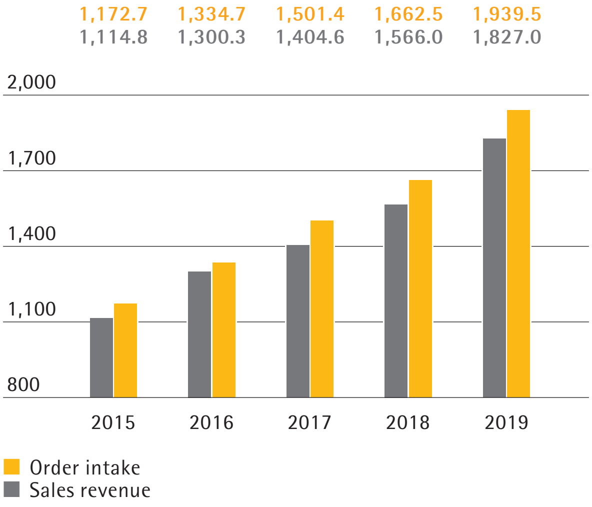
sartorius

Sartorius Group

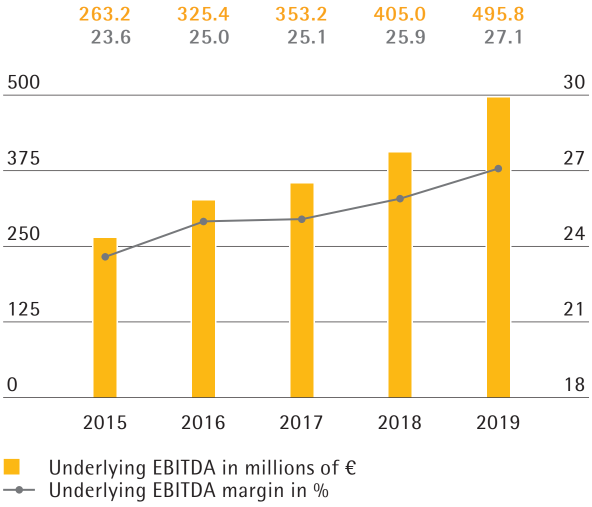
2019 Annual Report

2019

Order Intake and Sales Revenue
€ in millions



Underlying EBITDA and Margin[1)]



Key Figures

All figures are given in millions of € according to the IFRS, unless otherwise specified	**2019**	2018	2017	2016	2015
Order intake, sales revenue and earnings					
Order intake	1,939.5	1,662.5	1,501.4	1,334.7	1,172.7
Sales revenue	1,827.0	1,566.0	1,404.6	1,300.3	1,114.8
Underlying EBITDA[1)]	495.8	405.0	353.2	325.4	263.2
Underlying EBITDA[1)] as a % of sales revenue	27.1	25.9	25.1	25.0	23.6
Relevant net profit[2)]	209.3	175.6	144.0	132.6	107.4
Research and development costs	95.6	78.2	68.8	59.4	52.5
Financial data per share[3)]					
Earnings per share[2)]					
per ordinary share (in €)	3.06	2.56	2.10	1.93	1.59
per preference share (in €)	3.07	2.57	2.11	1.94	1.60
Dividende					
per ordinary share (in €)	0.70[4)]	0.61	0.50	0.45	0.37
per preference share (in €)	0.71[4)]	0.62	0.51	0.46	0.38
Balance sheet					
Balance sheet total	2,844.3	2,526.9	2,297.7	1,753.0	1,437.2
Equity	1,081.2	973.4	806.6	736.8	644.8
Equity ratio (in %)	38.0	38.5	35.1	42.0	44.9
Financials					
Capital expenditures[5)]	225.6	237.8	209.4	152.1	113.1
Capital expenditures as a % of sales[5)]	12.3	15.2	14.9	11.7	10.1
Depreciation and amortization	132.6	113.4	98.3	75.7	58.9
Cash from operating activities	377.2	244.5	206.5	170.4	124.4
Net debt	1,011.3	959.5	895.5	485.9	344.0
Gearing (underlying)	2.0	2.4	2.5	1.5	1.3
Total number of employees as of December 31	**9,016**	8,125	7,501	6,911	6,185

1) Underlying = excluding extraordinary items
2) After non-controlling interest, adjusted for extraordinary items and non-cash amortization, as well as based on the normalized financial result, including the corresponding tax effects for each of these items
3) 2015 adjusted for stock split; rounded values
4) Amounts suggested by the Supervisory Board and the Executive Board of Sartorius AG
5) Since 2019 and as a result of the change in IFRS 16 accounting principles, CAPEX has been based on cash flow instead of balance sheet computation; CAPEX restated for 2018: €233.2 million; CAPEX ratio restated for 2018: 14.9%

Mission & Vision

Mission

We empower scientists and engineers to simplify and accelerate progress in life science and bioprocessing, enabling the development of new and better therapies and more affordable medicine.

Vision

As pioneers, we are a magnet and a dynamic platform for the leading experts in our field. We bring creative minds together for a common goal: technological breakthroughs that lead to better health for more people.

An Overview of Our Divisions

As a leading international partner of biopharmaceutical research and the industry, Sartorius supports its customers in the development and manufacture of biotech medications and vaccines. Our goal is to make complex and expensive development of biopharmaceuticals and their production safer and more efficient. We cover the entire value-added chain of the biopharmaceutical industry and help with our products and services to ensure that novel therapies reach the market faster and are accessible to more people worldwide. Sartorius employs over 9,000 people across the globe and has Group companies in more than 30 countries.

Bioprocess Solutions

In the Bioprocess Solutions Division, Sartorius offers a broad product portfolio that covers all steps in the production of a biopharmaceutical. The company has held leading market positions for years in its core technologies, such as filtration, fermentation, cell cultivation and single-use bags and containers.

Key Figures

€ in millions	2019	2018	Δ in %
Sales revenue	1,372.1	1,143.1	18.1 [1]
Order intake	1,479.3	1,233.7	18.0 [1]
Underlying EBITDA	406.8	326.9	24.5
– As a % of sales	29.6	28.6	
Employees as of Dec. 31	6,106	5,498	11.1

[1] In constant currencies

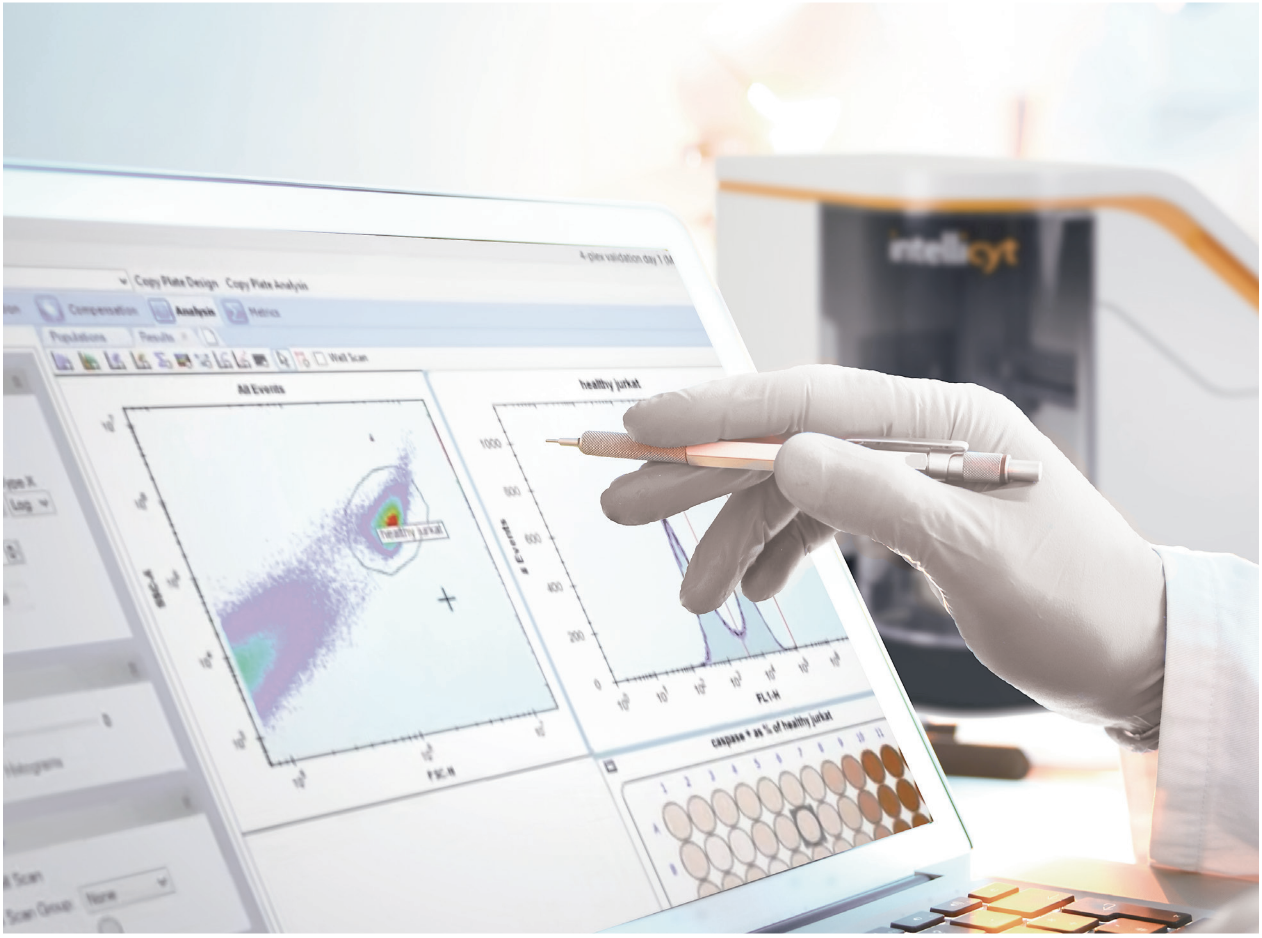
Lab Products & Services

The Lab Products & Services Division offers laboratories in the pharmaceutical and biopharmaceutical industries as well as at academic research institutes innovative solutions for bioanalytics, in addition to premium laboratory products, consumables and services. Sartorius is among the market leaders in laboratory balances, pipettes and lab consumables.

Key Figures

€ in millions	2019	2018	Δ in %
Sales revenue	454.9	423.0	5.9 [1]
Order intake	460.3	428.8	5.7 [1]
Underlying EBITDA	89.0	78.1	14.0
– As a % of sales	19.6	18.5	
Employees as of Dec. 31	2,910	2,627	10.8

[1] In constant currencies



01 To Our Shareholders

Throughout the Annual Report, differences may be apparent as a result of rounding during addition.

Contents

02 Combined Group Management Report

Non-Financial Declaration

03 Consolidated Financial Statements and Notes

04 Supplementary Information

To Our Shareholders

01

Report of the Executive Board

Dear Shareholders and Business Partners,

This promises to be a special year for Sartorius because our company will turn 150 in 2020. To mark this anniversary, we will be holding a series of events with scientists, customers and employees as an opportunity above all to venture a look ahead: In which direction is our industry moving? Which challenges will we need to master in the future? Where will the next breakthroughs and opportunities unfold? After all, we are in an extraordinarily dynamic phase of development in the life sciences that offer exciting future prospects.

But first, let us review the past year: Sartorius continued its highly dynamic development in 2019 and closed the year with double-digit growth rates in sales revenue and earnings. With sales revenue surging 14.8% to just over €1.8 billion and the EBITDA margin up 1.2 percentage points at 27.1%, we surpassed our business performance targets anticipated at the beginning of the year considerably, even edging above our significantly raised forecast issued at mid-year. Another encouraging development is that our employee headcount increased significantly once again – by around 11% or some 900 people, taking the total to just over 9,000.

At the same time, we have consolidated and enhanced our position as a leading international technology partner for biopharmaceutical research and the industry. The expansion of our production capacities means we are well prepared to optimally meet the growing demands of a rapidly expanding market, both today and tomorrow. With our innovative tools and technologies, we help ensure that new scientific findings can be applied more quickly to improve patient care and that more people have access to better medicine.

By acquiring a majority stake in Biological Industries, an Israeli company that develops and manufactures cell culture media, Sartorius now has its own cell culture media production facility for the first time, thus significantly expanding its range of bioprocessing media. To date, Biological Industries has concentrated primarily on the future-oriented field of cell and gene therapies, an area that has seen some major breakthroughs in the recent past. With this majority takeover, we are thus simultaneously expanding our product portfolio for customers in the dynamically growing market for advanced therapies.

In October 2019, we also signed an agreement to acquire parts of the Danaher life science portfolio for approximately U.S. $750 million in cash. The portfolio up for acquisition is an excellent strategic fit for both Sartorius divisions. At our Lab Products & Services Division, it strengthens the strategically important area of bioanalytics through a widely accepted and differentiating technology for use in biopharmaceutical drug research. And at the Bioprocess Solutions Division, it helps us expand our existing portfolio, especially in downstream processing. The planned transaction is currently undergoing antitrust clearance in connection with Danaher's intended takeover of GE's biopharma business, and we expect our acquisition to be completed around the end of the first quarter of 2020.

The extremely positive performance of our Group's business also led to a further rise in the price of Sartorius shares. In a stock market environment that was generally upbeat despite the weaker global economy and conflicts over economic policy, we were able to record above-average gains: Our preference shares closed the 2019 trading year at a price of €190.80, up 75.2%, while the ordinary share price rose by 82.3%, closing at €175.00.

Once again, we plan to enable our shareholders to participate appropriately in the company's success. The Supervisory Board and the Executive Board will submit a proposal to the Annual Shareholders' Meeting on March 26, 2020, to raise dividends for the tenth time in succession, with a payout ratio of €0.71 per preference share and €0.70 per ordinary share.

Let us now take a closer look at our divisions, which both contributed to the positive development of the Group.

The Bioprocess Solutions Division, which offers products and services for all phases in the production of biopharmaceuticals, showed very dynamic growth in sales and earnings, as in the previous year. Due to

strong demand across all product categories and geographies in the first half, we raised our full-year forecast for 2019 substantially at mid-year. With an increase in division sales of 18.1% in constant currencies and an EBITDA margin of 29.6%, up one percentage point, we even slightly exceeded this new forecast.

Operationally, we have set the course for further positive development: Our considerably extended production lines for single-use bags and filters that went into operation in the past summer at our site in Yauco, Puerto Rico, give Sartorius the scope to supply customers in the Americas with an even broader product range directly from the region. Our facility in Aubagne, France, started up operations at its new cleanroom for single-use bag manufacture, and new production capacities were also built up at the German facilities in Göttingen and Ulm.

The Lab Products & Services Division, which offers products and services for research and quality assurance laboratories, primarily for the pharmaceutical and biopharmaceutical industries besides other segments, developed robustly in a partly challenging economic environment. With a 5.9% increase in sales revenue, we reached the lower end of our forecast, as expected, while the division's EBITDA margin rose by more than one percentage point to 19.6%.

We are convinced that powerful bioanalytical tools are gaining importance in our industry and are therefore continuing to drive the expansion of this business area systematically. Following the acquisitions of Intellicyt and Essen Bioscience in 2016 and 2017, Sartorius already has a superbly positioned, innovative cell analysis segment in place. The planned acquisition of parts of Danaher's life science portfolio, which also includes the FortéBio business for label-free analysis of biomolecules, would make our range of bioanalytics solutions even more relevant and attractive for our customers.

All signs point toward continued growth for Sartorius. We anticipate that demand for biopharmaceuticals will continue to rise steadily and, along with it, the need for high-performance technologies and solutions for their development and production. Our goal is to maintain our steady growth and achieve sales of around €4 billion by 2025, with an EBITDA margin of about 28%. We also expect to employ around 15,000 people.

We are confident that our anniversary year will bring further profitable growth. In 2020, sales revenue is estimated to grow by around 10% to 13% in constant currencies. This means we are set to achieve the medium-term forecast we made in 2012 for the year 2020, with consolidated sales of around €2 billion. Regarding our EBITDA margin, we expect an increase to 27.5%. Our CAPEX ratio will probably be around 10%, below the prior-year level of 12.3%. These figures do not consider the acquisition of parts of the Danaher life science portfolio so we will adjust our forecast once the transaction is completed.

The most important building block for the past and future success of Sartorius is our team. More than 9,000 staff members worldwide are dedicating their expertise and efforts to drive the progress of Sartorius. On behalf of the entire Executive Board, I would like to express my sincere thanks for their willingness to always go the extra mile.

I would also like to thank our valued customers, business partners, and shareholders. Based on the trust you have placed in us throughout the year, you have contributed importantly to the positive development of Sartorius. We would be pleased if you would continue to accompany us on the road to success during our anniversary year and beyond.

Sincerely yours,

Dr. Joachim Kreuzburg
CEO and Executive Board Chairman

Executive Board

The Group's central management entity is the Executive Board of Sartorius AG. It defines the strategy, is responsible for the operational management of the Group and controls the distribution of resources within the organization.

Joachim Kreuzburg

CEO

Group Strategy, Human Resources, Corporate Research, Legal & Compliance, Communications

Board member since 2003

Rainer Lehmann

Member of the Board

Finance, Information Technology, Business Processes

Board member since 2017

René Fáber

Member of the Board since January 1, 2019

Head of Bioprocess Solutions

Gerry Mackay

Member of the Board since January 1, 2019

Head of Lab Products & Services

Report of the Supervisory Board

Dear Shareholders and Business Partners,

Fiscal 2019 marked yet another a successful year for Sartorius, both financially and strategically. The company performed excellently in both divisions and across all geographies, and attained or exceeded its financial targets substantially raised at mid-year. To support organic expansion, additional production lines were put into operation at several sites, and IT infrastructure was extended. Beyond this, a smaller acquisition was successfully closed and a larger takeover was launched at the end of the year.

In 2019, the Supervisory Board intensively dealt with the situation and prospects of the company. We advised the Executive Board concerning corporate management and performed the tasks assigned by German corporate law and the company's Articles of Association. The Executive Board kept us informed by providing regular, prompt and comprehensive reports, both written and verbal, about all relevant corporate planning and strategic development issues, the progress of business in the divisions, the situation of the Group, including its risk situation, risk management and internal control systems, as well as about compliance. The company's significant transactions were discussed in depth by the respective committees responsible as well as by the full Supervisory Board, on the basis of the reports provided by the Executive Board. Following thorough review of the Executive Board's reports and proposed resolutions, we voted on these to the extent that our vote was required.

Cooperation between the Supervisory Board and the Executive Board was always characterized by openness, constructive dialogue and trust.

Focus of the Supervisory Board's Conferences

In the reporting year, the Supervisory Board convened at four ordinary meetings, which the Executive Board also attended, provided these conferences did not concern the latter board's matters. We regularly conferred on the development of sales revenue, earnings and employment for the Group; the financial situation of the company and of its affiliates; and on strategic projects. Moreover, three extraordinary meetings took place in the context of the acquisitions mentioned above and the personnel decisions concerning the Executive Board.

At our meeting on February 14, 2019, we fully reviewed the annual and consolidated financial statements for fiscal 2018 and endorsed them based on the reports given by the Audit Committee and the independent auditors who were present during this item of the agenda. Following the report given by the independent auditors and a discussion, we endorsed the non-financial Group statement for the year under review. Beyond this, we conferred upon and approved the agenda, along with the proposed resolutions, for the 2019 Annual Shareholders' Meeting and the proposal for appropriation of the annual profit, as well as decided upon the remuneration of the Executive Board members for 2019. The Executive Board gave us an oral report on selected, relatively large customer projects and about various growth initiatives of both divisions in China and the USA.

At the Supervisory Board meeting on March 26, 2019, we dealt with various digitalization projects, among them the planned rollout of new software for customer relationship management. Furthermore, the Executive Board provided us with an overview of sales activities in Taiwan and the planned acquisition of our distribution partner there, which we approved. We moreover approved the extension of Rainer Lehmann's appointment ahead of time as a member of the Executive Board and as Chief Financial Officer by five years until February 28, 2025.

The main topic of an extraordinary Supervisory Board meeting on July 11, 2019, was the planned acquisition of parts of the Israeli cell culture media specialist Biological Industries. In this context, the Executive Board also detailed its strategy for broadening the company's cell culture media portfolio and building up the corresponding production capacities.

On the agenda of the Supervisory Board meeting on August 15, 2019, was the progress of the planned acquisition of Biological Industries. The Executive Board additionally described the changes in Sartorius' competitive environment as well as the former's

intentions to participate in the bidding to acquire selected Danaher Life Science businesses. Furthermore, we dealt with appointing a successor for a position on the Supervisory Board that had become vacant after Supervisory Board member Dr. Guido Oelkers had informed us that he would be resigning from the board due to his high professional workload. The Supervisory Board agreed to the proposal submitted by the Nomination Committee to appoint Prof. David Raymond Ebsworth as Dr. Oelker's successor. Beyond this, we were given an oral presentation on the progress of various digitalization projects.

At the focus of two extraordinary Supervisory Board meetings on September 23 and October 9 was the opportunity to acquire selected Danaher businesses. In September, the Executive Board informed us in detail about the acquisition status and the technologies offered for sale while October's meeting focused on discussing the results of due diligence. Following in-depth deliberations, the Supervisory Board approved the transaction that would be a good complementary fit with Sartorius' strong position in the two fast-growing segments of bioanalytics and bioprocessing.

Topics on corporate governance and compliance were dealt with at the meeting on December 5, 2019. After our consultations, we decided upon the wording of the Declaration of Compliance in accordance with the German Corporate Governance Code (GCGC), with this Declaration confirming that Sartorius complies in full with the recommendations of the current Code. The Supervisory Board Chairman also reported on various amendments to be expected in connection with the Act Implementing the Second Shareholders' Directive (ARUG II), as well as with the reform of GCGC. The Supervisory Board also examined the results of the efficiency review of its work and approved the budget submitted by the Executive Board for 2020.

Another major focus of this meeting was on the reappointment of Executive Board Chairman and CEO Dr. Joachim Kreuzburg ahead of time up to November 10, 2025, as well as the terms of his Executive Board contract that had been prepared in the Executive Task Committee.

Activity Report of the Committees

Four committees support the work of the Supervisory Board. These prepare topics that are then dealt with by the full Supervisory Board and, in individual cases, take decisions instead of the full board, as far as permitted. The committee chairpersons reported regularly to the Supervisory Board on the details of their committee work.

The Executive Task Committee met four times during the reporting year. Its discussions primarily focused on the company's various strategic actions and on Executive Board and personnel matters, particularly the extensions of the appointments of the Executive Board Chairman and CEO and of the CFO. In addition, the committee obtained information on the progress of several Group projects and conferred on the pending changes to ARUG II and the GCGC to prepare for the discussions and the resolutions to be taken by the full Supervisory Board.

In the year under review, the Audit Committee held four meetings. The committee prepared for the full Supervisory Board's conference on endorsement and approval of the consolidated annual financial statements for fiscal 2018 and discussed the quarterly releases and first-half financial reports of 2019. Additional focal points were monitoring the effectiveness of the Group-wide risk management and internal control system by the Internal Auditing Department, as well as measures for further improvement of compliance. The committee also conferred on the subjects of Group financing.

Beyond these items, the committee reviewed the Internal Auditing Department report, which did not indicate any material discrepancies in business transactions, and also considered the department's plans for the upcoming months.

With respect to the audit of the annual financial statements for fiscal 2019, the committee confirmed the independence of the auditors and deliberated in detail on selecting auditors to recommend at the Annual Shareholder's Meeting for appointment and commissioning to perform an audit review, as well as on defining and monitoring the audit procedure and the focal points of the audit.

The Nomination Committee that draws up election proposals to be submitted to the Annual Shareholders' Meeting for shareholder representatives on the Supervisory Board met three times in the year under review. With respect to the resignation of Supervisory Board member Dr. Guido Oelkers at year-end 2019, the committee prepared a corresponding proposal for his replacement to be appointed by the court.

The Conciliation Committee pursuant to Section 27, Subsection 3, of the German Codetermination Law ("MitBestG") did not have to be convened.

Audit of the Annual and Consolidated Financial Statements; Review of the Non-Financial Group Statement

The annual and consolidated financial statements prepared by the Executive Board for fiscal 2019 and the management report of Sartorius AG were reviewed by the independent auditing company KPMG AG Wirtschaftsprüfungsgesellschaft based in Hanover, Germany. This company had been commissioned by the Audit Committee of the Supervisory Board pursuant to the resolution passed at the Annual Shareholders' Meeting on March 28, 2019. The independent auditors issued an unqualified audit certificate.

They attended the Audit Committee meeting on February 12, 2020, and the Supervisory Board Meeting on February 13, 2020, and reported on the essential results of their audits.

Sufficient time was allotted for discussion of all issues with the auditors. Written information and audit reports had been sent to all Supervisory Board members on time and were discussed in detail during the meetings mentioned. On the basis of its own examination of the annual Sartorius AG and consolidated financial statements, the Sartorius AG management report and the Group management report, the Supervisory Board concurred with the results of the audit conducted by KPMG and, at the meeting on February 13, 2020, endorsed the financial statements of Sartorius AG and the Group on recommendation by the Audit Committee. The annual financial statements were thus approved. The Supervisory Board and the Executive Board will submit a proposal at the Annual Shareholders' Meeting on March 26, 2020, to pay dividends of €0.71 per preference share and €0.70 per ordinary share to shareholders from the retained profit.

Furthermore, the Executive Board submitted a Non-Financial Group Statement based on the German Law to Strengthen Companies' Non-Financial Reporting to implement the EU CSR Directive. The content of this statement was submitted to a voluntary review by KPMG AG Wirtschaftsprüfungsgesellschaft based on a limited assurance engagement. On the basis of this review, KPMG issued an unqualified opinion. The auditing company attended the Supervisory Board meeting on February 13, 2020, and reported on the results of its audit review. Following intensive discussions and examination, the Non-Financial Group Statement was also endorsed by the Supervisory Board members.

Composition of the Supervisory Board and the Executive Board

In fiscal 2019, there were no personnel changes in the Supervisory Board or the Executive Board. The positions of Executive Board Chairman and CEO Dr. Joachim Kreuzburg and CFO Rainer Lehmann were each extended for a five-year period until November 10, 2025, and February 28, 2025, respectively.

On the part of the Supervisory Board, Dr. Guido Oelkers announced that he would resign from the Supervisory Board at the end of 2019, as already mentioned. We would like to thank Dr. Oelkers very much for his dedicated work on our board. The company's local court of registration Amtsgericht Göttingen appointed Prof. David Raymond Ebsworth as a new Supervisory Board member until the election to be held by the Annual Shareholders' Meeting.

Moreover, the Supervisory Board would like to thank the Executive Board and all employees across the globe for their great commitment and successful hard work throughout the especially intensive fiscal year ended. In addition, the Supervisory Board expresses its appreciation to its shareholders for the confidence they have shown yet again in the company.

Hamburg, February 2020

For the Supervisory Board

Dr. Lothar Kappich

Chairman

Sartorius Shares

Global Stock Markets Post Price Gains

The world's major stock markets started off 2019 with strong price gains in the first quarter. Despite a weakening global economy and economic policy conflicts, such as the customs and trade disputes between the USA and China, share prices continued to rise further as the reporting year progressed. In particular, interest rate cuts by the U.S. Federal Reserve had a positive impact on stock markets. Supported by an expansive monetary policy, the Dow Jones reached a new record high in the year under review. The leading German stock index DAX also soared in the fourth quarter, approaching its historical high and closing the reporting year at 13,249 points, up 25.5%. The MDAX and the German technology index TecDAX, to which the Sartorius preference shares also belong, saw a rise of 31.2% and 23.0%, respectively. The index relevant to the biotech industry, NASDAQ Biotechnology, achieved a gain of 24.4%.

Sartorius Shares Rise Substantially

The prices of both classes of Sartorius AG shares developed positively yet again. Contributing factors included better-than-expected business performance and announcement of two acquisitions. Sartorius preference shares closed the 2019 stock-market year at €190.80 – up 75.2% year over year. Ordinary shares closed around 82.3% higher, at €175.00.

Sartorius AG preference shares have been listed on the TecDAX since 2012 and were additionally admitted to the MDAX in September 2018. At the end of 2019, the company's share certificates on the MDAX ranked 11th in market capitalization (2018: 15th) and 26th in trading volume (2018: 32th). On the TecDAX, the rankings for Sartorius share certificates were 6th place for market capitalization (2018: 8th place) and 16th place based on trading volume (2018: 13th place).

Facts about the Shares

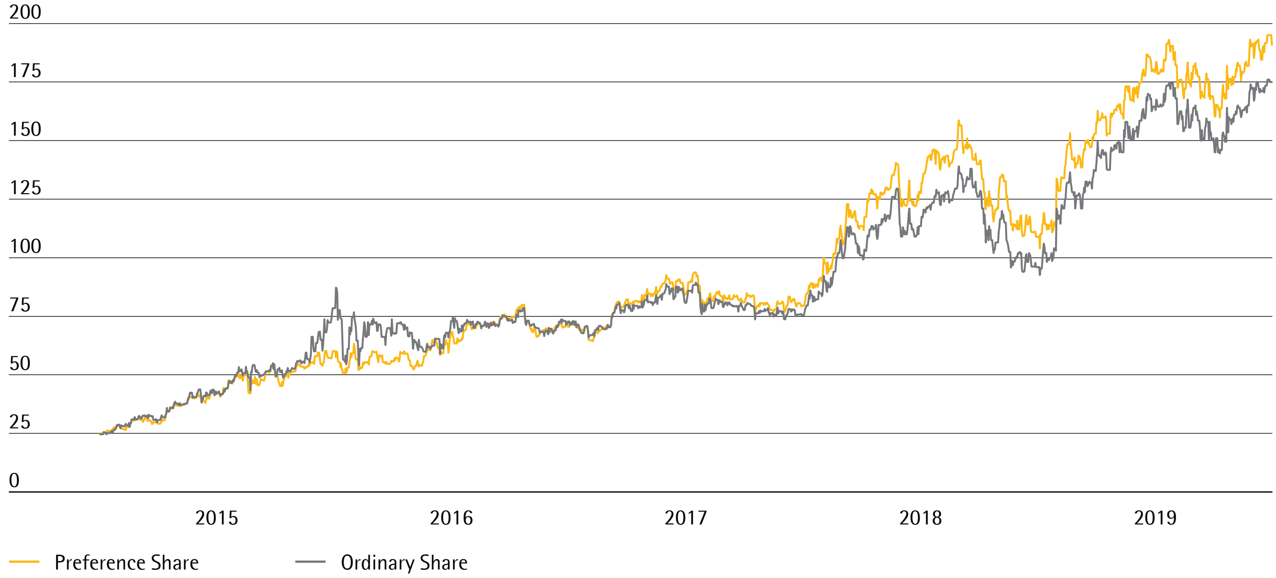
ISIN	DE0007165607 (ordinary shares)
	DE0007165631 (preference shares)
Designated sponsor	Oddo Seydler Bank AG | M.M. Warburg & Co. (AG & Co.) KGaA
Market segment	Prime Standard
Indexes	MDAX | TecDAX | HDAX | CDAX | MSCI World | MSCI Europe | MSCI Germany | STOXX Europe 600
Stock exchanges	Xetra | Frankfurt | Hanover | Dusseldorf | Munich | Berlin | Hamburg | Bremen | Stuttgart
Number of shares	74,880,000 no-par individual share certificates with a calculated par value of €1 per share
Of which	37,440,000 ordinary shares
	37,440,000 preference shares
Of which shares outstanding	34,212,224 ordinary shares
	34,176,068 preference shares

Trading Volume and Share Price Development

	2019	2018	Change in %
Preference share in € (Xetra year-end closing price)	190.80	108.90	75.2
Ordinary share in € (Xetra year-end closing price)	175.00	96.00	82.3
Market capitalization in millions of €[1]	12,507.9	7,006.1	78.5
Average daily trading volume of preference shares	65,810	107,761	–38.9
Average daily trading volume of ordinary shares	1,238	2,153	–42.5
Trading volume of preference shares in millions of €	2,682.6	3,571.1	–24.9
Trading volume of ordinary shares in millions of €	45.7	61.3	–25.4
Total trading volume in millions of €	**2,728.3**	**3,632.4**	**–24.9**
TecDAX (XETRA year-end closing price)	3,014.9	1,960.7	53.8
MDAX (XETRA year-end closing price)	28,312.8	21,588.0	31.2
DAX (XETRA year-end closing price))	13,249.0	10,559.0	25.5

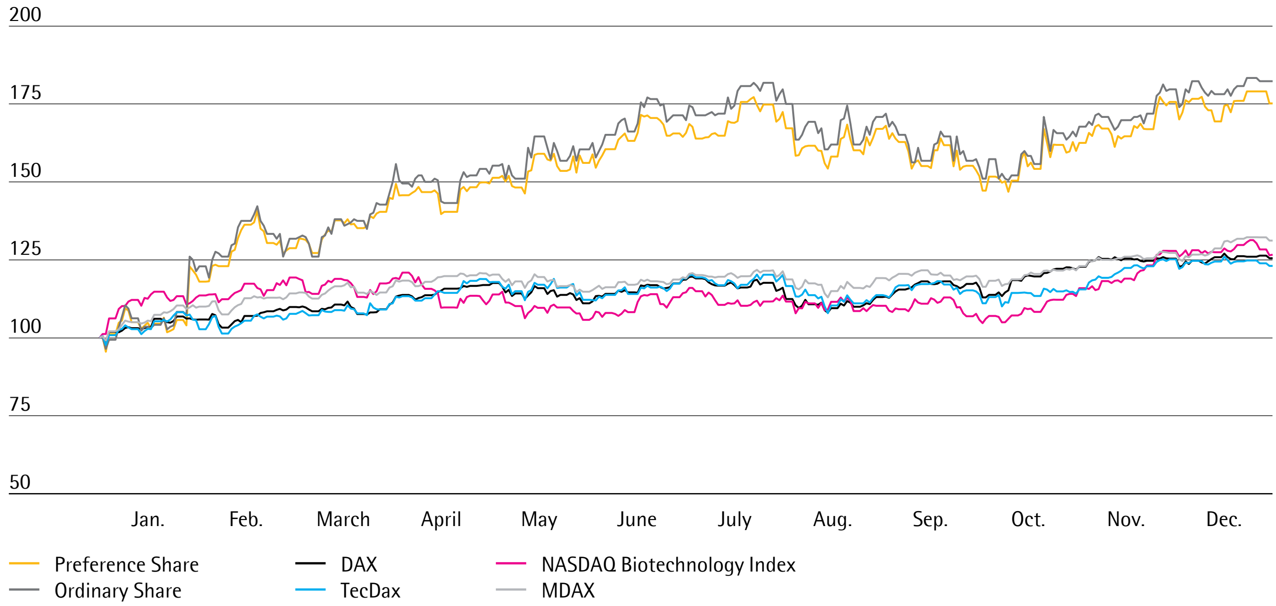
[1] without treasury shares
Sources: Bloomberg, Deutsche Börse AG

Sartorius Share[1] in €
January 1, 2015 to December 31, 2019



[1] Sartorius share prices from January 1, 2015, to June 13, 2016, adjusted for stock split

Sartorius Shares in Comparison to the DAX, MDAX, TecDAX and NASDAQ Biotechnology Index
January 1, 2019, to December 31, 2019



Market Capitalization and Trading Volume

The market capitalization of Sartorius AG ordinary and preference shares rose by around 79% in the reporting year and stood at €12.5 billion as of December 31, 2019, up from €7.0 billion in 2018.

The average number of preference shares traded daily on the Frankfurt Stock Exchange (Xetra and trading floor) decreased during the year under review from 107,761 to 65,810 shares. The high number in 2018 was essentially due to the admission of the company's preference shares to the MDAX and MSCI indices. Despite the higher share price level in the reporting period, the trading volume declined from €3.6 billion to €2.7 billion because admission to the latter indices had a one-time effect.

Due to the low free float of Sartorius' ordinary shares, they are traded only to a limited extent. Thus, the average number of ordinary shares traded daily was 1,238 compared with 2,153 in the previous year. The corresponding trading volume was around €45.7 million (2018: €61.3 million).

Investor Relations

Sartorius investor relations activities follow the objective of making the current and future development of the company transparent for its stakeholders. To achieve this objective, Sartorius maintains an ongoing, open dialog with shareholders, potential investors and financial analysts.

Besides providing quarterly, first-half and annual reports, we inform the capital market and the interested public at quarterly teleconferences and in regularly published press releases about the current development of our business and other material events at the company. Moreover, Group management and our IR team were present for talks and factory tours with capital-market participants at our sites in Göttingen, Germany, and Aubagne, France. Management and IR specialists also took part at conferences and roadshows in various financial centers.

All information and publications about our company and its shares are available on our website at www.sartorius.com.

Analysts

The assessments and recommendations of financial analysts serve as an important foundation for the decisions of private and institutional investors when acquiring shares. During the reporting year, we maintained an ongoing dialog with a total of 19 institutes.

Research Coverage

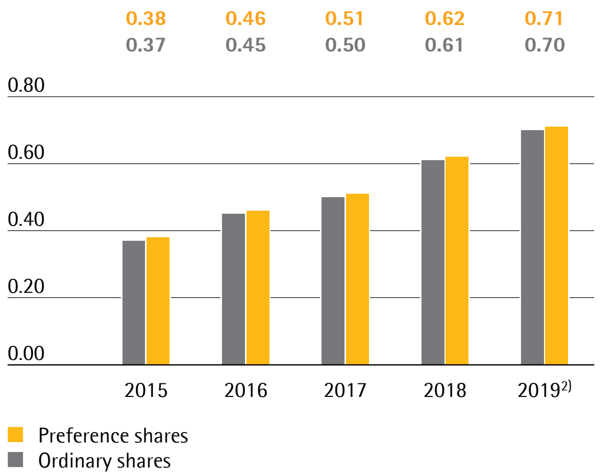
Date	Institute	Price target in €	Recommendation
Jan. 30, 2020	Kepler Cheuvreux	175.00	Sell
Jan. 30, 2020	J.P. Morgan	235.00	Buy
Jan. 30, 2020	Nord LB	150.00	Hold
Jan. 30, 2020	EQUI.TS	132.00	Hold
Jan. 29, 2020	Deutsche Bank	200.00	Hold
Jan. 29, 2020	M.M. Warburg	206.00	Hold
Jan. 29, 2020	Janney	225.00	Hold
Jan. 26, 2020	MainFirst	245.00	Buy
Jan. 20, 2020	Commerzbank	245.00	Buy
Jan. 13, 2020	Bank of America Merrill Lynch	237.00	Buy
Oct. 23, 2019	Société Générale	175.00	Hold
Oct. 23, 2019	AlphaValue	163.00	Sell
Oct. 23, 2019	Metzler	210.00	Buy
Oct. 22, 2019	DZ Bank	139.20	Sell
Oct. 16, 2019	HSBC	160.00	Hold
Sep. 19, 2019	LBBW	200.00	Buy
Aug. 23, 2019	Hauck & Aufhäuser	135.00	Sell
Jul. 07, 2019	UBS	184.00	Hold
Jun. 06, 2019	Berenberg	125.00	Sell

Dividends

The Sartorius Group strives to enable its shareholders to participate appropriately in the company's success and has continuously raised dividends over the past years. Our dividend policy is basically oriented toward distributing an approximately stable share of relevant net profit (see definition on page 37) to our shareholders.

The Supervisory Board and the Executive Board will submit a proposal to the Annual Shareholders' Meeting on March 26, 2020, to pay dividends of €0.71 per preference share and €0.70 per ordinary share for fiscal 2019.

Dividends[1)]
in €



[1)] 2015 adjusted for stock split; rounded values

[2)] Amounts suggested by the Supervisory Board and the Executive Board of Sartorius AG

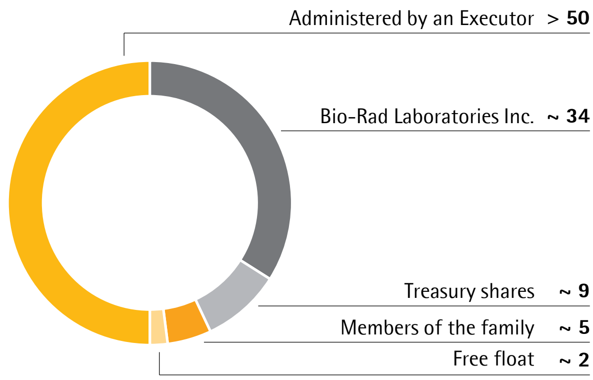
If approved, the dividends would increase for the tenth consecutive year and the total profit distributed would rise considerably by 14.6%, from €42.1 million the previous year to €48.2 million. The corresponding dividend payout ratio would be slightly below the previous year's level at 23.0%. Based on the 2019 year-end prices, this would result in a dividend yield of 0.4% for ordinary shares (previous year: 0.6%) and 0.4% for preference shares (previous year: 0.6%). Treasury shares held by the company are not entitled to dividend payments.

Shareholder Structure

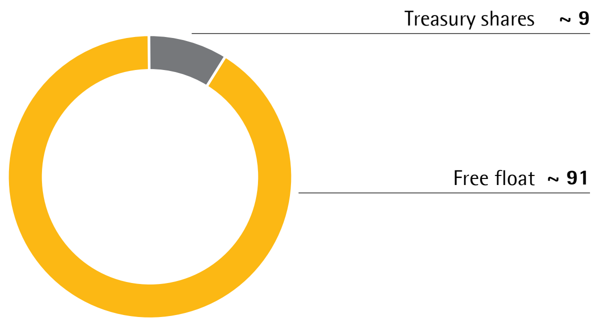
Sartorius AG's issued capital comprises 37,440,000 million ordinary shares and the same number of preference shares, each with a calculated par value of €1 per share. A good 50% of the ordinary shares are held by the Sartorius families and are under the management of an executor. Approximately a further 5% are held directly by members of the Sartorius families, and some 9% are owned as treasury shares by the corporation itself. According to a mandatory announcement published in 2011, the U.S. company Bio-Rad Laboratories Inc. held approximately 30% of the ordinary shares at that time; based on the most recent information available, this company now holds around 34%. To our knowledge, the remaining approximately 2% of the ordinary shares are in free float.

Around 91% of Sartorius' preference shares are in free float; roughly 9% are held as treasury shares by the corporation.

Shareholder Structure: Ordinary Shares
in %



Shareholder Structure: Preference Shares[1)]
in %



[1)] Information on shareholdings and shares in free float pursuant to Sections 33 et seq. of the German Securities Trading Act (WpHG). Reporting obligations refer only to ordinary shares and not to non-voting preference shares.

Key Figures for Sartorius Shares[1]

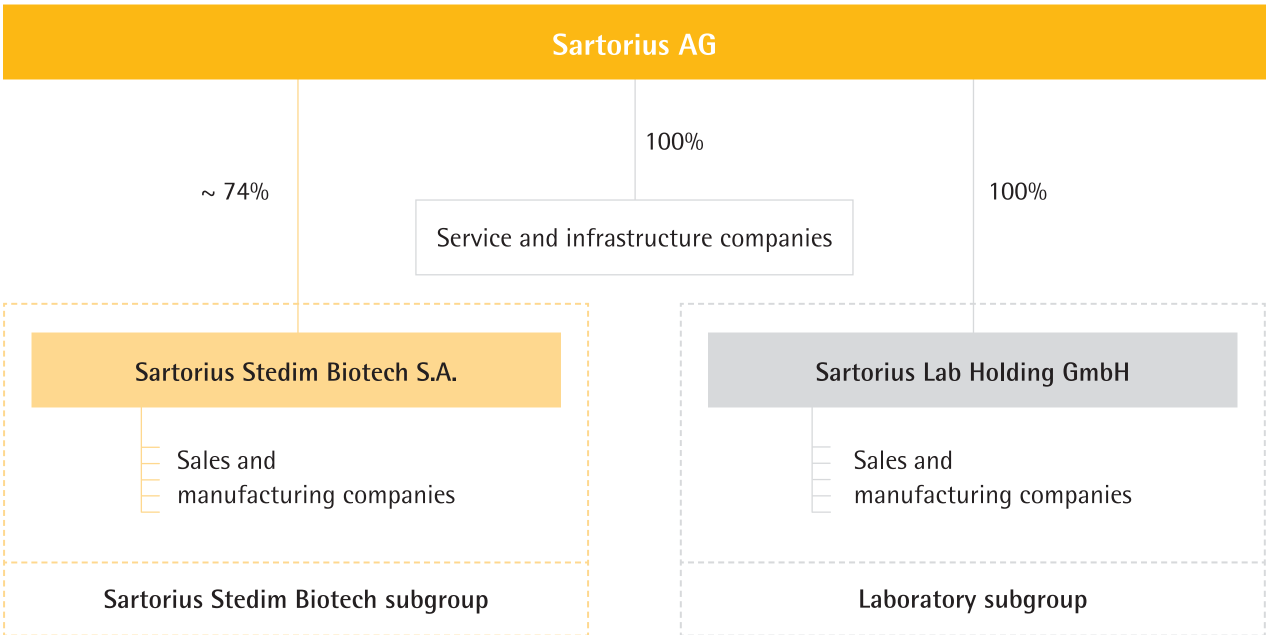
		2019	2018	2017	2016	2015
Ordinary shares[2] in €	Reporting date	175.00	96.00	75.42	72.80	78.50
	High	176.00	139.00	89.41	87.50	78.50
	Low	92.60	76.80	73.66	54.50	24.63
Preference shares[2] in €	Reporting date	190.80	108.90	79.54	70.50	60.11
	High	195.00	158.60	93.73	79.85	60.19
	Low	104.00	80.15	64.35	50.54	24.75
Market capitalization[3] in millions of €		12,507.9	7,006.1	78.5	4,900.1	4,740.1
Dividend per ordinary share[4] in €		0.70	0.61	0.50	0.45	0.38
Dividend per preference share[4] in €		0.71	0.62	0.51	0.46	0.38
Total dividends[4] [5] in millions of €		48.2	42.1	34.5	31.1	25.8
Payout ratio[4] [6] in %		23.0	24.0	24.0	23.5	24.0
Dividend yield per ordinary share[7] in %		0.4	0.6	0.7	0.6	0.5
Dividend yield per preference share[7] in %		0.4	0.6	0.6	0.7	0.6

[1] Share prices and dividends for 2015 adjusted for stock split; rounded values
[2] Xetra daily closing price
[3] Without treasury shares
[4] For 2019, amounts suggested by the Supervisory Board and the Executive Board of Sartorius AG
[5] Calculated on the basis of the number of shares entitled to dividends; 2015 adjusted for stock-split
[6] Based on the relevant net profit: net profit adjusted for extraordinary items and non-cash amortization, based on the normalized financial result, including the corresponding tax effects
[7] In relation to the closing price in the year concerned

Combined Group Management Report

02

Structure and Management of the Group



Group Legal Structure

Sartorius is a globally operating company with subsidiaries in more than 30 countries. The holding company Sartorius AG is the parent corporation of the Sartorius Group. The corporation is headquartered in Göttingen, Germany, and is listed on the German Stock Exchange.

Sartorius manages its bioprocess business as a legally independent subgroup whose parent corporation is Sartorius Stedim Biotech S.A., which is listed on Euronext Paris. As of December 31, 2019, Sartorius AG held around 74% of the shares of Sartorius Stedim Biotech S.A. The Group's lab business is legally combined in a further subgroup whose parent company is Sartorius Lab Holding GmbH, in which Sartorius AG holds a 100% stake.

The consolidated financial statements include Sartorius AG and all major affiliates in which Sartorius AG has a controlling interest pursuant to IFRS 10.

Organization and Management of the Group

The Group's central management entity is the Executive Board of Sartorius AG. In collaboration with the Supervisory Board, the Executive Board defines the Group's strategy, is responsible for the operational management of the Group and controls the distribution of resources within the organization.

The Sartorius Group conducts its operating business in two divisions: Bioprocess Solutions and Lab Products & Services. The divisions each combine their respective businesses for the same fields of application and user groups, and share part of the infrastructure and central services.

To align our business as closely as possible with our customers' needs, our organizational structure is tailored based on our two divisions. All operational functions such as Sales and Marketing and Production, including production-related functions, as well as Product Development, are organized by division. Administrative functions, support functions and the Corporate Research unit operate across divisions.

Implementing the Group's various strategies and projects at the local level is the responsibility of the national affiliates. The management bodies of the local companies run their organizations in accordance with the applicable statutory provisions, articles of association and rules of procedure and in keeping with the principles of corporate governance that apply throughout the Sartorius Group worldwide.

Changes in the Group Portfolio

Sartorius took over a majority stake in the Israeli cell culture media developer and manufacturer Biological Industries. For approximately €45 million in cash, Sartorius acquired slightly more than 50% of the shares of the company from its current owners, Kibbutz Beit Haemek and the private equity fund Fortissimo Capital. Moreover, further options to acquire further shares were agreed.

Biological Industries concentrates on cell culture media in particular for cell and gene therapies, regenerative medicine and other innovative therapies. The company was founded in 1981 and currently employs around 130 people, mostly at its main facility near Haifa, Israel. In 2019, it had sales revenue of some €20 million with a double-digit operating EBITDA margin. Half of Biological Industries' business is allocated to Bioprocess Solutions and half to Lab Products & Services, since its cell culture media are used in both manufacturing processes and research projects.

In October 2019, Sartorius moreover signed an agreement to acquire parts of Danaher's Life Science portfolio for approximately 750 million U.S. dollars in cash. The planned transaction covers the FortéBio business for label-free biomolecular characterization as well as chromatography systems and resins, among other assets. In 2018, the combined revenue generated by the portfolio available for purchase was approximately 140 million U.S. dollars, with double-digit profit margins as well as a strong growth profile. Worldwide, more than 300 employees have been working at the sites of the business segments to be acquired.

The proposed transaction is subject to the customary closing conditions as well as Danaher's successful takeover of the GE Biopharma business, and is expected to close in the first quarter of 2020.

Financial Controlling and Key Performance Indicators

The Sartorius Group is managed using a number of key performance indicators, which are also decisive for the determination of the variable remuneration component for the Executive Board and managers.

A key management parameter that Sartorius uses to measure the development of its size is currency-adjusted growth of sales revenue, i.e., sales in constant currencies. The key profitability measure is EBITDA adjusted for extraordinary items, i.e. underlying EBITDA, and the corresponding margin.

With respect to the Sartorius Group's debt financing capacity, the key indicator is the ratio of net debt to underlying EBITDA for the last twelve months. Furthermore, the capex ratio, i.e., capital expenditures in proportion to sales revenue, represents a key control parameter.

In addition, the following financial and non-financial indicators are reported on a regular basis:

- Order intake
- Relevant net profit | Earnings per share
- Annual net profit | Earnings per share
- Equity ratio
- Net working capital
- Net cash flow from operating activities
- Number of employees

The annual financial forecast that is published at the beginning of a fiscal year for the Group and the divisions refers, as a rule, to the development of sales revenue and of the underlying EBITDA margin. The expected capex ratio, as well as a directional forecast for the ratio of net debt to underlying EBITDA, is additionally indicated for the Group.

Further non-financial indicators are disclosed in the non-financial statement.

Business Model, Strategy and Goals

As a leading partner of the biopharmaceutical industry, we help our customers to develop medications faster and manufacture them more efficiently. Our objective is to achieve scientific and technological progress in life sciences and in bioprocessing to enable more people to have access to advanced therapies and medicines.

We focus on an attractive market, which is characterized by strong growth momentum and long-term trends. Primary growth drivers are a growing world population and an increase in age-related diseases in industrialized countries. In addition, rising incomes in emerging countries are leading to improved access to healthcare and rising demand for medications. Medical advances are also driving the ongoing development and approval of new biopharmaceuticals as well as of emerging biosimilars, which are highly similar to established biologics already licensed, and account for a share of the biopharma market that is currently still small, but fast-growing. As a result of these factors, the volumes of biotech medications are steadily increasing and so is the demand for the appropriate production technologies. This market is largely independent of business cycles.

The maturity and intensity of competition in this still comparably young biopharmaceutical industry are successively increasing. In addition to achieving scientific success, our customers will find it more important, in view of mounting cost pressure on healthcare systems, to increase the efficiency of their research, development and manufacturing processes. We help them meet this challenge by further developing our product portfolio. One of the decisive success factors of Sartorius is to use technology in order to differentiate ourselves from our competitors. Our innovative power rests on three pillars: our own specialized product development, the integration of innovations through acquisitions, and alliances with partners in complementary fields.

Another competitive advantage of Sartorius is its broad understanding of applications, which is based on its clear focus on the sector. We are thoroughly familiar with our customers' entire added-value chains, especially the interactivity of the systems in these chains. All this makes us a strategic partner of these customers who drive forward innovations in bioprocess technology.

Beyond the biopharmaceutical industry, Sartorius also supports related sectors, such as laboratories in the chemical and food industries, with a wide portfolio of laboratory instruments and consumables used to ensure safe and reliable performance of quality-critical processes.

The Sartorius Group has organized its business in two divisions: Bioprocess Solutions and Lab Products & Services. We outline the divisions' market positioning and strategy in the sections that follow.

Bioprocess Solutions

In the Bioprocess Solutions Division, Sartorius offers a broad portfolio of products that focuses on all major steps in the manufacture of a biopharmaceutical, as well as in process development as prerequisite procedures. Our technologies cover, inter alia, cell line technologies, cell culture media, bioreactors, and a wide range of products for separation, purification and concentration of biological intermediates and finished products, as well as solutions for their storage and transportation. Sartorius also offers data analytics software for modeling and optimizing processes of biopharmaceutical development and production. In its core technologies, the company has leading market positions with high double-digit market shares.

The breadth of our product portfolio sets us apart from our competitors. We provide customers with an entire production unit from a single source, as well as assist with preceding project planning, process integration and subsequent validation.

As an innovation leader, Sartorius is among the very first biopharmaceutical suppliers to have specialized in single-use technologies, which account for approximately three-quarters of the division's sales revenue. Due to their cost advantages and their greater flexibility and safety compared with reusable technologies, the pharmaceutical industry is increasingly relying on single-use products.

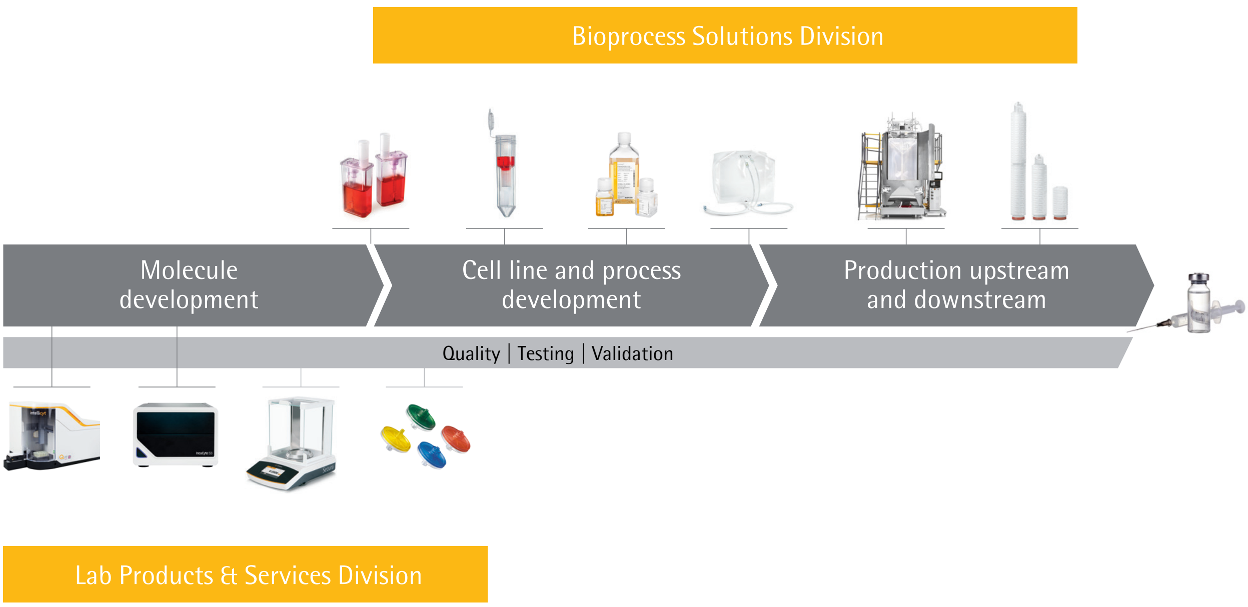
Particularly in pre-commercial production processes, single-use products have almost completely supplanted classic stainless steel components. Industry observers believe that market penetration is likely to continue as commercial production also increasingly moves toward single-use products.

As a result, the division generates a large share of sales from repeat business. The high approval requirements placed on our customers' products are also contributing to this growth. Because our customers' production processes must be validated by the health authorities responsible, the technological components initially used can be replaced only at considerable expense once they have been approved. The manufacturers of medications are therefore closely tied to the suppliers for the life cycle of a medication. Beyond this, our broad and stable customer base that we address through our specialized sales force directly for the most part also contributes to this favorable risk profile.

The division's strong strategic positioning and the above-average expansion of the sector are a good foundation for profitable growth in the future as well. Beyond realizing our organic development potential, we also aim to further expand the division's portfolio through complementary acquisitions and alliances.

Information on the business development of this division is given in the chapter on Business Development of Bioprocess Solutions.

Strategic Focus on Biopharma Applications from Molecule Development to Production of Biopharmaceuticals



Lab Products & Services

The Lab Products & Services Division concentrates on research laboratories in the pharmaceutical and biopharmaceutical industries, as well as on academic research institutes. We supply scientists and laboratory staff with the laboratory instruments and lab consumables they need to make their research and quality control easier and faster. For example, we provide our life science customers with innovative systems for live cell analysis to enable them to automate key analytical steps in molecule development, which earlier were mostly carried out manually. In this way, considerably larger quantities of samples can be examined and extensive sets of data generated and evaluated within a short time, substantially accelerating the identification of suitable drug candidates or cell clones, for instance.

Beyond this, the division offers a wide range of premium laboratory instruments for sample preparation – such as laboratory balances, pipettes and lab water systems – as well as consumables, such as filters and microbiological test kits. In these product categories, Sartorius has leading market positions and significant market shares. Our solutions are designed to boost the efficiency and productivity of routine yet quality-critical lab processes and industry-specific workflows. Besides serving the needs of the biopharmaceutical industry, this portfolio is also tailored to quality control labs in the chemical and food industries.

With its innovative technology platforms for bioanalytics and its comprehensive portfolio for sample preparation, the Lab Products & Services Division has a strong foundation for further significant organic growth. Due to economies of scale and product mix effects, growth is projected to be accompanied by a continuous increase in profitability. In addition, Sartorius plans to extend the division's portfolio through acquisitions and strategic partnerships.

Information on the business development of this division in 2019 is provided in the chapter on Business Development of Lab Products & Services.

Sartorius 2020 and 2025 Strategies

In 2011, Sartorius presented its strategy and targets for profitable growth up to 2020 according to which sales revenue is projected to increase to around €2 billion with an underlying EBITDA margin of 26% to 27%.

While the targets for 2020 still continue to apply unchanged, management extended its projected time horizon and announced its long-term targets for up to 2025. Accordingly, Sartorius plans to double its revenue in the period of 2020 to 2025 to around €4 billion, given the high market dynamics and the company's strong strategic positioning. Management expects to achieve around two-thirds of this growth organically and around one-third by acquisitions. The underlying EBITDA margin is forecasted to increase to around 28%. For the Bioprocess Solutions Division, the company projects that the division's sale revenue will reach approximately €2.8 billion, with an underlying EBITDA margin of around 30%. For the Lab Products & Sevices Division, the company forecasts sales revenue of around €1.2 billion and an underlying EBITDA margin of about 25%.

In these projections, management assumes that the margins of any future acquisitions in the Group after integration would be on average at a level comparable to that of the existing business and that no significant changes in key exchange rates would occur.

These targets are being implemented by various growth initiatives with the following focal points:

Expansion of the Product Portfolio

Sartorius has a broad product portfolio that is continuously expanded in line with the value-added chain of the biopharmaceutical industry. Aside from our own research and development activities and strategic partnerships, acquisitions that are complementary to or extend our strengths appropriately will remain part of the portfolio strategy of both divisions. We see opportunities in digital networking of products, for example, in the integration of software solutions for bioprocess production control, among others. Expansion into adjacent applications, such as regenerative medicine, is also conceivable. At the focus of our efforts will be products that offer solutions to the challenges our customers face and that make our offering even more attractive from the customers' perspective.

Regional Growth Initiatives

North America and Asia are the key focal areas of our regional growth strategy.

North America is the world's largest market for bioprocess equipment and laboratory products. Yet because it is home to the main competitors for both company divisions, Sartorius has lower market share in this region than in Europe and Asia. Accordingly, the company is striving to gain additional market share, primarily by strengthening its sales and service capacities.

A further strategic focus is on China. This market has sizable growth potential owing to rising private and public healthcare expenditures and the rapid development of regional biopharmaceutical plants. To benefit from the dynamic development of this market, Sartorius has already been investing heavily in its sales infrastructure and plans to expand production capacity levels there over the medium term.

Optimization of Work Processes

Sufficient production capacity and a powerful supply chain are an essential foundation of future growth. For this reason, in recent years Sartorius has substantially expanded its capacities for membranes, filters and single-use bags at various Group sites. Beyond this, implementation of a new ERP system based on Group-wide standardized business processes was completed in 2019.

Following these significant infrastructural expansions, our focus is increasingly shifting to optimization of our processes. Thus, we are driving forward digitalization and process automation in all parts of the company to further enhance the performance power of our supply chain and our customer contact interfaces. This also includes extending our activities in the areas of e-commerce, digital marketing and analytics.

Research and Development

As a leading company in the life science sector, our goal is to collaborate with expert scientific communities worldwide in order to contribute toward accelerating the discovery of new medical drugs and making their manufacture more efficient. To this end, we provide our biopharmaceutical customers with innovative instruments and solutions that support them in meeting this challenge.

One of the areas we focus on is to further develop our existing product portfolio to meet the needs of our customers in their end markets. Our core technologies include filter and single-use bag products, and also the automation of laboratory processes and software solutions for process control, among others. A detailed explanation of our developmental focal points can be found in the division chapters on pages 44 and 49.

Corporate Research is a functional area that operates Group-wide in close cooperation with external partners on overarching innovation projects. Its most important task and objective consists of identifying and developing key technologies and application fields of the future. In addition to collaborating closely with customers, research institutes and startups, Corporate Research pursues its own research activities in selected fields.

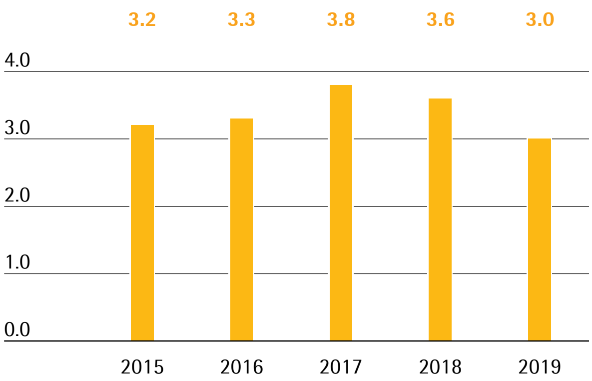
Macroeconomic Environment and Conditions in the Sectors

The sectors in which the Sartorius Group is active differ in their dependence on the economy. The Bioprocess Solutions Division, for instance, operates in an environment that is largely independent of economic fluctuations. The Lab Products & Services Division, in contrast, is active in sectors whose development is more strongly affected by economic factors.

Macroeconomic Environment

According to the International Monetary Fund (IMF), growth of the global economy weakened in 2019. The rise in the world's gross domestic product (GDP) is estimated at 3.0% – the lowest value since the financial and economic crisis of 2008/2009. Whereas the industrialized countries reported a gain of 1.7%, the economies in emerging and developing countries grew by 3.9%. The IMF downgraded its initial forecasts for 2019 during the year owing to the deteriorating outlook. In particular, the persistent trade disputes between the USA and China and the associated introduction of tariffs had a negative impact on international trade in goods and global industrial production.

Global Development GDP (2015 to 2019)
in %



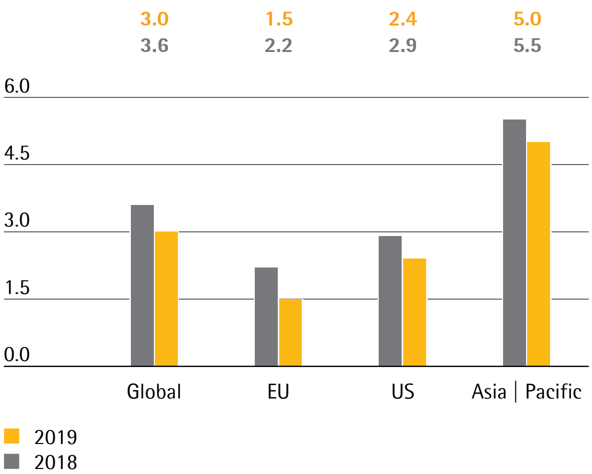
Source: International Monetary Fund

The growth forecasts for Sartorius' European core markets in particular were revised during the year owing to worsening economic data. Both continuing uncertainties in conjunction with Brexit and weaker exports are dampening the rate of expansion. In addition, a production decline in the automotive sector had a negative effect on Germany; growth here amounted to approximately 0.5% (2018: 1.5%), whereas the IMF had originally forecasted growth of 1.3%. In France and the United Kingdom, the respective growth rates of 1.2% (2018: 1.7%) and 1.2% (2018: 1.4%) were likewise lower than first anticipated. The GDP of the entire European Union grew by 1.5% (2018: 2.2%).

In our largest market, the USA, economic output grew by 2.4% (2018: 2.9%). According to the IWF, the end of positive effects from the 2017 tax reform and lower levels of investment were especially decisive in the weaker pace of the economy. On the other hand, employment levels and private consumption remain robust.

The Asia/Pacific economic region, which is becoming increasingly important for Sartorius, grew by a total of 5.0% (2018: 5.5%). China achieved a plus of 6.1% (2018: 6.6%) despite its tariff and trade dispute with the United States, and the Indian economy expanded by 6.1% as well (2018: 6.8%). Sartorius also generates significant revenues in South Korea and Japan. South Korean economic output grew in 2019 by 2.0% (2018: 2.7%); Japan charted growth of 0.9% (2018: 0.8%).

Gross Domestic Product by Region
in %



Source: International Monetary Fund

Exchange Rate Trends

In addition to the euro, the currencies relevant to the Sartorius Group include the U.S. dollar in particular, as well as a few additional currencies such as the South Korean won, the British pound, the Singapore dollar, the Japanese yen, and the Chinese renminbi.

The U.S. dollar gained ground against the euro in the year under review. In view of the further loosening of monetary policy by the U.S. Federal Reserve and the European Central Bank, the exchange rate of the euro to the U.S. dollar as of December 31, 2019, was $1.12 compared with $1.15 on the reporting date in 2018, representing an appreciation of around 1.9%.

The South Korean won depreciated against the euro year over year by around 1.4%. By contrast, all further currencies relevant for Sartorius appreciated. The British pound thus rose by 4.9%, the Singapore dollar by 3.0% and the Japanese yen by 3.1%. The increase in value of the Chinese renminbi against the European single currency was 0.7%.

Interest Rate Trends

Interest rates remained at a very low level on average throughout the reporting year. The European Central Bank kept its key interest rate at 0.00%. The 3-month EURIBOR rate – the rate of interest on fixed-term deposits denominated in euros in interbank business – stood at -0.38% on December 31, 2019, relevant to -0.31% at year-end 2018.

Sources: International Monetary Fund, World Economic Outlook, October 2019; Bloomberg.

Conditions in the Sectors

Sartorius' key customer groups include the biopharmaceutical and pharmaceutical industries as well as public research institutions. In addition, the company counts quality assurance laboratories in the chemicals and food industries among its customers. The progress of the Group's business accordingly depends on developments in these industries.

Strong Growth in the Biopharmaceutical Market

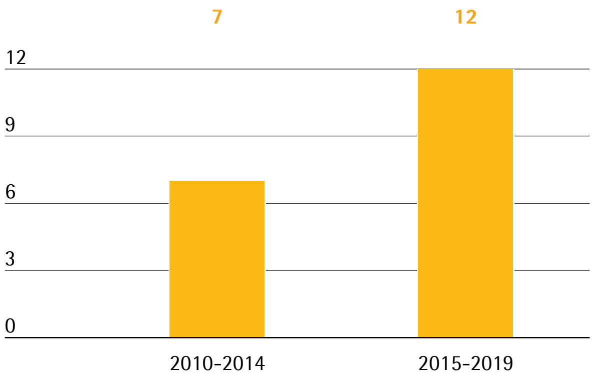
According to estimates from several market observers, the global pharmaceutical market showed positive development once again in 2019, with an increase of approximately 4% to 5%. Within this market, the segment for medications and vaccinations manufactured using biotech methods has grown faster than the rest of the pharmaceutical market for many years now. In 2019, the biopharmaceutical market was estimated at a volume of €235 billion, an increase of approximately 8% to 9% over the previous year. The steadily growing significance and acceptance of biologics is reflected in its increasing share of the sales revenue in the global pharmaceutical market and the development activities of the pharmaceutical industry. For example, biopharmaceutical compounds account for more than 40% of the R&D pipeline.

Manufacturers of biopharmaceutical development and production technologies were able to increase sales markedly in 2019. There was once again a dynamic rise in demand in emerging countries – especially China – where many commercial biopharmaceutical production facilities have opened in recent years to meet domestic demand. But there was also considerable investment in the United States and Europe, where the highest fermenter capacities are located.

Market growth fundamentally depends more on medium- to long-term trends than on short-term economic developments. In the process, significant impetus is provided by the world's rising demand for medications and the approval and market introduction of innovative biopharmaceuticals. The expanded range of indications for approved medications and their further market penetration also contribute to growth. During the reporting year, the U.S. Food and Drug Administration (FDA) approved 11 new biologics.

A growing number of active substances manufactured using biotech production methods is being approved for the treatment of rare illnesses that have been untreatable thus far. There has been recent progress in cell and gene therapies: the United States and Europe granted market approval to two more therapies in 2019. The rising number of approved biopharmaceuticals as well as an increasing variety of therapy types and substance classes coupled with growing demand for medications are the main drivers for the worldwide increase in production capacities for biopharmaceuticals.

Average Number of New Approvals of Biotech Medications in the USA per Year



Biosimilars, or copycats of biopharmaceuticals whose patents have expired, are playing an increasingly important role in the biotechnology market. At an estimated €8 billion, their sales volume in 2019 was still comparatively small, but the market is expected to grow strongly during the years to come owing to the expiration of several patents for high-volume pharmaceuticals. Thus an average annual growth rate of around 30% is projected for this segment through 2022. Further progress was made in the reporting period through the approval and market launch of new biosimilars. In particular in the USA, where regulatory, patent law-related and marketing hurdles have traditionally resulted in comparatively slow market penetration of biosimilars, 9 medications were approved.

Single-Use Systems for Biopharmaceutical Production Continue to Gain Importance

Biotech production methods are much more complex and cost-intensive than traditional methods for producing medications. Consequently, manufacturers and suppliers are continually looking to develop more efficient technologies. In this context, single-use products play a decisive role, as they require significantly less capital expenditure, reduce costs for cleaning and validation, and minimize downtime. They also offer greater flexibility in production and help accelerate time to market.

These advantages have already led to single-use technologies becoming an established part of many process steps. Single-use systems are primarily employed in pre-commercial development activities and production phases and in small batch manufacturing. In the future, they will become increasingly popular for the production of high-volume commercial quantities. This is particularly relevant to the production of biotech substances, whose clinical development takes place in single-use systems. Sartorius offers an extensive portfolio of single-use technologies, with scalable products for every step of manufacturing. The company is also actively helping the biopharmaceutical industry convert to these technologies in the production of medications.

Moderate Growth in the Global Laboratory Market

The global laboratory market reached a volume of €54 billion in the reporting year and is growing annually by 3% to 4.5% according to estimates from several market observers. Market growth is related to the levels of research and development spending in the individual end markets, among other factors.

Laboratories from the pharmaceutical and biopharma industry are the leading customers for laboratory instruments and consumables. Against the backdrop of globally rising demand for medications, the industry is continuously investing in research to find new active substances and in the laboratory equipment needed to perform this work. The focus is being placed on technologies related to process automation and innovative analytical instruments that are equipped with improved or new functionalities. Sales that key laboratory equipment companies generated with biopharma customers during the reporting year grew stronger than those of other industries.

Research and quality-assurance labs in the chemical and food industry are another important customer group. This segment's demand for laboratory products depends in part on economic trends. Additional momentum could also be generated by regulatory changes, such as stricter requirements for quality-assurance tests in the food industry. During the reporting year, the economies of key business regions continued to slow. As a result, these end markets tended to generate modest growth.

Academic and public-sector research institutions also use laboratory instruments and consumables made by Sartorius. Growth in demand is related to such factors as government budgets and funding programs, all of which can vary from one country to another. In the United States, the National Institute of Health (NIH) is the leading government agency for biomedical research and the largest agency that provides research funding around the world. The NIH's budget has constantly grown over the last six years. During the reporting year, it climbed by about 5.4% to €34 billion. The European Union is also planning to boost its funding programs for research and innovation starting in 2020. In recent years, China has sharply increased government R&D funding, a trend that has fueled dynamic growth in the laboratory market there. The country plans to continue increasing the share of research spending in GDP through 2020.

Competitive Position

The competitive environment of the Bioprocess Solutions Division is characterized by high entry hurdles arising in part from the biopharmaceutical industry's strong degree of regulation and its technological complexity. In addition, the supply industry has consolidated strongly in recent years owing to numerous takeovers, so that a majority of the market is in the hands of just a few suppliers. In this environment, the Bioprocess Solutions Division operates as a solution provider, covering the core process steps in biopharmaceutical production and upstream process development. It has a leading role in key technologies, especially single-use technologies for bioreactors, filtration and the transport and storage of liquids. The Bioprocess Solutions Division's principal competitors include certain business units at Merck KGaA, Danaher Corp., General Electric Co. and Thermo Fisher Scientific Inc. During the reporting year, Danaher announced that it would take over General Electric's biopharmaceutical business. Regulatory approvals for the transaction are expected during the first quarter of 2020.

The Lab Products & Services Division is positioned as a premium provider of laboratory instruments. It serves both R&D laboratories and quality assurance laboratories with a focus on the biopharmaceutical industry. The product range includes laboratory balances, pipettes, and instruments for bioanalytics as well as a wide range of consumables. The division ranks among the leading providers worldwide in most of these areas. Its main competitors include divisions of the companies Thermo Fisher Inc., Merck KGaA and Danaher Corp. In terms of laboratory balances, Mettler-Toledo Intl. Inc. is another competitor. Eppendorf AG is a rival for pipettes, and companies like Agilent Technologies Inc., Becton Dickinson Co. and PerkinElmer Inc. are cell analysis competitors.

Sources: IQVIA Institute: The Global Use of Medicine in 2019 and Outlook to 2023; January 2019; Evaluate Pharma: World Preview 2019, Outlook to 2024, June 2019; BioPlan: 16th Annual Report and Survey of Biopharmaceutical Manufacturing Capacity and Production, April 2019; Frost & Sullivan: 2018 Annual Report: Forecast and Analysis of the Global Market for Laboratory Products, May 2019; BCC Research: Biosimilars: Global Markets, March 2018; Daedal Research: Global Biologics Market: Size, Trends & Forecasts, December 2019; SDi: Global Assessment Report 2018, February 2018; 2018; www.fda.gov

Group Business Development

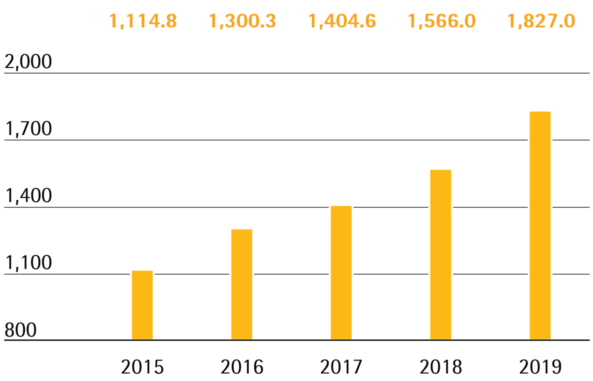
Sales Revenue and Order Intake

In the reporting year, Sartorius continued its dynamic growth: Sales revenue in constant currencies rose again by double digits, by 14.8% to €1,827.0 million and was thus even slightly stronger than expected in the range of our forecast, which was considerably raised to 10% to 14% at mid-year 2019. The consolidation of Biological Industries as of mid-December 2019 did not contribute any material growth. The reported increase in sales, i.e., including currency effects, was 16.7%.

Order intake also grew significantly in the reporting period, rising 14.8% to €1,939.5 million in constant currencies. On a reported basis, this increase was 16.7%.

For a full comparison of the Group's business development with its forecast, see page 53.

Sales Revenue 2015 – 2019
€ in millions



Sales Revenue and Order Intake

€ in millions	2019	2018	in % reported	in % cc[1]
Sales revenue	1,827.0	1,566.0	16.7	14.8
Order intake	1,939.5	1,662.5	16.7	14.8

[1] In constant currencies

Sales Driven by Both Divisions

Both divisions contributed to sales growth in the reporting year of 2019 as well. The Bioprocess Division in particular continued its strong prior-year performance and grew significantly yet again. The division's sales revenue rose in constant currencies by 18.1% to €1,372.1 million (reported: + 20.0%) and was fueled by strong demand across all product categories and geographies.

In a partly challenging economic environment, the Lab Products & Services Division achieved sales growth of 5.9% (reported: + 7.5%) to €454.9 million in constant currencies.

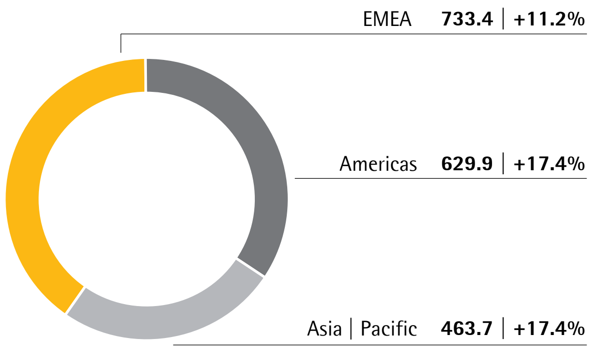
Sales by Division

€ in millions	2019	2018	in % reported	in % cc
Bioprocess Solutions	1,372.1	1,143.1	20.0	18.1
Lab Products & Services	454.9	423.0	7.5	5.9

Further information on the business development of the Group divisions is given on pages 44 et seq. for the Bioprocess Solutions Division and on pages 49 et seq. for the Lab Products & Services Division.

Gains in All Regions

Sales Revenue and Growth[1] by Region[2]
€ in millions unless otherwise specified



[1] In constant currencies
[2] Acc. to customers' location

Sartorius increased its sales revenue again in 2019 in all three regions. In EMEA, the region contributing the highest share of revenue of around 40%, sales rose very solidly by 11.2% to €733.4 million. While the Bioprocess Solutions Division achieved a gain of 13.2%, growth for the Lab Products & Services Division was 6.5%.

Sales revenue in the Americas region developed dynamically yet again, with sales up 17.4%, to €629.9 million, increasing its share of Group sales to 35%. In particular, the Bioprocess Solutions Division grew strongly again by 19.3%; the Lab Products & Services Division also markedly increased its regional sales revenue by 10.4%.

The Asia | Pacific region, which accounted for around 25% of Group revenue in 2019, showed high growth again, with sales up 17.4% to €463.7 million. This gain was fueled by the considerable expansion of 24.8% in the Bioprocess Solutions Division based on its especially dynamic project business. The Lab Products & Services Division moderately increased its revenue against a strong prior-year base by 0.8%.

All growth rates are in constant currencies unless otherwise stated.

Sales by Region

€ in millions	2019	2018	in % reported	in % cc
EMEA	733.4	657.7	11.5	11.2
Americas	629.9	520.1	21.1	17.4
Asia | Pacific	463.7	388.2	19.4	17.4

Costs and Earnings

In the reporting year, the cost of sales stood at €885.8 million. In comparison with reported sales revenue growth of 16.7%, the cost of sales increased somewhat underproportionately by 16.2%, which was due to product mix effects. The cost of sales ratio was 48.5% relative to 48.7% a year ago.

Selling and distribution costs rose by 12.1% to €369.7 million so the ratio of these costs to sales revenue decreased slightly by almost one percentage point from 21.1% in the previous year to 20.2%.

Expenses for research and development rose year over year by 22.2% to €95.6 million. The ratio of R&D expenses to sales revenue was 5.2%, slightly above the prior-year level of 5.0%.

Regarding general administrative expenses, Sartorius reported an increase of 13.8% to €107.2 million. In relation to sales revenue, general administrative expenses were 5.9% in 2019, down slightly from 6.0% in the previous year.

The balance of other operating income and expenses of - €33.0 million was considerably below the prior-year figure of -€2.7 million and essentially covered extraordinary items of -€28.4 million relative to -€1.7 million in the year before. These extraordinary items consisted of expenses for cross-divisional projects, especially for the Group-wide introduction of IT systems, among others. The reason for this year-over-year decrease is that in 2018, extraordinary items, as well as the balance of other operating income and expenses, were strongly impacted positively by one-time income of €35.2 million resulting from the modification of the contract with the life science company Lonza in the area of cell culture media.

The absence of this non-recurring income in the reporting period is also reflected in the development of EBIT, which grew by 12.4% to €335.7 million against the backdrop of higher extraordinary expenses as well as depreciation and amortization. The EBIT margin fell from 19.1% a year earlier to 18.4%.

Statement of Profit or Loss

€ in millions	2019	2018	in %
Sales revenue	1,827.0	1,566.0	16.7
Cost of sales	–885.8	–762.4	–16.2
Gross profit on sales	**941.2**	**803.6**	**17.1**
Selling and distribution costs	–369.7	–329.8	–12.1
Research and development costs	–95.6	–78.2	–22.2
General administrative expenses	–107.2	–94.2	–13.8
Other operating income and expenses	–33.0	–2.7	n.m.
Earnings before interest and taxes (EBIT)	**335.7**	**298.6**	**12.4**
Financial income	9.4	7.7	22.6
Financial expenses	–41.9	–35.6	–17.7
Financial result	**–32.5**	**–27.9**	**–16.4**
Profit before tax	**303.2**	**270.7**	**12.0**
Income taxes	**–84.4**	**–73.2**	**–15.3**
Net profit for the period	**218.7**	**197.5**	**10.8**
Attributable to:			
Equity holders of Sartorius AG	156.7	141.3	10.9
Non-controlling interest	62.0	56.1	10.4

The financial result was -€32.5 million in 2019 relative to -€27.9 million in 2018.

In the reporting year, tax expenses of €84.4 million were above the prior-year total of €73.2 million. The company's tax rate was 27.8% relative to 27.0% in the year before.

Net profit for the period rose by 10.8% to €218.7 million (2018: €197.5 million).

Net profit attributable to shareholders of Sartorius AG totaled €156.7 million in the reporting year, up from €141.3 million in the previous year. Non-controlling interest stood at €62.0 million (previous year: €56.1 million), which essentially reflected shares in Sartorius Stedim Biotech S.A. not held by the Sartorius Group.

Underlying EBITDA

The Sartorius Group uses underlying EBITDA – earnings before interest, taxes, depreciation and amortization and adjusted for extraordinary items – as its key profitability indicator to provide a better picture of its operating development, also in an international comparison. More information on extraordinary items is provided on page 121.

Reconciliation from EBIT to Underlying EBITDA

€ in millions	**2019**	2018
EBIT	335.7	298.6
Extraordinary items	28.4	1.7
Amortization | depreciation	131.8	104.7
Underlying EBITDA	495.8	405.0

In fiscal 2019, the Sartorius Group increased its earnings significantly yet again. Underlying EBITDA thus rose by 22.4% to €495.8 million. The Group's respective underlying EBITDA margin improved to 27.1% (2018: 25.9%) and was therefore in line with the Group's forecast. Slightly less than one percentage point of the margin increase was attributable, as expected, to the IFRS 16 Standard to be applied for the first time in 2019.

Underlying EBITDA by Division

	Underlying EBITDA € in millions	Underlying EBITDA margin in %
Group	**495.8**	**27.1**
Bioprocess Solutions	406.8	29.6
Lab Products & Services	89.0	19.6

Underlying EBITDA for the Bioprocess Solutions Division was €406.8 million, significantly up 24.5% from €326.9 million a year ago. The division's margin rose year over year from 28.6% to 29.6%, due to the effects of economies of scale. Moreover, slightly less than one percentage point of the margin increase was attributable to the application of the IFRS 16 Standard.

For the Lab Products & Services Division, these effects likewise led to an overproportionate increase in underlying EBITDA compared to sales development, by 14.0% to €89.0 million. Here again as well, the division's earnings margin was up 19.6% from the prior-year figure of 18.5%, with slightly more than one percentage point attributable to the introduction of IFRS 16.

Relevant Net Profit

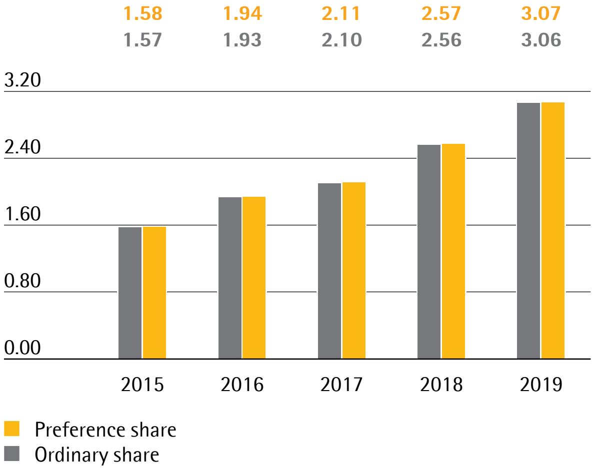
The relevant net profit attributable to the shareholders of Sartorius AG rose sharply by 19.2% from €175.6 million in 2018 to €209.3 million in 2019. This figure is the basis for determining the profit to be appropriated and is calculated by adjusting for extraordinary items and eliminating non-cash amortization, and is based on the normalized financial result as well as the corresponding tax effects for each of these items. Underlying earnings per ordinary share climbed by 19.3% to €3.06, up from €2.56 a year earlier, and by 19.2% per preference share to €3.07 euros, up from €2.57 euros a year ago.

€ in millions	**2019**	2018
EBIT	335.7	298.6
Extraordinary items	28.4	1.7
Amortization	34.2	37.1
Normalized financial result[1]	–16.6	–16.9
Normalized income tax (27%)[2]	–103.0	–86.5
Underlying earnings	278.6	233.9
Non-controlling interest	–69.3	–58.4
Underlying earnings after taxes and non-controlling interest	209.3	175.6
Underlying earnings per share		
per ordinary share (in €)	3.06	2.56
per preference share (in €)	3.07	2.57

[1] Financial result excluding fair value adjustments of hedging instruments (- €8.4 million) and other expenses and income not directly related to own financing needs

[2] Underlying income tax, based on the underlying profit before taxes and non-cash amortization

Underlying Earnings per Share[1)2)]
in €



1) Adjusted for extraordinary items and non-cash amortization, based on the normalized financial result, including the corresponding tax effects

2) 2015 adjusted for stock split; arounded values

Further information on earnings development and extraordinary items for the Group divisions is given on pages 44 et seq. and 49 et seq.

Research and Development

Sartorius continuously expands its product portfolio by investing in both the new and further development of its products, as well as in the integration of new technologies through alliances. In 2019, the Sartorius Group spent €95.6 million on R&D, corresponding to an increase of 22.2% over the previous year's investment of €78.2 million. The ratio of R&D costs to sales revenue stood at 5.2%, slightly above the previous year's 5.0%.

The International Financial Reporting Standards (IFRS) require certain development costs to be capitalized on the statement of financial position and then to be amortized over subsequent years. In the reporting year, these development investments amounted to €40.1 million compared with €33.0 million the year before. This equates to a share of 29.6% (previous year: 29.7 %) of the Group's total R&D expenses. Amortization related to capitalized development costs totaled €14.8 million in 2019 (previous year: €8.3 million). These expenses were disclosed in the cost of sales.

We pursue a strategic intellectual and industrial property rights policy across our divisions to protect our expertise. The Sartorius Group systematically monitors compliance with these rights on a cost | benefit basis to determine which specific individual rights are to be maintained.

In 2019, we filed a total of 194 applications for intellectual and industrial property rights (2018: 158). As a result of these applications, including those of prior years, we were issued 300 patents and trademarks during the reporting year (2018: 270). As of the reporting date, we had a total of 4,235 patents and trademarks in our portfolio (2018: 4,125).

Further information is provided in the sections covering the individual divisions on pages 44 et seq. and 49 et seq.

Capital Expenditures

Against a backdrop of strong organic growth, Sartorius made above-average investments over the past years in the development of new capacity. Several large expansion projects were completed in the reporting year and capital expenditures stood at €225.6 million relative to €237.8 million in the prior year. The ratio of capital expenditures to sales revenue was 12.3%, within the range of our guidance (previous year: 15.2%). In a year-over-year comparison, it needs to be considered that since IFRS 16 was introduced in 2019, capital expenditures have been calculated based on cash flow instead of the balance sheet as in 2018. If the CAPEX ratio would have been calculated according to the same basis, it would have been 14.9% in 2018.

Further milestones were achieved in 2019 at Group headquarters in Göttingen, Germany, upon the completion of production, laboratory and office facilities. In particular, manufacturing capacity was significantly expanded.

At our site in Yauco, Puerto Rico, Sartorius invested in the extension of its production plant, putting it into operation in the reporting year. As a result, production capacities for filters and single-use bags more than doubled and extensive capacity was created for the manufacture of membranes. (Further information is provided in the chapter covering the division on page 44).

To extend production capacities in cell line development, a new R&D and manufacturing facility that was completed after an approximately two-year construction phase started up operations in Ulm, Germany.

Sartorius also completed the implementation of its new ERP system in the reporting year. All major Group company sites are now connected to a standardized system and process platform.

Employees

The numbers of employees reported include all staff members of the Sartorius Group, except for vocational trainees, interns, employees on extended leaves of absence and those participating in an early retirement plan. Numbers are reported as head counts.

As of the reporting date on December 31, 2019, the Sartorius Group employed 9,016 people in 34 countries, 891 or 11.0% more than in the previous year.

Employees

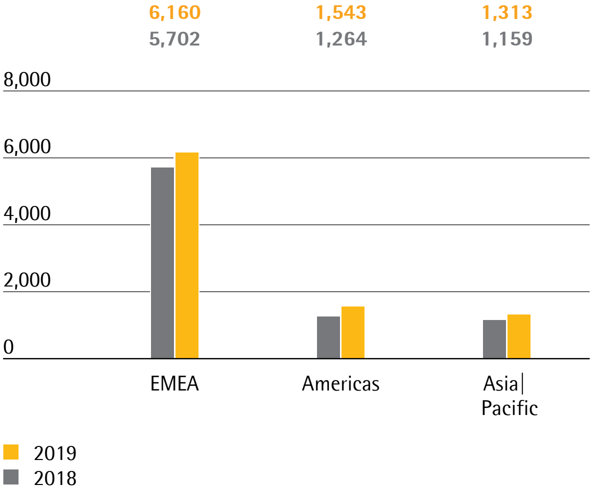
	2019	2018	Growth in %
Group	**9,016**	**8,125**	**11.0%**
Bioprocess Solutions	6,106	5,498	11.1%
Lab Products & Services	2,910	2,627	10.8%

In the Bioprocess Solutions Division, 6,106 people were employed as of the end of the reporting year, 608 or 11.1% more than at year-end 2018.

The Lab Products & Services Division employed 2,910 people as of the year ended December 31, 2019; this was an increase of 283 or 10.8% compared with the year-earlier period.

Employees in central administrative functions were allocated to the divisions in proportion to cost of the services they performed during the year.

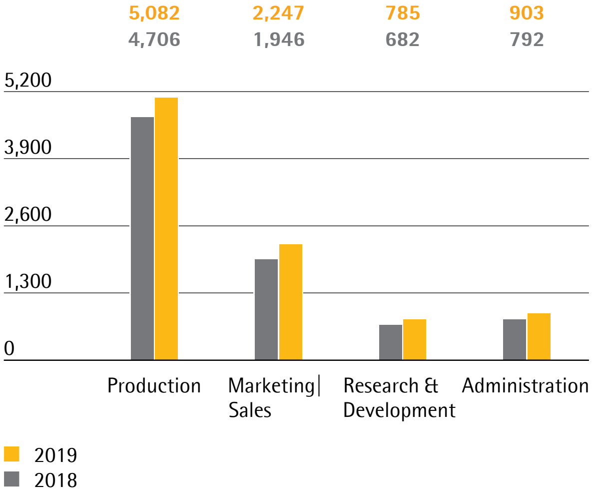
Employees by Region



Head count in the EMEA region rose by 458 new people, a gain of 8.0%. In Germany, Sartorius employed 3,316 people as of the end of the reporting year, most at the Göttingen-based headquarters. This number corresponds to 36.8% of the total Group workforce.

The Americas region reported the highest increase in staff, 22.1% or 279 new people. The number of employees in the Asia | Pacific region grew by 13.3% or 154 people.

Employees by Function



At the end of 2019, around 56% of all Sartorius employees worked in production. This head count includes service staff and employees who perform services such as testing as part of our customers' core processes. The number of employees in this area was 5,082 or 8.0% more than in the prior year.

In marketing and sales, 2,247 people were employed at year-end, equating to an increase of 15.5% and to about 25% of the total Group workforce.

Close to 9% of all employees worked in research and development in 2019, an increase of 785 people or 15.1% more than in 2018.

As of the reporting date, co-workers in administration numbered 903, a year-over-year increase of 14.1% and more than 10% of all Sartorius staff.

For more information on employees, see the Non-Financial Group Statement starting on page 91.

Net Worth and Financial Position

Cash Flow

In the reporting year, Sartorius again significantly increased its cash flow from operating activities. This figure amounted to €377.2 million relative to €244.5 million a year ago, which equates to a rise of 54.3%. This is essentially due to growth in earnings and, among other things, to the sale of about €37.1 million in trade receivables within the scope of a factoring program.

Cash outflows from investing activities decreased in the reporting period by 6.3% to -€227.2 million. These investments were for expansion of production capacities at our site in Yauco, Puerto Rico, and for consolidation and extension of our Group headquarters in Göttingen, Germany, among other purposes. In the reporting period, new production facilities were completed and put into operation at both sites.

As a result of acquisition-related expenses of €42.0 million, primarily in connection with the takeover of a majority stake in Biological Industries, cash flow from investing activities and acquisitions | divestitures decreased by 11.0% to -€269.2 million.

Cash flow from financing activities, which includes payment of dividends of €56.9 million for fiscal 2018, totaled -€101.5 million relative to -€16.7 million in the previous year.

Cash Flow Statement
Summary

€ in millions	2019	2018
Cash flow from operating activities	377.2	244.5
Cash flow from investing activities and acquisitions	−269.2	−242.5
Cash flow from financing activities	−101.5	−16.7
Cash and cash equivalents	53.9	45.2
Gross debt	1,065.2	1,004.6
Net debt	1,011.3	959.5

Consolidated Statement of Financial Position

The balance sheet total of the Sartorius Group was €2,844.3 million as of the end of fiscal 2019 and thus €317.4 million higher than the prior-year level. This increase is predominantly attributable to higher carrying amounts of property, plant and equipment and growth-driven higher inventories, as well as to the IFRS 16 Standard to be applied for the first time in 2019.

Non-current assets grew by €222.8 million to €1,995.7 million, primarily due to continuation of the Group's extensive investment program.

Current assets increased by €94.6 million to €848.6 million compared with the previous year, particularly because positive business development led to a buildup in working capital.

Key Figures for Working Capital

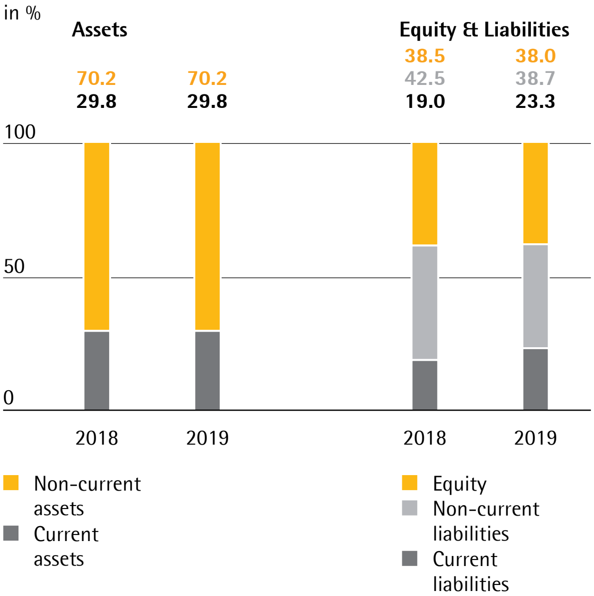
in days		2019	2018
Days inventory outstanding			
Inventories | Sales revenue	x 360	80	74
Days sales outstanding			
Trade receivables | Sales revenue	x 360	59	71
Days payables outstanding			
Trade payables | Sales revenue	x 360	44	40
Net working capital days			
Net working capital[1] | Sales revenue	x 360	96	105

[1] Sum of inventories and trade receivables less the trade payables

Equity grew by €107.8 million to €1,081.2 million as of year-end. The equity ratio decreased to 38.0% (2018: 38.5%) and thus continued to remain at a very robust level. Slightly less than 1 percentage point of this decline was attributed to the introduction of IFRS 16.

In the reporting year, current and non-current liabilities for the Sartorius Group of €1,763.1 million were higher than the previous year's figure of €1,553.5 million, which was due, inter alia, to the buildup in working capital and to the year-over-year increase in lease liabilities, with this change attributable, in particular, to the application of IFRS 16.

Balance Sheet Structure
in %

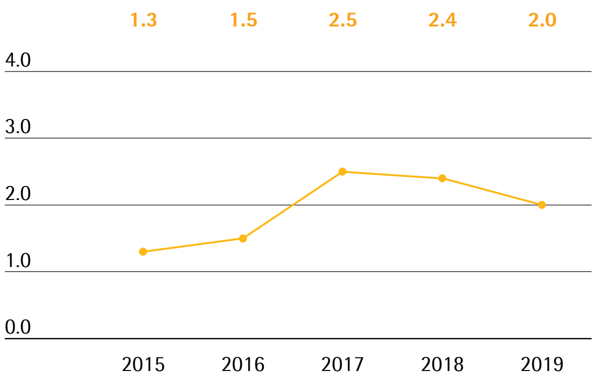


At the end of fiscal 2019, gross debt stood at €1,065.2 million relative to €1,004.6 million in fiscal 2018 and is comprised of liabilities to banks, including note loans ("Schuldscheindarlehen"), as well as lease liabilities. Net debt, defined as gross debt less cash and cash equivalents, also rose only slightly from €959.5 million a year ago to €1,011.3 million.

Ratio of Net Debt to Underlying EBITDA

Regarding the Sartorius Group's debt financing capacity, the ratio of net debt to underlying EBITDA is a key financial ratio that is calculated as the quotient of net debt and underlying EBITDA. This ratio was 2.0 as of December 31, 2019, below the prior-year figure of 2.4, despite the company's extensive investment program, and was thus within the range of our forecast.

Ratio of Net Debt to Underlying EBITDA[1]

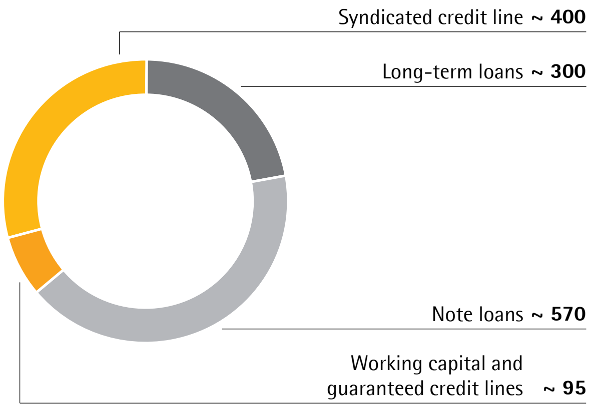


[1] Underlying

Financing | Treasury

Sartorius covers its operational and strategic financing needs through a combination of operating cash flows and the assumption of short-, medium- and long-term financial liabilities. The major debt financing instruments are shown in the graphic below.

Main Financing Instruments
€ in millions



A major pillar in our financing mix is the syndicated credit line of €400 million, whose term will run until December 2021. In addition, Sartorius placed note loans ("Schuldscheindarlehen") in each of the years of 2012, 2016 and 2017, respectively, with a year-end volume outstanding of approximately €570 million. Moreover, the company has several long-term loans in place that total around €300 million and are being used in part for the expansion of production capacities. In addition to these loans, Sartorius has various working capital and guaranteed credit lines totaling around €95 million.

The financing instruments mentioned above comprise those with both fixed and variable interest rates.

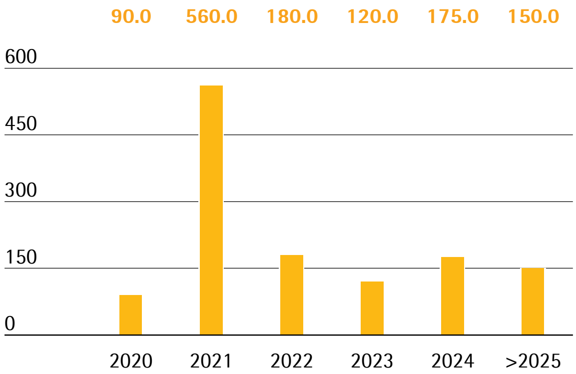
As of December 31, 2019, the total volume of all available loan capital and guaranteed credit lines amounted to €495 million. The available credit unused as of the end of 2019 was €380 million. Therefore, this ensures that all Group companies have sufficient funds to finance their business operations and new investments.

To finance the planned acquisition of selected Danaher Life Science businesses. Sartorius took out a bridge financing loan in October 2019 with BNP Paribas Fortis SA/NV. This financing provides the Sartorius Group with the liquidity needed if the transaction is closed.

The currency risk of the acquisition financing was hedged by the purchase of currency options with a nominal amount of U.S. $750 million.

The Group's maturity profile of its financing instruments is broadly diversified.

Maturity Profile of the Financing Facilities[1]
€ in millions



[1] As of December 31, 2019, major financing instruments

Due to its global business activities, Sartorius is exposed to fluctuations in foreign exchange rates, which are partially hedged by forward contracts. At the end of 2019, foreign exchange contracts amounted to €183 million on a reported basis, with a market value of €0.4 million.

Business Development of Bioprocess Solutions

Double-digit gains in sales revenue, order intake and earnings again

Sales growth increased in all three regions

Strong demand for all product categories

Products for biopharmaceutical production

Filters for sterilization of biopharmaceutical media

Technologies for cell harvesting, purification and concentration

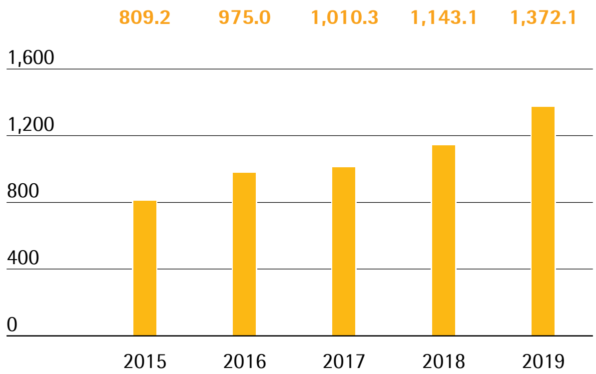
Scalable single-use bioreactor systems for cell culture processes

Single-use bags for cell cultivation, fermentation and storage of biopharmaceuticals

Sales Revenue and Order Intake

In fiscal 2019, the Bioprocess Solutions Division sustained its high momentum from the previous year, recording significant double-digit gains in sales revenue and profit yet again. The division's sales revenue rose in constant currencies by 18.1% to €1,372.1 million (reported: + 20.0 %) and was fueled by high demand across all product categories and geographies. Thus, sales growth even slightly exceeded our forecast of 13% to 17%, which was considerably raised at mid-year 2019. Consolidation of Biological Industries as of mid-December 2019 did not contribute any material growth.

Sales Revenue 2015 to 2019
€ in millions



Sales Revenue and Order Intake

€ in millions	**2019**	2018	in % reported	in % cc
Sales revenue	1,372.1	1,143.1	20.0	18.1
Order intake	1,479.3	1,233.7	19.9	18.0

In the reporting year, the division increased its revenues in all three regions. EMEA, the region generating the highest revenue for the division and representing around 38% of its total sales, recorded a very solid gain of 13.2% to €526.9 million. In the Americas region, which represented around 37% of division revenue, sales increased substantially again against a strong prior-year base, by 19.3% to €504.9 million. The Asia | Pacific region, which accounted for around 25% of the division's total sales, also saw very strong growth. Fueled by dynamic project business, sales revenue surged 24.8% to €340.3 million.

Order intake also showed very positive development in the reporting year, rising 18.0% in constant currencies to €1,479.3 million. On a reported basis, this increase was 19.9%.

Sales by Region

€ in millions	**2019**	2018	in % reported	in % cc
EMEA	526.9	464.7	13.4	13.2
Americas	504.9	410.0	23.1	19.3
Asia | Pacific	340.3	268.4	26.8	24.8

Overproportionate Increase in Earnings

In the reporting year, the Bioprocess Solutions Division significantly increased its underlying EBITDA by 24.5% to €406.8 million. Due to economies of scale and as a consequence of the IFRS 16 Standard, the division's respective margin was up year over year from 28.6% to 29.6%.

Underlying EBITDA and EBITDA Margin

	2019	2018
Underlying EBITDA in € millions	8406.	326.9
Underlying EBITDA margin in %	29.6	28.6

In the year under review, the Bioprocess Solutions Division recorded negative extraordinary items of -€19.1 million relative to €13.0 million a year earlier. The prior-year figure was positively impacted to a strong degree by one-time income of €35.2 million in connection with the modification of the contract with Lonza.

Products and Sales

The Bioprocess Solutions Division sells products and services for the entire added-value chain in biopharmaceutical production and upstream process development. The portfolio includes cell lines, cell culture media, bioreactors, a wide range of products for separation, purification and concentration, and systems for the storage and transport of intermediate and finished biological products.

New Products with a Focus on Automation

During the reporting year, Sartorius introduced a new generation of the automated microbioreactor system ambr® 15. This instrument controls up to 48 fermentation processes in parallel in single-use containers. The system is used in biopharmaceutical labs for cell line development and process optimization. The second generation of the device offers enhanced hardware and software.

Moreover, special bioreactors were launched on the market that are optimized for the production of cellular immune therapies, among other things.

Sartorius also updated its software for the multivariate data analysis of biopharmaceutical production processes. This software takes the extensive data sets that are generated at different points in the production process, combines them into a uniform system and enables them to be monitored, controlled and analyzed. The updated version offers improved user friendliness and accessibility as well as time-saving analysis functions.

Sartorius presented its new integrity testing device Sartocheck® 5 for testing and demonstrating the functional capability of its filters. It offers additional possibilities for electronic data capture and further processing such as the automatic transfer of test results to central databases, among other things.

Sales Activities Expanded

The Bioprocess Solutions Division markets its product portfolio directly through its own field sales representatives. Sales activities for key accounts are coordinated and supported by global key account management.

Sartorius has expanded its direct sales in Asia/Pacific through the acquisition of a sales partner in Taiwan that has been selling Sartorius products since 2012, particularly from the Bioprocess Solutions Division.

During the year under review, Sartorius joined the National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL) which is based in Newark, Delaware, USA. The institute was founded in 2017 as a public-private partnership, and has an extensive network of academic and industrial partners in the USA.

Product Development

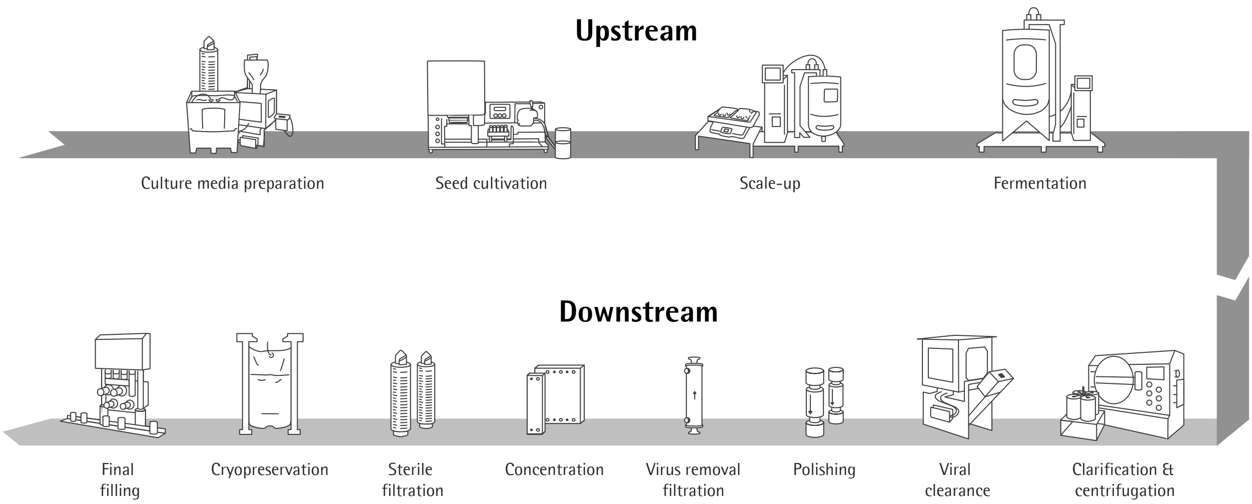
Activities in product development encompass both new and advanced in-house product developments in our own core technologies as well as the integration of new products through collaborations and acquisitions.

Development activities at Sartorius focus on technology areas such as membranes, which are the core component of our filter products; various technology platforms such as single-use containers and sensors; and control technologies for processes such as fermentation. Additional focal areas include developments in materials and components such as plastics, elastomers and intelligent polymers; expanded data analysis; and cell line development.

Sartorius signed a cooperation agreement with Novasep for the development of a membrane-based chromatography system. Novasep is an established manufacturer of gel-based batch and continuous chromatography systems, and Sartorius offers innovative solutions for membrance chromatography in single-use technologies. The combination of Novasep's established chromatography platform and Sartorius membrane solutions is intended to bring together the strengths of both technologies. The resulting system is designed to improve the efficiency of the purification step and strengthen the downstream positioning of Sartorius.

Our largest site for product development is Göttingen, Germany; other key sites are Aubagne, France; Guxhagen, Germany; Bangalore, India; Bohemia, New York, United States; Royston, United Kingdom; and Umeå, Sweden.

Technologies for the entire added-value chain in biopharmaceutical production



Simplified diagram

Production and Supply Chain Management

Bioprocess Solutions has a very well developed production network around the world. The largest production sites are located in Germany, France and Puerto Rico (U.S.). This division also manufactures in the United Kingdom, Switzerland, Tunisia, India, the United States and, since 2018, in China.

Expansion of Production Capacity

During the reporting year Sartorius started up operations at its expanded production facilities in Yauco, Puerto Rico. The U.S. market, in particular, is served by this plant. The site's considerably larger production capacities enable Sartorius to deliver an even broader spectrum of products to its American customers directly from the region.

Within about three years of construction, the production capacity for filters and single-use bags for biopharmaceutical production was more than doubled, and, for the first time, extensive capacity for the manufacture of filter membranes was established outside the company's primary German site in Göttingen. The facility in southwestern Puerto Rico offers about 190,000 square meters of space and is designed to accommodate further long-term growth: If needed Sartorius can at least double its production capacity there.

At company headquarters in Göttingen, capacity for membrane modification was expanded, and an additional building for office and laboratory space was opened.

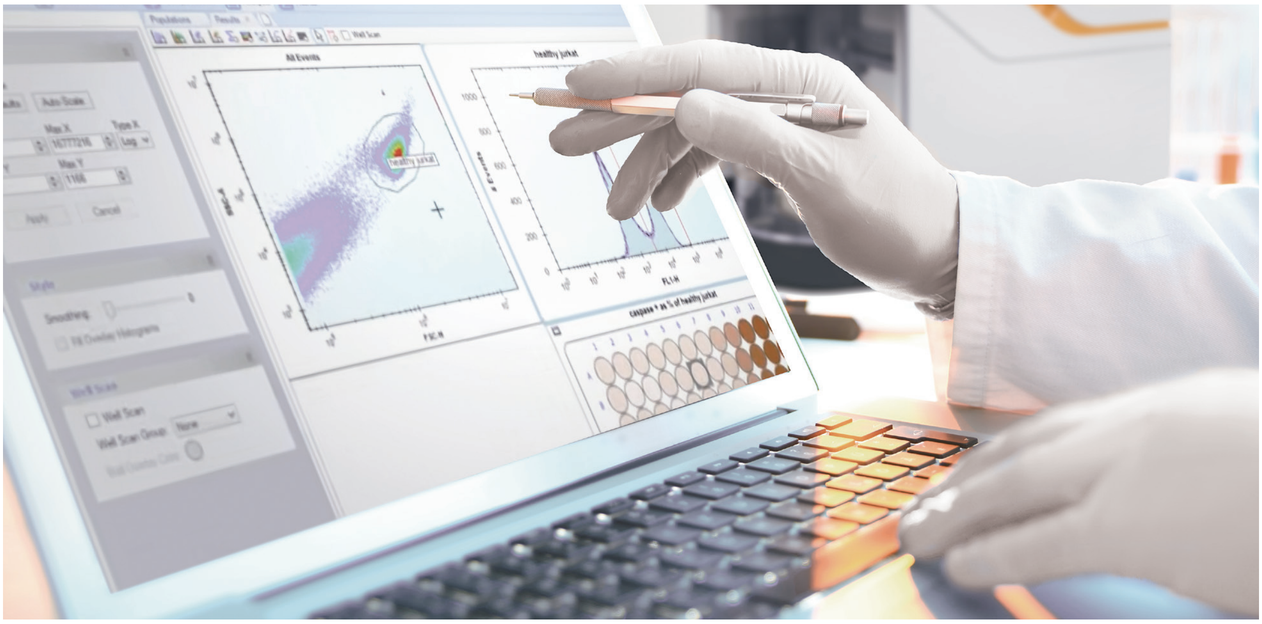
During the reporting year, staff moved into the development and production center for cell lines in Ulm. With 6,000 square meters of usable floor space, the new center offers twice the previously available capacity.

Business Development of Lab Products & Services

Gains in sales revenue and earnings

Robust development in a partly challenging economic environment

Strong growth in the Americas region



Products for laboratories in quality control and research

Lab balances and systems
for lab water purification

Innovative systems for
automated cell analysis processes

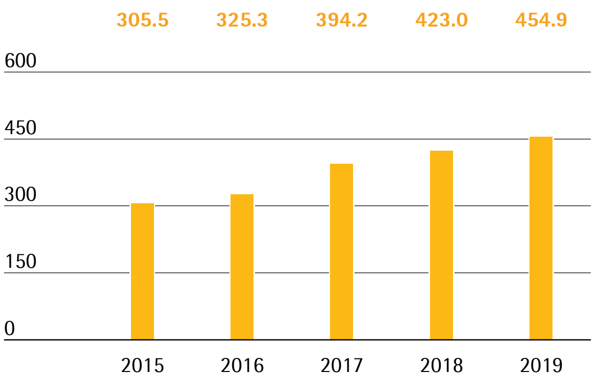
Solutions for microbiological
quality control and laboratory filtration

Electronic and mechanical pipettes
for precise and error-free pipetting

Sales Revenue and Order Intake

In a partly challenging global economic environment, the Lab Products & Services Division showed a robust gain in sales revenue of 5.9% in constant currencies (reported: +7.5%) to €454.9 million. This development was within the expected forecast, which was specified upon release of the first-half 2019 figures and projected that sales growth would reach the lower range of 5% to 9%. Consolidation of Biological Industries as of mid-December 2019 did not contribute any material growth.

Sales Revenue 2015 to 2019
€ in millions



Sales Revenue and Order Intake

€ in millions	2019	2018	in % reported	in % cc
Sales revenue	454.9	423.0	7.5	5.9
Order intake	460.3	428.8	7.3	5.7

In EMEA, the region contributing the highest share of revenue of around 45%, the division achieved a solid increase in sales of 6.5% to €206.5 million in the reporting year. The Americas region, whose share of revenue rose to around 28%, grew strongly again by double digits, 10.4%, to €125.0 million. Expansion in the Asia | Pacific region, which accounts for a good 27% of business for the Lab Products & Services Division, was dampened compared to a strong prior-year revenue base and due to a weaker economic environment. Sales in this region rose moderately by 0.8% to €123.3 million.

Order intake in the year under review increased by 7.3% on a reported basis. In constant currencies, it was up 5.7% to €460.3 million.

Sales by Region

€ in millions	**2019**	2018	in % reported	in % cc
EMEA	206.5	193.1	6.9	6.5
Americas	125.0	110.1	13.6	10.4
Asia | Pacific	123.3	119.8	2.9	0.8

Earnings

The Lab Products & Services Division increased its underlying EBITDA in the reporting period overproportionately relative to sales, by 14.0% to €89.0 million; the division's respective margin that was positively impacted by the application of IFRS 16 was 19.6%, up from 18.5% in the previous year.

Underlying EBITDA and EBITDA Margin

	2019	2018
Underlying EBITDA in € millions	89.0	78.1
Underlying EBITDA margin in %	19.6	18.5

The Lab Products & Services Division recorded extraordinary items of -€9.3 million in the reporting year relative to -€14.7 million a year ago.

Products and Sales

The Lab Products & Services Division focuses with its products on research laboratories in the pharmaceutical and biopharmaceutical industries as well as academic research institutes.

In the area of bioanalytics, the division offers life-science customers innovative systems for cell analysis. They enable the time-intensive development of new substances to be greatly accelerated through the automation and digitalization of core steps in analysis.

Beyond this, the product range includes a broad array of premium laboratory instruments for sample preparation such as laboratory balances, pipettes and lab water systems, as well as consumables such as filters and microbiological tests. This Sartorius portfolio is tailored to the biopharmaceutical industry, but also to research and quality-assurance labs in the chemicals and food industries.

In bioanalytics, Sartorius has launched a new version of its cell screening platform on the market. It can be used for the fully automated analysis of large quantities of samples and the generation of extensive sets of data. In addition, we introduced a basic model of an image-based cell analysis system and an improved system for fast virus quantification that can be used for quality checks and testing when producing vaccines.

During the reporting year, Sartorius introduced a new generation of its premium balances. They offer the greatest measurement accuracy and precision and are especially designed for R&D and analysis laboratories with particular quality requirements. In addition to hardware and software improvements to enhance data connectivity and flexibility, the Cubis II is the first balance that completely fulfills specific requirements of American and European regulatory authorities and thus simplifies and optimizes specific work processes for customers from regulated industries.

Range of Services and Test Laboratories in All Regions

The services offered by the Lab Products & Services Division cover the entire life cycle of laboratory products, from device installation and commissioning to verification, calibration, regular maintenance and repair. Our services are not limited to Sartorius instruments; they are offered to a limited degree for devices from other manufacturers as well. This extensive range enables our customers to minimize the number of service providers they use and to reduce complexity and costs.

Our application laboratories in all regions offer customers the opportunity to test Sartorius products, even using their own samples, and to take training courses.

Additional Expansion of Sales Activities

The division sells its products through three channels: laboratory dealers, direct sales and e-business. The dealer sales channel is already well established; direct sales and the digital channels are being expanded continually with an increasing focus on life science customers.

Besides expanding our sales structures we also focus on ongoing improvements in sales efficiency, in part through the creation of synergies between the two divisions. With the acquisition of Essen BioScience in 2017, Sartorius strengthened its bioanalytics expertise in the Lab Products & Service Division and thus improved the company's positioning among biopharmaceutical customers and life science research institutes. The Lab Products & Service Division therefore also gains access to customers of the Bioprocess Solutions Division, and the latter can naturally likewise tap new sales opportunities in return.

Product Development

The division has extensive technological expertise in the areas of bioanalytics, laboratory instruments and laboratory consumables. The product portfolio is expanded continuously to meet customer requirements through new and advanced developments in our own core technologies as well as the integration of new products through collaborations and acquisitions. Software and hardware advancements in our cell analysis products create many new evaluation opportunities for our customers. They are the foundation for the development of new tools that can process and present large amounts of data usefully in the appropriate application. We expect that such software solutions will become increasingly important.

An innovative pipetting system was developed as part of a cooperation and launched on the market by our partner during the reporting year. This system is based on the pipetting hardware from Sartorius that is networked with both a stand and a cloud-based software solution. The solution is intended to help users avoid application errors in laboratory practice and to improve the reproducibility and traceability of experiments.

Compliance with regulatory requirements is critical for our customers. Product development priorities for Sartorius therefore include data management, connectivity and process automation.

Most of the development for the Lab Products & Services Division is conducted at Group headquarters in Göttingen, but Sartorius also carries out development activities at its sites in Helsinki, Finland and Stonehouse, U.K. as well as Ann Arbor, Michigan and Albuquerque, New Mexico in the United States.

Production and Supply Chain Management

The Lab Products & Services Division operates plants in Germany, China, Finland, the U.K. and the U.S. These plants serve as centers of competence and tend to focus on one product group or a small set of product groups. In 2019, laboratory balances were manufactured in Göttingen and Beijing, for example, and pipettes in Kajaani, Finland. The sites in Ann Arbor and Albuquerque manufacture bioanalytical systems; microbiological test kits are produced in Stonehouse and most membrane-based products in Göttingen.

Assessment of Economic Position

The Sartorius Group's Business Performance

Sartorius continued on the profitable growth track in fiscal 2019. Its positive development was significantly fueled by the Bioprocess Solutions Division, which grew dynamically yet again. Strong demand for equipment and single-use technologies resulted in double-digit gains across all geographies so management substantially raised its sales guidance for the Bioprocess Solutions Division and, therefore, also for the entire Group at mid-year 2019. Due to the sustained positive market environment, management specified its expectations for the division, as well as for the entire Group, upon release of the company's 2019 nine-month figures, projecting that sales revenue would increase at the upper range of the bandwidth communicated.

Against the backdrop of a weaker economic environment, development of the Lab Products & Services Division was more moderate than expected, especially in the second quarter of 2019. Its guidance for sales growth was revised upon release of the 2019 first-half figures, projecting that the lower range would be reached. Guidance for the division's underlying earnings margin was also slightly revised downward. In the second half of the year, Lab Products & Services showed much more robust performance so that its full-year development was within the forecasts.

Consolidated sales revenue rose during 2019 by 14.8% in constant currencies to €1,827.0 million, thus even slightly exceeding the Group's expected forecast that was raised considerably at mid-year. The Group's earnings margin, based on underlying EBITDA, also increased as projected to 27.1%.

The ratio of net debt to underlying EBITDA for the last twelve months stood at 2.0 as of December 31, 2019, which, therefore, was also in line with the forecast. As a result, the Sartorius Group continues to have significant financing flexibility to further implement its strategy.

In the context of its ambitious growth targets, Sartorius has been making above-average investments over the past few years in the expansion of its manufacturing capacities, its IT systems, and in the consolidation and extension of its Group headquarters in Göttingen, Germany. Due to the completion of several large expansion projects and significant sales growth, the ratio of capital expenditures (CAPEX) to sales revenue decreased to 12.3%.

Projected | Actual Comparison for the Year 2019

	Actual 2018	Guidance January 2019	Guidance July 2019	Guidance October 2019	**Actual 2019**
Sartorius Group					
Sales growth[1]	13.2%	~7% –11%	~10% –14%	~10% –14% (upper end)	14.8%
Underlying EBITDA margin in %	25.9%	slightly above 27.0%[1]	slightly above 27.0%[1]	slightly above 27.0%[1]	27.1%
Gearing (underlying)	2.4	< 2.4[2]	< 2.4[2]	< 2.4[2]	2.0
CAPEX ratio	15.2%	~12%	~12%	~12%	12.3%
Sartorius Divisions					
Bioprocess Solutions					
Sales growth[1]	14.8%	~8% –12%	~13% –17%	~13% –17% (upper end)	18.1%
Underlying EBITDA margin in %	28.6%	slightly above 29.5%[1]	slightly above 29.5%[1]	slightly above 29.5%[1]	29.6%
Lab Products & Services					
Sales growth[1]	9.1%	~5% –9%	~5% –9% (lower end)	~5% –9% (lower end)	5.9%
Underlying EBITDA margin in %	18.5%	slightly above 20%[1]	slightly below 20.0%[1]	slightly below 20.0%[1]	19.6%

[1] In constant currencies
[2] Possible acquisitions are not considered

Annual Financial Statements of Sartorius AG

The retained profit of Sartorius AG is the key reference value for the payment of dividends to our shareholders. Whereas the Sartorius Group financial statements are drawn up according to the International Financial Reporting Standards (IFRS), the annual financial statements for Sartorius AG are prepared by applying the rules and regulations of the German Commercial Code (HGB).

The Management Report of Sartorius AG and the Group Management Report for fiscal 2019 are combined. The HGB annual financial statements of Sartorius AG and the combined management report are published simultaneously in the German Federal Gazette (Bundesanzeiger).

Business Operations, Corporate Strategy, Corporate Management and Oversight, Overview of Business Development

Sartorius AG has exercised only the functions of the strategic, group-leading management holding entity for the Sartorius Group since the beginning of fiscal 2011, and we refer in this connection to the explanatory reports concerning business operations, corporate strategy, corporate management and oversight, as well as the overview of business development, presented on pages 22 et seq. of the combined management report of Sartorius AG and the Group.

Earnings

Sales revenue of Sartorius AG essentially consists of cost transfers to affiliated companies within the Group for management services rendered as well as of the rental of buildings on Sartorius Campus.

Income from investments of €39.0 million relative to €31.5 million a year ago concerns dividends paid out for the French subsidiary Sartorius Stedim Biotech S.A.

The increase of €5.8 million in other operating expenses to a total of €15.3 million is mainly attributable to expenses in connection with the announced possible acquisition of selected parts of the Danaher Life Science portfolio. This acquisition is currently subject to a variety of regulatory approvals.

The total profit received under profit and loss transfer agreements was €3.4 million. Of this amount, €0.3 million was transferred to Sartorius Corporate Administration GmbH (2018: €6.6 million) and €3.1 million to Sartorius Lab Holding GmbH, compared with €3.5 million in 2018.

Net Worth and Financial Position

The balance sheet total of Sartorius AG decreased in the reporting year by €4.6 million to €1,238.8 million.

The balance sheet structure of Sartorius AG reflects its function as the management holding entity for the Sartorius Group. Fixed assets consist essentially of financial assets and, in the reporting year, stood at €535.6 million (2018: €520.0 million). Accordingly, fixed assets accounted for 43.2% of the balance sheet total (2018: 41.8%). The equity ratio for fiscal 2018 was 20.3% relative to 21.7% in 2018.

Statement of Profit and Loss of Sartorius AG
Based on the total cost accounting method according to Section 275, Subsection 2, of HGB[1]

€ in K	**2019**	2018
1. Sales revenue	11,207	10,090
2. Other operating income	1,187	3,596
3. Employee benefits expense	–6,700	–7,218
4. Depreciation and amortization	–2,880	–2,482
5. Other operating expenses	–15,335	–9,547
6. Income from investments	39,017	31,487
7. Profit received under a profit and loss transfer agreement	3,359	10,098
8. Interest and similar income	7,466	8,329
9. Interest and similar expenses	–13,726	–13,996
10. Income tax expense	–18	–1,516
11. Profit after tax	**23,577**	**28,841**
12. Other taxes	–24	–23
13. Net profit for the period	**23,553**	**28,818**
14. Profit brought forward	94,089	107,329
15. Retained profits incl. net profit for the period	**117,642**	**136,147**

[1] HGB = German Commercial Code

Balance Sheet of Sartorius AG
According to HGB[1], € in K

Assets	**Dec. 31, 2019**	Dec. 31, 2018
A. Fixed Assets		
I. Property, plant and equipment	93,922	78,308
II. Financial assets	441,711	441,736
	535,633	**520,044**
B. Current Assets		
I. Trade and other receivables	701,480	719,922
II. Cash on hand, deposits in banks	186	1,500
	701,666	**721,422**
C. Prepaid Expenses	**1,451**	**1,832**
	1,238,750	**1,243,298**

Equity and Liabilities	**Dec. 31, 2019**	Dec. 31, 2018
A. Equity		
I. Subscribed capital	74,880	74,880
Nominal value of treasury shares	–6,492	–6,492
Issued capital	**68,388**	**68,388**
II. Capital reserves	55,100	54,569
III. Earnings reserves	10,867	10,867
IV. Retained profits incl. net profit for the period	117,642	136,147
	251,997	**269,971**
B. Provisions	**34,534**	**31,201**
C. Liabilities	**952,219**	**942,126**
	1,238,750	**1,243,298**

[1] HGB = German Commercial Code

Proposal for Appropriation of Profits

The Executive Board will submit a proposal to the Annual Shareholders' Meeting to appropriate the retained profit of €117,641,275.26 reported by Sartorius AG for the year ended December 31, 2019, as follows:

	in €
Payment of a dividend of €0.70 per ordinary share	23,948,556.80
Payment of a dividend of €0.71 per preference share	24,265,008.28
Unappropriated profit carried forward	69,427,710.18
	117,641,275.26

Research and Development

Detailed information about the research and development activities of the Sartorius Group and of its divisions is given on pages 44 et seq. and 49 et seq.

Employees

Sartorius AG as a holding company does not employ any staff to be disclosed pursuant to Section 285, No. 7, of HGB.

Risks and Opportunities

The opportunities and risks affecting the business development of Sartorius AG as the management holding entity are essentially equivalent to those of the Sartorius Group. Sartorius AG shares in the risks to which its investments and subsidiaries are exposed in proportion to the extent of its investment. Where expedient and feasible, we adopted countermeasures and | or arranged for balance sheet measures during the reporting year to cover all discernible risks within Sartorius AG that had the potential to negatively impact our net worth, financial position and profitability.

A detailed Opportunity and Risk Report for the Sartorius Group is provided on pages 57 to 65; a description of the internal control and risk management system, on page 58.

Report on Material Events

Please refer to page 70 to read the Report on Material Events for Sartorius AG and the Sartorius Group.

Forecast Report

Earnings trends for Sartorius AG depend substantially on the progress of its subsidiaries and, hence, on the Sartorius Group.

The development of the Sartorius Group's business is discussed in the Forecast Report on pages 66 to 69.

Opportunity and Risk Report

Principles

Every business activity entails opportunities and risks, which have to be managed. The skill with which this is done is a decisive success factor in determining the future development of a company's shareholder value.

It is not the task of risk management to eliminate all possible risks. Rather, our approach is to intentionally take a certain measure of risk in our business activities in order to be successful in unlocking opportunities. In this endeavor, it is important to keep risks contained within acceptable limits and to control them carefully. Through appropriate guidelines, we ensure that risk assessments are taken into account in the decision-making processes from the very beginning.

At Sartorius, identification and management of opportunities and risks is a cross-functional component of Group management. To this extent, our risk management organization reflects a global functional organization in the two divisions of Bioprocess Solutions and Lab Products & Services. Within this organization, individuals heading a functional area, so-called "risk owners," are each responsible for their own management of opportunities and risks. The cross-divisional Finance & Controlling department is responsible for organizing the respective reporting process, including further developing the Group's risk management system.

Managing Opportunities

Our opportunity management centers on the analysis of target markets and sector environments, as well as the assessment of trends, both of which give strong indications as to future business opportunities. The identification of the potential for development in this context is one of the key roles of the relevant managers and initially takes place at the local rather than the central level. Particularly the market-facing functions, such as strategic marketing and product management in each of the two divisions, play a leading role in this respect. The central Business Development unit additionally supports these areas with market monitoring, data analysis and the implementation of strategic projects.

The Group strategy is regularly reviewed and adapted where necessary. As part of these reviews, the members of the Executive Board together with managers having operational responsibility regularly discuss short-, medium- and long-term opportunity potential for the various business areas. If the opportunities are short-term in nature, they are considered in annual budget planning. Medium- and longer-term opportunities are tracked systematically as part of strategic planning.

As a partner of the biopharmaceutical and laboratory industries, Sartorius operates in future-oriented and high-growth sectors. The significant opportunities generated by the various market and technology trends are described in detail in the sections entitled "Sector Conditions" and "Outlook for the Sectors" on pages 32 and 67, respectively.

Our assessments rank Sartorius as one of the global market leaders in many subsegments and product areas. We believe the high quality of our products, our high brand recognition and our established customer relationships give us strong opportunities to stabilize and continue extending our market leadership. The corresponding division strategies and the growth opportunities and initiatives based on them are discussed in the section on the strategy of the Bioprocess Solutions Division, which begins on page 26, and in the section on the strategy of the Lab Products & Services Division, which starts on page 27.

Risk Management

Organization

Overall responsibility for the maintenance of an effective risk management system ensuring comprehensive and consistent management of all material risks rests with the Executive Board. The Finance & Controlling Department is responsible for coordinating and developing this system and for consolidated risk reporting, while the particular functional areas are responsible for identifying, analyzing and reporting individual risks, as well as for assessing their potential impact and taking the appropriate countermeasures.

The Supervisory Board of Sartorius AG monitors the effectiveness of the risk management system, with the preparatory work being performed by the Audit Committee of this board. While carrying out their statutory audit mandate for the annual financial statements and consolidated financial statements, the independent auditors assess whether the early warning system in place is capable of prompt identification of risks that could jeopardize the future of the company. Finally, the Internal Audit Department regularly reviews the risk management process and system.

Insurance

We have taken out insurance policies to cover a wide range of risks where possible and economically advisable. These insurance policies include coverage against product liability, property damage, business interruption, transport, material and pecuniary damages and other risks, and provide comprehensive coverage for legal costs. An independent department working in conjunction with an external insurance broker regularly reviews the nature and extent of our insurance protection and makes any adjustments as necessary.

When choosing our insurers, we particularly consider the credit rating of these entities as potential contractual partners, as well as aim to achieve a high degree of diversity in order to mitigate the related risks.

Risk Management System and Risk Reporting

The risk management system of the Sartorius Group is documented in a Risk Management Handbook that applies throughout the entire Group and includes definitions of the framework, the structural organization, processes, risk reporting and monitoring and controls of the effectiveness of the risk management system. This Handbook is based as a whole on the ISO 31000 "Risk management – Guidelines" standard and the COSO standard (COSO = Committee of Sponsoring Organizations of the Treadway Commission). There are also a number of other sources that contain stipulations for handling risks, including the articles of association and rules of procedure of the Group companies and other internal guidelines. The strong growth of the Group over the past years and the rising demands of customers and regulators meanwhile require that we continue to adapt our guidelines and rules. In the fiscal year ended, changes were made to the risk management process and risk management software introduced to further improve documentation.

The prescribed reporting process in the risk categories subsequently described establishes the rules for the ongoing review of and information on risk situations. If any specific risks are discernible, these are documented with respect to their assessment, probability of occurrence and measures to be taken to eliminate such risks or to mitigate their impact. As a matter of policy, assessment of risks is governed by the remaining net risk, i.e., after any risk-mitigating action has been taken. In addition, as soon as these risks reach defined size criteria, they are reported to the central risk management system. We have an urgent reporting procedure in place to ensure that when a new or an emerging significant risk to our net worth, financial position and profitability is identified, the Executive Board of Sartorius AG receives all of the necessary details without undue delay.

To classify risks appropriately, we have defined four main categories: external risks, operating risks, financial risks and compliance risks. Each main category is divided into several subcategories that are described in the following sections.

Moreover, we have defined a so-called risk matrix that categorizes the probability of occurrence and potential impact on the net profit into specific classes as follows:

Probability of Occurrence	
Remote	< 10%
Possible	10% - 50%
Probable	50% – 90%
Very likely	> 90%

Significance in millions of €	Impact on Earnings
Insignificant	< 10
Moderate	10 – 50
Significant	50 – 100
Critical	> 100

These two elements are combined to form the following matrix that indicates the importance of the individual risks for the Group:

> 75%	Low	Medium	High	High
50% – 75%	Low	Medium	High	High
10% – 50%	Low	Medium	Medium	Medium
< 10%	Low	Medium	Medium	Medium
Probability of occurrence | Impact	< €10 million	€10 – €50 million	€50 – €100 million	> €100 million

External Risks and Opportunities

General Risks

In principle, our ability to foresee and mitigate the direct and indirect effects of risks entailed by life in general is limited. Such risks include natural catastrophes or force majeure, and their associated damage to commercially significant and critical infrastructure and currency or monetary crises. Yet we proactively take measures, whenever feasible, to ensure that we can respond appropriately and at short notice or are insured against any damage entailed by such risks.

Our largest sites in Germany and France do not face any major risks from natural catastrophes, while, for example, our production plant in Puerto Rico is exposed to the risk of severe hurricanes and could be impacted accordingly. We endeavor to counteract this risk by applying the highest possible safety standards to the buildings and explicitly consider this risk in our warehousing and international production network strategies.

Furthermore, political developments, such as the United Kingdom's leaving the European Union ("Brexit") or the change in U.S. foreign trade policy, can have an impact on the Group's business.

In the U.K., the Group operates several manufacturing and sales entities accounting for a significant business volume. Any developments that have a negative impact on trade between the U.K. and other countries, such as the introduction of customs duties could therefore result in a corresponding decrease in Group's earnings. Further developments are being closely observed, and some measures to reduce risks have already been taken, such as maintaining safety stock.

Since our Group companies in the USA and China maintain business relationships with companies in each other's countries, the punitive tariffs imposed in recent months have had a somewhat negative effect on our profitability, although this has not been material to date.

Business Cycle Risks

The nature of our different business areas entails that Sartorius is exposed as a whole to a much lesser extent to cyclical business effects. The Bioprocess Solutions Division focuses on the biopharmaceutical industry, which is largely independent of economic cycles. In contrast, the Lab Products & Services Division is partly susceptible to business cycles that can pose a risk to its growth. Our strategy of also aligning the Lab Products & Services Division more strongly with the biopharma sector reduces these risks.

Operating Risks and Opportunities

Our supply chain extends from procurement to production to sales and distribution. Problems within this workflow can have consequential effects, including delays in deliveries. The supply chain management system we have instituted throughout our value-added chain to prevent such problems largely minimizes the associated risks by analyzing and controlling all operations involved. On the other hand, the strongly international alignment of our organization opens up a whole series of opportunities. The various risks and opportunities encountered within our supply chain are explained in detail below.

Procurement Risks and Opportunities

We purchase a wide range of raw materials, components, parts and services from suppliers and are consequently exposed to the risks of unexpected delivery bottlenecks and | or price increases.

Over the past years, we have implemented powerful tools and robust processes in our Materials Management unit to manage risks arising from critical materials. These means enable us to meet the expectations of our customers with respect to assurance of supply and transparency. Important measures in this respect are to maintain safety stock and to define alternative suppliers as part of our second supplier policy. In addition, we conduct regular supplier reviews and use early warning systems.

Risks arising from raw material prices play a rather subordinate role in most of our business areas. On the one hand, the proportion of raw materials in our production costs is rather low. On the other hand, we purchase a wide range of materials so that price increases for certain materials do not represent any significant factor.

Opportunities can arise in the area of procurement when our growth enables us to increase order quantities and thereby strengthen our position with our suppliers, such as by receiving price discounts or preferential treatment as a "preferred customer." In addition, we maintain a list of preferred suppliers for key vendors in parallel, with whom we enter into long-term business relationships to our mutual benefit.

Production Risks and Opportunities

Based on our core technology expertise, we ourselves manufacture a significant proportion of the products that involve a high level of vertical integration. Examples include filters and laboratory balances. Other products, such as reusable fermenters and bioreactors, are manufactured in collaboration with suppliers so that some of the production risks are transferred to external third parties. Where we manufacture products ourselves, we also bear the associated risks of capacity bottlenecks or overcapacity, production downtimes, excessive reject rates and high levels of tied-up working capital, as well as dependency on individual manufacturing sites.

We contain these risks by planning production capacities carefully, using versatile machines, semi-automated individual workstations and flextime work schedules, and by continuously monitoring production processes. Moreover, our global manufacturing network enables us to compensate for any capacity bottlenecks by shifting production to other regional plants and to minimize our dependency on individual local manufacturing sites. Furthermore, we have taken out policies for business interruption insurance to compensate for any possible losses due to production downtimes.

Some of our production processes use mildly flammable or explosive materials. The improper handling of such materials can result in significant damage to property and business interruptions. We have taken all necessary organizational and structural measures at the affected locations to mitigate this risk as much as possible.

We consider it an opportunity that our investments in infrastructure and production resources, among other things, have given us high flexibility in our manufacturing operations and that we are capable of meeting our customers' requirements and regulatory standards with respect to business continuity concepts. In addition, this approach ensures that our international production sites can concentrate on specific manufacturing technologies, leveraging regional cost advantages as a result. Our international manufacturing network also makes it possible to capitalize on the cost advantages offered by individual sites. Continuous improvements in production, such as simplifying processes and increasing levels of automation, also help drive manufacturing efficiency even higher.

Sales and Distribution Risks and Opportunities

We use a variety of channels to sell and distribute our products around the world. The potential risks entailed are unexpected changes in the demand structure, growing price pressure and non-compliance with supply agreements concluded with customers. We employ targeted market analyses to identify emerging demand trends in individual segments early on so that we have time to respond appropriately. Our technical innovations and the fact that a large number of our products are used in validated production processes in the biopharmaceutical industry reduce our exposure to the risk of growing price pressure. We have lowered our risk exposure in the area of logistics in recent years by setting up and using central warehouses to optimize distribution logistics.

Opportunities arise in the area of sales and distribution when the increasing breadth of our product range – in both bioprocess and lab segments – puts us in a position to sell new products to existing customers. Moreover, our business relationships, most of which are established for the long term, and our global presence provide opportunities. Finally, through our acquisitions in cell analysis, we offer customers in the biopharmaceutical industry, a key sector for us, comprehensive product solutions to address needs ranging from research laboratories all the way to production processes.

Sartorius sources its key customers from the pharmaceutical, chemical and food industries and from research and educational institutions of the public sector. These customers are usually relatively large organizations that have been in existence for some time and have strong credit ratings. Most of our business areas have a highly diversified customer base so the Group as a whole is not dependent on individual key accounts to any significant degree.

Competitive Risks and Opportunities

Sartorius has a leading competitive position in its core technologies and competes with mainly larger rivals sharing our status as a globally operating company. As we serve a large number of customers from highly regulated sectors like the pharmaceutical and food industries, and the technology barriers to market entry are fairly high, we regard the probability of new competitors emerging within the short term as relatively low.

The fact that many of our products are used in validated processes, especially those in the biopharmaceutical industry, reduces the risk of losing significant market share within a short timeframe. Conversely, the hurdles Sartorius faces in winning over customers from our competitors in this industry are also higher.

Changes in the competitive environment, for example, further consolidation in the markets, can pose further risks but also opportunities. Sartorius has been continuously making acquisitions in recent years, thus further strengthening its market position and opening up new potential synergies.

Quality Risks and Opportunities

Our customers use Sartorius products in a wide range of critical production processes, including the manufacture of medications, foods and chemicals, and in research and development laboratories. The main risk encountered in these areas is non-compliance with agreed quality criteria, which can lead to losses for our customers, or their customers, for which we may be made liable through compensation claims.

We employ rigorous quality checks and advanced production methods and processes, such as cleanroom technology, to ensure that our products satisfy the most stringent quality standards and high regulatory requirements. These manufacturing methods and processes are subject to constant review under our continual improvement processes, moreover, and are optimized as requirements evolve. Our successful completion of a host of annual audits by customers and implementation of quality systems compliant with ISO 9001 and, where applicable, with ISO 13485 document the high level of quality achieved in Sartorius products and processes. Irrespective of these measures, we also maintain significant insurance coverage against product liability risks. In addition, Sartorius has established a traceability system that enables us to recall an entire production batch immediately, if necessary, and minimize any adverse consequences in the event that a defect or non-conforming item is discovered in a product.

We have also installed a complaints management system to deal with customer requests promptly and to ensure efficient documentation.

In the sectors we address, quality requirements are growing more and more stringent all the time, not least as a result of increasing requirements on protection of medical patients and on product safety by regulatory authorities. Changing requirements typically entail the risk that a new prerequisite might be overlooked or be difficult to achieve, but for Sartorius these are opportunities that open up new market prospects. The reason is that challenging quality demands represent a considerable barrier to entry for potential new competitors and provide stimulus for further technical innovation. Moreover, through our work on professional committees, membership in industry associations and standards committees, we actively take part in drafting new standards and guidelines, and are able to identify these emerging requirements at an early stage and prepare ourselves accordingly.

Research and Development Risks and Opportunities

We devote a considerable share of our resources to research and development. Potential risks in this area may arise from development results that diverge from market needs and application requirements and from exceeding planned development deadlines. Our advanced project management, intensive R&D controlling and early involvement of our customers in the development process substantially limit these R&D risks. In particular, we ensure that product developments are always reviewed promptly with regard to how well they meet customers' needs so products can be adapted accordingly as required. Patents and continuous tracking of the technologies and competitors relevant to us secure our technology and marketing position.

On the other hand, we see a number of opportunities in the area of R&D. Not least, our intensive collaboration with partners that rank among the global market leaders in their own fields opens up the opportunity for us to jointly develop products with an especially high level of innovation. In areas such as membrane technology and plastics technology, sensorics and biopharmaceutical process engineering, as well as measurement technology for laboratory applications, in turn, the expertise of our own specialists puts us at the very forefront of global research and development, presenting us with an opportunity to turn this technical knowledge into potential sales and an even stronger position on the market. The combination of different innovative activities in a separate Corporate Research Department further enables us to identify and benefit from promising developments and emerging trends at universities, startups and at our customers' plants.

Acquisition Risks and Opportunities

By nature, acquisitions provide many opportunities, such as sales growth, extension of our product portfolio and development of new markets. By contrast, the purchase and sale of companies or parts of companies entail a number of typical risks, such as incorrect valuation assumptions or insufficient usage of anticipated synergy effects.

To prevent these risks, we take various measures, such as performing a thorough due diligence review of important areas and carrying out comprehensive analysis of the market concerned. In addition, we involve external consultants and experts in the purchase or sales process as required. We especially focus on drafting transaction contracts so that they adequately counter such risks, especially by clauses assuring specific characteristics or by contractual warranty or guarantee provisions, as well as agreements on mechanisms for adjustment of the purchase price and on liability clauses and, moreover, by taking out the appropriate insurance policies, if required. Immediately after an acquisition has taken place, an integration phase is initiated in which any potential risks can likewise be detected as early as possible and prevented or minimized by taking the appropriate counteractions. A Post Merger Integration (PMI) Office was established as an independent function in the Business Process Management Department to ensure the efficiency of the integration process and minimization of the associated risks.

Personnel Risks and Opportunities

As an innovative technology group, Sartorius employs a large percentage of highly qualified people. This entails the risk that Sartorius may not be able to hire sufficient numbers of highly qualified employees in the future or may lose high performers currently at the company. We therefore endeavor to retain employees in key positions over the long term by offering performance-related remuneration models, targeted continuing professional development options, attractive social benefits and interesting people development opportunities. The success of these measures is apparent in the low attrition rates of recent years. Employment contracts in certain cases contain a clause prohibiting any move to a direct competitor.

We counter the risk posed by demographic change primarily by offering continuous education and training of junior staff. This, in turn, results in opportunities for Sartorius as we can further qualify employees on our own and retain such staff over the long term, thus covering company needs for qualified personnel particularly well.

IT Risks and Opportunities

The business processes of the Sartorius Group are supported by a large number of specific IT applications and systems. Failure or other impairment of the relevant IT systems or (cyber)attacks can considerably disrupt the smooth functioning of the company's business processes and lead to manipulation or to uncontrolled loss or leakage of knowledge or data.

We reduce these risks by continuously investing in the setup and operation of secure IT systems and applications and by continuously further developing and implementing our concepts and security measures based on the International Standard ISO 27001, Information Security Management System. In addition, we incorporate the results of regular audits and vulnerability assessments carried out by external companies specializing in IT security.

Protection of our data against misuse is ensured by specific authorization and authentication policies based on the assignment of rights limited to a "need-to-know" basis for performing certain tasks, and the application of such policies is reviewed at regular intervals.

We protect our systems against failure and data loss by regular data backups, recovery testing based on rolling disaster scenarios and risk-based use of redundant IT infrastructures. Multi-factor authentication solutions enable us to prevent malware threats.

We assume that the threat of cyberattacks is growing worldwide, both in number and intensity. This is why we are continuously extending and strengthening our activities: We are improving our activities by further automating management of authorizations and reducing the potential for data misuse, among other measures. We inform our staff in a targeted way about possible threats and risks, involving our employees by providing them with simple but effective options for decentralized defense and for reporting suspicious incidents to IT for checking.

By extending our means for competent and fast response to cyberattacks, including other IT security incidents, we supplement our organizational basis for running the Sartorius system and applications at the lowest possible risk across the entire landscape.

Financial Risks

The global nature of the Sartorius Group's operations entails that its business activities are inevitably exposed to financial risks. The most significant of these are exchange rate risks, interest rate risks, liquidity risks and tax risks. Conversely, financial risks, most notably exchange rate risks and interest rate risks, are balanced by opportunities of approximately equal magnitude.

Exchange Rate Risks

As a consequence of its global business activities, the Sartorius Group is exposed to risks arising from foreign currency fluctuations. Since we generate around two-thirds of consolidated sales revenue in foreign currencies and, in turn, approximately two-thirds of this total revenue in U.S. dollars or in currencies pegged to the U.S. dollar, we are positively or negatively impacted by currency effects, especially when converting the currencies of balance sheet items and profit or loss items, respectively. Other currencies relevant to the Sartorius Group are the South Korean won, the British pound, the Singapore dollar, the Japanese yen and the Chinese renminbi.

Our global production network enables us to offset the lion's share of sales revenues received in foreign currency within the Group against costs likewise incurred in foreign currency. For example, we manufacture many of our products for the North American market locally, and are not disadvantaged on the cost side in competing with our U.S. rivals, insofar as this risk is concerned.

We continuously calculate our risk exposure with a cash flow at-risk model in order to evaluate and steer the remaining risk based on the expected net exposure for the next 12 months and take into consideration hedging transactions already executed. This is the basis we use to decide on whether to employ additional derivative financial instruments, especially spot, forward and swap transactions, to adjust for maximum loss. Hedging transactions are set up by one group of staff and monitored by another, separate group.

Interest Rate Risks

We have concluded fixed interest agreements for approximately two-thirds of our outstanding loans so that any changes in the interest rate will not have any positive or negative effects on consolidated earnings. The remaining portion of the financial instruments outstanding on the reporting date is subject to variable interest based on the market rate. We monitor interest rate trends and our interest rate exposure constantly and arrange for hedging transactions where we consider it necessary and economically advisable to do so for individual loans. As of December 31, 2019, we did not have any interest rate derivatives in our portfolio of financial instruments.

Liquidity Risks

The Sartorius Group actively manages liquidity centrally in order to check and minimize liquidity risks in the individual Group companies, on the one hand, and to optimize liquidity management within the organization, on the other. For this purpose, we use various long- and short-term financial instruments. Regarding the maturities of our loans, we make it a policy to take a risk-averse approach.

For short-term liquidity procurement, we also employ various instruments. In addition to the syndicated credit line that can be accessed and repaid at short notice, we have a number of bilateral credit lines in place on a smaller scale for individual Group companies. Furthermore, we use cash pooling agreements between selected Group companies as the primary tool to manage liquidity within the Group.

Under the present 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 3.25. Higher limits are possible for a certain period of time for larger acquisitions. There is a basic risk in this connection that the Group might not comply with these covenants, which could lead to a termination of its loan agreements. Based on the current information available, this is considered unlikely.

Tax Risks

The Sartorius Group and its subsidiaries do business across the globe and are therefore subject to the tax laws and policies of various countries. Changes in tax laws, rulings by the courts and interpretation of the law by the fiscal authorities or courts in these countries can result in additional tax expenses and payments and thus also affect the corresponding tax items in the statements of financial position and profit or loss.

We manage the resulting risks by continually monitoring and analyzing tax conditions along with our central Tax department with the support of third-party consultants in the respective countries.

Compliance Risks

Regulatory Risks

Our role as a partner of the biopharmaceutical industry and healthcare providers means that Sartorius can also be affected by underlying developments in these areas. The possibility of the regulatory authorities (e.g., the U.S. Food and Drug Administration and the European Medicines Agency) adopting a more restrictive approach to the approval of new medications remains the principal source of risk in this context. Such a move would reduce the number of new pharmaceutical products to be marketed and would consequently downgrade future prospects for Sartorius over the medium term.

Environmental Risks

Sartorius has established an environmental management system that encompasses both divisions to minimize environmental risks. Most of its large production sites are additionally certified for compliance with ISO 14001:2015. Corresponding company organizational units ensure at the respective sites that the related legal and regulatory requirements are observed and that sustainable technical innovations for improving environmental aspects are implemented in our production processes on an ongoing basis. In this effort, it is important for Sartorius to include environmental considerations in the widest array of decision-making processes as early as possible in order to counter possible environmental risks systematically and to do business in a manner that is sustainable and environmentally friendly.

The growing importance of sustainability considerations in many industries and in society increasingly offers Sartorius the opportunity as well to demand heightened environmental awareness from other companies. That is why this aspect is a key element in our supplier selection process for assessing the suitability of a particular company as a business partner. For further information on this group of topics, please refer to our Non-Financial Group Statement.

Litigation Risks

Litigation risks for Sartorius can arise from pending or forthcoming legal disputes or from administrative proceedings. All judicial or extrajudicial disputes are attended to by the company's own attorneys and legal experts, who engage external lawyers as needed.

At present, there are no pending or discernible legal disputes or proceedings that lack any cost coverage allowances in the statement of financial position or that could have a substantial negative impact on Group.

Assessment of the Overall Risk Situation and Risk Outlook

Where feasible, we adopted countermeasures and|or arranged for balance sheet measures during the reporting year to cover all discernible risks within the Sartorius Group, and those of a defined probability of occurrence, that had the potential to damage our net worth, financial situation and profitability.

For the purposes of this report, we have assessed the probability of occurrence of the risks as shown below and, in the adjacent columns, classify their particular significance for the entire Group.

Risk Category	**Probability of Occurrence**	**Significance**	**Total Impact**
External risks			
General risks	Possible	Moderate	Medium
Business cycle risks	Possible	Moderate	Medium
Operating risks			
Procurement risks	Remote	Significant	Medium
Production risks	Remote	Significant	Medium
Sales and distribution risks	Possible	Moderate	Medium
Competitive risks	Remote	Moderate	Low
Quality risks	Remote	Significant	Medium
Research and development risks	Possible	Significant	Medium
Acquisition risks	Possible	Significant	Medium
Personnel risks	Possible	Moderate	Medium
IT risks	Possible	Significant	Medium
Financial risks			
Exchange rate risks	Probable	Moderate	Medium
Interest rate risks	Probable	Insignificant	Low
Liquidity risks	Remote	Moderate	Low
Tax risks	Possible	Moderate	Medium
Compliance risks			
Regulatory risks	Possible	Significant	Medium
Environmental risks	Remote	Moderate	Low
Litigation risks	Possible	Moderate	Medium

After thorough analysis of the entire risk situation and according to our current review, there are no discernible risks at present that could jeopardize the continued existence of the Group.

Similarly, based on our current review, there are no discernible risks that could jeopardize the future existence of the Group.

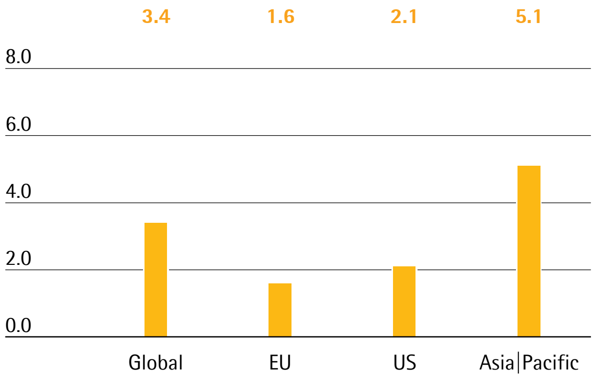
Forecast Report

Future Macroeconomic Environment

After the economy slowed in virtually all economic regions in 2019, the International Monetary Fund (IMF) expects to see a recovery this year. Global growth is projected to rise to 3.4% compared with 3.0% the previous year. The growing momentum is primarily based on stabilizing economic trends in a number of emerging and developing countries in Latin America, the Middle East and Eastern Europe. In contrast, other key economic regions like the United States and China are expected to experience further slowdown. Risks to global economic growth arise in particular from the still-unresolved trade dispute between the United States and China. Other threats could be posed by geopolitical tension and Great Britain's withdrawal from the European Union (Brexit).

The IMF projects growth of 1.6% in the EU, roughly the same level as last year. Germany, the largest economy in Europe, is projected to pick up speed and grow by 1.5% (2019: 0.5%). This growth should result from the declining impact of temporarily dampening factors such as new emission test standards introduced in the automotive industry. GDP in France is expected to increase by 1.3% (2019: 1.2%). The research institution projects a slight rise in growth in Great Britain of 1.4% (2019: 1.2%) under the assumption of an orderly exit of this country from the EU.

Forecasted GDP Growth Rates for 2020
in %



Source: International Monetary Fund

The U.S. economy is projected to grow by 2.1% in 2020 compared with 2.4% during the previous year. According to the IMF, the trade dispute with China is becoming an increasing burden for the industry and is resulting in declining economic indicators and significantly slower job creation, among other things. On the other hand, consumer confidence and private consumption remain stable. As a result, the pace of expansion is likely to remain robust compared with the performance of other developed economies.

The Asia-Pacific economic area is likely to grow by about 5.1% (2019: 5.0%), with expected growth to be fueled by the expanding economies of China and India in particular. However, GDP in China is projected to increase at a slightly lower rate compared with last year's, by 5.8% in 2020 (2019: 6.1%). According to the IMF, the trade dispute with the United States is increasingly affecting the export industry and having a negative impact on wage trends, domestic demand and the overall economy. In contrast, India is expected to generate further momentum and grow by 7.0% (2019: 6.1%). Growth in South Korea should reach 2.2% (2019: 2.0%). Japan is expected to grow by 0.5% (2019: 0.9%).

Exchange and Interest Rate Trends

Experts predict that the base interest rates will remain unchanged at a low level in 2020 as well.

The market consensus on the exchange rate of the euro to the U.S. dollar for the course of 2020 is that it will range between 1.07 euros to the U.S. dollar and 1.20 euros to the U.S. dollar.

Sources: International Monetary Fund, World Economic Outlook, October 2019; Reuters Forex Poll, December 2019.

Outlook for the Sectors

Biopharmaceutical Industry Maintains Dynamic Growth

Strong, long-term trends drive growth in the pharmaceutical industry, which is almost entirely independent of business cycles. Various market observers estimate the world's pharmaceutical market will grow between 3% and 6% annually during the period up to 2023. The biopharma segment of the pharmaceutical market, which has been enjoying particularly strong growth for years, will continue to outperform the market. For the period of 2019 to 2023, growth is expected to average between 8% and 9% annually. This would amount to an increase in market volume from the current level of €235 billion to €320 billion. The share of biological medications and vaccines in the total revenue generated by the global pharmaceutical market is expected to continue rising.

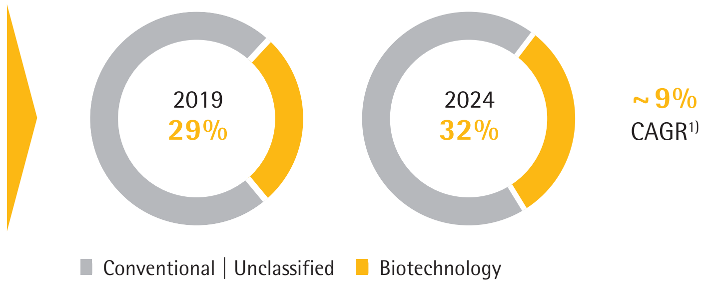
In the coming years, the most dynamic market will likely be China. Positive regulatory and political conditions, a constantly rising number of local biotech companies and increasing demand for advanced biopharmaceuticals have been fueling above-average growth for several years now. This trend could continue as a result of the huge amount of catch-up potential in the market and the improved availability of biotech medications. Considerable growth in the United States and Europe is also anticipated, driven in particular by a growing need for medications for aging societies as well as the rising number of chronically ill and multi-morbid patients. In addition, more and more medications are being approved. For example, biopharmaceuticals are increasingly being used in yet-to-be fully explored therapeutic areas and in the treatment of rare diseases that have thus far been untreatable. Innovative types of therapy for regenerative medicine and new substance classes, such as antibody-drug conjugates (ADCs), are increasing the number and range of approved biopharmaceuticals as well as necessitating investments in innovative production technologies.

This relatively young biopharmaceuticals segment is driving sector growth with its high innovative power, as reflected in the strong research and development pipelines. Of the estimated 10,000+ medications in R&D pipelines, more than 40% are based on biological manufacturing processes. These include more than 1,750 biosimilars and biobetters, which are generic versions of biologic agents with comparable or better efficacy or fewer side effects than the original compounds.

Biosimilars are contributing increasingly to the growth of the biotechnology market. Current estimates indicate that by 2022, the market could grow by an annual average of 30% and reach a volume of around €18 billion. The significantly lower prices of biosimilars, particularly in emerging and developing countries, are creating new, affordable therapy options and should result in increased demand and rising production volume. The development of national production capacities to meet the growing demand for medications is receiving political support in these countries and is fueling the establishment of local biotech companies. The biosimilars market in industrialized countries is also likely to expand considerably in the coming years due to the expiration of patents for high-volume biopharmaceuticals and an increasing number of approved biosimilars. This is particularly the case in Europe, where generic medications have been widely used for many years and have been able to gain significant market share in some areas. In the United States, regulatory, patent and marketing challenges that have slowed development up to now could begin to ease.

Strong Growth in the Biopharma Market

- Growing & aging population
- Increasing access to healthcare
- Strong R&D pipelines
- Emerging biosimilars market



1) Evaluate Pharma®: World Preview 2019, Outlook to 2024; June 2018; CAGR 2019 to 2024

The biopharmaceutical industry must meet a growing demand for medications while producing an increasing number of approved medications and new types of therapy. For these reasons, industry observers expect that worldwide bioreactor capacities will continue to expand in the years to come. At the same time, the industry faces rising cost pressure. This increases the significance of innovations for boosting flexibility and efficiency in biopharmaceutical research and production. In the future, the biopharmaceutical market will shift away from a low number of especially high-volume medications that account for a majority of total production volume towards an expanding range of products for smaller groups of patients. Technological progress leads to ongoing improvements in the productivity of biopharmaceutical production processes. Therefore, according to the research and consulting institute BioPlan, manufacturers will likely rely increasingly on single-use technologies for the commercial production of many new medications. Particularly in the case of relatively small batches, single-use technologies already ensure more cost-effective production than conventional stainless steel units. To master these challenges, more and more pharmaceutical companies are relying on digitalization and automation as well as innovative software solutions for controlling and optimizing their processes.

Laboratory Market Remains Stable While Macroeconomic Risks Increase

The market for laboratory instruments and consumables is expected to grow by about 3% to 4.5% annually in future years according to several market observers. The greatest demand should continue to come in particular from the pharmaceutical and biopharma industry as a result of continuous research into and approval of new medications, the high momentum of scientific and technological innovations and strong growth in China. For instance, Evaluate Pharma estimates that sector-specific research spending will climb annually by 3.0% during the period of 2018 to 2024.

Budget increases for academic and public-sector research institutions in some countries should also act as a growth stimulant. On the other hand, the trade dispute between the United States and China or an unexpected slowdown in global economic growth could put demand at risk in industrial end markets. Market observers continue to expect Asian countries like China and India to generate the highest growth rates. Stricter regulatory requirements in a range of industries are also stimulating increased demand for instruments used in sample analysis and quality control. Investments in laboratory infrastructure are becoming more attractive, particularly in China as a result of improved protection of intellectual property rights and government-supported efforts to promote innovativeness in several key industries.

Sources: IQVIA Institute: The Global Use of Medicine in 2019 and Outlook to 2023; January 2019; Evaluate Pharma: World Preview 2019, Outlook to 2024, June 2019; BioPlan: 16th Annual Report and Survey of Biopharmaceutical Manufacturing Capacity and Production, April 2019; Frost & Sullivan: 2018 Annual Report: Forecast and Analysis of the Global Market for Laboratory Products, May 2019; BCC Research: Biosimilars: Global Markets, March 2018; Daedal Research: Global Biologics Market: Size, Trends & Forecasts, December 2019; SDi: Global Assessment Report 2018, February 2018

Outlook for 2020

Sartorius expects substantial sales growth for its divisions and the Group. Management also forecasts significant additional sales expansion due to consolidation of the life science portfolio to be acquired from Danaher. With respect to underlying EBITDA, Sartorius anticipates a slightly positive effect for the Lab Products & Services Division, a slightly negative impact for the Bioprocess Solutions Division, and a neutral effect for the Group. The amounts of these effects for fiscal 2020 will depend on the specific point in time at which this portfolio is initially consolidated.

Without consolidation of the Danaher life science portfolio, management expects the following developments:

- In this scenario, Sartorius projects that it will increase its Group sales in 2020 on the basis of constant currencies by about 10% to 13%, with Biological Industries acquired at the end of 2019 expected to contribute approximately 1.5 percentage points to this growth.

- Regarding profitability, management forecasts that the Group's underlying EBITDA margin will increase year over year from 27.1% to about 27.5%.

- The ratio of capital expenditures (CAPEX) to sales revenue is expected to be around 10% (previous year: 12.3%).

- In view of the Group's financial situation, management projects a further slight decrease in the ratio of net debt to underlying EBITDA as of the end of fiscal 2020. This projection does not include any potential acquisitions.

- For the Bioprocess Solutions Division, management forecasts sales growth of about 11% to 14%, with consolidation of Biological Industries expected to account for around one percentage point. With respect to the division's underlying EBITDA margin, management assumes that it will increase to around 30.0% (previous year: 29.6%).

- The Lab Products & Services Division will likely increase its sales revenue by about 7% to 10%, with Biological Industries projected to contribute around 2.5 percentage points. For this division, the underlying EBITDA margin is forecasted at about 20.0% (previous year: 19.6%).

The guidance assumes an overall stable economic environment and intact supply chains.

Report on Material Events

No material events occurred after the close of fiscal 2019.

Description of the Key Features of the Internal Control Management System

In relation to the Group Accounting Process (Section 289, Subsection 4, and Section 315, Subsection 4, of the German Commercial Code [HGB])

Definitions and Elements of the Internal Control Management System at the Sartorius Group

The internal control system (ICS) of Sartorius AG and the Sartorius Group encompasses all of the principles, procedures and measures adopted to ensure the organizational implementation of management decisions. The main priority of the system as it relates to Sartorius AG's and the Group's accounting process is to make sure that accounting is effective, cost-efficient and formally correct and that it complies with the pertinent legal provisions.

The internal control system of Sartorius AG and of the Sartorius Group consists of a combination of process-integrated and non-process-integrated monitoring measures. The process-integrated safeguarding measures are subdivided, in turn, into organizational measures and other control measures. The Supervisory Board, specifically in this case the Audit Committee of Sartorius AG, and the Legal Affairs & Compliance unit with its Group Auditing department are involved in the Sartorius Group's internal control system through their non-process-integrated audit activities. The Audit Committee regularly reviews quarterly reports in addition to the annual financial statements of the parent corporation and the consolidated annual financial statements.

Moreover, to ensure systematic, early identification of risks across the entire Group, a "monitoring system for early group-wide detection of risks with the potential to jeopardize the company's continued existence" as defined in Section 91, Subsection 2, of the German Stock Corporation Law (AktG) is in place at the Sartorius Group. The efficacy of the early risk detection system, which the Sartorius Group adapts promptly in response to any relevant changes in circumstances, is assessed by the independent auditors of Sartorius AG in accordance with Section 317, Subsection 4, of the German Commercial Code (HGB). An integral component of this system is also operational risk management, which involves activities such as the transfer of risk to insurance companies through coverage for damage and liability risks, and the arrangement of suitable hedges to limit currency and interest rate risks.

Organizational Measures

Accounting processes are strictly organized according to the principle of segregation of functions and comply with the "four-eyes" principle – i.e. review by two individuals, also referred to as the dual-review principle. Duties and responsibilities are clearly assigned to different specialized departments, companies and regional units. The separation of administrative, executive, settlement and approval functions reduces the possibility of fraud. It also continues to play a significant role in ensuring that any possible errors are discovered early and any potential misconduct is prevented.

The IT applications used in the company's accounting processes have access restrictions, which allow only authorized persons to have controlled access to the accounting system and data. Each access right is assigned specifically according to the tasks to be performed and is subject to annual review. Furthermore, the dual-review principle is also applied in IT process design and the assignment of access rights.

In addition, defined written local and global operating procedures exist, particularly the Group accounting guidelines, which are regularly updated and communicated throughout the Group. The scope of regulation at Group level also extends to the central definition of measurement rules and parameters, among other factors. Additional data for the presentation of external information in the notes to the financial statements and in the Group management report is also prepared and aggregated at Group level.

Continuous coordination of internal accounting during the year for planning and control with external accounting contributes significantly to the quality of Group financial reporting. Reporting itself is done through a standardized management reporting system implemented throughout the Group. This system visualizes all consolidation processes. Internal controls, on the one hand, and the Group auditors of Sartorius AG, on the other hand, ensure that Group financial reports are accurately generated from the consolidated Group companies' financial statements.

The employees involved in the accounting process meet qualitative standards and receive regular training. The Group Financial Reporting department assists the local units in resolving complex accounting issues, such as measuring fair value, to ensure consistent and accurate reporting in the consolidated financial statements. Complex evaluations, such as actuarial reports and company valuations or purchase price allocations, are assigned to specialized service providers who involve the respectively qualified in-house staff.

Control Measures

Comprehensive control activities are performed by managers and staff to ensure effective and reliable accounting. As a result, this ensures compliance with legal requirements and internal guidelines as well as properly conducted business transactions. Examples of such control activities include the analysis of situations and developments with reference to specific key indicators. Moreover, every month individual reporting units comment on and explain special characteristics or variances using Group-wide standardized analytical tools as the basis. Further specific control activities performed to ensure effective and reliable Group accounting encompass the analysis and, where applicable, correction of the individual financial statements submitted by the Sartorius Group companies. A large number of control mechanisms already incorporated into the consolidated reporting system enable erroneous information to be identified and corrected at Group level. Impairment tests are conducted centrally for the specific cash-generating units, known as CGUs, from the Group's perspective to ensure that consistent, standardized evaluation criteria are applied.

The Legal Affairs & Compliance unit annually draws up a risk-based audit plan and reviews in spot checks whether basic legal requirements and internal group guidelines are complied with for the entire control and risk management system of the Group. This monitoring function covers, in particular, audits of the functional efficiency and effectiveness of defined control measures. The results of these audits are reported directly to the audited departments and units, making it possible to efficiently remedy any identified deficiencies and to further enhance the company's internal control system (ICS). The Executive Board and the Supervisory Board regularly receive reports on audit activities.

A manual on the company's internal control system that focuses on the business processes of our company further contributes toward strengthening our ICS. This manual combines all ICS-relevant requirements that we consider of material importance into one standardized document and will be supplemented by further appropriate rules as necessary.

Qualifying Statements

The internal control and risk management system enables the complete recording, processing and evaluation of company-related matters on the basis of the organizational, control and monitoring structures defined in the Sartorius Group, as well as their accurate presentation in Group accounting.

In particular, decisions based on personal judgment, erroneous controls, criminal acts and other circumstances cannot be ruled out. They impair the efficacy and reliability of the internal control and risk management system, so that even the application throughout the Group of the systems adopted cannot provide absolute assurance as to the accurate, complete and timely recording of matters in Group accounting.

The statements made relate solely to the subsidiaries included in the consolidated financial statements of Sartorius AG, whose financial and business policies Sartorius AG can directly or indirectly determine in order to obtain benefits from their activities.

Explanatory Report of the Executive Board

On the Disclosures Pursuant to Section 289a, Subsection 1, and Section 315a, Subsection 1, of the German Commercial Code (HGB)

Composition of the Issued Capital | Limitations to Voting Rights

Sartorius AG's capital stock totals €74,880,000. It comprises 74,880,000 no par value individual bearer shares, 37,440,000 of which are ordinary shares and 37,440,000 of which are non-voting preference shares. Each share certificate represents a calculated proportion of €1 of the issued capital.

The rights and obligations associated with these shares are governed by the provisions of the German Stock Corporation Law (Aktiengesetz, abbreviated "AktG"). According to the company's Articles of Association, preference shares are entitled to a dividend payment that is one euro cent higher per share than that for ordinary shares. However, this entitlement to receive dividends shall be at least two euro cents per preference share. Apart from the cases provided for in Sections 140 and 141 of AktG, preference shares are non-voting. Beyond this, preference shares grant all other rights to which every shareholder is entitled.

The company holds 3,227,776 ordinary shares and 3,263,932 preference shares; these do not entitle the company to any membership rights.

Direct or Indirect Equity Ownership Exceeding 10% of Voting Rights

The community of heirs consisting of Ms. U. Baro, resident of Munich, Germany; Ms. C. Franken, resident of Bovenden, Germany; Mr. A. Franken, resident of Riemerling, Germany; Mr. K.-C. Franken, resident of Göttingen, Germany; and Ms. K. Sartorius-Herbst, resident of Northeim, Germany, holds a voting percentage of approximately 50.1% in Sartorius AG (18,754,160 votes; source: memo on voting rights dated March 20, 2018). The decedent Horst Sartorius ordered that his will be administered by an executor. Dr. Lothar Kappich, resident of Hamburg, Germany, is the appointed executor of Horst Sartorius' estate and exercises the specified voting rights at his own discretion as defined by Section 34, Subsection 1, sentence 1, item no. 6, of the German Securities Trading Act (Wertpapierhandelsgesetz, abbreviated "WpHG").

According to a memo on voting rights dated April 1, 2011, Bio-Rad Laboratories Inc., 1000 Alfred Nobel Drive, Hercules, California 94547, USA, to which the voting rights of Bio-Rad Laboratories GmbH, Heidemannstr. 164, 80939 Munich, Germany, are ascribed according to Section 34, Subsection 1, sentence 1, item no. 1, of WpHG, holds 30.01% of the voting rights in Sartorius AG (11,237,196 votes, taking into account the share capital increase from retained earnings that went into effect as of June 1, 2016).

Appointment and Dismissal of Executive Board Members | Amendment to the Articles of Association

Executive Board members of Sartorius AG are nominated and|or appointed as well as removed from office in accordance with Sections 84 et seq. of the German Stock Corporation Law (AktG) and Sections 31 and 33 of the German Codetermination Law (Mitbestimmungsgesetz, abbreviated "MitBestG"). Amendments to Sartorius AG's Articles of Association are regulated by Sections 133 and 179 of the German Stock Corporation Law (AktG).

Powers of the Executive Board to Issue Shares

Subject to approval by the Supervisory Board, the Executive Board is authorized to sell treasury shares held by the corporation, including selling them through channels other than the stock exchange or by tendering an offer to all shareholders in proportion to their participation in the company, provided that these shares are transferred to third parties as contribution in kind, particularly in the (indirect) acquisition of companies, in return. Under these circumstances, the preemptive rights of the shareholders are excluded.

Material Agreements with Clauses Regulating the Event of a Change of Control

Sartorius AG has material loan agreements containing customary market clauses regulating the possible event of a change of control and giving the participating lenders the option of requesting complete repayment of the respective loan:

These loan agreements are primarily note loans ("Schuldscheindarlehen") outstanding, a continued syndicated loan agreement, and a financing agreement concluded for completion of the acquisition of selected parts of the Danaher portfolio. In addition, material loan agreements concern a number of bilateral loans for an initial aggregate volume of €327 million The repayment sum outstanding for these material loan agreements stands at approximately €822 million as of December 31, 2019.

Report and Declaration on Corporate Governance

Corporate Governance Report

Corporate government aligned with the interests of stakeholders, lawful and responsible conduct, and constructive cooperation between the managerial bodies and within the company in a spirit of mutual trust constitute the essential cornerstones of Sartorius' corporate culture.

The Executive Board and the Supervisory Board report in the following declaration on the key aspects of corporate management and governance pursuant to § 289f of the German Commercial Code ("HGB") and to Article 3.10 of the German Corporate Governance Code.

Declaration of Compliance with Corporate Governance

Declaration of the Executive Board and of the Supervisory Board of Sartorius AG Concerning the Recommendations of the Government Commission on the German Corporate Governance Code Pursuant to § 161 of the German Stock Corporation Law ("Aktiengesetz"):

The Executive Board and the Supervisory Board declare that full compliance will be achieved with the recommendations made by the Government Commission on the German Corporate Governance Code and published by the German Federal Ministry of Justice in the official section of the German Federal Gazette ("Bundesanzeiger"), as amended on February 7, 2017.

Since last year's Declaration of Compliance was issued, Sartorius AG has complied with the recommendations in the valid version of the Government Commission on the German Corporate Governance Code to the full extent.

Göttingen, December 5, 2019

For the Supervisory Board For the Executive Board

Dr. Lothar Kappich Dr. Joachim Kreuzburg

Further Remarks Concerning Corporate Governance

Sartorius AG is a joint stock corporation founded under German law and headquartered in Göttingen, Germany. With the Annual General Shareholders' Meeting, Supervisory Board and Executive Board, it has three corporate managerial bodies whose tasks and powers are essentially derived from the German Stock Corporation Law ("Aktiengesetz") and the company's Articles of Association.

As owners of the company, the shareholders exercise their rights at its Annual General Shareholders' Meeting, where they decide, in particular, on the appropriation of profits, measures concerning share capital, amendments to the Articles of Association, discharge of the Supervisory Board and the Executive Board and on the appointment of statutory auditors, as well as elect shareholder representatives to the Supervisory Board. The Annual General Shareholders' meeting is held at least once a year within the first eight months of the respective fiscal year.

In managing the company, the Supervisory Board and the Executive Board perform their tasks in a two-tier board structure, each with separate duties and powers.

The Supervisory Board appoints members to the Executive Board, determines their remuneration and monitors and advises the Executive Board in its management of the company. The Supervisory Board is not authorized to take any operational management measures for the business.

The Executive Board is responsible for independently managing the company. In particular, it defines corporate strategy, coordinates and agrees on this approach with the Supervisory Board and implements such corporate strategy. In line with established reporting obligations, the Executive Board regularly informs the Supervisory Board promptly and comprehensively, and requests the latter's approval for certain key business transactions.

Composition and Operating Mode of the Supervisory Board and Its Committees

The Supervisory Board has an equal number of shareholder representatives and employee repre–sentatives: six shareowner representatives elected by the Annual General Shareholders' Meeting and six employee representatives elected according to the German Codetermination Law ("Mitbestimmungsgesetz").

Details on the members of the Supervisory Board and its committees are provided on pages 170 to 173.

The Supervisory Board Chairman coordinates the work within this board, as well as convokes and conducts Supervisory Board meetings. Furthermore, he is the first individual for the Executive Board to contact and externally represents the matters of the Supervisory Board.

The Supervisory Board holds at least two meetings every six months; as a rule, four or more conferences take place, as required. This board has established four committees: the Executive Task Committee, the Audit Committee, the Conciliation Committee and the Nomination Committee. The Executive Task Committee, Audit Committee and Conciliation Committee each have four members and have an equal number of shareholder representatives and employee representatives. The Executive Task Committee and Audit Committee hold regular meetings; the Conciliation Committee and the Nomination Committee meet only as necessary.

The Executive Task Committee carries out preparatory work for resolutions and issues to be addressed in the meetings of the Supervisory Board. It also oversees the preparations for appointments, including the remuneration and employment contract conditions of members of the Executive Board. The Audit Committee supports the Supervisory Board in performing its supervisory function. The chairperson of the Audit Committee is an independent member of the Supervisory Board and has detailed knowledge and extensive experience in the application of accounting standards and internal control systems from his or her own professional practice. The Conciliation Committee meets if the majority required in connection with the appointment of members to the bodies authorized to represent the company for legal purposes is not reached. The Nomination Committee comprises representatives of the shareholders only. Its function is to propose suitable candidates to the Supervisory Board for the latter's election proposals submitted to the Annual Shareholders' Meeting. More information on the individual meetings held in the reporting year by the Supervisory Board and its committees is given in the Report of the Supervisory Board on pages 12 to 15.

The Supervisory Board regularly reviews the efficiency of its work based on a questionnaire sent in advance and by a discussion of the results of this questionnaire in a plenary session.

Appointment Objectives for the Supervisory Board; Diversity Policy and Competence Profile

Members of the Supervisory Board of Sartorius AG are to be appointed such that they, on the whole, have the knowledge, skills and experience that are necessary to perform the board's duties properly.

For this purpose and based on the recommendations of the German Corporate Governance Code, the Supervisory Board decided on the following appointment objectives:

- Independent members shall account for no less than 25% of the Supervisory Board.

- The upper age limit of 70 at the time of election should be taken into consideration, but may be waived in exceptional cases, provided there are no reservations about the suitability of the persons proposed and their election is expedient to the interests of the company in spite of the age limit being exceeded.

- As a matter of principle, no member may serve on the Supervisory Board for longer than five elected terms. This limit can be exceeded in individual cases if the Supervisory Board does not have any reservations about the suitability of an individual for serving longer and election of this person is apparently in the interest of the company.

- Care must be taken to ensure that each Supervisory Board member has sufficient time available to perform his or her mandate.

In addition, the Supervisory Board also defined a competence profile for itself. This also covers aspects such as diversity, for example, with regard to professional background and international experience. In view of achieving an appropriate gender balance, the legal quotas of at least 30% women and at least 30% men apply to the Sartorius Supervisory Board. The shareholder representatives and the employee representatives decided to fulfill these legal targets separately.

- In its election proposals for membership, the Supervisory Board is required to consider whether candidates have international experience or an international background within the scope of its current members.

- The Supervisory Board must have members with expertise in one or several of the international markets relevant for Sartorius.

- Members of the Supervisory Board need to bring in knowledge of technologies and products relevant to the Group, as well as of digitalization, and experience in research and development, particularly in the biopharmaceutical industry.

- The Supervisory Board must have members who have expertise in setting up and developing innovative business models, as well as knowledge of corporate strategies.

- Members of the Supervisory Board need to have in-depth knowledge of financial business processes and competences in financial controlling and risk management; at least one independent member of the Supervisory Board must have expert knowledge of accounting or auditing (§ 100, Subsection 5, of AktG).

- Members of the Supervisory Board must have expertise in law, corporate governance and compliance.

- The Supervisory Board needs to have in-depth knowledge and a thorough background in issues concerning human resources.

According to the Supervisory's self-assessment, the members on its board meet the diversity and competency requirements. The appointment objectives previously mentioned regarding independence and the age and membership limits are also met:

Concerning the criterion of independence, this is met by all members of the Supervisory Board with one exception: the executor of Horst Sartorius' estate. This individual is Dr. Lothar Kappich, who is concurrently Chairman of the Supervisory Board. In the opinion of the Supervisory Board, an appointment as an employee representative to this board or an existing employment contract with the company alone does not preclude the independence of this member because an employee is protected by the laws in force in performing his or her duties on the Supervisory Board.

None of the current Supervisory Board members was over the age of 70 at the time of his or her election and none has served for more than five elected terms.

In view of achieving a more equal balance of both genders, the Supervisory Board meets the quota of 30% set for the underrepresented gender. Seven men total (around 58%) are members of this board, of whom four are shareholder representatives and three employee representatives. In addition, five women (around 42%) are members of this board, among them two representatives of the share owners and three representatives of the employees. As a result, the gender quota requirements are met on both sides of Supervisory Board representation and on the full Supervisory Board itself.

To facilitate comparison of the appointment objectives, brief resumés of the Supervisory Board members are available on the Sartorius website.

Composition and Operating Mode of the Executive Board

The Executive Board of Sartorius AG manages the company under its own responsibility, with the goal of increasing the company's sustainable value. It develops the company's strategy, coordinates it with the Supervisory Board and ensures implementation of this strategy. Beyond that, the rules of procedure for the Executive Board define the legal transactions requiring approval by the Supervisory Board in order for such transactions to be effected. The Executive Board is responsible for compliance with all provisions of the law and the company's internal policies, as well as for appropriate risk management.

Decision-making by the Executive Board is done at its regular meetings, which are convoked and conducted by the Chairman. If required, further specialists and mangers are invited to these meetings to provide advice.

The Executive Board members are jointly responsible as a collegiate body for matters of special significance. As for the board's remaining responsibilities, each member independently manages the area assigned to him or her according to the plan for allocation of areas of responsibilities, and is required to notify the Chairman of all material transactions and events.

Composition of the Executive Board, Diversity and Competency Requirements

In the opinion of the Supervisory Board, the basic qualification criteria for appointments to positions on the Executive Board are professional qualifications for heading each particular area of responsibility, a proven track record in the individual's career path and convincing managerial skills. In addition, the Supervisory Board also considers the aspect of diversity in its appointment decisions. Therefore, the Supervisory Board strives to appoint people with complementary profiles, professional and personal life experiences and in different age brackets to the Executive Board. Moreover, the latter board is required to have broad international experience.

Pursuant to the German Act on Equal Participation of Women and Men in Executive Positions in the Private and the Public Sectors, the Supervisory Board defined a target quota for the Executive Board that is explained in the following section.

The Sartorius Executive Board is a committee consisting of four members. It is therefore relatively small so establishment of a rigid gender quota can be problematic. At present, the Executive Board of Sartorius AG has four male members. For the current deadline by June 30, 2022, the Supervisory Board decided on the target of appointing at least one woman to the Executive Board.

Also regarding the appointment of women to the Executive Board of Sartorius AG, the Supervisory Board supports the activities of the Executive Board to further increase the percentage of female executives at the first two management levels in the company. The Executive Task Committee and the full Supervisory Board regularly receive reports on the development of the proportions of women in senior-level management positions.

First and Second Management Levels Below the Executive Board

Over the past years, the percentage of women at the first two management levels below the Executive Board has considerably increased on the whole and is already at a comparably high level.

For the next deadline by June 30, 2022, the Executive Board resolved in 2017 to increase the proportion of women at both levels of management below this board to around 30%. Currently, the proportion of women at the first management level is around 38%; that at the second level, around 27%. As a result, these percentages are above and within the attainable range of the target quotas set, respectively. As a general observation, individual personnel changes may lead to considerable variations in the quota of women because of the relatively low number of managers at the first level. Moreover, in the past, consolidation of the companies acquired often diluted the percentages of women to a slight degree. This cannot be ruled out in the future either.

Further Corporate Governance Practices

Risk Management

Conscientious management of commercial risks is a key principle of good corporate governance. Sartorius AG and the Group have at their disposal enterprise-wide and company-specific reporting and control systems designed to facilitate the recording, assessment and management of commercial risks. These systems are developed and adapted continuously as conditions evolve. The Executive Board informs the Supervisory Board regularly of existing risks and their development. The Audit Committee is concerned, in particular, with monitoring of the following: the accounting process including reporting; the efficacy of the internal control system; risk management and the internal auditing system; compliance; and the independent statutory audit. Details on risk management are presented in the Opportunity and Risk Report.

Transparency

Sartorius AG places great importance on disclosing consistent and complete information promptly. Information about the economic position of the Group and new developments is consequently released regularly, without delay, as it becomes known in order to inform participants in the capital market and interested members of the public at large. The annual report, first-half financial report and quarterly releases are published within the timeframes specified for this purpose. Current developments and material events are publicized as press releases and, where appropriate, ad hoc announcements. This information is usually made available in German and English simultaneously and published via suitable media and on the internet.

The chief recurring events and publications, such as the Annual General Shareholders' Meeting, the annual report and the interim reports, are listed on a financial calendar that may be viewed at any time on the Group website.

Share Trading Activities of Supervisory and Executive Board Members

We did not receive any reports, under the applicable mandatory disclosure requirements, of any purchases or sales of shares in Sartorius AG or related financial instruments made by the members of the Executive Board and the Supervisory Board or other persons with management responsibilities or their related parties.

Supervisory Board Chairman Dr. Lothar Kappich in his capacity as executor of the estate of Horst Sartorius holds approximately 50.1% of the ordinary shares issued by the company, but otherwise no member of the Executive Board or Supervisory Board has any holding of shares or financial instruments subject to the mandatory reporting requirements that directly or indirectly exceeds 1% of the shares issued by the company.

The CEO and Chairman of the Executive Board Dr. Joachim Kreuzburg holds 100,000 ordinary shares and 100,000 preference shares in the company. These were transferred to him based on a corresponding agreement arising from his employment contract of December 18, 2015, and are subject to a minimum holding period of four years. For further information on this transfer, please see the Remuneration Report on pp. 79 et seq.

Accounting and Independent Statutory Audit

The consolidated financial statements and the Group Management Report, as well as the consolidated interim financial statements and reports, are prepared in accordance with the International Financial Reporting Standards (IFRS) as they are to be applied within the EU, and according to the commercial law regulations to be applied under Section 315a, Subsection 1, of the German Commercial Code, HGB. The annual financial statements of Sartorius AG are prepared in accordance with German commercial law, HGB. The consolidated financial statements and the annual financial statements are prepared by the Executive Board, audited by the independent auditors elected by the Annual General Shareholders' Meeting and approved by the Supervisory Board.

It has been agreed with the independent auditors that they will notify the Supervisory Board directly of any potential disqualification or bias issues and any material findings and incidents identified during the audit. This also encompasses the corporate governance reporting duties pursuant to § 161 of the German Stock Corporation Law (Aktiengesetz).

Basic Principles of Our Compliance Management System | Code of Conduct

With its compliance management system that is valid worldwide, Sartorius ensures that the members of its individual boards, executives and employees comply with all legal regulations and codes, and perform their activities in accordance with the company's internal rules and guidelines. Targeted training and awareness-raising prevent any misconduct, as well as economic damage and loss of image.

Sartorius makes every effort to ensure optimal risk management by using a combination of approaches: a preventive compliance approach designed to proactively stop any potential breaches before they occur and a repressive compliance approach intended to continuously monitor compliance with the company's rules. These processes are closely intermeshed, creating a standardized compliance management system that aims to offer the best possible protection against potential violations of rules and regulations. Sartorius has developed a Code of Conduct as a preventive component of its compliance management system and has committed to an Anti-Corruption Code. An internal system is available for reporting any suspicious circumstances involving potential compliance violations.

Further information is given in the Sustainability Report on pp. 91 et seq. and on the company's internet website at www.sartorius.com.

The Supervisory Board | The Executive Board

Remuneration Report

1. Main Features of the Remuneration Plan for the Executive Board

General Information

The full Supervisory Board is responsible for establishing the remuneration paid to members of the Executive Board of Sartorius AG. The total value of the remuneration of an Executive Board member reflects the scope of the responsibilities of the Executive Board member concerned, the Executive Board member's personal performance, the company's economic situation and sustainable progress. In addition, the extent to which this amount of remuneration is typical is considered, taking into account peer companies and the remuneration structure in place in other areas of the company and in similar companies.

Remuneration is comprised of both fixed non-performance-based components and of variable performance-based components, and is reviewed regularly to ensure that it remains appropriate. The variable performance-based remuneration components consist of those to be paid annually and of multi-year components intended to have a long-term incentive. Fixed non-performance-based remuneration is paid in the year in which it is granted. For 100% target achievement, the variable annual and long-term performance-based components generally represent at least half of total remuneration, which excludes pension commitments under a defined benefit plan as well as fringe benefits.

Variable Performance-Based Remuneration

The portion of the variable performance-based remuneration is comprised of components to be paid annually (with the subordinate targets of sales revenue | order intake, underlying EBITDA and the ratio of net debt to underlying EBITDA) as well as components providing a long-term incentive (with the subordinate targets of Group annual net profit and the phantom stock plan). The components to be annually paid and those providing a long-term incentive each account for half of the total target achievement possible. A cap is provided for all performance-based components to be paid out.

For the Executive Board Chairman and the Chief Financial Officer on this board, the subordinate targets are weighted as follows within the components to be paid annually:

- Group sales revenue | Group order intake, 30%;

- Group underlying EBITDA, 40%; and

- Group ratio of net debt to underlying EBITDA, 30%.

For Executive Board members with division responsibility, the subordinate targets of the components to be paid annually are weighted as follows:

- Group sales revenue | Group order intake, 9%;

- Group underlying EBITDA, 12%;

- Group ratio of net debt to underlying EBITDA, 9%;

- Sales revenue | Order take of the respective division, 30%;

- Underlying EBITDA of the respective division, 40%;

Within the components with a long-term incentive, the subordinate targets comprised of Group net profit and of the phantom stock plan are each weighted at 50% for all Executive Board members.

Multi-year Components as Long-term Incentives

Weighted components determined by multi-year assessment depend on the development of consolidated net profit in a multi-year period, on the one hand, and on the development of Sartorius AG's share prices, on the other hand. Multi-year components providing a long-term incentive are based on a three-year average of consolidated net profit and on a four-year average of share prices, respectively. These components are paid out after two fiscal years for net profit and at the earliest after three fiscal years for share prices.

a) Consolidated Net Profit

For this subordinate target, the basis for assessment is the consolidated net profit after non-controlling interest excluding amortization (impairment of the value of intangible assets due to business combinations pursuant to IFRS 3). Target achievement for assessing annual variable remuneration in the particular year under review is based on the average taken over a period of three fiscal years, beginning with the particular year under review. To smooth the amounts to be paid out, a partial payment amounting to 50% of the target achievement for the first fiscal year of each respective average period will be effected. Any overpayments as a result of these partial payments will be offset against other remuneration components once the total target achievement has been determined after the third fiscal year of an average period. A cap for this component is provided as well.

b) Phantom Stock Plan

Through the issue of shadow shares, called phantom stock, Executive Board members are treated as if they were owners of a certain number of shares in Sartorius AG, without, however, being entitled to receive dividends. The development of the value of this phantom stock is linked with the development of the Sartorius share; both increases and decreases in the share price are taken into account. Later, the value of this phantom stock is assessed based on the share price at the time, and its equivalent is paid out, provided that the associated conditions are met. Phantom stock cannot be traded and does not entail any share subscription rights.

According to the Sartorius phantom stock plan, each Executive Board member is credited at the beginning of every year with phantom stock units valued at an agreed monetary sum. The value of this phantom stock can be paid out only as an entire annual tranche. Payment can be requested, at the earliest, after a period of four years and no later than after eight years.

An Executive Board member is entitled to receive payment for phantom stock units only if the share price at the time of such payment request has appreciated at least 7.5% per year relative to the time the phantom stock was assigned or if the share price outperformed the TecDAX as a comparative index. The phantom stock plan rules out subsequent changes to the parameters used for comparative stock valuation.

The amount to be paid is capped at a maximum of 2.5 times the share price at the time the phantom stock was assigned, based in each case on the actual annual tranche concerned.

Assignment of this phantom stock and later payment of its monetary equivalent depend on the mean value calculated from the average prices of the Sartorius AG preference share, with said prices quoted in the closing auction of Xetra trading on the Frankfurt Stock Exchange over the last 20 days of trading of the previous year or over the last 20 days of trading prior to submission of a payment request. This serves to compensate for any short-term fluctuations in the share prices.

Payment for phantom stock is blocked for the four weeks preceding the scheduled publication date of quarterly and preliminary year-end results and for 20 days of trading on the stock exchange following the actual publication of quarterly and preliminary year-end results. These blackout periods are intended to prevent Executive Board members' profiting from their insider knowledge.

Pension Commitments

According to the company's remuneration policy, Executive Board members of Sartorius AG receive performance-related benefit commitments under a defined benefit plan when reappointed for the first time. In addition to including a basic pension, these commitments provide for the Executive Board member to make his own contribution from his variable earnings and for the company to match this contribution by a bonus amount. An Executive Board member may choose to receive such defined benefits in the form of a retirement pension for old age or as a one-time payment to cover the member's retirement pension for old age and invalidity as well as in the form of survivor's benefits for the surviving spouse and children of the decedent.

Beyond such commitments, an Executive Board member is additionally entitled under a former company pension scheme to receive performance-based retirement benefits based on the salary of a German federal civil servant classified as grade 10 of salary class B for ministry officials according to the Federal Civil Service Remuneration Act (Bundesbesoldungsgesetz). Such benefits are paid in the form of a retirement pension or old age and invalidity as well as in the form of survivors' benefits for the surviving spouse and children of the decedent.

After a member has turned 65, this shall be considered the regular age limit at which this member shall automatically be entitled to receive all such benefits.

Other Remuneration Components

The remuneration system provides that the Supervisory Board of Sartorius AG at its discretion may grant an Executive Board member special compensation based on that member's exceptional performance.

Early Termination of Executive Board Duties

In the event of any early termination of Executive Board duties, the employment contracts of Executive Board members provide for severance to be capped to a maximum of two annual salaries.

Non-Competition Clause

The employment contracts provide for a post-contractual non-competition clause for a duration of two years upon termination of employment with the company. In the event that this non-competition clause is not waived or is nullified, half of the remuneration last paid shall be granted for the duration of the non-competition period.

Fringe Benefits

Beyond the remuneration components stated above, the members of the Executive Board are each entitled to use a company car, reclaim expenses incurred on business travel and to be covered by accident insurance and D&O insurance as fringe benefits. D&O insurance provides for the application of a deductible or excess in the amount required by law.

Share-Based Payment

As a rule, the remuneration policy for Executive Board members does not provide for the transfer of Sartorius AG shares as compensation for members. Exceptions to this policy rule were made in December 2014 and in December 2019 for Dr. Kreuzburg, who was granted entitlement to receive share-based remuneration due to the third and fourth extensions of his appointment as a member of the Executive Board and as its Chairman and CEO; please refer to Section 3 in this chapter.

2. Remuneration of the Executive Board Members in the Reporting Year

In 2019, the total remuneration for active service provided by all Executive Board members totaled €9,405 K relative to €5,703 K in 2018. Of this aggregate total, €2,400 K accounted for non-performance-based components as "fixed remuneration" (2018: €2,022 K) and €7,005 K for variable performance-based components and multi-year components with a long-term incentive (2018: €1,719 K). Furthermore, as part of the pension commitments to the Executive Board members, the pension service cost totaling €308 K in the reporting year was expensed, following on €393 K in the prior year.

Total Remuneration of the Executive Board Pursuant to § 314, Subsec. 1, No. 6, of the German Commercial Code (HGB)

	Executive Board (total)		Dr. Joachim Kreuzburg		Dr. René Fáber		Rainer Lehmann		Gerry Mackay	
€ in K	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Fixed remuneration	2,163	1,277	888	863	425	0	425	414	425	0
Fringe benefits[1]	237	189	15	15	11	0	151	174	60	0
Fixed remuneration	**2,400**	**1,466**	**903**	**878**	**436**	**0**	**576**	**588**	**485**	**0**
Variable performance-based remuneration (1 year)[2]	1,184	673	495	455	242	0	237	218	210	0
Variable multi-year components w/ long-term incentive										
Consolidated net profit (3 years)[3]	281	189	201	189	0	0	80	0	0	0
Phantom stock plan (4-8 years)[4]	540	320	222	216	106	0	106	104	106	0
Shares granted[4]	5,000	0	5,000	0	0	0	0	0	0	0
	7,005	**1,182**	**5,918**	**860**	**348**	**0**	**423**	**322**	**316**	**0**
Remuneration former Excecutive Board Members	**0**	**3,055**								
Total remuneration	**9,405**	**5,703**	**6,821**	**1,738**	**784**	**0**	**999**	**910**	**801**	**0**

[1] The amounts contributed to D&O insurance totaling €172 K (2018: €159 K) are not included as these refer to the executive bodies of all companies of the Sartorius Group and are not allocated to the individual insurees.

[2] Amount corresponds to actual target achievement

[3] Amount corresponds to actual target achievement of the plan in which a fiscal year ended; i.e., for 2019, consolidated net profits for 2017 –2019 (2017: consolidated net profits for 2016–2018)

[4] Fair value at the time granted.
For the stock granted to Dr. Kreuzburg in fiscal 2019, this fair value amount is derived from the number of shares granted (13,785 ordinary shares and 13,785 preference shares) and their stock market prices at the time granted (€171.50 and €191.20, resp.). Due to the structure of stock granted, expected dividends are not to be considered in their valuation.

As part of the remuneration component based on the consolidated net profit of three consecutive fiscal years, each Executive Board member receives a partial compensation payment of 50% of his respective target achievement for the first fiscal year under review. Once the total target achievement has been determined after the third fiscal year, final payment is then effected by deducting the particular partial payment already made. The amounts of the partial payments made in total at the end of the reporting year are shown as follows:

	2019 € in K	2018 € in K
Balance as of Jan. 1 of a fiscal year	354	391
Partial payments deducted	–169	–222
Partial payments effected	190	185
Balance as of Dec. 31 of a fiscal year	**375**	**354**

3. Disclosures on Share-Based Payments

For multi-year components with a long-term incentive, the phantom stock plan must be generally classified as share-based payment just as is the share-based payment agreed to be granted to Dr. Kreuzburg in December 2014 in connection with the third extension of his appointment as a member of the Executive Board and its Chairman and CEO. Since December 18, 2015, Dr. Kreuzburg has held 100,000 ordinary shares and 100,000 preference shares. These shares transferred to him are subject to a holding period that ended on November 10, 2019.

The amount resulting since December 16, 2014, for the shares granted are to be spread as an employee benefits expense over the full vesting period and recognized as such in profit or loss. In fiscal 2019, an amount of €437 K was accordingly recognized as an employee benefits expense resulting from the grant of shares.

The fourth term of Dr. Kreuzburg as a member and Chairman, as well as CEO, of the Executive Board of the company will expire on November 10, 2020. By resolution passed by the Supervisory Board on December 5, 2019, Dr. Kreuzburg was reappointed as a member and Chairman, as well as CEO, of the Executive Board of the company for the term from November 11, 2020, to November 10, 2025. Due to Dr. Kreuzburg's special achievements in developing the Sartorius Group since the start of his tenure on the Executive Board on November 11, 2002, the company wished to continue this successful collaboration with him. The new remuneration agreement therefore provides that 13,785 ordinary shares and 13,785 preference shares shall be transferred as a supplementary compensation component to Dr. Kreuzburg. This share-based payment is subject to the rules of IFRS 2 and is deemed to have been granted upon the resolution approved by the Supervisory Board on December 5, 2019. The following basic structure has been agreed upon: The transfer of the shares granted shall be effected at the time to be determined by Dr. Kreuzburg, but no earlier than on November 11, 2020. The shares granted shall be subject to a holding period that will end on November 10, 2024. Should Dr. Kreuzburg leave the company prior to November 11, 2022, at his own request, his entitlements to be granted said shares by transfer shall lapse in their entirety. If Dr. Kreuzburg leaves the company after November 11, 2022, and before November 11, 2024, at his own request, half of his entitlements to be granted said shares shall lapse. Shares already transferred and for which his entitlements have lapsed shall be returned to the company. This remuneration component is to be included in his total remuneration at fair value as of the grant date of these shares. This respective fair value is to be derived from the number of shares granted and the price of each class of share on the grant date and amounts to €5,000 K. Considering the conditions agreed, the amount resulting as of December 5, 2019, is to be spread as an employee benefits expense over the full vesting period of the plan and recognized as such in profit or loss. In fiscal 2019, an amount of €94 K was accordingly recognized as an employee benefits expense resulting from the grant of shares.

The employee benefits expense recognized in profit or loss in connection with the share-based payments is summarized as follows:

	2019 € in K	2018 € in K
Executive Board (total)		
Share-based payments	**2,817**	**1,544**
Phantom stock units	2,286	1,040
Shares granted	531	504

	2019 € in K	2018 € in K
Dr. Joachim Kreuzburg		
Share-based payments	**1,500**	**995**
Phantom stock units	969	491
Shares granted	531	504

	2019 € in K	2018 € in K
Dr. René Fáber		
Share-based payments	**160**	**0**
Phantom stock units	160	0
Shares granted	0	0

	2019 € in K	2018 € in K
Rainer Lehmann		
Share-based payments	**378**	**162**
Phantom stock units	378	162
Shares granted	0	0

	2019 € in K	2018 € in K
Gerry Mackay		
Share-based payments	**160**	**0**
Phantom stock units	160	0
Shares granted	0	0

	2019 € in K	2018 € in K
Jörg Pfirrmann (until Feb. 28, 2017)		
Share-based payments	**110**	**80**
Phantom stock units	110	80
Shares granted	0	0

	2019 € in K	2018 € in K
Reinhard Vogt (until Dec. 31, 2018)		
Share-based payments	**509**	**307**
Phantom stock units	509	307
Shares granted	0	0

Disclosure of Phantom Stock Units

	Number of phantom stock units	Price on assign-ment in €	Fair value when granted on Jan. 1 of the particular year € in K	Fair value at year-end on Dec. 31, 2018 € in K	Fair value at year-end on Dec. 31, 2019 € in K	Paid in fiscal 2019 € in K	Change in value in fiscal 2019 € in K	Status
Dr. Joachim Kreuzburg								
Tranche for fiscal 2015	7,360	24.70	182	454	0	454	0	Paid out in 2019
Tranche for fiscal 2016	3,484	57.41	200	359	500	0	141	Not exercisable
Tranche for fiscal 2017	2,950	70.51	208	281	520	0	239	Not exercisable
Tranche for fiscal 2018	2,685	80.32	216	239	493	0	254	Not exercisable
Sum of the tranches from the previous years	**16,479**		**806**	**1,333**	**1,513**	**454**	**634**	
Tranche for fiscal 2019	1,950	113.78	222	0	335		113	Not exercisable
Total sum of tranches	**18,429**		**1,028**	**1,333**	**1,848**	**454**	**747**	
Dr. René Fáber								
Tranche for fiscal 2019	934	113.78	106	0	160	0	54	Not exercisable
Total sum of tranches	**934**		**106**	**0**	**160**	**0**	**54**	
Rainer Lehmann								
Tranche for fiscal 2017	1,182	70.51	83	112	208	0	96	Not exercisable
Tranche for fiscal 2018	1,289	80.32	104	115	237	0	122	Not exercisable
Sum of the tranches from the previous years	**2,471**		**187**	**227**	**445**	**0**	**218**	
Tranche for fiscal 2019	934	113.78	106	0	160	0	54	Not exercisable
Total sum of tranches	**3,405**		**293**	**227**	**605**	**0**	**272**	
Gerry Mackay								
Tranche for fiscal 2019	934	113.78	106	0	160	0	54	Not exercisable
Total sum of tranches	**934**		**106**	**0**	**160**	**0**	**54**	
Reinhard Vogt								
Tranche for fiscal 2015	4,456	24.70	110	275	0	275	0	Paid out in 2019
Tranche for fiscal 2016	2,176	57.41	125	224	312	0	88	Not exercisable
Tranche for fiscal 2017	1,844	70.51	130	176	325	0	149	Not exercisable
Tranche for fiscal 2018	1,673	80.32	134	149	308	0	159	Not exercisable
Sum of the tranches from the previous years	**10,149**		**499**	**824**	**945**	**275**	**396**	
Tranche for fiscal 2019	661	113.78	75	0	113	0	38	Not exercisable
Total sum of tranches	**10,810**		**574**	**824**	**1,058**	**275**	**434**	
Jörg Pfirrmann								
Tranche for fiscal 2015	3,140	24.70	78	194	0	194	0	Paid out in 2019
Tranche for fiscal 2016	1,416	57.41	81	146	203	0	57	Not exercisable
Tranche for fiscal 2017	644	70.51	45	61	114	0	53	Not exercisable
Sum of the tranches from the previous years	**5,200**		**204**	**401**	**317**	**194**	**110**	

The number of phantom stock units granted as well as the particular grant prices were adjusted to the proportions following the stock split executed in 2016.

4. Pension Commitments

The retirement plan for Executive Board members provides for an old age and disability pension for Dr. Kreuzburg and for an old age pension for Messrs. Lehmann and Vogt. To cover such pensions, a benefit contribution amounting to one percent of each pensionable income and of each pensionable bonus is paid into a reinsurance policy. The benefit contribution for Dr. Kreuzburg is 10% and for Mr. Lehmann 9%, of their pensionable income, which equals their respective fixed remuneration.

If an Executive Board member elects to convert a portion of his salary to accrued retirement benefits by paying his own contribution into the reinsurance policy, Sartorius matches this by paying a corresponding additional benefit contribution on the reporting date. This amount matched by the company is 5% of the pensionable bonus earned by Dr. Kreuzburg. This pensionable bonus is comprised of their respective one-year variable remuneration and of their respective multi-year remuneration based on the consolidated net profit. The amount of the retirement benefits that Sartorius will pay later to each Executive Board member and his surviving dependents is dependent on the maturity payment of the insurance policy accrued up to the maturity date, including the policyholders' bonuses earned by the insurance company. An Executive Board member does not acquire any rights to the reinsurance policy; Sartorius shall be solely vested with such rights at all times.

Furthermore, an earlier pension agreement granted to Dr. Kreuzburg provides that he will receive a monthly pension of 70% of the basic salary of a German federal civil servant classified as grade 10 of salary class B for ministry officials according to the Federal Civil Service Remuneration Act (Bundesbesoldungsgesetz) in the respective version applicable. With each full year of service, 5% of his full pension is vested until after his full pension will have been reached after 20 years. Arrangements for pensions of surviving dependents basically provide for a widow's pension of 60% and an orphan's pension for each child amounting to 20% of his pension.

Furthermore, in continuity with his pension scheme in place, Mr. Mackay was granted 9.5% of his total remuneration in order to pay this amount into the personal pension plan of his choice.

The projected pension payments, the present value of pension obligations and service cost are shown in the following table:

	Projected pension payment	Present value of the obligation (IFRS)		Service cost (IFRS)	
€ in K	p.a.	**Dec. 31, 2019**	Dec. 31, 2018	**2019**	2018
Dr. Joachim Kreuzburg	252	4,416	3,385	270	257
Rainer Lehmann	28	98	62	38	37
Reinhard Vogt	38	861	743	0	99
	318	**5,375**	**4,190**	**308**	**393**

5. Disclosures Required by the German Corporate Governance Code (DCGK)

The following table shows the benefits granted for the year 2018, including the fringe benefits and the attainable maximum and minimum remuneration for the variable remuneration components in line with the requirements of the DCGK of lit. 4.2.5 of February 2017:

	Dr. Joachim Kreuzburg				Dr. René Fáber				Rainer Lehmann			
				CEO			Member of the Board, Head of Bioprocess Solutions					CFO
							as of Jan. 1, 2019					
Benefits granted € in K	2019 (min)	2019 (max)	**2019**	**2018**	2019 (min)	2019 (max)	**2019**	**2018**	2019 (min)	2019 (max)	**2019**	**2018**
Fixed remuneration	888	888	888	863	425	425	425	0	425	425	425	414
Fringe benefits	15	15	15	15	11	11	11	0	151	151	151	174
Total non-performance-based remuneration	**903**	**903**	**903**	**878**	**436**	**436**	**436**	**0**	**576**	**576**	**576**	**588**
Variable performance-based remuneration (1 year)	0	533	444	432	0	256	213	0	0	256	213	207
Variable multi-year components w/ long-term incentive												
Consolidated net profit (2019 - 2021)	0	266	222		0	127	106		0	127	106	
Consolidated net profit (2018 - 2020)				216				0				104
Phantom stock plan 2019 (holding period 2019 - 2022)	0	555	222		0	265	106		0	265	106	
Phantom stock plan 2018 (holding period 2018 - 2021)				216				0				104
Shares granted	0	5,000	5,000	0	0	0	0	0	0	0	0	0
	903	**7,257**	**6,791**	**1,742**	**436**	**1,084**	**861**	**0**	**576**	**1,224**	**1,001**	**1,003**
Post-employment benefits	270	270	270	257	0	0	0	0	38	38	38	37
Total remuneration	**1,173**	**7,527**	**7,061**	**1,999**	**436**	**1,084**	**861**	**0**	**614**	**1,262**	**1,039**	**1,040**

	Gerry Mackay				Reinhard Vogt			
			Member of the Board, Head of Lab Products & Services					
			as of Jan. 1, 2019				until Dec. 31, 2018	
Benefits granted € in K	2019 (min)	2019 (max)	**2019**	**2018**	2019 (min)	2019 (max)	**2019**	**2018**
Fixed remuneration	425	425	425	0	0	0	0	538
Fringe benefits	60	60	60	0	0	0	0	18
Total non-performance-based remuneration	**485**	**485**	**485**	**0**	**0**	**0**	**0**	**556**
Variable performance-based remuneration (1 year)	0	256	213	0	0	0	0	269
Variable multi-year components w/ long-term incentive								
Consolidated net profit (2019 - 2021)	0	127	106		0	0	0	
Consolidated net profit (2018 - 2020)				0				135
Phantom stock plan 2019 (holding period 2019 - 2022)	0	265	106		0	188	75	
Phantom stock plan 2018 (holding period 2018 - 2021)				0				134
Shares granted	0	0	0	0	0	0	0	0
	485	**1,133**	**910**	**0**	**0**	**188**	**75**	**1,094**
Post-employment benefits	81	81	81	0	0	0	0	99
Total remuneration	**566**	**1,214**	**991**	**0**	**0**	**188**	**75**	**1,193**

The inflows of the various remuneration components in the reporting year are shown in the following table:

	Dr. Joachim Kreuzburg		Dr. René Fáber		Rainer Lehmann		Gerry Mackay		Reinhard Vogt (until Dec. 31, 2018)	
	CEO		Member of the Board, Head of Bioprocess Solutions		CFO		Member of the Board, Head of Lab Products & Services			
			as of Jan. 1, 2019				as of Jan. 1, 2019		until Dec. 31, 2018	
Benefits received € in K	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Fixed remuneration	888	863	425	0	425	414	425	0	506	538
Fringe benefits [1]	15	15	11	0	151	174	60	0	10	18
Total non-performance-based remuneration	**903**	**878**	**436**	**0**	**576**	**588**	**485**	**0**	**516**	**556**
Variable performance-based remuneration (1 year)[1]	495	455	242	0	237	218	210	0	168	284
Variable multi-year components w/ long-term incentive										
Consolidated net profit (2017-2019)[1]	201		0		80		0		125	
Consolidated net profit (2016-2018)[1]		189		0		0		0		118
Phantom stock plan 2015[2]	454		0		0		0		275	
Phantom stock plan 2014[2]		422		0		0		0		256
	2,053	**1,944**	**678**	**0**	**893**	**806**	**695**	**0**	**1,084**	**1,214**
Post-employment benefits	270	257	0	0	38	37	81	0	71	99
Total remuneration	**2,323**	**2,201**	**678**	**0**	**931**	**843**	**776**	**0**	**1,155**	**1,313**
Zufluss Ehemalige Vorstände	**271**	**181**								

[1] Amount equal to actual target achievement
[2] Paid out in the fiscal year

6. Main Features of the Remuneration Plan for the Supervisory Board

The remuneration for Supervisory Board members is defined in the Articles of Association of Sartorius AG and comprises fixed remuneration, meeting attendance fees and reimbursement of out-of-pocket expenses. Members serving as chairperson and vice chairperson of the Supervisory Board receive higher fixed remuneration.

Members and chairpersons of Supervisory Board committees are entitled to receive additional annual fixed amounts and meeting attendance fees and reimbursement of their out-of-pocket expenses. These amounts do not apply in relation to the Nomination Committee or to the committee pursuant to Section 27, Subsection 3, of the German Codetermination Law (MitBestG).

7. Remuneration of the Supervisory Board Members

	2019 € in K	2018 € in K
Remuneration for the Supervisory Board Members		
Total remuneration	**1,024**	**882**
Fixed remuneration	675	600
Compensation for committee work	120	80
Meeting attendance fee	174	151
Total remuneration for the Sartorius Stedim Biotech subgroup	55	51
Remuneration from Sartorius Stedim Biotech S.A., Aubagne	55	882

	2019 € in K	2018 € in K
Dr. Lothar Kappich (Chairman)		
Total remuneration	**246**	**221**
Fixed remuneration	135	120
Compensation for committee work	33	24
Meeting attendance fee	23	26
Remuneration from Sartorius Stedim Biotech S.A., Aubagne	55	51

	2019 € in K	2018 € in K
Manfred Zaffke[1)] (Vice Chairman)		
Total remuneration	**137**	**122**
Fixed remuneration	90	80
Compensation for committee work	24	16
Meeting attendance fee	23	26

	2019 € in K	2018 € in K
Annette Becker[1)]		
Total remuneration	**56**	**46**
Fixed remuneration	45	40
Meeting attendance fee	11	6

	2019 € in K	2018 € in K
Uwe Bretthauer[1)]		
Total remuneration	**92**	**82**
Fixed remuneration	45	40
Compensation for committee work	24	16
Meeting attendance fee	23	26

	2019 € in K	2018 € in K
Michael Dohrmann[1)]		
Total remuneration	**56**	**46**
Fixed remuneration	45	40
Meeting attendance fee	11	6

	2019 € in K	2018 € in K
Dr. Daniela Favoccia		
Total remuneration	**53**	**46**
Fixed remuneration	45	40
Meeting attendance fee	8	6

	2019 € in K	2018 € in K
Petra Kirchhoff		
Total remuneration	**56**	**46**
Fixed remuneration	45	40
Meeting attendance fee	11	6

	2019 € in K	2018 € in K
Karoline Kleinschmidt[1)]		
Total remuneration	**56**	**46**
Fixed remuneration	45	40
Meeting attendance fee	11	6

	2019 € in K	2018 € in K
Dr. Guido Oelkers		
Total remuneration	**53**	**46**
Fixed remuneration	45	40
Meeting attendance fee	8	6

	2019 € in K	2018 € in K
Ilke Hildegard Panzer		
Total remuneration	**56**	**46**
Fixed remuneration	45	40
Meeting attendance fee	11	6

	2019 € in K	2018 € in K
Prof. Dr. Thomas Scheper		
Total remuneration	**45**	**45**
Fixed remuneration	40	40
Meeting attendance fee	5	5

	2019 € in K	2018 € in K
Prof. Dr. Klaus Rüdiger Trützschler		
Total remuneration	**107**	**90**
Fixed remuneration	45	40
Compensation for committee work	39	24
Meeting attendance fee	23	26

[1] The employee representatives declared that they donate their Supervisory Board remuneration to the foundation Hans-Böckler-Stiftung according to the guidelines of the German Trade Union Association.

Beyond their Supervisory Board remuneration, the employee representatives who are employees within the Sartorius Group receive compensation that is not related to their service on the Supervisory Board.

Remuneration of Former Managing Directors

	2019 € in K	2018 € in K
Remuneration of Former Managing Directors		
Remuneration of former managing directors and members of the Executive Board as well as their surviving dependents	499	608
Retirement benefits and pension obligations to former managing directors and members of the Executive Board as well as their surviving dependents	9,537	8,531

Any circumstances beyond the disclosures made above and required to be reported according to Section 289a, Subsection 1, and Section 315a, Subsection 1, of the German Commercial Code "HGB" do not exist or are unknown.

Non-Financial Group Statement

Contents

Responsibility at Sartorius

Sustainability Management

Sartorius is an internationally leading partner of the biopharmaceutical industry. With our technologies, we help researchers and engineers achieve faster, easier progress in the life sciences and bioprocess technology, thus enabling the development of new and better treatments and affordable medical care.

As a 150-year old company, sustainability is firmly embedded at many levels in our structure. To us, it means operating responsibly over the long term – with respect to customers, employees, investors, business partners and society as a whole. Likewise, it entails handling natural resources responsibly.

Sustainable action also means remaining agile and constantly asking ourselves how we can respond to the changing world and make a positive contribution. This concerns the continued development of our core business just as much as living up to our corporate responsibilities.

This is why the Corporate Responsibility Steering Committee meets at least once each year. Under the direction of the CEO, senior-level managers and corporate responsibility officers discuss approaches that Sartorius could use to contribute to greater sustainability.

During the reporting year, the Corporate Responsibility Steering Committee decided on three sets of measures and introduced them. First, a climate strategy is to be developed that will lead to greater transparency with regard to energy consumption and emissions. Clear goals will be established to decarbonize the company. Second, a plastics strategy will strengthen the assumption of responsibility for our products and their packaging. Third, a sustainable supply chain management system will improve the perception of our responsibility in the supply chain.

In addition to optimizing processes and procedures, we believe that innovation and technical developments are the most important drivers of sustainability. Through innovation, we can improve ecological responsibility and contribute to more and better employment through economic growth. Innovation will help us reach our most important goal: enabling better health for more people.

Stakeholder Involvement

Sartorius engages in a very close, ongoing dialog with its stakeholders, using this exchange to regularly discuss aspects of sustainability.

We define stakeholders as those persons, companies, institutions and interest groups that are able to influence the success of the Sartorius Group or are affected by the actions of our company. In particular these are our customers, employees, investors, suppliers and business partners, as well as neighboring companies and local residents.

Sartorius participates in sustainability analyses and ratings to gauge its performance with respect to its environmental, social and governance-related business practices. In the EcoVadis Rating, Sartorius achieved silver level and, with this score, positioned itself among the best 19 percent of the companies assessed. In the MSCI Sustainability Rating, Sartorius achieved an AA rating, which puts it among the top 20 percent of companies assessed within that industry.

About the Non-Financial Group Statement

Sartorius defined non-financial indicators that enable assessment of the impact of its business activities on stakeholders, the environment and society.

This non-financial Group statement was prepared in accordance with the disclosures set out in Section 315b and 315c in conjunction with Sections 289c to 289e of the German Commercial Code (HGB). Pursuant to Section 315b, Subsection 1, Sentence 3 HGB, reference is also made to individual non-financial aspects contained elsewhere in the Group Management Report.

Orientation for the non-financial Group statement is provided by the reporting framework developed by the Global Reporting Initiative (GRI) so that we can ensure transparency and comparability.

The reporting period for the non-financial Group statement is the fiscal year, the reporting cycle is annual. Unless otherwise indicated, the employee-related data covers all Sartorius companies. Unless otherwise specified, the environmental indicators encompass all our production companies, representing 77% of the total headcount.

This non-financial Group statement was audited by KPMG AG in the form of an audit with limited assurance. The submission of this non-financial Group statement releases our subgroup Sartorius Stedim Biotech S.A. from the obligation of creating its own non-financial statement.

Organizational Profile

We refer to the Group Management Report, pages 23 to 40, sections "Structure and Management of the Group", "Business Model, Strategy and Goals", and "Group Business Development". We also refer to the Opportunity and Risk Report on page 57 and the Notes on page 109.

Materiality Analysis

Our considerations with regard to materiality are based on the term used in the European CSR Directive Implementation Act. We also take our stakeholders' considerations into account.

We conducted a comprehensive materiality analysis in 2017 to determine the material topics for the business activities of the Sartorius Group.

For reporting in the year under review, we assessed discussions with customers and investors, taking into account the views of managers in Sales, Product Marketing, Purchasing, Quality Management, Legal & Compliance, Corporate Communications as well as Research and Development and Production. The outcome of this process was discussed with the Corporate Responsibility Steering Committee for validation purposes and confirmed by the Executive Board.

There were no changes to the material topics compared with last year. They were confirmed as follows:

1. Advance innovation and, as a result, contribute to improved medical care and promote employment and good working conditions through growth.

2. Find and retain employees, protect their health and safety and promote their continuous development.

3. Responsible corporate governance and compliance and respect for human rights throughout the supply chain.

4. Protect the environment by reducing emissions and assuming responsibility for our products throughout their life cycles.

Risk Management

Sartorius is responsible towards its employees, the environment, and society. This responsibility must be assumed throughout the supply chain and we must ensure that laws and human rights are respected. This is why Sartorius strives to consider risks that have an impact on the company, but what is more, to examine the risks Sartorius poses for its environment with its business operations as well.

Sartorius believes in the greatest possible integration of risk management processes in the company. The requirements defined in the German CSR Directive Implementation Act (CSR-RUG) are the basis of the ESG risk analysis. ESG risk management also follows the same procedures for identification, analysis, control and reporting as those for central risk management.

In the year under review, we began to integrate non-financial risks into the risk management process. In this first overall analysis, no CSR risks were identified that would have to be reported according to CSR-RUG. The new risk management process will be fully implemented from 2020.

Sustainable Development Goals

Sartorius is a signatory to the United Nations Global Compact and supports the 2030 agenda for a sustainable global economy.

The United Nations developed 17 Sustainable Development Goals (SDGs). The governments of all member states have adopted the SDGs; however, their success is largely dependent on the actions and cooperation of everyone involved – especially on the commitment of the private sector. Sartorius accepts this responsibility.

To determine which SDGs are related to Sartorius' business activities, we also conducted a comprehensive materiality analysis in 2018. Eight SDGs were considered material in the context of Sartorius' business activities. After further analysis of the SDGs in the year under review, we also consider that SDG 8, "Decent Work and Economic Growth", is material for us.

SDG 3 – Good Health and Well-Being

According to the United Nations, health is considered one of the basic human rights and is a major indicator of sustainable development. It is our core business to help improve the health of more people. Our performance in regard to "Innovation and Social Responsibility", a topic that is material to us, is measured on the basis of our contribution to SDG 3.

SDG 4 – Quality Education

Education empowers people to improve their political, social and economic situations. According to the United Nations it is a basic human right and a requirement for sustainable development. We contribute to this by continuously training our employees and through many forms of support for young scientists.

SDG 5 – Gender Equality

Gender equality is not only a UN human right, it is also a lever for economic growth. It gives women better access to education, medical care and financial resources. We support equality in our own business activities and expect our business partners to behave similarly.

SDG 6 – Clean Water and Sanitation

The United Nations recognized access to clean drinking water as a human right in 2008. Within the scope of our product stewardship, we try to keep the water consumption of our products as low as possible throughout their entire life cycle. We take care that our business partners handle water and wastewater responsibly.

SDG 8 – Decent Work and Economic Growth

More than 60% of all employees worldwide do not have an employment contract, less than 45% of all employees work full time in permanent employment relationships. Bad working conditions are often associated with poverty, discrimination and inequality and mainly affect groups of people such as women, people with a disability, young people and migrants. Sartorius is growing quickly and needs to find and retain employees. We can do this by offering high employment standards. We also expect this from our business partners.

SDG 9 – Industry, Innovation and Infrastructure

This SDG aims to expand scientific research in all countries throughout the world. While Sartorius does not have a direct influence on the areas of infrastructure or sustainable industrialization, it does contribute in a wide variety of ways to achieve this innovation goal. By having our production sites serve as centers of competence, we develop scientific expertise at many sites across the globe. Our promotion of young people helps us spread and network the scientific basis worldwide and, as a result, strengthen future innovation activities.

SDG 12 – Responsible Consumption and Production

Single-use plastic products are a key component of Sartorius' product portfolio – for a good reason: the properties of these products are beneficial for the patients at the end of the supply chain, for the environment and for the basic availability and development of innovative medical care. At the same time, single-use products inevitably raise the question of the product's end of life. We are addressing this issue and considering the end of life of our products as well as their overall ecological footprint.

SDG 13 – Climate Action

Human-induced climate change is one of the greatest challenges of our time. It requires action from everyone concerned, especially the private sector. A key issue is to reduce emissions of CO2 and other greenhouse gases. We accept this responsibility and are pushing ahead with climate protection measures within our company and also in our supply chain.

SDG 17 – Partnerships for the Goals

The SDGs can be implemented only when we all work together. Traditionally, partnerships have always played an important role at Sartorius. This is especially true when it comes to our innovation activities.

Innovation & Social Contribution

Why it's important

Our corporate mission is to promote scientific progress in the life sciences, which in turn supports the development of better therapies and affordable medical care.

The research and development activities in the Group are aimed at providing innovative solutions for our customers, supporting sustainable development and, at the same time, strengthening the competitiveness and, consequently, the growth of the company.

The biopharmaceutical market is rapidly developing – it is an area in which scientific breakthroughs leading to new therapies occur at a high rate. At the same time, developing a new pharmaceutical drug continues to take around an entire decade and is extremely cost-intensive. We are committed to enabling our biopharmaceutical customers to obtain usable results faster by automating research steps, making them more efficient.

From day one of its incorporation, Sartorius has worked to maintain an open exchange with the scientific community and, in this way, has driven forward scientific insights and precisely tailored product development. Our goal is to promote scientific thinking and working in society, creating a broader basis for future research and development.

Our approach

Innovation at the Sartorius Group rests on three pillars. First is our own specialized product development combined with strategic corporate research activity. While product development is assigned to the respective board members, Corporate Research works across the different divisions under the control of the CEO. Second is the integration of innovation through acquisitions and, third, cooperation with partners in complementary areas.

Often, new approaches arise from the interdisciplinary collaboration of various experts. Because of this, our approach is to bring experts from science startups and industry together and encourage networking and the sharing of ideas. This is conducive to the generation of new and creative ideas and thus supports scientific progress.

Supporting young scientists is important to us, as this creates the basis for scientific progress in the future.

Our performance

By expanding its research cooperation agreements, Sartorius supports the development and production of biopharmaceuticals worldwide and, hence, improves the availability of innovative medical care in the long term.

In the year under review, Sartorius was involved in many research partnerships. At more than 80 percent, the majority of this research work was carried out in Europe and the USA. However, Sartorius is also constantly expanding its cooperation activities in the Asia-Pacific region.

Forms of collaboration vary from single cooperation agreements to partnerships with institutes and scientific facilities. Both of these make up about 40 percent of the cooperation agreements. In addition, Sartorius is involved in research work in consortia.

Sartorius contributes its latest scientific findings to the cooperations in which it takes part. In particular, the company supports the scientific community with its participation in consortia such as the Advanced Mammalian Biomanufacturing Innovation Center (AMBIC) – a partner of Sartorius during the year under review.

The AMBIC consortium involves five US universities and 25 industrial companies. The aim is to work together on complex challenges in biopharmaceutical production. This joint, pre-competitive approach enables more efficient production of biopharmaceuticals, which ultimately reduces the costs of healthcare for patients.

In 2017, Sartorius created a platform for interdisciplinary exchanges between industry and science in the form of the Research Xchange Forum. The third Research Xchange Forum in April 2019 focused on immunotherapy with CAR-T cells, a new cellular gene therapy to treat cancer.

Together with the American Association for the Advancement of Science (AAAS), Sartorius awards the "Sartorius & Science Prize for Regenerative Medicine &

Cell Therapy". The award, which comes with $40,000 in prize money, is geared toward outstanding scientists concentrating on basic or translational research in these fields. Besides honoring outstanding achievements, the award aims to draw attention to these research topics and their significance for the future.

Employees

Finding and Retaining Talented Young Staff

Why it's important

Sartorius is growing strongly. We continually gain talented and well-qualified employees and build their loyalty to ensure the success of the company in the future as well. In the process, one particular challenge all over the world is to recruit experienced specialists for the company. Currently, 9,016 employees contribute to Sartorius' success. Continuing professional development, assumption of responsibility and opportunities to advance within the company are important for our employees' satisfaction. These competences safeguard their employability and open up new professional prospects for them.

As a globally operating company, we do business in many different regions and markets. Sartorius employees from 82 countries work together. The interplay of a variety of perspectives and experiences helps us understand our customers better, develop tailored solutions and remain competitive in a global economy. We believe that a working environment of mutual trust, appreciation and respect brings the best work results and increases our employees' motivation and creativity as well as their loyalty.

Our approach

To acquire personnel, our approach is to focus on the things that are important for existing and potential employees and make them known throughout the world. According to our analysis, they are all factors that are likely to create trust in the future: the company's brand leadership, its sales growth and margin development, its internationality and innovation activities and – last but not least – the individual's opportunities for development within the company. A meaningful mission and the perceptible assumption of social responsibility are also important for many job applicants.

Sartorius creates loyalty among its qualified employees with a wide range of management and communications training and technical training courses at all sites. Annual performance reviews between employees and their managers provide a forum for discussing performance, targets and individual development opportunities. We conduct these obligatory annual performance reviews worldwide using the same criteria.

Sartorius fills management vacancies from within its own ranks whenever possible. We use Sartorius' leadership guidelines as the basis for a management development program in which all first-time managers participate with the goal of developing a common leadership culture throughout the Group. The program is already available at our companies in Germany, the U.K., France, Belgium, Italy, Spain, India and China. A development program for production managers exists in Germany.

Sartorius encourages its employees to network within the company and to transfer temporarily to its other departments or sites. The Global Mobility Department coordinates and looks after employees on temporary assignment to other countries. The basic conditions for temporary assignments in foreign countries are transparently defined for all staff members.

We offer our employees positive work conditions to encourage them to apply their skills in the best possible manner. The approaches that we pursue throughout the Group are defined in our policy on work practices and social standards.

Our employees should be able to develop personally and professionally throughout their professional lives. To create the same opportunities for people regardless of their life situations, we have installed a flexible work scheduling model at many of our companies. Employees are often able to take advantage of flextime, part-time and teleworking options.

In addition to flexible work schedules, our response to the need for work-life balance includes child care opportunities. In Göttingen, for example, there are offers for children during school vacations, and a day care center is available close to the company on the Sartorius Campus. As an inclusive day care center, it is also open to children with disabilities. It's part of our corporate culture that fathers also take family leave at Sartorius.

Measures that promote equal opportunity in our company include the creation of transparency on salary structures. The majority of salaries at the German companies are linked to the rates agreed with the IG Metall trade union, with some paid in accordance with rates established for IG Bergbau, Chemie, Energie. The remuneration paid to employees in France and Austria is also based on trade union rates. Using the union rates makes our remuneration more transparent.

The Group Employees' Council represents the interests of our staff in Germany. Five of our six operating companies in Germany also have a local employees' council. In addition to the employee council members, various representatives are available to Sartorius employees.

Our performance

To us, education is a valuable asset, and we consider it part of our corporate responsibility to support it and make it accessible within our sphere of influence.

In the year under review, training hours were recorded in 23 countries. 82% of our employees worldwide work in these countries, which include the major sites in Germany, France, Puerto Rico and India. In the reporting year, 108,888 hours were invested in training measures in these countries – on average 14.7 training hours per employee.[1]

Training Hours by Region[1)]

Region	Total training hours	Headcount with training hours	Average training hours per employee
EMEA	83,544	5,839	14.3
Americas	7,652	633	12.1
Asia | Pacific	17,692	936	18.9
Total	**108,888**	**7,408**	**14.7**

Over the past five years, Sartorius has recruited 6,326 new employees. At the end of the reporting year, women made up 38.9% of the total workforce, which is a slight increase over the previous year.

In the reporting year, 5.8% or 520 people worked part-time at the Sartorius Group, 20 more than in 2018; most of them are in Germany.

New Hires by Region, Gender and Age Group[1)]

	EMEA	Americas	Asia | Pacific	Total
Women	**384**	**140**	**101**	**625**
≤ 29 years	189	30	28	247
30 - 49 years	164	88	72	324
≥ 50 years	31	22	1	54
Men	**517**	**140**	**155**	**812**
≤ 29 years	208	42	49	299
30 - 49 years	259	69	104	432
≥ 50 years	50	29	2	81
Total	**901**	**280**	**256**	**1,437**

The success of our measures to create a positive working environment is reflected in permanently low attrition rates. Excluding expired fixed-term contracts, Sartorius had an attrition rate of 7.5% in the reporting year, or 0.9 percentage points below the already low level of the prior year.[1,2]

Despite the continuation of a high number of new hires, average seniority rose slightly year on year. In 2019, about half of all employees had been with Sartorius for fewer than five years, while around a fifth had been with the company for 15 years or more.

Fluctuation by Region, Gender and Age Group[1)]

	EMEA	Americas	Asia | Pacific	Total
Women	**232**	**57**	**53**	**342**
≤ 29 years	100	9	15	124
30 - 49 years	94	35	36	165
≥ 50 years	38	13	2	53
Men	**298**	**95**	**72**	**465**
≤ 29 years	108	16	20	144
30 - 49 years	113	55	44	212
≥ 50 years	77	24	8	109
Total	**530**	**152**	**125**	**807**

[1)] Companies acquired during the year are not counted and, in line with the reporting guideline, will be included in the report next year. The two sales companies in the Netherlands are not included.

[2)] The calculation method was changed: in 2019, we calculated in relation to the reporting date; in 2018, in relation to the average. For the sake of comparability, the updated calculation method was used for the prior year.

Occupational Health and Safety

Why it's important

Our employees' safety is our responsibility. The health of our employees is also important to us as a company, which is why we offer support in the form of a variety of preventative health care offers.

Our approach

Sartorius has high safety standards to minimize job-related medical conditions, risks to health, and potential causes of industrial accidents. The basic principles and core policies on occupational safety and health protection are defined throughout the Sartorius Group in its corporate policy on workplace safety and health. In the process, job safety and work organization conditions are continuously improved. Our company in Beijing is also certified according to OHSAS 18001.

Planned, mandatory employee training on topics of occupational health and safety and environmental protection ensure that our staff members recognize risks and avoid them accordingly.

Sartorius analyzes all accidents regularly and derives accident prevention measures from them that are also used at other sites. At our local Group locations, work safety committees confer regularly to discuss measures that promote health and prevent work-related accidents.

The Group's corporate health management policy addresses both the physical and psycho-social elements of health to enhance employee performance and motivation, ensure their employability and reduce illness-related costs. It is compulsory for companies to provide an in-house medical service. In addition, an external provider is on hand to offer psychological help on any work-related and indeed personal matter. Staff can reach the service via a hotline.

Our performance

Occupational safety and the preservation and promotion of the good health of all employees are very important to Sartorius, and management actively encourages them. Sartorius is currently working towards standardizing its safety management system throughout the Group. Global harmonization of the processes will further improve occupational safety at our sites. By setting the goal of deriving improvement measures from less serious incidents as well, we modified the definition of accidents during the reporting year and recorded work-related accidents in greater detail. Accident statistics therefore now include not just work-related injuries with at least one day work lost, but also accidents that required only first aid. Sartorius is also increasingly changing its reporting to be more in line with the requirements of the Global Reporting Initiative.

Accordingly, the reported number of work-related injuries and relative accident frequency were higher than in the previous year. There were no accidents with serious outcomes or fatal accidents at any of our sites, which corroborates the high quality of the safety management system.

Sartorius is responsible for more than just its own employees. Consequently, in the reporting year, first steps were taken to record the work-related injuries of external employees, too.

	2019	2018
Number of work-related injuries (staff)[1)2)]	253	135
Relative frequency of work-related injuries (staff) per 1,000,000 theoretical working hours[2)]	16.6	10
Work-related injuries with a serious outcome[3)]	0	0
Fatal occupational accidents	0	0

1) Companies acquired during the year are not included and, in accordance with the reporting guideline, will not be reported until the next reporting year. The two sales companies in the Netherlands are not counted.
2) The definition of an occupational accident was harmonized across the Group during the year with the Group-wide survey in October 2019. Prior to this time, accidents were recorded in accordance with local statutory regulations.
3) An accident with a serious outcome is an accident in which the injured person is not rehabilitated at all or not until six months after the accident.

Responsible Business Practices

Compliance

Why it's important

We regard compliance with applicable laws as self-evident. Beyond this, we have set ourselves the standard of managing our company with integrity.

We are committed to upholding internationally recognized human and labor rights as a basis of our worldwide business operations. A significant task in this regard is to create a common understanding of fair working conditions – at all our sites and in the supply chain.

Our approach

Sartorius conducts its business in compliance with globally accepted ethical standards and applicable national legal requirements. The German Corporate Governance Code defines requirements for management boards and supervisory boards including their interaction with regard to transparency, accounting and auditing and the conduct of annual general meetings. Legal & Compliance reports to the CEO and informs the Supervisory Board in the Audit Committee. Sartorius follows the rules and recommendations of the German Corporate Governance Code in its current version of February 7, 2017.

Our globally applicable compliance management system is intended to ensure that our Supervisory and Executive Board members, management and employees comply with all legal regulations and codes, and act according to our internal guidelines. The Legal Affairs & Compliance department is responsible for legal consulting, internal auditing, corporate security, data protection, anti-corruption, customs and export control.

A dedicated team has the task of the implementing and enforcing all Group compliance topics. The Sartorius Code of Conduct defines the requirements we place on our employees with respect to responsible conduct. The code helps employees act ethically and in accordance with the law in their daily work. In everything they do, employees are required to ask themselves the following questions: Are my actions legal? Does my conduct correspond to our values and guidelines? Is it free of personal interests (that are not covered by labor-law regulations)? Will it stand up to public scrutiny? The Code of Conduct covers compliance with international social and environmental standards, general rules of conduct and dealing with conflicts of interest.

The Anti-Corruption Code forms the basis for raising employee awareness about corruption risks. It is also a guideline, instruction manual and aid in taking the necessary action to both prevent and fight corruption at specific companies or in specific sectors. An anti-corruption officer has been appointed by Group management as a contact person for corruption prevention. This officer pursues his or her duties independently.

We ensure that our employees are familiar with the Anti-Corruption Code and the Code of Conduct by asking all employees worldwide every year to take part in an online training course and complete a test at the end of it. The course teaches employees how to deal with ethically or legally problematic situations.

A complaint system ensures that employees and external third parties can report cases of damaging conduct, such as corruption, discrimination or sexual harassment. The compliance team can be contacted face-to-face, via a telephone hotline, the department's electronic mailbox or – in the case of anonymous reports – the whistleblower system. The relevant contact options are listed on the intranet and are thus available company-wide. They are also available on the company's website and can thus be accessed by external persons concerned.

Our performance

During the period under review, 3,223 employees from 33 countries completed training for the Anti-Corruption Code and 3,429 employees from 34 countries completed training for the Code of Conduct. The hours spent on training amounted to 2,263 for the Code of Conduct and 2,127 for the Anti-Corruption Code. Compliance training course are currently available in German, English, French and Chinese.

No significant fines or non-monetary penalties resulting from violations of laws or regulations were imposed in the reporting year and no cases of corruption came to light.

Supply Chain

Why it's important

Respect for human rights, the maintainance of high environmental standards and good, safe and fair working conditions for the production of our products is important to us, and appy to sites outside our own production as well. With more than 9,000 suppliers in more than 100 countries and a purchasing volume that corresponds to about 40 percent of our sales revenue, it is obvious that our supply chain is important for us to implement these goals. In addition, a growing number of laws and requirements regulate the assumption of responsibility in global supply chains.

Moreover, the supply chains for pharmaceuticals are very sensitive and are the focus of many stakeholders. In particular, patients at the end of the supply chain are dependent on their medications being available and safe at all times.

Our approach

We take a close look at our suppliers. In January 2020, we introduced a multi-step process to check compliance with our requirements for sustainability in the production process.

In the process, our Code of Conduct for business partners is the basis for collaboration with our business partners throughout the Group. Our requirements with regard to the environment, social matters and governance are defined in the Code. Since December 2019, acknowledgment of the Code of Conduct is part of the acceptance process for new suppliers. Beginning in 2020, we will systematically check whether our existing suppliers have already acknowledged the Code and, if not, will ask them to do so.

And from January 2020, Sartorius will review whether and to what extent suppliers actually breach the required ESG standards. We use a risk-based approach to set priorities in the review. Parameters can include the respective headquarters or production processes that pose an elevated risk for the environment or the safety of employees. Suppliers from whom we purchase a high volume of products are particularly important for our production and, consequently, our own delivery capability. The same applies to suppliers from whom we purchase products that are critical for our production. Regardless of the individual risk of these suppliers, we will be observing their quality, delivery reliability and sustainability more intensively.

Our multi-level procedure consists of a self-assessment, external assessments, quality audits carried out by Sartorius and ESG audits performed by external partners.

Our objective is to initiate actual improvements in the working, social and environmental standards of our suppliers.

Of course, we do not establish business relationships with suppliers where we see a considerable risk of child, forced or mandatory labor, other breaches of human rights or negative impacts on society, and will end any existing relationships with such suppliers. This procedure is also defined officially in our new process for sustainability in the supply chain.

Our performance

The new multi-level process for reviewing the ESG performance of Sartorius suppliers was adopted in September 2019. We will be reporting on the corresponding results and performance indicators in the 2020 annual report.

Human Rights

Why it's important

The United Nations Guiding Principles on Business and Human Rights clarify the responsibility of states and businesses to protect and respect human rights. The focus is therefore not only on preventing infringements of human rights, but also the positive contribution that a business can make through its activities that promote the protection of human rights.

Our approach

In line with the UN Guiding Principles on Business and Human Rights, we respect and support the implementation of the values of the International Bill of Human Rights, the OECD Guidelines for Multinational Enterprises and the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work, by committing ourselves to regard these internationally recognized human rights as relevant for our operations. We respect the laws of the countries in which we operate.

A Policy Statement on Human Rights has been communicated to employees via the intranet since February 2019 and is also available to all stakeholders on the Internet.

Sartorius' Policy Statement on Human Rights is binding on the entire Group and applies worldwide. It requires all employees to observe appropriate, fair, and lawful conduct towards other employees, business partners, and the local community. We expect our business partners, suppliers, customers and cooperation partners to operate their business in line with correspondingly high ethical standards.

Sartorius' Code of Conduct and the Code of Conduct for business partners address the content of Sartorius' Policy Statement on Human Rights and puts it into concrete terms for everyday work. In annual mandatory online training courses about Sartorius' Code of Conduct, Sartorius employees strengthen their knowledge of the content and check it in the subsequent online test.

The complaint system described on page 100 ensures that topics with human rights relevance can be reported – even anonymously if the person so requests.

The Executive Board becomes involved in handling reported incidents on a case-by-case basis.

Our performance

Human rights concern many areas. This is why we consider the effects we have on human rights on the basis of the Sustainable Development Goals (SDGs) of the United Nations, and report on this in the respective sections. There are potential impacts with regard to SDGs 6, 12 and 13, which concern the environment. In particular, we see substantial opportunities to make a positive contribution to the fundamental human rights health, education and equal rights, which are covered by SDGs 3, 4 and 5. We report on these in detail in the respective sections of this non-financial Group statement.

In the 2019 reporting year, we developed an assessment of our suppliers with regard to the environment, human rights, employees, social issues and anti-corruption. We will be reporting on the results from the non-financial Group statement from the next fiscal year onwards.

Environment

Energy Consumption and Emissions

Why it's important

Advancing climate change is a challenge that concerns everyone. We see it as our duty to make a contribution towards the decarbonization of the economy.

Sartorius operates at 23 production sites and, accordingly, consumes energy and creates emissions. Overall, we classify the environmental impact of our activities as comparatively low. However, we are also aware of our responsibility for the environment and set high standards for environmental protection.

Our approach

In our Environmental Position, we define the basic principles and core topics of our environmental management system. Sartorius' Environmental Position is binding on all the companies and sites of the Sartorius Group. It has been communicated to all our employees via the intranet and the company website, and supports us in anchoring efficiency and environmental awareness in our daily business. In constructing new facilities, we follow recognized standards for sustainable building.

An ISO 14001 environmental management system has been introduced at our two largest companies in Göttingen, Germany, as well as in Aubagne, France; Beijing, China; Bangalore, India; and Kajaani, Finland. Consequently, 26% of the production sites fulfill the requirements of the international standard ISO 14001 and 53% of the employees at production sites work according to this standard.

Seventeen of our production sites are also certified according to the quality standard ISO 9001. This means that 90% of the employees of our production companies work according to this standard. These standards ensure that we comply with quality requirements in the manufacture of our products, exercise care with the resources we use, and prevent environmental risks. We also operate an energy management system in accordance with ISO 50001 at our four German facilities. In relation to the number of employees at these plants, this represents 39% of all our production sites.

For many years Sartorius' management has pursued the goal of achieving a situation in which energy consumption and greenhouse gas emissions do not increase at the same rate as sales growth. In September 2019, we began developing a Sartorius climate strategy. Within this framework we will define medium-term goals and the corresponding measures. These should enable us to obtain a comprehensive picture of our emissions and to set practical and quantifiable reduction targets. Current energy efficiency measures will be bundled in this strategy and new ones will be identified.

Our performance

Sartorius has been recording greenhouse gas emissions in line with the Greenhouse Gas Protocol (GHG) global standard since 2013. We thus account for emissions not only of CO_2 but of all gases relevant to climate change and report them in CO_2 equivalents (CO_2eq). Currently, we report direct climate-relevant emissions from our production sites[1] (Scope 1). We also report indirect energy-related emissions resulting from power generation by external energy suppliers (Scope 2). Scope 1 emissions occur through consumption of direct energy sources, such as diesel, fuel oil, natural gas and LPG, and also through process emissions from solvents and refrigerants at our sites in Göttingen and Yauco.

Scope 1 and 2 emissions from Sartorius are relatively low. Nevertheless, we are continuously looking for ways to reduce emissions. Despite continuing expansion of our production facilities, the success of our measures is reflected in the company's overall energy consumption and greenhouse gas emissions, which have increased at a lower rate than the company's expansion in terms of sales revenue.

As part of the climate strategy we develop, we will also begin to record our Scope 3 emissions. This will enable us to get an overall picture of our emissions and identify further reduction potential.

[1] Excluded: Sweden Data Analytics, since only 14 employees work there; Israel, as this site was not added until the middle of December.

Energy Consumption[1]

	2019	2018[2]
Total energy consumption in MWh	**130,649**	**113,143**
Direct energy consumption in MWh	58,891	48,999
Electricity consumption from public grid in MWh	67,059	59,939
Others in MWh	4,698	4,204

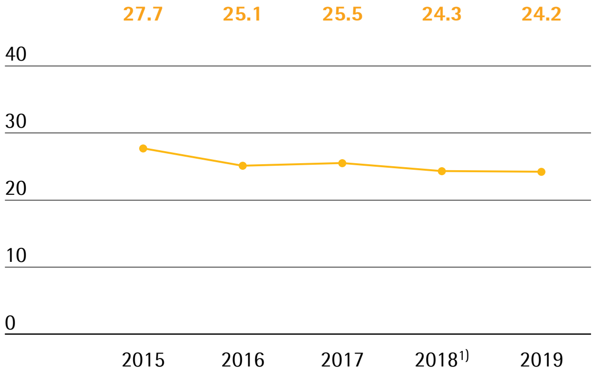
1) Excluded: Sweden Data Analytics, since only 14 employees work there; Israel, as this site was not added until the middle of December.
2) The key figure was corrected following an internal audit.

Greenhouse Gases

	2019	2018[1]
Total GHG emissions in t CO_2eq[2)3)6)]	**44,138**	**38,005**
- Total Scope 1 emissions in t CO_2eq[4)6)]	16,710	13,521
- Total Scope 2 emissions in t CO_2eq[5)6)]	27,428	24,484

1) The key figure was corrected following an internal audit.
2) Emissions in t CO_2eq were calculated using thinkstep's SoFi software. Emission factors from GaBi, Defra and VfU were used for this. The current GaBi emission factors (01/20) were used to calculate emissions in 2019. As a result, the emissions in 2018 differ from those in 2019.
3) Companies are integrated into the environmental report for emissions in accordance with the financial control consolidation approach.
4) Excluding fuel consumption for car fleet.
5) Only location-based factors are used to calculate Scope 2 emissions.
6) Excluded: Sweden Data Analytics, since only 14 employees work there; Israel, as this site was not added until the middle of December.

Development of Climate -Relevant Emissions
in proportion to annual sales, in t/€ in millions



1) The key figure was corrected following an internal audit.

Product Stewardship

Why it's important

Environmental responsibility concerns not just our value creation; it has an impact on our products, too.

Sartorius earns almost two thirds of its revenue with single-use products. The production and sale of single-use products raises the question of their ecological footprint during their life cycle and at the product's end of life. Increasing customer demands and stricter statutory regulations have also resulted in aspects of the circular economy becoming more important.

A large proportion of our single-use products and their packaging are plastic. These are a particular focus of current social discussions. We take these discussions seriously. In the production of single-use products, we operate between the conflicting priorities of humans – environment – revenue. In terms of sustainability, we want to achieve an optimum balance.

Our approach

Most single-use products manufactured by Sartorius are used in the biopharmaceutical industry, where they ensure the highest possible level of safety for end consumers, as cross-contamination through multiple use can be prevented. To ensure the corresponding sterility in the process, reusable systems must be cleaned thoroughly between the production of different batches. Large volumes of ultrapure water are used as well as various acids and lyes. The necessary steam sterilization is also energy-intensive.

Single-use technologies require up to 30 percent less space than reusable solutions. Manufacturers can therefore achieve lower energy and material consumption as a result of small production units. This effect is mainly due to the fact that biopharmaceutical processes place high demands on production conditions with regard to air and climate and are therefore energy-intensive.

The particular flexibility of single-use components also enables our customers to respond faster to changing requirements and to expand or reduce capacities accordingly. Our customers' ability to supply patients with medication or vaccines can be improved in this way.

During their usage phase, single-use products have fewer negative ecological effects than reusable solutions[1]. However, they do create more waste. In biopharmaceutical processes, single-use components such as bags, filters and connection parts are usually disposed of after they have been used in the same way as infectious hospital waste: They are incinerated. The high-purity plastics that we use to manufacture single-use products can be thermally recycled to generate heat or electricity.

In the reporting year, management decided to develop a comprehensive Sartorius plastic strategy. With this strategy we are addressing three dimensions: end of product life, plastic waste in our own business operations and packaging. We are developing short, medium and long-term goals. An interdisciplinary project team began working on this in the reporting year.

Our performance

Within the scope of the Sartorius plastic strategy project, we will be developing suitable indicators to measure our performance. We will publish the results in the next reporting year.

[1] Sinclair, A.; Leveen, et al.; The Environmental Impact of Disposable Technologies, The Biopharm International Guide, November 2008; Base of the analysis: Typical mAb process at 3+2000 L scale

Report of the Independent Auditor

Limited Assurance Report of the Independent Auditor regarding the Non-financial Group Statement[1)]

To the Supervisory Board of Sartorius Aktiengesellschaft, Göttingen

We have performed an independent limited assurance engagement on the Non-financial Group Statement of Sartorius AG, Göttingen, (further „Sartorius“) and the group as well as the by reference qualified parts “Structure and Management of the Group” as well as “Business Model, Strategy and Goals” (further: „Report“) according to §§ 315b and 315c in conjunction with 289c to 289e German Commercial Code (HGB) for the business year from January 1 to December 31, 2019.

Management's Responsibility

The legal representatives of Sartorius are responsible for the preparation of the Report in accordance with §§ 315b and 315c in conjunction with 289c to 289e HGB.

This responsibility of the legal representatives includes the selection and application of appropriate methods to prepare the Report and the use of assumptions and estimates for individual disclosures which are reasonable under the given circumstances. Furthermore, this responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Report in a way that is free of – intended or unintended – material misstatements.

[1)] Our engagement applied to the German version of the Statement 2017. This text is a translation of the Independent Assurance Report issued in German language, whereas the German text is authoritative.

Independence and quality assurance on the part of the auditing firm

We are independent from the entity in accordance with the requirements of independence and quality assurance set out in legal provisions and professional pronouncements and have fulfilled our additional professional obligations in accordance with these requirements.

Our audit firm applies the national statutory provisions and professional pronouncements for quality assurance, in particular the Professional Code for German Public Auditors and Chartered Accountants (in Germany) and the quality assurance standard of the German Institute of Public Auditors (Institut der Wirtschaftsprüfer, IDW) regarding quality assurance requirements in audit practice (IDW QS 1).

Practitioner's Responsibility

Our responsibility is to express a conclusion on the Report based on our work performed within our limited assurance engagement.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): “Assurance Engagements other than Audits or Reviews of Historical Financial Information” published by IAASB. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance whether any matters have come to our attention that cause us to believe that the Report of the entity for the business year January 1 to December 31, 2019 has not been prepared, in all material respects, in accordance with §§ 315b and 315c in conjunction with 289c to 289e HGB. We do not, however, provide a separate conclusion for each disclosure. In a limited assurance engagement the evidence gathering procedures are more limited than in a reasonable assurance engagement and therefore significantly less assurance is obtained than in a reasonable assurance engagement. The choice of audit procedures is subject to the auditor's own judgement.

Within the scope of our engagement, we performed amongst others the following assurance procedures:

- Inquiries of personnel on group level, who are responsible for the materiality analysis, in order to gain an understanding of the processes for determining material sustainability topics and respective reporting boundaries of Sartorius.
- A risk analysis, including a media search, to identify relevant information on Sartorius sustainability performance in the reporting period.
- Reviewing the suitability of internally developed Reporting Criteria.
- Evaluation of the design and implementation of the systems and processes for determining, processing and monitoring disclosures relating to environmental, employee and social matters, respect for human rights, and combating corruption and bribery, including the consolidation of the data.
- Inquiries of personnel on group level who are responsible for determining disclosures on concepts, due diligence processes, results and risks, for conducting internal controls and consolidation of the disclosures.
- Evaluation of selected internal and external documentation.
- Analytical evaluation of data and trends of quantitative information which are reported by all sites for consolidation on group level.
- Evaluation of local data collection, validation and reporting processes as well as the reliability of reported data based on a sample of the sites in Göttingen (Germany) and Aubagne (France)
- Assessment of the overall presentation of the disclosures.

Conclusion

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the Report of Sartorius for the business year from January 1 to December 31, 2019 is not prepared, in all material respects, in accordance with §§ 315b and 315c in conjunction with 289c to 289e HGB.

Restriction of Use / Clause on General Engagement Terms

This assurance report is issued for purposes of the Supervisory Board of Sartorius AG, Göttingen, only. We assume no responsibility with regard to any third parties.

Our assignment for the Supervisory Board of Sartorius AG, Göttingen, and professional liability is governed by the General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 (https://www.kpmg.de/bescheinigungen/lib/aab_english.pdf). By reading and using the information contained in this assurance report, each recipient confirms notice of provisions of the General Engagement Terms (including the limitation of our liability for negligence to EUR 4 million as stipulated in No. 9) and accepts the validity of the General Engagement Terms with respect to us.

Munich, Feburary 04, 2020

KPMG AG
Wirtschaftsprüfungsgesellschaft

Signed by

Hell
Auditor

ppa. Dollhofer

Consolidated Financial Statements and Notes

03

Statement of Profit or Loss | Other Comprehensive Income

	Notes	**2019 € in K**	2018 € in K
Sales revenue	[9]	1,826,966	1,566,033
Cost of sales	[10]	–885,809	–762,430
Gross profit on sales		**941,157**	**803,604**
Selling and distribution expenses	[10]	–369,680	–329,830
Research and development expenses	[10]	–95,591	–78,201
General administrative expenses	[10]	–107,206	–94,235
Other operating income and expenses	[11]	–33,017	–2,724
Earnings before interest and taxes (EBIT)		**335,663**	**298,614**
Financial income	[12]	9,398	7,663
Financial expenses	[12]	–41,885	–35,582
Financial result		**–32,487**	**–27,919**
Profit before tax		**303,176**	**270,695**
Income taxes	[13]	–84,433	–73,217
Net profit for the period		**218,743**	**197,478**
Attributable to:			
Equity holders of Sartorius AG		156,747	141,342
Non-controlling interest		61,996	56,135
Earnings per share	**[14]**		
Earnings per ordinary share (€) (basic = undiluted)		2.29	2.06
Earnings per ordinary share (€) (diluted)		2.29	2.06
Earnings per preference share (€) (basic = undiluted)		2.30	2.07
Earnings per preference share (€) (diluted)		2.30	2.07

The Group initially applied IFRS 16 as of January 1, 2019, using the modified retrospective transition approach. Accordingly, the figures of the comparative period have not been restated.
The Notes to the Consolidated Financial Statements are an integral part of these statements.

Statement of Comprehensive Income

	2019 € in K	2018 € in K
Net profit for the period	**218,743**	**197,478**
Cash flow hedges	–3,521	–14,480
Of which effective portion of the changes in fair value	–5,989	–24,627
Of which reclassified to profit or loss	2,468	10,147
Income tax on cash flow hedges	1,056	4,344
Net investment in a foreign operation	7,441	17,719
Income tax on net investment in a foreign operation	–1,998	–5,314
Currency translation differences	10,606	5,649
Items that may be reclassified to profit or loss, net of tax	**13,585**	**7,918**
Remeasurements of the net defined benefit liability	–11,626	692
Income tax on remeasurements of the net defined benefit liability	3,328	–733
Items that will not be reclassified to profit or loss, net of tax	**–8,298**	**–41**
Other comprehensive income after tax	**5,286**	**7,877**
Total comprehensive income	**224,029**	**205,355**
Attributable to:		
Equity holders of Sartorius AG	161,212	149,500
Non-controlling interest	62,817	55,855

Statement of Financial Position

	Notes	**Dec. 31, 2019 € in K**	Dec. 31, 2018 € in K
Non-current assets			
Goodwill	[15]	705,045	662,229
Other intangible assets	[15]	403,173	401,027
Property, plant and equipment	[16][17]	829,610	659,608
Financial assets	[34]	30,660	28,781
Other assets		1,482	678
Deferred tax assets	[18]	25,767	20,606
		1,995,737	**1,772,929**
Current assets			
Inventories	[19]	411,821	321,695
Trade receivables	[28]	302,296	307,364
Other financial assets	[29]	21,172	29,256
Current tax assets		16,400	15,360
Other assets		42,971	35,105
Cash and cash equivalents	[27]	53,918	45,164
		848,579	**753,946**
		2,844,316	**2,526,875**

	Notes	**Dec. 31, 2019 € in K**	Dec. 31, 2018 € in K
Equity			
Equity attributable to Sartorius AG shareholders		**810,402**	**740,568**
Issued capital	[20]	68,388	68,388
Capital reserves	[21]	40,691	40,161
Other reserves and retained earnings	[21]	701,323	632,018
Non-controlling interest	**[22]**	**270,810**	**232,822**
		1,081,212	**973,389**
Non-current liabilities			
Pension provisions	[23]	76,552	64,724
Other provisions	[24]	8,437	7,820
Loans and borrowings	[30]	822,157	878,538
Lease liabilities	[17][30]	55,421	16,108
Other financial liabilities	[31]	54,546	21,913
Deferred tax liabilities	[18]	84,397	83,684
		1,101,510	**1,072,787**
Current liabilities			
Provisions	[24]	15,422	16,260
Trade payables	[32]	224,058	173,455
Loans and borrowings	[30]	168,937	107,314
Lease liabilities	[17][30]	18,687	2,664
Employee benefits		68,120	63,020
Other financial liabilities	[33]	51,678	25,075
Current tax liabilities		57,445	38,070
Other liabilities	[25]	57,247	54,842
		661,593	**480,699**
		2,844,316	**2,526,875**

Statement of Cash Flows

	Notes	**2019 € in K**	2018 € in K
Profit before tax		303,176	270,695
Financial result	[12]	32,487	27,919
Depreciation | amortization of intangible and tangible assets	[15][16][17]	132,585	113,374
Gains from the disposal of fixed assets		–1,033	–466
Increase | decrease in provisions	[24]	–1,607	2,097
Increase | decrease in receivables	[28][29]	18,172	–44,655
Increase | decrease in inventories	[19]	–77,153	–73,705
Increase | decrease in liabilities		38,204	50,706
Income taxes paid	[13]	–69,318	–69,571
Other non-cash transactions		1,676	–31,869
Cash flow from operating activities		**377,189**	**244,524**
Capital expenditures	[15][16]	–225,568	–233,184
Proceeds from the disposal of fixed assets		2,783	6,803
Other payments		–4,433	–16,103
Cash flow from investing activities before acquisitions		**–227,218**	**–242,484**
Payments for acquisitions of consolidated subsidiaries and other business operations; net of cash acquired	[8]	–41,990	0
Cash flow from investing activities		**–269,207**	**–242,484**
Interest received	[12]	2,349	3,148
Interest paid and other financial charges	[12]	–27,449	–23,229
Dividends paid to:			
- Shareholders of Sartorius AG		–42,059	–34,536
- Non-controlling interest		–14,861	–11,699
Changes in non-controlling interest	[8][23]	–6,940	0
Loans and borrowings raised	[6][30]	173,202	90,787
Loans and borrowings repaid	[6][30]	–185,791	–41,170
Cash flow from financing activities		**–101,550**	**–16,699**
Net increase | decrease in cash and cash equivalents		**6,433**	**–14,658**
Cash and cash equivalents at the beginning of the period		45,164	59,423
Change in scope of consolidation		2,479	0
Net effect of currency translation on cash and cash equivalents		–158	400
Cash and cash equivalents at the end of the period		**53,918**	**45,165**

Statement of Changes in Equity

€ in K	Issued capital	Capital reserves	Cash flow hedging reserves	Pension reserves	Retained earnings	Foreign currency translation reserves	**Equity attributable to Sartorius AG shareholders**	Non-controlling interest	**Total equity**
Balance at Jan. 1, 2018	**68,388**	**39,657**	**11,392**	**–19,057**	**513,726**	**4,118**	**618,224**	**188,766**	**806,990**
Net profit for the period	0	0	0	0	141,342	0	141,342	56,135	197,478
Cash flow hedges	0	0	–11,508	0	0	0	–11,508	–2,972	–14,480
Remeasurements of the net defined benefit liability	0	0	0	571	0	0	571	121	692
Currency translation differences	0	0	0	0	0	3,929	3,929	1,721	5,649
Net investment in a foreign operation	0	0	0	0	17,719	0	17,719		17,719
Tax effects	0	0	3,453	–692	–5,314	0	–2,553	850	–1,703
Other comprehensive income after tax	0	0	–8,055	–121	12,405	3,929	8,158	–281	7,877
Total comprehensive income	**0**	**0**	**–8,055**	**–121**	**153,747**	**3,929**	**149,500**	**55,855**	**205,355**
Share-based payments	0	504			0		504	0	504
Dividends					–34,536		–34,536	–11,699	–46,235
Purchase price liability Israel					7,081		7,081	0	7,081
Other changes in equity					–206		–206	–100	–306
Balance at Dec. 31, 2018	**68,388**	**40,161**	**3,337**	**–19,178**	**639,813**	**8,047**	**740,568**	**232,822**	**973,389**
Balance at Jan. 1, 2019	**68,388**	**40,161**	**3,337**	**–19,178**	**639,813**	**8,047**	**740,568**	**232,822**	**973,389**
Net profit for the period	0	0	0	0	156,747	0	156,747	61,996	218,743
Cash flow hedges	0	0	–2,708	0	0	0	–2,708	–813	–3,521
Remeasurements of the net defined benefit liability	0	0	0	–9,591	0	0	–9,591	–2,035	–11,626
Currency translation differences	0	0	0	0	0	7,769	7,769	2,837	10,606
Net investment in a foreign operation	0	0	0	0	7,441	0	7,441	0	7,441
Tax effects	0	0	811	2,741	–1,998	0	1,554	832	2,386
Other comprehensive income after tax	0	0	–1,897	–6,850	5,443	7,769	4,465	821	5,286
Total comprehensive income	**0**	**0**	**–1,897**	**–6,850**	**162,190**	**7,769**	**161,212**	**62,817**	**224,029**
Share-based payments	0	530			0		530	0	530
Dividends					–42,059		–42,059	–14,861	–56,920
Acquisition of BI Israel / Sartorius Israel					590		590	5,667	6,257
Purchase price liability BI Israel					–45,306		–45,306	–15,704	–61,010
Changes in scope of consolidation					–4,743		–4,743	0	–4,743
Other changes in equity					–390		–390	70	–320
Balance at December 31, 2019	**68,388**	**40,691**	**1,440**	**–26,027**	**710,095**	**15,816**	**810,402**	**270,810**	**1,081,212**

The dividends paid per share are as follows:

	Per share in €	**2019 total € in K**	Per share in €	2018 total € in K
Dividend for ordinary shares	0.61	20,869	0.50	17,106
Dividend for preference shares	0.62	21,189	0.51	17,430
		42,059		**34,536**

Notes to the Financial Statements

1. General Information

Sartorius AG is a listed joint stock corporation established according to German law and is the highest-level parent company of the Sartorius Group. The corporation is recorded in the German Commercial Register of the District Court of Göttingen (HRB 1970) and is headquartered at Otto-Brenner-Str. 20 in Göttingen, 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 to manufacture biotech medications and vaccines safely and efficiently

In compliance with § 315e, Subsection 1, of the German Commercial Code (HGB) in conjunction with Art. 4 of the Regulation (EC) No. 1606/2002 of the European Parliament and Council, dated July 19, 2002 (OJ L243 p. 1), the consolidated financial statements of the Sartorius Group for the year ended December 31, 2019, were prepared according to 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 site:

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 on February 13, 2020, to the Supervisory Board.

2. Effects from New or Amended Standards

Standards to Be Applied for the First Time in 2019

In particular, the following new accounting rules were applicable for the first time to the present consolidated financial statements of the Group compared with those of the prior year:

– IFRS 16, Leases

This Standard changes the accounting for leases. For detailed information on these changes, particularly on initial application of IFRS 16this Standard, see Note 17.

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:

– Annual Improvements to IFRSs – Cycle 2015–2017 (issued in Dec. 2017), Amendments to IFRS 3, IFRS 11, IAS 12 and IAS 23

The amendments to IFRS 3 and IFRS 11 clarify the remeasurement of previously held interests in a business when an entity obtains control or joint control of a business that is a joint operation. The amendment to IAS 12 clarifies the applicability of the requirements regarding income tax consequences of dividends. The amendment to IAS 23 clarifies the treatment of any specific borrowing that remains outstanding after the related asset is ready for its intended use or sale.

– Amendments to IAS 19, Plan Amendment, Curtailment or Settlement

The amendments are applicable to plan amendments, curtailments or settlements. It is now mandatory that the current service cost and the net interest for the period after remeasurement be determined using the assumptions used for remeasurement. The amendment further includes clarifications regarding the effect of a plan amendment, curtailment or settlement on the requirements regarding the asset ceiling.

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

The amendment clarifies that an entity applies IFRS 9 to long-term interests in an associate or joint venture that form part of the net investment in the associate or joint venture but to which the equity method is not applied.

- Amendments to IFRS 9, Prepayment Features with Negative Compensation

The amendment to IFRS 9 amends existing requirements regarding termination rights with negative compensation features. Furthermore, clarification regarding the accounting for a modification or an exchange of a financial liability measured at amortized cost that does not result in the derecognition of the financial liability is included in the Basis for Conclusions. It clarifies that an entity recognizes any adjustment to the amortized cost of the financial liability arising from a modification or exchange in profit or loss at the date of the modification or exchange.

- IFRIC 23, Uncertainty over Income Tax Treatments

IFRIC 23 clarifies how the recognition and measurement requirements of IAS 12 are applied where there is uncertainty over income tax treatments.

New Standards and Interpretations Not Yet Applied

The Standards, Interpretations and Amendments to Standards in the following 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 2019:

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 IAS 1 and IAS 8	Definition of Material	January 1, 2020	Yes
Various Standards / Framework	Amendments to References to the Conceptual Framework in IFRS Standards	January 1, 2020	Yes
Amendments to IFRS 3	Definition of a Business	January 1, 2020	No
Amendments to IFRS 9, IAS 39 and IFRS 7	Interest Rate Benchmark Reform	January 1, 2020	Yes
IFRS 17	Insurance Contracts	January 1, 2021	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 the items disclosed at fair value, such as derivative financial instruments.

Scope of Consolidated Financial Statements

The consolidated financial statements of Sartorius AG include the annual financial statements of all major companies, which are controlled directly or indirectly by Sartorius AG. In terms of IFRS 10, Consolidated Financial Statements, a controlling interest 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 with respect to the latter's returns

- Exposure, or rights, to variable returns from an investee

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

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 transferred 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 recognition and measurement methods.

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 measured according to the acquisition method. The identifiable assets acquired by the Group as well as liabilities and contingent liabilities assumed are recorded at fair value on the date of combination.

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 the profit for 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 a functional currency. Foreign subsidiaries are regarded as independent subdivisions of the Sartorius Group. Items on the statement of financial position are translated at the exchange rates on the reporting date. An exception to this is equity of consolidated subsidiaries, which is translated at historical cost. Income and expense items are converted at the average rates. Any translation differences resulting from the use of different exchange rates for items on 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 to 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 considered as follows:

	Year-end exchange rates		Average annual exchange rates	
	2019	2018	**2019**	2018
USD	1.12340	1.14500	1.11956	1.18129
GBP	0.85080	0.89453	0.87787	0.88465
CHF	1.08540	1.12690	1.11255	1.15517
JPY	121.94000	125.85000	122.01949	130.40242
INR	80.18700	79.72980	78.84689	80.69389
KRW	1296.2800	1277.9300	1305.50569	1299.12464
CNY	7.82050	7.8751	7.73613	7.80666

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 and future situation of the period. 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:

Business Combinations

Accounting for acquisitions requires certain estimates and assumptions to be made, especially concerning the fair value of the intangible assets and the property, plant and equipment acquired, the liabilities assumed on the acquisition date, as well as the useful lives of the intangible assets and of the 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 on 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 a cash-generating unit is the higher of its fair value – less costs to sell the asset or its CGU – and its value in use. In the event 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 are removed, the book value of the asset (or the CGU) is credited to the newly estimated recoverable amount (except for goodwill). However, the book value increase is limited to the value that the asset (or CGU) would have had if no asset impairment loss would have been assessed in previous financial years.

The calculation of the value in use is generally based on discounted cash flow methods that use cash flow projections of up to five years. These projections take into account past experiences and represent management's best estimates 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. If the carrying amount exceeds the recoverable amount, an impairment loss is recognized.

Intangible Assets

The capitalization of self-constructed intangible assets includes a certain level of estimates and assumptions, e.g., the evaluation of the technical feasibility of a development project, its expected market prospects and determination of its useful live.

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 obligations 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 must determine tax positions under respective local tax laws and tax authorities' views, which can be complex and subject to different interpretations of taxpayers and local tax authorities.

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 IFRS, including the level in the fair value hierarchy in 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 in the same level of the fair value hierarchy as the lowest level input that is significant for 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 to be 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. In this connection, extraordinary items are expenses and income that are of an exceptional or a one-time nature and accordingly distort the sustainable profitability of a segment and have a material impact on the net worth, financial position and earnings of the Group. Examples of such items are restructuring expenses, large Group projects and proceeds or losses from the disposal, sale or other transfer of financial assets or of property, plant and equipment, provided that these are not of a recurrent nature.

"Underlying EBITDA" is not a defined performance measure in IFRS. The Group’s definition of underlying EBITDA might 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 upon with external third parties in the particular situation and under the given framework conditions. Essentially, these prices are calculated by applying the cost-plus-margin 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 continuously maintained. The volume of such inter-segment receivables and payables is immaterial.

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

	Sales revenue		Underlying EBITDA	
€ in K	**2019**	2018	**2019**	2018
Bioprocess Solutions	1,372,113	1,143,054	406,796	326,871
Lab Products & Services	454,853	422,980	89,043	78,116
Total	**1,826,966**	**1,566,033**	**495,839**	**404,987**
Reconciliation to the profit before tax				
Depreciation and amortization			–131,760	–104,702
Extraordinary items			–28,416	–1,671
Earnings before interest and taxes (EBIT)			**335,663**	**298,614**
Financial result			–32,487	–27,919
Profit before tax			**303,176**	**270,695**

	Depreciation and amortization	
€ in K	**2019**	2018
Bioprocess Solutions	–80,107	–68,474
Lab Products & Services	–52,479	–44,900
Total	**–132,585**	**–113,374**

In 2019, depreciation and amortization include depreciation of right-of-use assets according to IFRS 16 (see Note 17).

Geographical Information

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

€ in K	Sales revenue 2019	Sales revenue 2018	Non-current assets 2019	Non-current assets 2018
EMEA	**733,425**	**657,739**	**1,309,806**	**1,143,897**
Of which Germany	188,615	181,833	668,743	566,500
Of which France	91,537	76,517	371,890	368,038
Americas	**629,884**	**520,076**	**571,996**	**538,416**
Of which USA	570,730	480,920	569,502	538,336
Asia | Pacific	**463,657**	**388,218**	**56,025**	**40,551**
Of which China	150,709	127,436	12,225	10,313
Of which South Korea	97,417	86,909	14,409	7,882
Group	**1,826,966**	**1,566,033**	**1,937,827**	**1,722,864**

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 2019 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 equivalents are assets than can be converted into cash within a 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.

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

- Additions to the fixed assets related to finance leases amounted to €68 K in 2018. See Note 17 for additions to the fixed assets resulting from leases according to IFRS 16 in the reporting period.
- The expenses incurred by granting shares to the CEO and Executive Board Chairman totaled €530 K in 2019 and €504 K in 2018.
- The liability for the acquisition of the non-controlling interest in Sartorius Israel was eliminated upon acquisition of Biological Industries (see Note 8).
- The income recognized in 2018, which results from the changes of the cooperation with Lonza, was entirely of a non-cash nature.

Financial liabilities resulting from financing activities developed as follows:

	Balance at Dec. 31, 2017 € in K	Cash flows	Currency effects	Other non-cash changes	**Balance at Dec. 31, 2018 € in K**
Loans and borrowings	934,405	51,434	13	0	985,852
Finance lease liabilities	20,565	–1,817	–44	68	18,772
Liability for the acquisition of non-controlling interest in Sartorius Israel	13,816	0	–427	–6,654	6,735
Liability for phantom stock units in connection with the AllPure acquisition	5,282	0	250	3,206	8,739
Total financial liabilities from financing activities	**974,068**	**49,617**	**–208**	**–3,380**	**1,020,098**

	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	22,988	74,108
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	11,516
Total financial liabilities from financing activities	**1,020,098**	**49,881**	**–12,589**	**1,127**	**79,210**	**1,137,728**

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:	74.3	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 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 [1)]	50.0	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
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
TAP Biosystems Group Ltd., Royston, UK	100.0	X
TAP ESOP Management Ltd., Royston, UK	100.0	X
TAP Biosystems (PHC) Ltd., Royston, UK	100.0	
TAP Biosystems Ltd., Royston, UK	100.0	
The Automation Partnership Cambridge Ltd., Royston, UK	100.0	X
Americas		
Sartorius Stedim Filters Inc., Yauco, Puerto Rico	100.0	X
Biological Industries USA Inc., Cromwell, Connecticut, USA	55.0	
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
BI Shanghai Co. Ltd., Shanghai, China	51.0	
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

	Ownership in %	Consolidated
EMEA		
Sartorius Belgium N.V., Brussels, Belgium	100.0	X
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., Tepotzotllán, Mexico	100.0	X
Sartorius Peru S.A.C., Lima, Peru	100.0	
Essen Instruments Inc., Ann Arbor, Michigan, USA	100.0	X
Sartorius North America Inc., Dover, Delaware, USA	100.0	X
Sartorius Corporation, Dover, Delaware, Delaware, USA	100.0	X

	Ownership in %	Consolidated
Asia | Pacific		
Sartorius Australia Pty. Ltd., Dandenong South, Victoria, Australia	100.0	X
Denver Instrument (Beijing) Co. Ltd., Beijing, China	100.0	X
Sartorius Scientific Instruments (Beijing) Co. Ltd., Beijing, 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 companies Sartorius Thailand and Biological Industries are 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 balance sheet total of the non-consolidated companies taken as a whole are below 2% of the Group figures. No associates or joint ventures were consolidated; all companies identified by an "X" are fully consolidated.

The companies Sartorius Argentina S. A., Sartorius do Brasil Ltda., Sartorius de México S.A. de C.V. and Sartorius Vietnam Co. Ltd. which were not consolidated due to material considerations so far were included in the scope of consolidation for the first time on January 1, 2019.

On January 1, 2019, the Group obtained control over the company Sartorius South Africa (Pty) Ltd. located in South Africa. The company is not consolidated due to materality considerations.

In 2019, the entity Biohit Biotech (Suzhou) Co. Ltd. was merged into Sartorius Scientific Instruments (Beijing) Co. Ltd.

Furthermore, the companies Biological Industries and Sartonets Taiwan were acquired in the course of business combinations in 2019 (see Note 8).

8. Business Combinations

Acquisition of Biological Industries

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 agreements.

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

The purchase price for the acquired shares equals approximately €40.6 million and was fully paid in cash. The directly attributable acquisition-related cost amounted to €0.3 million and was recognized in other expenses.

Due to the short time period between the closing of the business combination and the authorization 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. Non-controlling interests are measured at their proportionate share of the net assets. The following table shows the preliminary purchase price allocation:

	Preliminary purchase price allocation € in K
Property, plant and equipment	5,201
Inventories	4,982
Trade receivables	5,121
Other assets	1,386
Cash and cash equivalents	3,209
Other liabilities	–6,981
Net assets acquired	**12,918**
Purchase price	40,634
Non-controlling interest	6,459
Goodwill	**34,175**

It is expected that the final purchase price allocation will result in additional intangible assets, especially for technologies and customer relations. Any resulting goodwill is expected not to be deductible for tax purposes. Besides being attributable to the synergies realized by the acquiree's access to the Group's global sales and distribution network, the resulting goodwill is expected to reflect the expansion of the Group's product offering for biopharmaceutical customers. Therefore, the goodwill was provisionally allocated entirely to the Group's Bioprocess Solutions Division.

As part of the acquisition, the holder of the non-controlling interest was granted a right to sell its remaining shares in several tranches up to 2027. For the obligation to purchase own equity interests, the Group recognized financial liabilities of €61.0 million against equity. On the other hand, the Group has the right to purchase an additional 20% of the shares exercisable within a three-year period as of the acquisition.

As the acquisition date was close to the end of the reporting period, the amounts of revenue and profit or loss of the acquiree included in the consolidated financial statements are not material.

In the course of the transaction, the non-controlling interests in Sartorius Israel were acquired as well, as these are held by Biological Industries. For the acquisition of these non-controlling interests, an amount of €6.9 million has been considered in the determination of the consideration transferred for the business combination. The respective cash outflow is presented in the cash flow from financing activities. The financial liability that was recognized to account for the put option of the holder of the non-controlling interests was reclassified in retained earnings at the acquisition date.

Acquisition of Sartonets Taiwan

On September 27, 2019, the Group acquired 100% of the shares of Sartonets Taiwan Inc. The company is an importer, distributor and maintenance service provider of medical devices and of bioprocess and laboratory products in the Chinese Republic of Taiwan ("Taiwan"). The total consideration transferred amounts to €5.8 million and was fully paid in cash. The directly attributable acquisition-related cost amounted to €0.2 million and was recognized in other expenses. The net assets acquired total about €2.5 million. The leading intangible asset identified is a customer relationship that is measured at its acquisition date fair value of €2 million. The resulting goodwill amounts to €3.2 million.

Had the acquisition date of both acquisitions been at the beginning of the reporting period, the revenue and net result of the combined entity would have amounted to €1,852 million euros and €220 million, respectively.

Notes to the Statement of Profit or Loss

9. Sales Revenue

IFRS 15, Revenue from Contracts with Customers, defines a comprehensive model to determine when to recognize revenue and which 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 according to the customer's location.

	2019			2018		
€ in K	**Group**	**Bioprocess Solutions**	**Lab Products & Services**	Group	Bioprocess Solutions	Lab Products & Services
Sales revenue	**1,826,966**	**1,372,113**	**454,853**	**1,566,033**	**1,143,054**	**422,980**
EMEA	733,425	526,939	206,486	657,739	464,671	193,068
Americas	629,884	504,852	125,031	520,076	409,972	110,104
Asia | Pacific	463,657	340,322	123,335	388,218	268,410	119,807

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 low extent, revenue is recognized over time in the customer-specific project business. In these cases, revenue is recognized according to the project progress which is measured based on the percentage of costs to date compared to the 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 temporis 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. As of December 31, 2019, the Group has refund liabilities in the amount of €6,690 K as a result of incentive agreements with customers (2018: €8,317 K).

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 amounts to €661.1 million (2018: €533.9 million). The Group expects that these unsatisfied performance obligations will be satisfied for the most part in 2020.

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 €62,577 K was recognized in the reporting period that was included in the contract liability balance at the beginning of the reporting period (2018: 53,695 K).

The balances of trade receivables and contract assets are presented in Note 28. For details on the impairments 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.

	Line item in statement of financial position	**Carrying amount Dec. 31, 2019 € in K**	Carrying amount Dec. 31, 2018 € in K
Deferred revenue	Other liabilities	27,208	28,578
Payments received on account of orders	Trade payables	84,008	52,987
Total contract liabilities		**111,216**	**81,565**

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 item "Cost of sales" reports the costs of products sold and the acquisition costs of merchandise sold. Besides the directly imputable expenses, such as raw materials and supplies, employee benefits expense and energy expenses, the cost of sales also includes overhead, which can be allocated to the manufacturing area, and the corresponding depreciation and amortization.

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

Research and development expenses comprise the costs for research and product as well as process development, insofar as these are not capitalized.

The item "General administrative expenses" 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 fixed assets, allowances on trade receivables, and extraordinary expenses. Income from grants related to expenses are 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 presented as follows:

Raw Materials and Supplies

This item consists of the following:

	2019 € in K	2018 € in K
Expenses for raw materials and supplies and for purchased goods (incl. changes in inventories)	346,025	303,679
Cost of purchased services	127,500	102,074
	473,525	**405,753**

Employee Benefits Expense

This item can be broken down as follows:

	2019 € in K	2018 € in K
Wages and salaries	496,151	431,958
Social security	103,012	86,036
Expenses for retirement benefits and pensions	9,866	9,297
	609,029	**527,291**

11. Other Operating Income and Expenses

	2019 € in K	2018 € in K
Currency translation gains	13,021	13,323
Income from the decrease in allowances for bad debts	1,301	1,346
Income from grants	1,101	4,502
Extraordinary income	0	37,747
Other income	7,521	3,754
Other operating income	**22,944**	**60,672**
Extraordinary expenses	–28,416	–39,418
Currency translation losses	–12,440	–13,660
Allowances for bad debts	–4,735	–3,257
Other expenses	–10,370	–7,061
Other operating expenses	**–55,961**	**–63,396**
Other operating income and expenses	**–33,017**	**–2,724**

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 is sufficiently reliable indication that the necessary prerequisites are met.

The extraordinary items of fiscal 2018 and 2019 were essentially for various strategic Group projects as well as integration and acquisition costs.

Extraordinary income for fiscal 2018 essentially included the effects from the changes in the alliance with Lonza in the cell culture media business. In this case, the liability for the future purchase price was to be released; at the same time, intangible assets were to be derecognized as well.

12. Financial Result

	2019 € in K	2018 € in K
Interest and similar income	341	499
- of which from affiliated companies	170	189
Income from derivative financial instruments	4,388	4,470
Other financial income	4,669	2,694
Financial income	**9,398**	**7,663**
Interest and similar expenses	–14,682	–13,388
Expenses for derivative financial instruments	–12,794	–9,347
Interest for pensions and other retirement benefits	–1,268	–1,126
Other financial charges	–13,140	–11,722
Financial expenses	**–41,885**	**–35,582**
	–32,487	**–27,919**

The other financial expenses and income cover effects from discount reversals and evaluation of loans and other financial liabilities denominated in foreign currencies. The other financial charges also include the effect from the adjustment of the liability in connection with the acquisition of AllPure phantom units (see Note 31).

13. Income Taxes

	2019 € in K	2018 € in K
Current income taxes	–87,365	–83,064
Deferred taxes	2,932	9,847
- of which from tax losses	–1,032	–6,154
- of which from temporary differences	3,964	16,001
	–84,433	**–73,217**

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 can contain adjusted amounts to cover any tax payments or refunds for years not yet assessed.

Considering 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 roughly 27%. The following table describes the differences between the tax expense to be expected and the income tax expenses reported for the particular financial year:

	2019 € in K	2018 € in K
Expected tax rate	**27%**	27%
Expected tax expense	−81,858	−73,088
Difference from the Group average income tax rate	13,233	8,686
Effects from intragroup dividends and other non-deductible expenses	−9,449	−7,819
Tax credits	4,111	1,217
Deductible temporary differences and tax losses not capitalized	−5,451	−4,781
Taxes from previous years and adjustments from the revised evaluation of the recoverability of deferred tax assets	−2,731	4,825
Withholding and similar taxes	−1,364	−990
Changes in tax rates	−741	−576
Other	−183	−691
	−84,433	**−73,217**
Effective tax rate	**27.8%**	**27.0%**

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 to be considered in the calculation of the average number of shares outstanding.

	2019	2018
Ordinary shares		
Basis for calculating basic earnings per ordinary share (net profit after non-controlling interest), € in K	78,244	70,538
Weighted average number of shares outstanding	34,212,224	34,212,224
Basic earnings per ordinary share in €	**2.29**	**2.06**
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 €	2.29	2.06
Preference shares		
Basis for calculating basic earnings per preference share (net profit after minority interest), € in K	78,503	70,805
Weighted average number of shares outstanding	34,176,068	34,176,068
Basic earnings per preference share in €	**2.30**	**2.07**
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 €	2.30	2.07

Notes to the Statement of Financial Position

15. Goodwill and Intangible Assets

Goodwill

	Goodwill € in K
Gross book values at Jan. 1, 2018	**653,929**
Currency translation	8,301
Acquisitions through business combinations	0
Gross book values at Dec. 31, 2018	**662,229**
Amortization and impairment losses at Jan. 1, 2018	**0**
Currency translation	0
Amortization and impairment losses in 2018	0
Amortization and impairment losses at Dec. 31, 2018	0
Net book values at Dec. 31, 2018	**662,229**
Gross book values at Jan. 1, 2019	**662,229**
Currency translation	5,398
Acquisitions through business combinations	37,418
Gross book values at Dec. 31, 2019	**705,045**
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	**705,045**

The item reported as goodwill in the amount of €705,045 K (2018: €662,229 K) is the capitalized difference in assets resulting from capital consolidation within the scope of business combinations. This amount also covers asset deals to some extent. The additions in fiscal 2019 are attributable to the acquisitions of Biological Industries and Sartonets Taiwan (see Note 8). Under IAS 36, goodwill may not be amortized on a scheduled basis, but rather must be tested annually for impairment.

Because of the integration of our businesses in the divisions of Bioprocess Solutions and Lab Products & Services 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 distributed to the segments as follows:

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Bioprocess Solutions	536,034	495,481
Lab Products & Services	169,011	166,748
	705,045	**662,229**

The impairment tests for fiscal 2019 were conducted as of November 30. 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 experiences 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 2023. 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 the emerging-market countries, as well as the currently ongoing paradigm shift towards 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 the fiscal years after 2023.

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

	2019		2018	
	Before tax	**After tax**	Before tax	After tax
Bioprocess Solutions	9.1%	7.3%	9.0%	7.2%
Lab Products & Services	9.7%	7.6%	9.9%	7.7%

In fiscal 2019, these impairment tests did not result in the recognition of impairment losses. Even realistic changes in the basic assumptions upon which measurement of the 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

	Patents, licenses, technologies and similar rights € in K	Brand names € in K	Customer relationships € in K	Capitalized development costs € in K	Payments on account € in K	Total € in K
Gross book values at Jan. 1, 2018	296,558	39,254	215,245	121,798	224	673,080
Currency translation	5,746	1,069	2,553	67	10	9,445
Acquisitions through business combinations	0	0	0	0	0	0
Capital expenditures	6,279	0	0	32,997	162	39,438
Disposals	–12,955	0	–11,804	–1,822	–2	–26,583
Transfers	511	–12	0	0	–135	363
Gross book values at Dec. 31, 2018	**296,140**	**40,311**	**205,994**	**153,040**	**258**	**695,744**
Amortization and impairment losses at Jan. 1, 2018	–88,526	–4,116	–94,979	–58,112	0	–245,733
Currency translation	–1,187	–116	–481	14	0	–1,770
Amortization and impairment losses in 2018	–31,442	–2,069	–23,031	–8,265	0	–64,807
Disposals	10,095	0	5,680	1,822	0	17,597
Transfers	–12	9	0	0	0	–3
Amortization and impairment losses at Dec. 31, 2018	–111,073	–6,292	–112,811	–64,542	0	–294,717
Net book values at Dec. 31, 2018	**185,067**	**34,020**	**93,183**	**88,499**	**258**	**401,027**

	Patents, licenses, technologies and similar rights € in K	Brand names € in K	Customer relationships € in K	Capitalized development costs € in K	Payments on account € in K	**Total € in K**
Gross book values at Jan. 1, 2019	296,140	40,311	205,994	153,040	258	695,744
Currency translation	3,362	463	3,155	794	4	7,778
Acquisitions through business combinations	101	0	2,000	0	0	2,101
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	**308,628**	**40,775**	**211,394**	**193,626**	**214**	**754,636**
Amortization and impairment losses at Jan. 1, 2019	–111,073	–6,292	–112,811	–64,542	0	–294,717
Currency translation	–1,104	–63	–1,297	–192	0	–2,656
Amortization and impairment losses in 2019	–25,713	–1,898	–17,199	–14,821	0	–59,630
Disposals	4,811	0	0	0	0	4,811
Transfers	468	0	0	263	0	730
Amortization and impairment losses at Dec. 31, 2019	–132,611	–8,252	–131,307	–79,292	0	–351,463
Net book values at Dec. 31, 2019	**176,016**	**32,523**	**80,087**	**114,333**	**214**	**403,173**

Intangible assets acquired are stated at cost less the accumulated, regular amortization that is 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 that were allocated to the staff involved in R&D, to raw materials and supplies, outside services and to directly attributable overhead. Internally generated intangible assets are amortized over their useful life on a straight-line basis.

If an internally generated intangible asset may not 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 15 years
Capitalized development expenses	4 to 6 years
Brand name	10 years to an indefinite period

The brand name acquired in the Stedim transaction (book value: €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 "Sartorius Stedim Biotech" brand, a separate measurement of relevant cash flows is not possible, 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.

For the remaining brand names acquired through the business combinations, their limited periods of useful life are estimated as up to 20 years on average.

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

In fiscal 2019, the development costs of €40,059 K (2018: €32,997 K) were recognized as assets.

In fiscal 2019, impairment expenses of €3.0 million were recognized and related mainly to capitalized development costs (2018: €8.5 million). Impairments in the prior reporting year essentially concerned technologies and customer relationships of the BPS Division as well as software. The disposals in 2018 include the assets derecognized as a result of the contractual changes in the business with cell culture media.

16. Property, Plant and Equipment

	Land, buildings and improvements € in K	Technical machinery and equipment € in K	Factory and office equipment and other equipment € in K	Payments on account and construction in progress € in K	Total € in K
Gross book values at Jan. 1, 2018	305,217	199,558	159,460	122,949	787,184
Currency translation	639	333	127	3,712	4,810
Acquisitions through business combinations	0	0	0	0	0
Capital expenditures	27,033	13,570	15,659	142,071	198,333
Disposals	−4,448	−10,211	−16,861	−386	−31,906
Transfers	5,718	12,634	1,432	−20,185	−402
Gross book values at Dec. 31, 2018	**334,160**	**215,884**	**159,816**	**248,160**	**958,020**
Depreciation and impairment losses at Jan. 1, 2018	−71,991	−112,330	−94,862	−9	−279,191
Currency translation	−28	−471	−131	0	−630
Amortization and impairment losses in 2018	−12,943	−16,449	−19,174	0	−48,567
Disposals	4,090	9,024	16,476	0	29,590
Transfers	−18	499	−95	0	386
Depreciation and impairment losses at Dec. 31, 2018	−80,890	−119,727	−97,786	−8	−298,412
Net book values at Dec. 31, 2018	**253,269**	**96,157**	**62,030**	**248,152**	**659,608**

	Land, buildings and improvements € in K	Technical machinery and equipment € in K	Factory and office equipment and other equipment € in K	Payments on account and construction in progress € in K	**Total € in K**
Gross book values at Jan. 1, 2019	334,160	215,884	159,816	248,160	958,020
Less assets from finance leases	−23,716	−380	−2,911	0	−27,006
Gross book values at Jan. 1, 2019	310,444	215,504	156,905	248,160	931,014
Currency translation	1,325	1,473	616	2,324	5,738
Acquisitions through business combinations	3,185	1,431	1,409	0	6,025
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**	**250,901**	**189,517**	**109,505**	**1,090,504**
Depreciation and impairment losses at Jan. 1, 2019	−80,890	−119,727	−97,786	−8	−298,412
Less depreciation of assets from finance leases	6,417	380	2,162	0	8,959
Depreciation and impairment losses at Jan. 1, 2019	−74,474	−119,347	−95,623	−8	−289,453
Currency translation	−456	−810	−449	0	−1,714
Depreciation 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	−128,473	−112,362	−175	−332,532
Net book values at Dec. 31, 2019	**449,059**	**122,428**	**77,155**	**109,330**	**757,972**
Nettobuchwerte Nutzungsrechte per 31.12.2019	59,056	2,368	10,214	0	71,638
Gesamtbuchwert Sachanlagen per 31.12.2019	**508,115**	**124,796**	**87,370**	**109,330**	**829,610**

The item "Property, plant and equipment" is reported at cost and, if subject to depreciation, is depreciated as scheduled. 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 fixed 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 included in the statement of profit or loss according to use of the assets 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 qualified 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

Lease Accounting in 2019 According to IFRS 16

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 in relation to 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 extends typically over three to five years.

Furthermore, at some sites, the Group has long-term leases of buildings, which are negotiated and managemed 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.

For lessees, IFRS 16 eliminates the differentiation between finance and operating leases. This Standard introduces a standardized accounting model according to which leases are generally to be recognized on the lessee's balance sheet. A lessee recognizes a right-of-use asset as well as a liability resulting from the lease, 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 impairments. 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 the interest expenses and reduced by the 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".

Accounting for the lessor is comparable to that of the previous standard IAS 17; i.e., lessors continue to classify leases as finance or operating leases. The transition method and the effects from the initial applica-tion of IFRS 16 on the consolidated financial statements for the period of 2019 are described below.

Initial Application of IFRS 16, Leases in 2019

The Group has initially applied IFRS 16 in the 2019 reporting period. Accordingly, the date of initial application is January 1, 2019. In accordance with IFRS 16, the Group applies this Standard using the modified retrospective transition approach. Therefore, the cumulative effect of initially applying the standard is recognized as of January 1, 2019. There was no material transition effect to be recognized in retained earnings. In line with the transition regulations, the Group does not adjust its prior-year figures. The significant accounting policies and disclosures for the comparative period are disclosed separately at the end of this Notes section.

The Group is mainly affected by the new standard in its role as a lessee as its lessor activities are not material. For leases that were previously classified as operating leases under IAS 17, the Group recognized a lease liability on January 1, 2019. The liabilities were measured at the present value of the remaining lease payments discounted using the respective incremental borrowing rate of the Group as of the date of initial application. The weighted average incremental borrowing rate was 2.1%. On the same date, a right-of-use asset was recognized for each of these leases, with the asset amount equal to the corresponding lease liability and adjusted for any prepaid or deferred lease payments. At the date of initial application, initial direct costs were not taken into consideration when the right-of-use assets were measured. Furthermore, the Group did not perform an impairment review, but relied on its assessment of whether a lease was onerous in ac-cordance with IAS 37 immediately before the date of initial application of IFRS 16. On this basis, no adjust-ments were necessary on the date of initial application.

No lease liabilities and no right-of-use assets were recognized in the course of the initial application of IFRS 16 for short-term leases and leases of low value assets that were previously classified as operating leases. Instead, in accordance with this Standard, the lease payments for these leases are recognized as an expense on a straight-line basis over the lease term. Regardless of their original lease term, leases for which the remaining lease term did not exceed 12 months from the date of initial application onwards were generally not considered lease liabilities and right-of-use assets. Accounting for such leases follows the general accounting rule for short-term leases. The remaining lease terms of the leases were determined based on the knowledge of the Group as of January 1, 2019.

For leases that were previously classified as finance leases under IAS 17 and, thus, already reflected on the Group's statement of financial position, the carrying amounts of the corresponding assets and liabilities as of December 31, 2018, were considered carrying amounts of the right-of-use assets and lease liabilities at the date of initial application of IFRS 16, without any adjustments.

In the course of the transition to IFRS 16, right-of-use assets of €68 million (including €18 million related to leases previously classified as finance leases), as well as lease liabilities of €70 million (including €19 million related to leases previously classified as finance leases) were recognized as of January 1, 2019. In addition, lease receivables from subleases were recognized at around €1 million. As expected, the new Standard resulted in an increase in total assets of around €51 million on the date of initial application. This corresponds to a reduction in the equity ratio of a little more than one percentage point.

Based on the financial commitments from operating leases according to IAS 17 as of December 31, 2018, reconciliation with the opening balance of the lease liabilities as of January 1, 2019, is presented in the table below.

	In millions of €
Financial obligations from operating lease commitments according to IAS 17 as of December 31, 2018	**65**
- of which short-term leases	–2
- of which leases of low value assets	–5
Other	–4
Relevant financial obligations from operating leases (undiscounted)	**54**
Discounting	–3
Relevant financial obligations from operating leases (discounted)	**51**
Carrying amount of lease liabilities from finance leases in accordance with IAS 17 as of December 31, 2018	**19**
Carrying amount of lease liabilities in accordance with IFRS 16 as of January 1, 2019	**70**

As of December 31, 2019, lease liabilities stood at €74 million. This includes lease liabilities from finance leases existing as of December 31, 2018, amounting to €17 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 the date of initial application, as well as of December 31, 2019, and the main changes during the period are shown in the table below. Assets of around €16 million related to finance leases that already existed as of December 31, 2018, are included in these right-of-use assets reported as of December 31, 2019.

	Land, buildings and improvements € in K	Technical machinery and equipment € in K	Factory and office equipment and other equipment € in K	**Total € in K**
Gross book values at Jan. 1, 2019	63,899	2,538	10,450	76,887
Currency translation	842	21	81	945
Acquisitions through business combinations	389	201	75	666
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	**76,607**	**3,274**	**15,505**	**95,386**
Depreciation and impairment losses at Jan. 1, 2019	–6,417	–380	–2,162	–8,959
Currency translation	–119	–3	–5	–127
Depreciation and impairment losses in 2019	–12,073	–899	–5,287	–18,259
Disposals	906	600	2,240	3,746
Transfers	152	–224	–76	–149
Depreciation and impairment losses at Dec. 31, 2019	–17,551	–906	–5,291	–23,748
Net book values at Dec. 31, 2019	**59,056**	**2,368**	**10,214**	**71,638**

The table below shows the interest expenses presented in the financial result, the total cash outflows for the existing leases and the expenses that were 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.

	2019 € in K
Interest expenses for leases	2,493
Expenses for short-term leases	4,054
Expenses for leases of low value assets	2,917
Total cash outflow for leases	27,293

Lease Accounting in 2018 According to IAS 17

Following the transition approach described above, IAS 17 is the standard applied for lease accounting in 2018. According to IAS 17, both a lessee and a lessor classify a lease as either an operating or a finance lease. A finance lease is a lease that transfers substantially all the risks and rewards incidental to own-ership of an asset. All other leases are designated as operating leases.

If the Group is a lessee in a finance lease, the amount equal to the fair value of the leased property or, if lower, the present value of the minimum lease payments is recognized as an asset on the statement of financial position and simultaneously recognized as a financial liability. The minimum lease payments essentially consist of a finance charge and a reduction of the outstanding liability, which are measured according to the effective interest method. A leased asset is depreciated on a straight-line basis over the period of its expected useful life or over the shorter lease term.

For an operating lease, the lease installments to be paid by the lessee are recognized as expenses over the lease term, and the lease payments received by the lessor are recognized as income, respectively. The leased asset continues to be recognized on the lessor's statement of financial position as property, plant and equipment.

Capitalized property, plant and equipment for assets held under finance leases amounted to €18,047 K as of December 31, 2018. The cost of acquisition of these assets totaled €27,006 K. In fiscal 2018, rental payments amounting to €22.1 million were made for assets leased under operating leases.

The Group's financial obligations from operating lease commitments (future minimum lease payments under non-cancellable leases), were as follows:

	Dec. 31, 2018 € in K
Operating leases	
-due within one year	22,068
-due within 2 to 5 years	33,788
-due thereafter	9,472

18. Deferred Taxes

	Deferred tax assets		Deferred tax liabilities	
	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K	**Dec. 31, 2019 € in K**	Dec. 31, 2018 € in K
Other intangible assets	313	3,277	86,880	85,503
Tangible assets	0	0	9,466	7,575
Inventories	14,080	11,946	0	0
Receivables and other current assets	3,553	0	0	5,005
Provisions	12,264	9,008	0	0
Liabilities	7,492	4,936	7,193	645
Gross amount	**37,701**	**29,166**	**103,539**	**98,728**
Taxable losses carried forward	6,883	7,790	0	0
Interest carry-forwards	2,674	1,068	0	0
Tax on non-distributed earnings of subsidiaries	0	0	2,350	2,375
Offset	–21,491	–17,419	–21,491	–17,419
	25,767	**20,606**	**84,397**	**83,684**

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 an asset is realized or a liability is settled. Changes in deferred tax assets and liabilities are reflected in income taxes in the statement of profit or loss. Exceptions to this are changes that must 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 which 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 €142 million (2018: around €74 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 approx. €30 million (2018: approx. €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, €12.6 million can still be carried forward for a limited time (2018: €10.4 million) and of this carryforward amount, €12.6 million will expire in the next five years (2018: €10.4 million).

Deferred tax assets of approximately €1 million (2018: approx. €1 million) relate to companies that reported losses in this year under review or in the earlier reporting year. These losses carried forward were reported as assets because it is assumed that taxable profits would 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 companies of the Group in the amount of €11 million (2018: €12 million). Deferred tax assets of €2.7 million were considered for these carry-forwards in the reporting year (2018: €1.1 million).

Deferred Tax Liabilities

The deferred tax liabilities in connection with intangible assets essentially refer 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 €1,017 million (2018: €825 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 might be incurred.

In fiscal 2019, as in the previous years, a tax effect was yielded by reporting derivative financial instruments recognized outside the statement of profit or loss according to IFRS 9 rules for hedge accounting, and the deferred tax assets from recognition of actuarial gains and losses were recognized in other comprehensive income. Likewise, the amount of current income taxes incurred by net investment in a foreign operation was recognized in other comprehensive income. The income taxes recognized in other comprehensive income are disclosed in the following table:

	2019 € in K	2018 € in K
Cash flow hedges	1,056	4,344
Remeasurements of the net defined benefit liability	3,328	–733
Net investment in a foreign operation	–1,998	–5,314
Total	**2,386**	**–1,703**

The change in deferred tax assets and liabilities in fiscal years 2018 and 2019 is as follows:

	Deferred tax assets € in K	Deferred tax liabilities € in K
Balance at Jan. 1, 2018	16,242	86,046
Currency translation	117	1,535
Change in the scope of consolidation	0	0
Recognized in profit or loss in 2018	4,915	–4,932
Recognized in other comprehensive income	–668	1,035
Balance at Dec. 31, 2018	**20,606**	**83,684**

	Deferred tax assets € in K	**Deferred tax liabilities € in K**
Balance at Jan. 1, 2019	20,606	83,684
Currency translation	–22	962
Change in the scope of consolidation	514	400
Recognized in profit or loss in 2019	2,687	–244
Recognized in other comprehensive income	1,981	–405
Balance at Dec. 31, 2019	**25,767**	**84,397**

19. Inventories

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Raw materials and supplies	115,439	97,142
Work in progress	119,608	84,040
Finished goods and merchandise	173,429	137,107
Payments on account	3,346	3,408
	411,821	**321,695**

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Gross amount of inventories	437,289	345,237
Write-downs	–25,468	–23,541
Net amount of inventories	**411,821**	**321,695**

Raw materials and supplies, including merchandise, are reported under "Inventories" at average cost. On principle, finished goods and work in progress are reported at cost of conversion. This cost includes direct costs, which can be allocated to these materials, and the appropriate portion of production and materials han-dling overhead, general administrative expenses and fixed assets at normal depreciation and | or amortization rates, provided that these expenses are caused by production.

Inventories must be measured at the lower amount 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 § 71, Subsection 1, No. 8, of the German Stock Corporation Law (AktG). According to 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, 831,944 ordinary shares were repurchased at an average price of €11.27 and 840,983 preference shares at an average price of €7.98 on the whole. In December 2015, 25,000 ordinary shares and 25,000 preference shares were issued to CEO and Executive Board Charmain Dr. Joachim Kreuzburg pursuant to his 2014 remuneration agreement.

Following the stock split carried out in 2016, 3,227,776 ordinary shares and 3,263,932 preference shares remain as treasury stock as part of share capital, thus constituting a proportion of €6,492 K (8.7%).

No treasury shares were purchased in fiscal 2019.

21. Reserves

Capital Reserves

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

In fiscal 2019, capital reserves rose by €530 K (2018: €504 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 to be transferred to other comprehensive income as of the reporting date stands at €2,183 K (2017: 5,704 K).

Pension Reserves

Actuarial gains and losses from defined benefit plan commitments, including their respective tax effects, are included in the pension reserves.

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 capital shares and 85% of the voting rights in this subgroup. 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%)

Biological Industries and Sartorius Thailand were consolidated due to contractual arrangements to ensure control purposes.

	2019 € in K	2018 € in K
Cumulative non-controlling interest as of Dec. 31		
Sartorius Stedim Biotech	254,052	222,530
Other	16,758	10,292
	270,810	**232,822**
Profit or loss allocated to non-controlling interest		
Sartorius Stedim Biotech	60,379	53,553
Other	1,617	2,582
	61,996	**56,135**
Dividends paid to non-controlling interest		
Sartorius Stedim Biotech	13,526	10,916
Other	1,335	783
	14,861	**11,699**

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

Condensed Statement of Financial Position

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Non-current assets	1,186,619	1,018,932
Current assets	633,802	552,529
	1,820,421	**1,571,461**
Equity	1,177,629	1,044,874
Non-current liabilities	215,447	144,612
Current liabilities	427,345	381,975
	1,820,421	**1,571,461**

Condensed Statement of Profit or Loss and Other Comprehensive Income

	2019 € in K	2018 € in K
Sales revenue	1,440,570	1,212,152
Profit before tax	317,606	284,549
Income taxes	–81,424	–74,590
Net profit for the period	**236,182**	**209,959**
Other comprehensive income after tax	1,334	–1,342
Total comprehensive income	**237,516**	**208,617**

Condensed Statement of Cash Flows

	2019 € in K	2018 € in K
Cash flow from operating activities	**310,129**	**227,289**
Cash flow from investing activities before acquisitions	–184,901	–176,540
Cash flow from financing activities	–122,159	–59,594
Net increase | decrease in cash and cash equivalents	**3,070**	**–8,845**
Cash and cash equivalents at the beginning of the period	23,975	32,552
Net effect of currency translation on cash and cash equivalents	598	268
Cash and cash equivalents at the end of the period	**27,643**	**23,975**

For information about Biological Industries, see also Note 8.

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 2019, an amount of €32.0 million was recognized for defined contribution plans (2018: €30.3 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 the IAS 19 Standard. The actuarial losses, which were transferred to the pension reserves, essentially resulted from a change in the discount rate and totaled - €39,646 K (2018: - €28,020 K).

An amount of €59,512 K (2018: €52,316 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 with assets. A substantial portion of these provisions relates to Sartorius AG. In this case, the obligations measured pertain to the General Pension Plan ("Allgemeine Versorgungsordnung") for employees whose employment commenced prior to January 1, 1983, on the one hand. On the other, individual commitments to active and former Executive Board members and executives exist.

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

	2019	2018
Discount rate	0.89%	1.81%
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:

	2019	2018
Discount rate	0.70%	1.80%
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:

	2019 € in K	2018 € in K
Service cost	2,147	1,776
Net interest cost	1,093	991
Components of defined benefit costs recognized in profit or loss	**3,240**	**2,767**
Return on plan assets (excl. interest)	–12	–56
Actuarial gains | losses	11,638	–636
Components of defined benefit costs recognized in other comprehensive income	**11,626**	**–692**
Total defined benefit costs	**14,867**	**2,075**

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:

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Present value of obligations	91,369	76,658
Fair value of the plan assets	14,818	11,935
Net liability	**76,552**	**64,724**

Defined Benefit Obligation

	2019 € in K	2018 € in K
Present value of obligations as of Jan. 1	**76,658**	**74,312**
Current service cost	2,541	2,262
Past service cost	–394	–485
Interest cost	1,268	1,126
Actuarial gains | losses	11,621	–783
Currency translation differences	450	386
Retirement benefits paid in the reporting year	–2,764	–2,221
Employer contributions	290	323
Employee contributions	357	261
Contributions by the plan participants	1,286	1,466
Other changes	56	14
Present value of obligations as of Dec. 31	**91,369**	**76,658**

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

	2019 € in K	2018 € in K
Experience adjustments	616	325
Changes in demographic assumptions	–486	762
Changes in financial assumptions	11,491	–1,870
Total	**11,621**	**–783**

Plan Assets

	2019 € in K	2018 € in K
Plan assets at Jan. 1	**11,935**	**9,367**
Interest income	175	135
Return on plan assets (excl. interest)	12	56
Actuarial gains | losses	–17	–148
Group contribution & payments	–946	–887
Employee contributions	357	261
Currency translation differences	283	279
Employer contributions	1,734	1,406
Contributions by the plan participants	1,286	1,466
Other changes	0	0
Plan assets as of Dec. 31	**14,818**	**11,935**

Composition of Plan Assets

Plan assets essentially consist of insurance contracts with insurance companies in Germany and Switzerland. An amount of €3.6 million (2018: €2.4 million) is held by local banks as securities for a subsidiary 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 basically arise, 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, 2019 (a positive sign in front of the number means an increase in the obligation):

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

Present value of the defined benefit obligations for the year ended December 31, 2018:

Demographic assumptions		
Change in life expectancy	–1 year	+1 year
Effect	–2,187	2,207
Financial assumptions		
Change in discount rate	–100 bps	+100 bps
Effect	12,305	–9,719
Change in future salary increase	–50 bps	+50 bps
Effect	–1,011	1,070
Change in future pension increase	–25 bps	+25 bps
Effect	–1,727	1,809

The sensitivity analysis presented above might not be representative of the actual change in the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another. Furthermore, the present value of the defined benefit obligation has been 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:

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
<1 year	3,373	3,059
1-5 years	14,918	14,300
6-10 years	21,998	19,909
>10 years	120,038	107,489

The weighted average duration of the defined benefit obligations is 16.7 years (2018: 15.7 years).

For fiscal 2020, payments of €4.4 million for defined benefit plan commitments are expected (2019: €3.5 million). These cover contributions to plan assets and payment of retirement benefits.

24. Other Non-Current Provisions

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

Restructuring provisions are set up 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

	Payments to employees on early retirement plan € in K	Other € in K	Total € in K
Balance at Jan. 1, 2018	4,368	3,377	7,746
Currency translation	3	117	120
Consumption	–2,079	–82	–2,161
Reversals | Utilization	–7	–22	–29
Additions	1,802	342	2,144
Balance at Dec. 31, 2018	**4,087**	**3,732**	**7,820**

	Payments to employees on early retirement plan € in K	Other € in K	**Total € in K**
Balance at Jan. 1, 2019	4,087	3,732	7,820
Currency translation	4	74	78
Consumption	–2,006	–351	–2,357
Reversals | Utilization	0	–84	–84
Additions	2,247	734	2,980
Balance at Dec. 31, 2019	**4,332**	**4,105**	**8,437**

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 company anniversaries are generally granted to employees who have accumulated seniorities of 20, 25, 30 and 40 years, 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 interest rate for employees on the early retirement plan is 0.0% (2018: 0.1%) and for provisions accrued for company anniversaries 0.54% (2018: 1.45%). In fiscal 2018 and 2019, the effect from compounding non-current provisions, including the effects of changes in the interest rate, were immaterial.

Current Provisions

	Warranties € in K	Other € in K	Total € in K
Balance at Jan. 1, 2018	6,628	6,723	13,351
Currency translation	21	–16	6
Consumption	–1,068	–1,490	–2,558
Reclassifications	0	–187	–187
Reversals	–2,886	–797	–3,683
Additions	5,589	3,743	9,332
Balance at Dec. 31, 2018	**8,284**	**7,976**	**16,260**

	Warranties € in K	Other € in K	**Total € in K**
Balance at Jan. 1, 2019	8,284	7,976	16,260
Currency translation	79	18	97
Consumption	–631	–1,791	–2,422
Reclassifications	0	0	0
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**

Provisions for warranties cover expected return of products, replacement deliveries and repairs. Such provisions are set up to cover individual risks, provided that their occurrence is more probable than their non-occurrence, as well as to cover general warranty risks based upon past experience.

The other provisions essentially include those for pending losses on onerous contracts and for uncertain obligations concerning employee benefits.

25. Other Liabilities

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Tax and social security	26,966	24,670
Other	30,281	30,173
Other liabilities	**57,246**	**54,842**

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. Except for derivative financial instruments, 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 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 for 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 (so-called "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 includes a so-called 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 special 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, 2019. No impairment is recognized for these financial assets due to materiality considerations. As on the last balance sheet date, for the remaining financial assets that are measured at amortized cost, no impairment is recognized as of December 31, 2019, for the 12-month expected credit losses, given the Group's immaterial historical losses.

Derivatives are measured at fair value determined according to the mark-to-market method in which recognized mathematical methods are used. The fair values are based on the market data available at the time the value of these derivatives is calculated and reflect the estimates of the market conditions at the end of the year. Those instruments that are not designated as hedging instruments and for which no hedge accounting is applied, are categorized as held for trading. Changes of 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 procurement of materials, 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 deposits in banks. Cash and cash eqivalents are measured at cost. As of the reporting date on December 31, 2019, cash and cash equivalents stood at around €53,918 K (2018: €45,164 K).

28. Current Trade and Other Receivables

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Trade receivables from third parties	293,229	296,024
Amounts due from customers for contract work[1]	8,530	3,902
Receivables from non-consolidated affiliates	537	7,438
Trade receivables	**302,296**	**307,364**

[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 terms. 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, 2019, is reduced by €37.1 million as result of a sale of trade receivables because substantially all risks and rewards in relation to the financial assets sold were transferred to the buyer.

Impairment losses on trade and other receivables are recognized using separate allowance accounts. For a description on the calculation of these allowances, see Note 39.

29. Other Financial Assets

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Derivative financial instruments	2,164	3,350
Loan receivables from affiliates	7,045	3,728
Miscellaneous other financial assets	11,963	22,178
Other financial assets	**21,172**	**29,256**

The book value 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

	Balance at Dec. 31, 2019 € in K	Of which non-current € in K	Balance at Dec. 31, 2018 € in K	Of which non-current € in K
Loans and borrowings	991,094	822,157	985,852	878,538
Lease liabilities	74,108	55,421	18,772	16,108
	1,065,202	**877,578**	**1,004,624**	**894,646**

A major pillar of financing for the Sartorius Group is the syndicated credit line of €400 million concluded in December 2014 with a maturity term of up to 2021. Further elements of the company's financing are various note loans ("Schuldscheindarlehen") placed in 2012, 2016 and 2017, respectively, with an average outstanding loan balance of around €570 million and original maturities of up to 10 years. Moreover, the company has several current and non-current loans in place that total around €300 million and are being used in part for expansion of production capacities.

These predominantly long-term financing instruments are supplemented by various working capital loans and guaranteed credit lines totaling around €100 million.

The increase of the lease liabilities in 2019 primarily resulted from the initial application of IFRS 16 (see Note 17).

31. Other Non-Current Liabilities

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Other liabilities	54,546	21,913
Total	**54,546**	**21,913**

The other non-current liabilities mainly include the liabilities in connection with the possible acquisition of the non-controlling interests in Biological Industries due to the the current holder's put options of €41.3 million (see Note 8 for details) as well as the non-current portion of the liability for phantom stock units that was incurred in connection with the acquisition of the non-controlling interests in AllPure Technologies, LLC (€5.8 million).

The non-current portion of the liability in relation to AllPure depends on the future sales. Given its ongoing positive development, the expected payments are determined by considering future revenue at an annual growth rate of about 20% on average applied to a higher base achieved in the reporting year. Due to the sales achieved in the reporting year and the reassessment of expectations, the total liability has increased by about €2.5 million. The effect is recognized in profit or loss. The portion of the liability that is due in 2020 is reported under "Other current financial liabilities" as of December 31, 2019 (see

Note 33). An increase (decrease) in sales revenue by 10% in each of the following years would lead to an increase (decrease) in the liability by €0.6 million.

In the previous year, other non-current liabilities included the liability in connection with the non-controlling interest of Sartorius Israel. From the Group perspective, this liability has been eliminated in the course of the acquisition of Biological Industries (see Note 8).

32. Trade Payables

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Payments received on account of orders[1]	84,008	52,987
Trade payables to third parties	139,678	120,393
Payables to affiliated companies	372	74
Trade payables	**224,058**	**173,455**

[1] Contract liabilities according to IFRS 15 (see Note 9).

33. Other Current Financial Liabilities

	Dec. 31, 2019 € in K	Dec. 31, 2018 € in K
Derivative financial instruments	1,105	1,732
Other	50,573	23,343
Other financial liabilities	**51,678**	**25,075**

"Other liabilities" as of December 31, 2019, include the current portion of the liabilities in connection with the possible acquisition of the non-controlling interests in Biological Industries (€19.7 million) as well as the AllPure phantom stock units (€5.7 million; see Note 31).

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, 2019, and as of December 31, 2018:

	Category acc. to IFRS 9	**Carrying amount Dec. 31, 2019 € in K**	**Fair value Dec. 31, 2019 € in K**	Carrying amount Dec. 31, 2018 € in K	Fair value Dec. 31, 2018 € in K
Investments in non-consolidated subsidiaries	n/a	11,675	11,675	13,449	13,449
Financial investments	Equity instruments at fair value through profit or loss	4,414	4,414	2,124	2,124
Financial investments	Debt instruments at fair value through profit or loss	10,707	10,707	7,789	7,789
Financial assets	Measured at amortized cost	3,864	3,864	5,419	5,419
Financial assets (non-current)		**30,660**	**30,660**	**28,781**	**28,781**
Amounts due from customers for contract work	n/a	8,530	8,530	3,902	3,902
Trade receivables	Measured at fair value through other comprehensive income	38,269	38,269	0	0
Trade receivables	Measured at amortized cost	255,497	255,497	303,463	303,463
Trade receivables		**302,296**	**302,296**	**307,364**	**307,364**
Receivables and other assets	Measured at amortized cost	19,008	19,008	25,906	25,906
Derivative financial instruments	Held for trading	692	692	0	0
Derivative financial instruments in hedge relationships*	n/a	1,472	1,472	3,350	3,350
Other financial assets (current)		**21,172**	**21,172**	**29,256**	**29,256**
Cash and cash equivalents	**Measured at amortized cost**	**53,918**	**53,918**	**45,164**	**45,164**
Loans and borrowings	Financial liabilities at cost	991,094	1,000,305	985,852	1,001,758
Trade payables	Financial liabilities at cost	140,050	140,050	120,467	120,467
Trade payables | payments received for orders	n/a	84,008	84,008	52,987	52,987
Trade payables		**224,058**	**224,058**	**173,455**	**173,455**
Derivative financial instruments in hedge relationships*	n/a	1,105	1,105	1,732	1,732
Other financial liabilities	Financial liabilities at cost	105,120	104,966	45,256	45,240
Other financial liabilities		**106,225**	**106,071**	**46,988**	**46,972**

* The amounts each contain the non-designated part of derivatives of a total of -€1.8 million (2018: -€4.1 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 calculated on the basis of prices quoted on active markets for identical assets and liabilities. In Level 2, financial instruments are calculated on the basis of input factors, which are derivable from observable market data, or on the basis of market prices for similar instruments. Level 3 financial instruments are calculated on the basis of input factors that cannot be derived from observable market data.

The financial instruments to be 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.

The fair values to be 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 market interest rate 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 on account of their predominantly short-term maturity. The maximum default risk to be disclosed 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	**2019 € in K**	2018 € in K
Financial assets at amortized cost	122	3,114
Financial assets and liabilities at fair value through profit or loss	–3,528	1,628
Financial liabilities at cost	–6,566	–14,086

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 is primarily comprised of changes in the fair value of derivative financial instruments as well as of interest income and expenses for these instruments.

The net result of liabilities measured at amortized cost mainly consists of the effects of foreign currency translation as well as of the effect of the reassessment of the AllPure liability (see Note 31).

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:

	2019 € in K	2018 € in K
Interest income	1,132	628
Interest expenses	–16,426	–14,704

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 and, furthermore, so are the cash and cash equivalents as well as 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 controlling are carried out by different staff members. Moreover, the Group's Internal Auditing Department regularly monitors the use of such financial instruments. Trading with derivative financial instruments is done 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 portion of sales revenue in foreign currency that remains after we have settled our costs, i.e., the net currency exposure, is hedged to a large extent (generally 70% to 80%) by derivative financial instruments. Our hedging strategy generally provides for hedging 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.

Using 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 exchange rate actually valid on this date. The profit or loss resulting from the difference between the current and the previously established exchange rate is generally measured as income or an 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. $170 million (2018: $177 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. €130 million for 2020.

In October 2019, the Group concluded a bridge loan agreement with BNP Paribas Fortis SA/NV to finance the announced potential acquisition of selected businesses of Danaher Life Science, which is on condition that Danaher acquires the GE Biopharma business and further subject to various regulatory approvals. This agreement provides the Sartorius Group with the financing needed at the time the acquisition is 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, 2018	Currency	Volume	Maturity	Fair value € in K
Forward contract	USD	177,000	2019	1,775
	USD	**177,000**		**1,775**
Forward contract	CHF	–3,000	2019	4
	CHF	**–3,000**		**4**
Forward contract	JPY	1,500,000	2019	–429
	JPY	**1,500,000**		**–429**
Forward contract	GBP	7,300	2019	63
	GBP	**7,300**		**63**
Forward contract	CAD	10,000	2019	204
	CAD	**10,000**		**204**

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

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 recognized in the statement of profit or loss on the reporting date.

If the derivative financial instruments serve to hedge against cash flow risk arising from exchange rate risks and a qualified hedging relationship exists based on the criteria of IAS 9, the valuation adjustments for the portion determined to be effective hedges 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 included in profit or loss 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 ineffectivenss 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, 2018 € in K	Carrying amount (liabilities) Dec. 31, 2018 € 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	6,648	851	100%	5,797	5,797	177,000	134,000	43,000	1.14
CHF	5	0	100%	5	5	3,000	3,000	0	1.13
CAD	238	0	100%	238	238	10,000	8,000	2,000	1.52
JPY	0	421	100%	–421	–421	1,500,000	800,000	700,000	130.36
GBP	86	0	100%	86	86	7,300	7,300	0	0.90

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%	1,976	1,976	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

On the statement of financial position, hedging instruments with a positive market value are disclosed in the items "Financial assets (non-current)" and in the "Other financial assets (current)," while such instruments with a negative market value are reported in the items "Other financial liabilities (non-current)" and "Other financial liabilities (current)."

Concerning the exchange rate of the U.S. dollar to the euro, the following sensitivities provide the estimated impacts: If the U.S. dollar would have depreciated 10% against the euro, equity would have been €13.7 million higher (2018: €20.0 million higher) than actually reported and annual profit before tax would have decreased by €3.9 million (2018: €0.7 million higher) from the currently disclosed figure. Vice versa, if the U.S. dollar would have appreciated 10% against the euro, the resulting impact on the annual profit before tax would have been €53.4 million (2018: - €0.8 million) and the impact on equity - €16.7 million (2018: - €13.1 million). These impacts include effects from the Group's intercompany loans, which are partially compensated for by effects of currency reserves for translation.

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, 2019, the Group predominantly obtained financing at fixed interest rates (approx. 70%) 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 carried out.

As of the reporting date of December 31, 2019, the volume of variable interest loans was around €270 million (2018: €300 million). For the financial instruments held as of the reporting date, a sensitivity analysis yields the following results: If the market interest rate would have been 1.0 percentage point higher, this would have had an impact on annual profit of -€3.1 million, resulting from the variable interest loans (2018: -€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 (2019: €1.2 million; 2018: €0.9 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:

	Carrying amount Dec. 31, 2018 € in K	Cash flow Dec. 31, 2018 € in K	< 1 year € in K	1 - 5 years € in K	> 5 years € in K
Loans and borrowings	985,852	1,035,266	114,561	603,967	316,738
Finance leases	18,772	35,359	2,983	10,238	22,138
Trade payables	120,467	120,467	120,467	0	0
Other liabilities (excluding derivatives)	45,256	50,513	31,138	14,662	4,712
Financial liabilities	**1,170,347**	**1,241,605**	**269,149**	**628,867**	**343,588**

	Carrying amount Dec. 31, 2019 € in K	**Cash flow Dec. 31, 2019 € in K**	< 1 year € in K	1 - 5 years € in K	> 5 years € in K
Loans and borrowings	991,094	1,033,577	177,714	701,863	154,000
Lease liabilities	74,108	90,215	20,022	41,390	28,803
Trade payables	140,050	140,050	140,050	0	0
Other liabilities (excluding derivatives)	105,120	106,644	50,573	34,882	21,188
Financial liabilities	**1,310,372**	**1,370,486**	**388,360**	**778,135**	**203,991**

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

	Carrying amount Dec. 31, 2018 € in K	Cash flow Dec. 31, 2018 € in K	< 1 year € in K	1 - 5 years € in K	> 5 years € in K
Gross fulfillment					
Forward contracts	**1,732**	**1,730**	**1,730**	**0**	**0**
Payment obligation			50,107	0	0
Payment claim			−48,377	0	0
Derivatives	**1,732**	**1,730**	**1,730**	**0**	**0**

	Carrying amount Dec. 31, 2019 € in K	**Cash flow Dec. 31, 2019 € in K**	< 1 year € in K	1 - 5 years € in K	> 5 years € in K
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**

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 with materially different amounts.

As in the previous year, there was no offsetting potential for financial instruments due to global netting agreements as of December 31, 2019 (German Master Agreement for Financial Futures).

Credit Lines

€ in K	Credit line at Dec. 31, 2018	<1 year	1 to 5 years	>5 years	Interest rate	Credit line used at Dec. 31, 2018	Credit line unused as of Dec. 31, 2018
Syndicated credit lines	400,000	0	400,000	0	Variable interest rate	80,000	320,000
Note loan (Schuldscheindarlehen)	582,000	10,500	291,500	280,000	variable and fixed	582,000	0
Bilateral loans	269,164	40,447	201,516	27,201	variable and fixed	269,164	0
Bilateral credit line	83,371	83,371	0	0	Variable interest rate	54,688	28,683
Total	**1,334,535**	**134,318**	**893,016**	**307,201**		**985,852**	**348,683**

€ in K	**Credit line at Dec. 31, 2019**	<1 year	1 to 5 years	>5 years	Interest rate	**Credit line used at Dec. 31, 2019**	**Credit line unused as of Dec. 31, 2019**
Syndicated credit lines	400,000	0	400,000	0	Variable interest rate	40,000	360,000
Note loan (Schuldscheindarlehen)	571,500	0	441,500	130,000	variable and fixed	571,500	0
Bilateral loans	303,758	91,852	194,254	17,652	variable and fixed	303,758	0
Bilateral credit line	96,330	96,330	0	0	Variable interest rate	75,837	20,494
Total	**1,371,588**	**188,182**	**1,035,754**	**147,652**		**991,094**	**380,494**

As explained in Note 30, the Group is essentially financed by a syndicated loan, note loans ("Schuldscheindarlehen") and bilateral loans. Under these 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 3.25 (3.75 in case of large acquisitions). In fiscal 2019, the Group achieved a ratio of net debt to underlying EBITDA of 2.0 compared with 2.4 in 2018. Based on the current information available, the company considers it unlikely that it would 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 market value and, to a low degree, to other contractual cash flows from debt securities.

Credit risk is controlled centrally for the Group by the Treasury Management unit. The creditworthiness of banks and financial institutions as counterparties of the Group are continuously monitored in order to recognize 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 the business volume, past experience with and the net worth and financial risk of these respective customers. Management responsible for these customers regularly reviews that their assigned customers comply with these credit limits. 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 in line with the contract modalities 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, 2019, and as of the previous reporting date on December 31, 2018:

Dec. 31, 2018 € in K	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	191,723	53,456	23,520	9,024	31,828	309,551
Gross carrying amount of contract assets	3,902	0	0	0	0	3,902
Impairment loss allowance	108	54	60	336	5,530	6,087

Dec. 31, 2019 € in K	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	199,355	34,193	22,370	9,938	37,596	303,452
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

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 with respect to trade receivables and contract assets are presented below:

€ in K	**2019**	2018
Valuation allowances at January 1	**–6,087**	**–5,080**
Net remeasurement of loss allowance recognized in profit or loss	–4,734	–3,257
Derecognition and consumption	323	859
Recoveries of amounts previously impaired	1,300	1,345
Currency effects	–27	46
Changes in scope of consolidation	–462	0
Valuation allowances at December 31	**–9,686**	**–6,087**

Impairment of Other Financial Assets

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 on December 31, 2019, 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 by definition, the impairment which 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, 2019, 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, the Sartorius Group had not been exposed to any significant risk of volatility in share prices; only vested portions of share-based payments are linked directly to the price development of Sartorius stock.

For details concerning further types of risk, please refer to the Group Management Report.

41. Share-based Payments

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

The so-called 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 monetary sum. 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. For further details, please refer to the Remuneration Report. 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, 2019 € in K**	Fair value at year-end on Dec. 31, 2018 € in K	Paid out € in K
Tranche for fiscal 2015	17,632	0	1,064	1,064
Tranche for fiscal 2016	10,112	1,015	916	187
Tranche for fiscal 2017	7,980	1,167	705	75
Tranche for fiscal 2018	5,647	1,038	503	0
Tranche for fiscal 2019	5,413	928	0	0
	46,784	**4,148**	**3,188**	**1,326**

In fiscal 2019, the expenses relating to granting and valuation of phantom stock units were €2,286 K (2018: €1,039 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. For details on phantom stock units, please refer to the Remuneration Report that is an integral part of the Group Management Report.

By 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. Considering the agreed conditions, the amounts resulting 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 2019, an amount of €531 K (2018: €504 K) was accordingly recognized as an employee benefits expense resulting from the grant of shares. For further details, please refer to the Remuneration Report.

Other Disclosures

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

The exemptions options provided by § 264, Subsection 3, of the German Commercial Code (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 Göttingen, Germany, for the year ended December 31, 2019.

The exemption options provided by § 264 b of the German Commercial Code (HGB) were used in 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 Göttingen, Germany, for the year ended December 31, 2019.

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 § 314, Subsec. 1, No. 8, of the German Commercial Code (HGB)

The declaration prescribed by § 161 of the German Stock Corporation Law (AktG) was submitted on December 5, 2019, 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 disclosures pursuant to § 285, No. 10, of the German Commerical Code (HGB).

Number of Employees

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

	2019	2018
Bioprocess Solutions	5,927	5,290
Lab Products & Services	2,828	2,563
Total	**8,755**	**7,853**

Auditors' Fee

In fiscal 2018 and 2019, the following fees were incurred by the Group for the auditors, KPMG AG:

	2019 € in K	2018 € in K
Audits	765	828
Tax consultation services	0	0
Other attestation services	52	50
Other services	10	144
	827	**1,022**

The fees for statutory audits include the audit review fee of €91 K (2018: €91 K) for the first-half financial report pursuant to § 37w 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 and are generally concluded according to the customary market terms. A long-term service contract exists with an affiliated company. For this contract, expenses of €7.6 million were incurred and reported in the statement of profit or loss in the reporting year (2018: €6.6 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 €1,024 K (2018: €882 K); that of the Executive Board, €9,405 K (2018: €3,741 K). The remuneration of former managing directors and members of the Executive Board and their surviving dependents was €499 K (2018: €608 K). The pension obligations to former managing directors and members of the Executive Board and their surviving dependents totaled €9,537 K (2018: €8,531 K). For details on remuneration, please refer to the Remuneration Report, which is an integral part of the combined Group Management Report. Beyond their Supervisory Board remuneration, the employee representatives who are employees within 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:

	2019 € in K	2018 € in K
Short-term benefits (excl. share-based remuneration)	3,584	2,979
Post-employment benefits	389	2,355
Other long-term benefits	281	307
Share-based payments	1,070	455
Total remuneration	**5,324**	**6,096**

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

	2019 € in K	2018 € in K
Balance as of Jan. 1 of a fiscal year	354	391
Partial payments deducted	–169	–222
Partial payments effected	190	185
Balance as of Dec. 31 of a fiscal year	**375**	**354**

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

	2019 € in K	2018 € in K
Short-term benefits (excl. share-based remuneration)	1,024	882
Post-employment benefits	0	0
Other long-term benefits	0	0
Share-based payments	0	0
Total remuneration	**1,024**	**882**

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 €117,641,275.26 reported by Sartorius AG for the year ended December 31, 2019, as follows:

	€
Payment of a dividend of €0.70 per ordinary share	23,948,556.80
Payment of a dividend of €0.71 per preference share	24,265,008.28
Unappropriated profit carried forward	69,427,710.18
	117,641,275.26

Göttingen, February 5, 2020

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 2019 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, 2020

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 ist subsidiaries (the Group) – which comprise the consolidated statement of financial position as at December 31st, 2019, 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 2019 to 31 December 2019, 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 2019 to 31 December 2019. 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 Auditor's 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 2019, and of its financial performance for the financial year from 1 January 2019 to 31 December 2019, 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 2019 to 31 December 2019. 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 for the Lab Products & Services Division

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 2019, goodwill totalled EUR 169 million, thereby comprising 6% 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 Lab Products & Services. 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 2019.

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 2020 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.

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

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.

Göttingen, Germany, February 5, 2020

KPMG AG
Wirtschaftsprüfungsgesellschaft

Original German version signed by:

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

Executive Board and Supervisory Board

During Fiscal 2019

Executive Board

Dr. rer. pol. Joachim Kreuzburg

Dipl.-Ingenieur (Graduate Engineer)
CEO and Chairman
Executive for Labor Relations
Corporate Strategy, Human Resources, Corporate Research, Legal Affairs & Compliance and Corporate Communications
Born April 22, 1965
Resident of Göttingen, Germany
Member since November 11, 2002
"Sprecher" (Spokesman) from May 1, 2003, to November 10, 2005
Chairman since November 11, 2005
Appointed until November 10, 2025

Rainer Lehmann
Dipl.-Kaufmann (Graduate in Business Administration)
Finance, IT and Business Processes
Born March 2, 1975
Resident of Brightwaters, New York, USA
Member since March 1, 2017
Appointed until February 28, 2025

Dr. René Fáber
Dipl.-Chemiker (Graduate Chemical Engineer)
Bioprocess Solutions Division
Born July 18, 1975
Resident of Göttingen, Germany
Member since January 1, 2019
Appointed until December 31, 2021

John Gerard Mackay

BSc Honors degree in biochemistry
Master of Education
Lab Products & Services Division
Born May 11, 1962
Resident of Glasgow, Scotland
Member since January 1, 2019
Appointed until December 31, 2021

Supervisory Board

Dr. Lothar Kappich
Dipl.-Ökonom (Graduate Economist)
Chairman
Freelance Consultant, formerly Managing Director of ECE Projektmanagement GmbH & Co. KG in Hamburg, Germany
Resident of Hamburg, Germany

Manfred Zaffke
Dipl.-Volkswirt (Graduate Political Economist)
Vice Chairman
First Authorized Representative of the German Metalworkers' Union (IG Metall) in the southern Lower Saxony/Harz region in Northeim, Germany
Resident of Osterode am Harz, Germany

Annette Becker
Personalfachkauffrau (HR Specialist)
Chairwoman of the Employees' Council of Sartorius Corporate Administration GmbH in Göttingen, Germany
Chairwoman of the Group Employees' Council of Sartorius AG in Göttingen, Germany
Resident of Göttingen, Germany

Uwe Bretthauer
Dipl.-Ingenieur (Graduate Engineer)
Chairman of the Employees' Council of Sartorius Lab Instruments GmbH & Co. KG in Göttingen, Germany
Resident of Göttingen, Germany

Michael Dohrmann
Feinmechaniker (Precision Engineer)
Technical Employee
Sartorius Stedim Biotech GmbH in Göttingen, Germany
Resident of Reinhausen, Germany

Dr. Daniela Favoccia
Attorney and Partner of the Hengeler Mueller partnership of lawyers in Frankfurt a.M., Germany
Resident of Frankfurt a.M., Germany

Petra Kirchhoff
Dipl.-Volkswirtin (Graduate Political Economist)
Head of Corporate Communications and Investor Relations
Sartorius Corporate Administration GmbH in Göttingen, Germany
Resident of Göttingen, Germany

Karoline Kleinschmidt
Dipl.-Sozialwirtin (Graduate Social Economist)
Secretary of the German Metalworkers' Union (IG Metall) of the district management of Lower Saxony and Saxony-Anhalt in Hanover, Germany
Resident of Hanover, Germany

Dr. Guido Oelkers
President and CEO of Swedish Orphan Biovitrum AB (publ) in Stockholm, Sweden
Resident of Wollerau, Switzerland

Ilke Hildegard Panzer
Chief Executive Officer of Assurance Laboratories LLC in Milwaukee, Wisconsin, USA
Resident of Fredonia, Wisconsin, USA

Prof. Dr. Thomas Scheper
Dipl.-Chemiker (Graduate Chemical Engineer)
University professor and head of the Institute of Technical Chemistry, Gottfried Wilhelm Leibnitz University in Hanover, Germany
Resident of Hanover, Germany

Prof. Dr. Klaus Rüdiger Trützschler
Dipl.-Wirtschaftsmathematiker (Graduate Business Mathematician) and Dipl.-Mathematiker (Graduate Mathematician)
Resident of Essen, Germany

Committees of the Supervisory Board

Executive Task Committee
Dr. Lothar Kappich (Chairman)
Manfred Zaffke
Uwe Bretthauer
Prof. Dr. Klaus Rüdiger Trützschler

Audit Committee
Prof. Dr. Klaus Rüdiger Trützschler (Chairman)
Manfred Zaffke
Uwe Bretthauer
Dr. Lothar Kappich

Conciliation Committee
Dr. Lothar Kappich (Chairman)
Manfred Zaffke
Uwe Bretthauer
Prof. Dr. Klaus Rüdiger Trützschler

Nomination Committee
Dr. Lothar Kappich
Dr. Daniela Favoccia
Prof. Dr. Klaus Rüdiger Trützschler

Positions Held by the Members of the Executive Board as of December 31, 2019

Dr. rer. pol. Joachim Kreuzburg
Positions held within the Group:
Président-Directeur Général (CEO) of:
– Sartorius Stedim Biotech S.A., France
On the Supervisory Board of:
– Sartorius Stedim Biotech GmbH, Germany, Chairman
On the Advisory Board of:
- LabTwin GmbH, Germany, Chairman
On the Board of Directors of:
– Sartorius North America, Inc., USA, Chairman
– Essen Instruments, Inc., USA
– Denver Instrument (Beijing) Co., Ltd., China

External positions:
On the Supervisory Board of:
– Carl Zeiss AG, Germany
– Ottobock SE & Co. KGaA, Germany, Vice Chairman
On the Verwaltungsrat (Administrative Board) of:
-Ottobock Management SE, Germany
On the Wirtschaftsbeirat (Economic Advisory Board) of:
Norddeutsche Landesbank, Germany

Rainer Lehmann
Positions held within the Group:
On the Board of Directors of:
– Sartorius Corporation, USA
– Sartorius North America, Inc., USA
– Sartorius Stedim North America, Inc., USA
– Sartorius Stedim Filters, Inc., Puerto Rico

External positions:
On the Unternehmerbeirat (Employers' Advisory Board) of:
– Gothaer Versicherungsbank VVaG, Germany
On the Regionalbeirat (Regional Advisory Board) of:
– Commerzbank AG, Germany

Dr. René Fáber
Positions held within the Group:
On the Supervisory Board of:
– Sartorius Stedim Biotech GmbH, Germany, Vice Chairman
On the Board of Directors of:
– Sartorius Stedim (Shanghai) Trading Co., Ltd., China
– Sartorius Stedim Japan K.K, Japan
– Sartorius Korea Biotech Co., Ltd., South Korea
On the Comité Exécutif (Executive Committee) of:
– Sartorius Stedim FMT S.A.S., France, Chairman

External positions:
None

John Gerard Mackay

Positions held within the Group:
On the Board of Directors of:
– Essen Instruments, Inc., USA
– Sartorius Biohit Liquid Handling Oy, Finland
– Sartorius Stedim BioOutsource Ltd., Scotland
– Denver Instrument (Beijing) Co., Ltd., China, Vice Chairman
– Sartorius Scientific Instruments (Beijing) Co., Ltd., China, Vice Chairman
– Sartorius Hong Kong Ltd., China
– Sartorius (Shanghai) Trading Co., Ltd., China
– Sartorius Japan K.K, Japan
– Sartorius Korea Ltd., South Korea
– Sartorius Australia Pty. Ltd., Australia
– On the Comité Exécutif (Executive Committee) of:
– Sartorius France S.A.S., France, Chairman

External positions:
None

Positions Held by the Members of the Supervisory Board as of December 31, 2019

Dr. Lothar Kappich
Positions held within the Group:
On the Conseil d'Administration (Board of Directors) of:
– Sartorius Stedim Biotech S.A., France

External positions:
None

Manfred Zaffke
Positions held within the Group:
None

External Positions:
On the Supervisory Board of:
– GMH GUSS GmbH, Germany, Vice Chairman
– Demag Cranes & Components GmbH, Germany
– Konecranes Holding GmbH, Germany

Annette Becker
None

Uwe Bretthauer
None

Michael Dohrmann
None

Dr. Daniela Favoccia
None

Petra Kirchhoff
Positions held within the Group:
None

External positions:
On the Supervisory Board of:
– AWO Göttingen gGmbH (local Workers' Welfare Association), Germany
On the Foundation's Board of Directors of:
– SüdniedersachsenStiftung, Germany
On the Stock Exchange Council (Börsenrat) of:
– The Hanover Stock Exchange of Lower Saxony (Niedersächsiche Börse zu Hannover), Germany

Karoline Kleinschmidt
None

Dr. Guido Oelkers
None

Ilke Hildegard Panzer
None

Prof. Dr. Thomas Scheper
None

Prof. Dr. Klaus Rüdiger Trützschler
Positions held within the Group:
None

External positions:
On the Supervisory Board of:
– Wuppermann AG, Germany, Chairman
– Zwiesel Kristallglas AG, Germany, Chairman
On the Advisory Board of:
- Odenwald Faserplatten GmbH, Germany

Supplementary Information

04

Glossary

Industrial | Product-specific Terms

Bags, single-use
Plastic disposable bag used in bioreactors and for storing liquids, such as culture media, intermediate products and biopharmaceuticals

Bioreactor
In English-speaking countries, a bioreactor is a vessel used for cultivating animal or human cells in a culture medium. In non-English-speaking countries, the term bioreactor is also used synonymously with the term fermenter to denote a system used to multiply microorganisms. In either case, the vessel is used to obtain cells, parts of these or one of their metabolites.

Disposable
Used synonymously with "single-use"

Downstream processing
Collective term for the various steps that follow fermentation or cell cultivation (upstream processing) in the production of biopharmaceuticals; for example, separation, purification and concentration

FDA – Food and Drug Administration
U.S. regulatory agency responsible for ensuring the safety and efficacy of human and veterinary pharmaceuticals, biological products, medical devices and foods

Fermentation
Technical process used to produce or transform intra- or extra-cellular substances with the help of microorganisms

Fluid management technologies
Technologies and systems for the transportation and storage of biological liquids

Membrane chromatography
Selective separation of mixtures of substances by adsorption to specifically modified membranes (membrane adsorbers) in a flowing system

Membrane (filter)
Thin film or foil made of polymers; because of the porous structure, this film is suitable for filtration applications.

Monoclonal antibodies
Synthetic antibodies used, in particular, in the treatment of cancer, HIV and autoimmune diseases

PAT – Process Analytical Technology
A strategy for the design, analysis and control of manufacturing processes according to which quality characteristics of intermediate or finished products are defined and then analyzed and monitored using the critical process parameters identified

Purification
An important step in downstream processing

Scale-up
Transfer of scale or increase in size. Used to denote the progression of a process that increases in a range from lab scale to pilot scale to process scale, while retaining the same technology, materials of construction and geometries throughout

Single-use | Reusable product
Disposable product, i.e., for one-time usage. A reusable product is designed for repeated use.

Upstream processing
In the manufacture of biopharmaceuticals, designates the various steps that take place for seeding and propagating cells that produce an active pharmaceutical ingredient

Validation
Documented verification that systems, devices and processes reproducibly deliver the desired result

Business | Economic Terms

Amortization
Amortization relates exclusively to potential reductions in the value of goodwill and the allocation of the purchase price to intangible assets acquired as carried out according to IFRS 3

Cash flow
The amount of cash earned after paying all expenses and taxes; i.e., the cash balance of inflows and outflows of funds

Compliance
Observance of applicable laws, codes and other relevant rules and regulations

Constant currencies; currency-adjusted
In the presentation of figures, identical exchange rates are used for each of the comparative periods.

DAX®, TecDAX®
German stock indexes of the transaction service provider and marketplace organizer Deutsche Börse AG

D&O insurance
Directors' and Officers' liability insurance that covers Supervisory and Executive Board members and managerial employees

DVFA | SG
The Methods Commission of the Society of Investment Professionals in Germany (DFVA e.V.) and the Schmalenbach-Gesellschaft (SG)

EBITDA
Earnings before interest, taxes, depreciation and amortization; in this context, amortization refers exclusively to the purchase price allocation (PPA) to intangible assets acquired according to IFRS 3.

EBITDA margin
The ratio of EBITDA (earnings before interest, taxes, depreciation and amortization) to sales

Equity ratio
The ratio of equity to the balance sheet total

ERP
Stands for "Enterprise Resource Planning";
IT-based system for resource planning

Extraordinary items
Exceptional or one-time expenses and income, such as acquisition costs, restructuring costs and other non-operating expenses

Fixed assets
The sum of intangible assets, property, plant and equipment and financial assets

Goodwill
The difference between the price paid for a company or business and its net assets; a form of intangible asset

Holding company
A parent company that exists for the purpose of owning a controlling interest or shares in several legally independent subsidiaries that are subordinate within the organizational hierarchy; this holding company conducts its business exclusively through these subsidiaries.

Market capitalization
The total number of shares outstanding of both classes issued by the company, multiplied by the corresponding share price

Normalized financial result
Financial result excluding fair value adjustments of hedging instruments, as well as excluding non-periodic expenses and income.

Normalized income tax
Underlying income tax, based on underlying profit before tax and on non-cash amortization.

Prime Standard
Market segment of the Frankfurt Stock Exchange with high, internationally accepted transparency requirements to meet the needs of companies seeking to attract international investors.

Supply chain management
Setup and coordination of integrated flows of materials, information and finances (supply chains) over the entire value-added process

Treasury
Short- and medium-term liquidity management

Underlying
Adjusted to eliminate extraordinary items (see definition extraordinary item)

Other Terms

CRM
Abbreviation for "Customer Relationship Management"; practices, strategies and technologies that companies use to manage and analyze customer interactions and data to improve customer retention and drive sales growth

EHS
Abbreviation for "Environment, Health and Safety"

EMEA
The region comprising Europe, the Middle East and Africa; one of the three reporting regions in the geographical allocation of the Sartorius Group besides the Americas and Asia / Pacific

ERP
Stands for "Enterprise Resource Planning"; IT-based resource planning system

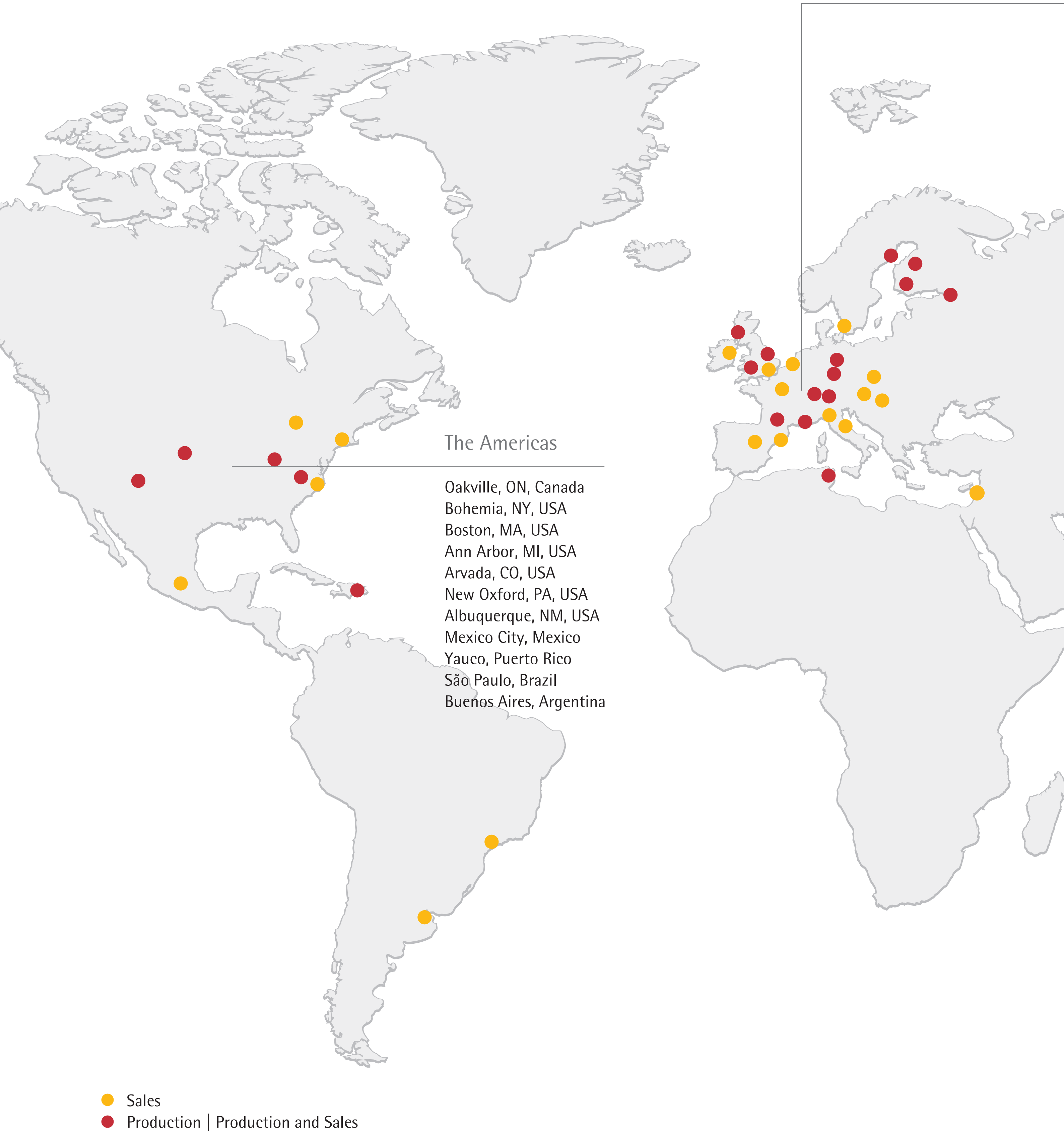
ESG
Abbreviation for "Environment, Social and Governance"; refers to the three major factors of sustainable corporate management.

GEC
Stands for the "Group Executive Committee"; the central management body of the Sartorius Group. It currently is comprised of six members: the three Executive Board members of Sartorius AG and further executives with global responsibility

GHG
Abbreviation for "Greenhouse Gas Protocol," the international standard for measuring and managing greenhouse gas emissions, including reporting. The WHO stands for the "World Heath Organization," the coordination authority of the United Nations for international public health

Index

A Local Presence Worldwide



Europe | Africa

Dublin, Ireland
Royston, UK
Stonehouse, UK
Epsom, UK
Glasgow, UK
Brussels, Belgium
Dourdan, France
Aubagne, France
Lourdes, France
Florence, Italy
Milan, Italy
Madrid, Spain
Barcelona, Spain
Kajaani, Finland
Helsinki, Finland
Malmo, Sweden
Umeå, Sweden
St. Petersburg, Russia
Goettingen, Germany
Guxhagen, Germany
Laupheim, Germany
Poznan, Poland
Budapest, Hungary
Vienna, Austria
Tagelswangen, Switzerland
Mohamdia, Tunisia
Beit Haemek, Israel

Asia | Pacific

Beijing, China
Shanghai, China
Hong Kong, China
Seoul, South Korea
Tokyo, Japan
Hanoi, Vietnam
Bangkok, Thailand
Bangalore, India
Kuala Lumpur, Malaysia
Singapore, Singapore
Melbourne, Australia

Financial Schedule

Annual Shareholders' Meeting in Goettingen, Germany	March 26, 2020
Payment of dividends[1]	March 31, 2020
Publication of first-quarter figures for 2020	April 21, 2020
Publication of first-half figures for 2020	July 21, 2020
Publication of nine-month figures for 2020	October 20, 2020
Publication of preliminary figures for fiscal 2020	January 2021
Annual press conference in Goettingen, Germany	February 2021
Annual Shareholders' Meeting in Goettingen, Germany	March, 2021
Publication of first-quarter figures for 2020	April 2021

[1] Subject to approval by the Annual Shareholders' Meeting

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