 31 of a fiscal year	**470**	**375**

The total remuneration of the Supervisory Board members is as follows:

€ in K	**2020**	2019
Short-term benefits (excl. share-based remuneration)	1,049	1,024
Post-employment benefits	0	0
Other long-term benefits	0	0
Share-based payments	0	0
Total remuneration	**1,049**	**1,024**

Proposal for Appropriation of Profit

The Supervisory Board and the Executive Board will submit a proposal to the Annual Shareholders' Meeting to appropriate the retained profit of €206,247,468.31 reported by Sartorius AG for the year ended December 31, 2020, as follows:

	€
Payment of a dividend of €0.70 per ordinary share	23,958,206.30
Payment of a dividend of €0.71 per preference share	24,274,795.63
Unappropriated profit carried forward	158,014,466.38
	206,247,468.31

Göttingen, February 5, 2021

Sartorius Aktiengesellschaft

The Executive Board

Declaration of the Executive Board

We declare to the best of our knowledge that the consolidated financial statements for fiscal 2020 present a true and fair view of the actual net worth, financial situation and profitability of the Group in accordance with the accounting standards used in preparing these statements. We also certify that the progress of the Group's business, including its business performance and its situation, are represented accurately in the Group Management Report in all material respects and present the most important opportunities and risks of the Group's future development during the fiscal year.

Göttingen, February 5, 2021

Sartorius Aktiengesellschaft

The Executive Board

Dr. Joachim Kreuzburg	Rainer Lehmann	Dr. René Fáber	John Gerard MacKay

Independent Auditors' Report

Report on the Audit of the Consolidated Financial Statements and of the Group Management Report

Opinions

We have audited the consolidated financial statements of Sartorius Aktiengesellschaft, Göttingen, and its subsidiaries (the Group) – which comprise the consolidated statement of financial position as at December 31st, 2020, and the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from 1 January 2020 to 31 December 2020, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Sartorius Aktiengesellschaft for the financial year from 1 January 2020 to 31 December 2020. In accordance with the German legal requirements we have not audited the content of the parts of the management report mentioned in the section on "Other Information" of our Independent Audit Report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e (1) HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2020, and of its financial performance for the financial year from 1 January 2020 to 31 December 2020, and

- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the group management report does not cover the content of the non-financial statement and the corporate governance statement mentioned above.

Pursuant to Section 322 (3) sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Section 317 HGB and the EU Audit Regulation No. 537/2014 (referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with

Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January 2020 to 31 December 2020. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, we do not provide a separate opinion on these matters.

Recoverability of the Carrying Amount of Goodwill
The accounting policies as well as the assumptions made are disclosed in the notes to the consolidated financial statements in note 15. Disclosure of the amount of goodwill is provided in the notes to the consolidated financial statements in note 15.

THE FINANCIAL STATEMENT RISK

As at 31 December 2020, goodwill totalled EUR 1.381 million, thereby comprising 29% of the balance sheet total and a substantial portion of the assets.

Goodwill is tested for impairment annually at the level of the operating segment Bioprocess Solutions (Goodwill EUR 1.052 million) and Lab Products & Services (Goodwill EUR 329 million) and The carrying amount is thereby compared with the recoverable amount of the respective operating segments. If the carrying amount exceeds the recoverable amount of the respective operating segment, an impairment is recorded. The recoverable amount is the higher of the fair value less the costs to sell and value in use of the operating segment. The impairment test was carried out as at 30 November 2020.

The goodwill impairment test is complex and is based on a number of judgemental assumptions. These include, among others, the expected business and earnings development of the operating segments for the upcoming 5 years, the assumed long-term growth rates and the discount rate used.

There is the risk for the financial statements that the required impairments were not sufficiently recorded. In addition, there is the risk that the disclosures in the notes associated herewith are not appropriate.

OUR AUDIT APPROACH

With the support of our valuation specialists, we assessed, among other things, the appropriateness of the significant assumptions as well as the Company's valuation model. This included a discussion of the expected development of the business and results as well as of the assumed underlying long-term growth rates with those responsible for the planning process. In addition, reconciliations were made with the budget 2021 prepared by the Executive Board and which were approved by the Supervisory Board and as well with the planning for the next 4 years. Furthermore, we assessed the consistency of the assumptions with external market assessments.

We also assessed the Company's planning accuracy by comparing projections for previous financial years with the actual results realised and analysed deviations. As small changes in the discount rate can have a substantial impact on the results of the impairment test, we have compared the assumptions and parameters underlying the discount rate – in particular the risk-free rate, the market risk premium and the beta factor – with own assumptions and publicly available information.

To provide for the mathematical accuracy of the valuation model utilised, we recalculated the Company's calculations on the basis of elements selected in a risk-orientated manner.

To reflect the existing uncertainty with respect to forecasts as well as the earlier valuation date for the impairment test, we have assessed reasonably possible changes of the discount rate, the expected earnings respectively the long-term growth rate on the recoverable amount (sensitivity analysis) by calculating alternative scenarios and comparing these with the Company's valuation results.

Finally, we assessed whether the disclosures in the notes with respect to the recoverability of the carrying amount of the goodwill are appropriate.

OUR OBSERVATIONS

The underlying valuation model used in the impairment test of goodwill is appropriate and consistent with the applicable accounting principles.

The Company's assumptions and parameters underlying the valuation are within an acceptable bandwidth and are, on the whole, balanced.

The disclosures in the notes associated herewith are appropriate.

The acquisition of selected Life Science Businesses from Danaher and BIA Separations d.o.o.
The accounting policies as well as the assumptions made are disclosed in the notes to the consolidated financial statements.

THE FINANCIAL STATEMENT RISK

On 30 April 2020 the Group acquired selected life science businesses from Danaher Corporation. The purchase price amounted to EUR 775 million. Giving consideration to the net assets acquired in the amount of EUR 454 million, goodwill totalling EUR 321 million resulted.

In addition, on 2 November the Group acquired BIA Separations d.o.o. The acquisition costs amounted to EUR 652 million. Giving consideration to the net assets acquired in the amount of EUR 262 million, goodwill totalling EUR 391 million resulted.

Pursuant to IFRS 3, the identifiable assets acquired and the liabilities assumed are, as a rule , recorded at their fair value on the acquisition date. The group engaged an external expert to determine and measure the identifiable assets acquired and the liabilities assumed.

The identification and measurement of the assets acquired and the liabilities assumed is complex and based on the Executive Board's judgemental assumptions. The significant assumptions comprise the projections of the acquired business' sales and margins, the license fees utilised as well as the cost of capital.

There is the financial statement risk that the assets acquired and the liabilities assumed are insufficiently identified or incorrectly measured. In addition, there is the risk that the disclosures in the notes to the consolidated financial statements are not complete and appropriate.

OUR AUDIT APPROACH

With the support of our valuation specialists we assessed, among other things, the appropriateness of the significant assumptions as well as the identification and valuation approaches. We initially obtained an understanding of the acquisition based on inquires and by assessing the relevant contracts.

We agreed the total purchase price with the underlying purchase agreement and evidence of payment, insofar as these were settled in cash.

We assessed the competency, skills and objectivity of the independent expert engaged by Sartorius AG. Furthermore, we assessed the process of the identification of the assets acquired and liabilities assumed in terms of conformity with the requirements of IFRS 3 using our knowledge of Sartorius AG`s business model. We considered the consistency of the measurement methods used and the measurement principles applicable.

We discussed the expected development of sales and margins with those responsible for planning. Furthermore, we reconciled these with the budgets prepared by the Executive Board which were approved by the Supervisory Board and assessed the consistency of the assumptions with external market views The license rates utilised to measure the intangible assets were compared with reference amounts from relevant data bases. The assumptions and parameters underlying the cost of capital – in particular the risk-free interest rate, the market risk premium and the beta factor – were compared with own assumptions and publicly available data.

To assess the mathematical accuracy we recalculated amounts selected using a risk-oriented approach. Finally, we assessed whether the disclosures in the notes to the consolidated financial statements are complete and appropriate.

OUR OBSERVATIONS

The approaches underlying the identification and valuation of the assets acquired and the liabilities assumed are appropriate and consistent with the applicable accounting policies. The significant assumptions and parameters are appropriate and the disclosures in the notes to the consolidated financial statements are complete and appropriate.

Other Information

Management and the Supervisory Board are responsible for the other information. The other information comprises the following parts of the management report, the content of which has not been audited:

- the non-financial statement, contained in the section on the non-financial statement of the management report,
- the corporate governance statement, contained in the section on the corporate governance statement of the management report.

The other information additionally covers the remaining parts of the annual report. The other information does not comprise the audited consolidated financial statements and group management report and our respective auditor's report.

Our opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or

- otherwise appears to be materially misstated.

Responsibilities of Management and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

Management is responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, management is responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, management is responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, management is responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by management and the reasonableness of estimates made by management and related disclosures.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by management in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by management as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other Legal and Regulatory Requirements

Report on the Assurance in accordance with Section 317 (3b) HGB on the Electronic Reproduction of the Consolidated Financial Statements and the Group Management Report Prepared for Publication Purposes

We have performed an assurance engagement in accordance with Section 317 (3b) HGB to obtain reasonable assurance about whether the electronic reproduction of the consolidated financial statements and the group management report (hereinafter the "ESEF documents") contained in the file that can be downloaded by the issuer from the electronic client portal with access protection, (sartoriusag.zip; SHA256-algorithm, 2f3e62534f4898c951688de56871ac6d2f8848828078153132b62110da20abc5 hash value) and prepared for publication purposes complies in all material respects with the requirements of Section 328 (1) HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance engagement only extends to the conversion of the information contained in the consolidated financial statements and the group management report into the ESEF format and therefore relates neither to the information contained in this reproduction nor any other information contained in the above-mentioned electronic file.

In our opinion, the reproduction of the consolidated financial statements and the group management report contained in the above-mentioned electronic file and prepared for publication purposes complies in all material respects with the requirements of Section 328 (1) HGB for the electronic reporting format. We do not express any opinion on the information contained in this reproduction nor on any other information contained in the above-mentioned file beyond this reasonable assurance conclusion and our audit opinion on the accompanying consolidated financial statements and the accompanying group management report for the financial year from 1. January 2020 to 31. December 2020 contained in the "Report on the Audit of the Consolidated Financial Statements and the Group Management Report" above.

We conducted our assessment of the reproduction of the consolidated financial statements and the group management report contained in the above-mentioned electronic file in accordance with Section 317 (3b) HGB and the Exposure Draft of the IDW Assurance Standard: Assurance in accordance with Section 317 (3b) HGB on the Electronic Reproduction of Financial Statements and Management Reports Prepared for Publication Purposes (ED IDW AsS 410) and the International Standard on Assurance Engagements 3000 (Revised). Accordingly, our responsibilities are further described below. Our audit firm has applied the IDW Standard on Quality Management 1: Requirements for Quality Management in Audit Firms (IDW QS 1).

The company's management is responsible for the preparation of the ESEF documents including the electronic reproduction of the consolidated financial statements and the group management report in accordance with Section 328 (1) sentence 4 item 1 HGB and for the tagging of the consolidated financial statements in accordance with Section 328 (1) sentence 4 item 2 HGB.

In addition, the company's management is responsible for the internal controls they consider necessary to enable the preparation of ESEF documents that are free from material non-compliance with the requirements of Section 328 (1) HGB for the electronic reporting format, whether due to fraud or error.

The company's management is also responsible for the submission of the ESEF documents together with the auditor's report and the attached audited consolidated financial statements and audited group management report as well as other documents to be published to the operator of the German Federal Gazette [Bundesanzeiger].

The supervisory board is responsible for overseeing the preparation of the ESEF documents as part of the financial reporting process.

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material non-compliance with the requirements of Section 328 (1) HGB, whether due to fraud or error. We exercise professional judgement and maintain professional scepticism throughout the assurance engagement. We also:

- Identify and assess the risks of material non-compliance with the requirements of Section 328 (1) HGB, whether due to fraud or error, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance conclusion.

- Obtain an understanding of internal control relevant to the assessment of the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing a conclusion on the effectiveness of these controls.

- Evaluate the technical validity of the ESEF documents, i.e. whether the electronic file containing the ESEF documents meets the requirements of Commission Delegated Regulation (EU) 2019/815 on the technical specification for this electronic file.

- Evaluate whether the ESEF documents enable an XHTML reproduction with content equivalent to the audited consolidated financial statements and the audited group management report.

- Evaluate whether tagging the ESEF documents with Inline XBRL technology (iXBRL) provides an appropriate and complete machine-readable XBRL copy of the XHTML reproduction.

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 28 March 2019. We were engaged by the supervisory board on 28 March 2019. We have been the group auditor of the Sartorius Aktiengesellschaft without interruption since the financial year 2015.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

In addition to the consolidated financial statements, we audited the annual financial statements of Sartorius Aktiengesellschaft and carried out various audits of annual financial statements of subsidiaries. Auditing-integrated reviews of interim financial statements and project-accompanying audits of IT-based accounting-related systems were performed. In addition, other statutory or contractual audits have been carried out, such as the confirmation of compliance with contractual conditions, the review of the non-financial consolidated statement and the investigation of possible non-compliance with internal regulations. In addition, other statutory or contractual audits have been carried out, such as the confirmation of compliance with contractual conditions, the review of the non-financial consolidated statement and the review of the risk management manual to ensure its quality.

German Public Auditor Responsible for the Engagement

The German Public Auditor responsible for the engagement is Frank Thiele.

Hanover, Germany, February 5, 2021

KPMG AG
Wirtschaftsprüfungsgesellschaft

Original German version signed by:

Tonne	Thiele
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)