FRESENIUS

2019

ANNUAL REPORT

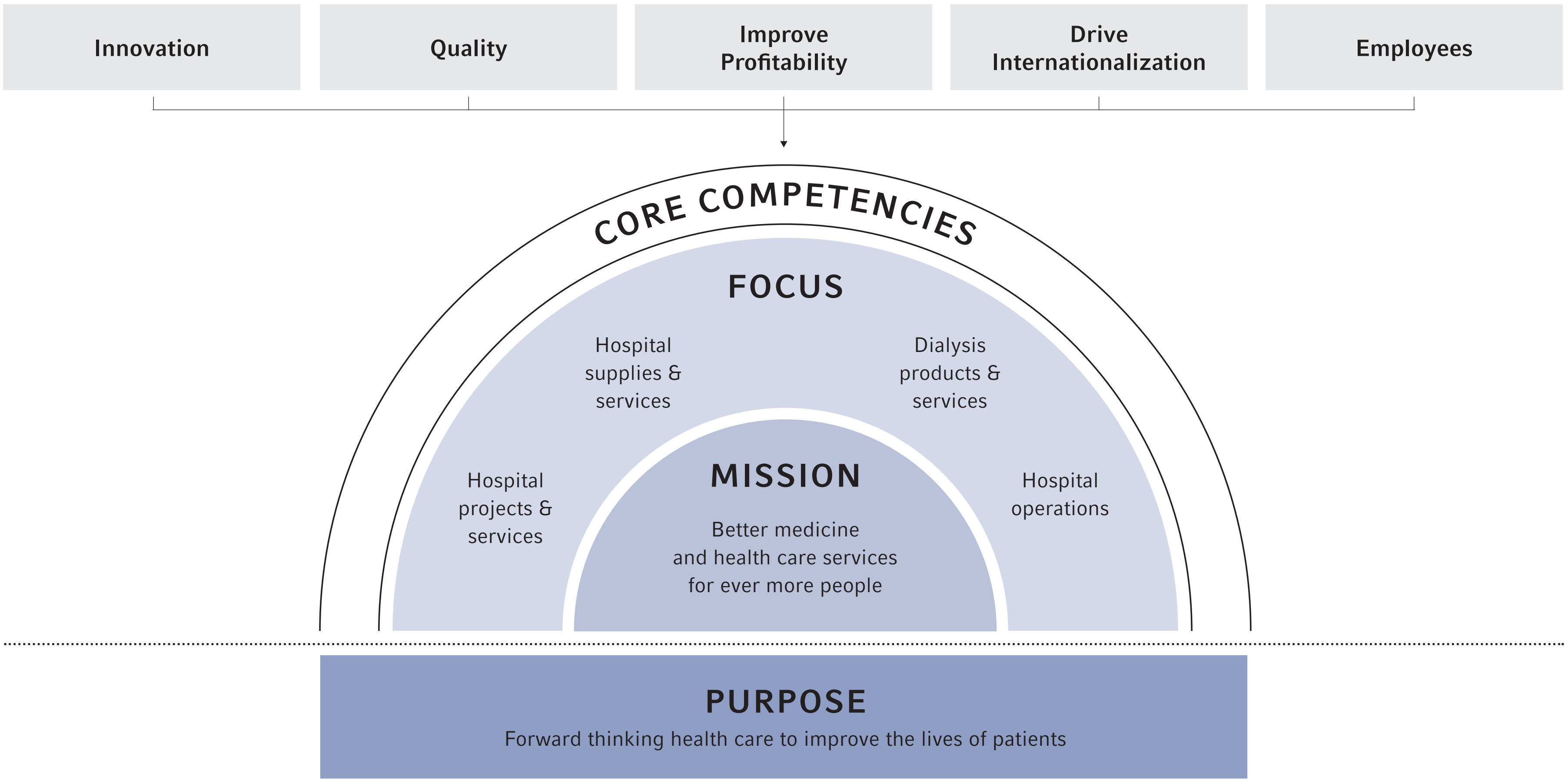
FRESENIUS

FRESENIUS MEDICAL CARE | FRESENIUS KABI | FRESENIUS HELIOS | FRESENIUS VAMED

Fresenius is a global health care Group providing products and services for dialysis, hospitals, and outpatient medical care. In addition, Fresenius focuses on hospital operations. We also manage projects and provide services for hospitals and other health care facilities worldwide. More than 290,000 employees have dedicated themselves to the service of health in over 100 countries worldwide.

Play Image Film

FRESENIUS STRATEGY



GROUP IN FIGURES

€ in millions	2019[1]	2018	2017	2016	2015
Sales and Earnings					
Sales	**35,524**	33,530	33,886	29,471	27,995
EBITDA[2]	**6,170**	5,991	6,267	5,517	5,125
EBIT[2]	**4,599**	4,561	4,830	4,302	4,001
Net income[3]	**1,915**	1,871	1,816	1,560	1,436
Depreciation and amortization	**1,571**	1,430	1,437	1,215	1,124
Earnings per share in €[3]	**3.44**	3.37	3.28	2.85	2.64
Cash flow and Balance sheet					
Operating cash flow	**3,514**	3,742	3,937	3,585	3,349
Operating cash flow in % of sales	**9.9%**	11.2%	11.6%	12.2%	12.0%
Total assets	**61,237**	56,703	53,133	46,697	43,233
Non-current assets	**45,973**	41,913	40,529	34,953	32,800
Equity[4]	**26,836**	25,008	21,720	20,849	18,453
Equity ratio[4]	**44%**	44%	41%	45%	43%
Net debt	**19,579**	16,275	17,406	13,201	13,725
Net debt/EBITDA[5,6]	**3.14**	2.71	2.84	2.33	2.65
Investments[7]	**5,086**	3,249	8,680	2,559	2,051
Profitability					
EBIT margin[2]	**12.9%**	13.6%	14.3%	14.6%	14.3%
Return on equity after taxes (ROE)[3]	**11.3%**	12.1%	13.3%	12.3%	12.9%
Return on operating assets (ROOA)[5]	**8.2%**	9.0%	9.4%	10.0%	10.2%
Return on invested capital (ROIC)[5]	**7.4%**	8.3%	8.0%	8.5%	8.4%
Dividend per share in €	**0.84[8]**	0.80	0.75	0.62	0.55
Employees (December 31)	**294,134**	276,750	273,249	232,873	222,305

[1] Adjusted for IFRS 16 effect
[2] Before special items
[3] Net income attributable to shareholders of Fresenius SE & Co. KGaA; before special items
[4] Including noncontrolling interest
[5] Before special items; 2016, 2017, 2018, 2019 pro forma acquisitions
[6] At LTM average exchange rates for both net debt and EBITDA
[7] Investments in property, plant and equipment, and intangible assets, acquisitions
[8] Proposal

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56 to 61.

Here you can find our interactive tool

KEY FIGURES OF THE BUSINESS SEGMENTS

FRESENIUS MEDICAL CARE

HEALTH CARE SERVICES (DIALYSIS SERVICES AND CARE COORDINATION), AND HEALTH CARE PRODUCTS

	2019 € in millions	2018 € in millions	Change
Sales	**17,329** [3]	16,026 [3]	8%
EBIT	**2,296** [3]	2,292 [3]	0%
Net income [4]	**1,369** [3]	1,341 [3]	2%
Operating cash flow	**1,947** [1]	2,062	-6%
Capital expenditure/acquisitions	**3,422**	2,014	70%
R & D expenses	**168**	114	47%
Employees (December 31)	**128,300**	120,328	7%

FRESENIUS KABI

IV DRUGS, BIOSIMILARS, CLINICAL NUTRITION, INFUSION THERAPY, AND MEDICAL DEVICES/TRANSFUSION TECHNOLOGY

	2019 € in millions	2018 € in millions	Change
Sales	**6,919**	6,544	6%
EBIT	**1,200** [1,2]	1,139 [2]	5%
Net income [4]	**802** [1,2]	742 [2]	8%
Operating cash flow	**968** [1]	1,040	-7%
Capital expenditure/acquisitions	**812**	615	32%
R & D expenses	**507** [2]	534 [2]	-5%
Employees (December 31)	**39,627**	37,843	5%

FRESENIUS HELIOS

HOSPITAL OPERATION

	2019 € in millions	2018 € in millions	Change
Sales	**9,234**	8,993	3%
EBIT	**1,015** [1]	1,052	-4%
Net income [4]	**670** [1]	686	-2%
Operating cash flow	**683** [1]	554	23%
Capital expenditure/acquisitions	**693**	501	38%
Order intake	**n/a**	n/a	
Employees (December 31)	**106,377**	100,144	6%

FRESENIUS VAMED

PROJECTS AND SERVICES FOR HOSPITALS AND OTHER HEALTH CARE FACILITIES

	2019 € in millions	2018 € in millions	Change
Sales	**2,206**	1,688	31%
EBIT	**131** [1]	110	19%
Net income [4]	**85** [1]	72	18%
Operating cash flow	**-46** [1]	106	-143%
Capital expenditure/acquisitions	**85**	540	-84%
Order intake	**1,314**	1,227	7%
Employees (December 31)	**18,592**	17,299	7%

[1] Adjusted for IFRS 16 effect
[2] Before special items
[3] On an adjusted basis
[4] Net income attributable to the parent company of the respective business segments

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56 to 61.

TARGETS, RESULTS, AND OUTLOOK

	TARGETS 2019[1]	RESULTS 2019	OUTLOOK 2020[7]
Fresenius Group			
Sales (growth, in constant currency)	4% – 7%[3]	**6%[3]**	4% – 7%
Net income[2] (growth, in constant currency)	~0%[4]	**0%[4]**	1% – 5%
Investments in property, plant and equipment	~7% of sales[5]	**7% of sales[5]**	6% – 7% of sales
Financing			
Cash flow margin	10% – 12%[5]	**9.9%[5]**	12% – 14%
Net debt/EBITDA	Around the upper-end of the original self-imposed target corridor of 2.5 x – 3.0 x excluding further potential acquisitions[6]	**3.14[5]**	Towards the top-end of the self-imposed target corridor of 3.0 – 3.5 x excluding further potential acquisitions[8]

[1] Updated July 2019
[2] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[3] On a comparable basis: 2018 adjusted for divestitures of Care Coordination activities at FMC; 2019 adjusted for IFRS 16 effect
[4] On a comparable basis: 2018 before special items and adjusted for divestitures of Care Coordination activities at FMC; 2019 before special items (transaction-related expenses, gain related to divestitures of Care Coordination activities at FMC, expenses associated with the cost optimization program at FMC, revaluation of contingent biosimilar purchase price liabilities), including NxStage operations, adjusted for IFRS 16 effect
[5] Adjusted for IFRS 16 effect
[6] Calculated at annual average exchange rates, for both net debt and EBITDA; including NxStage; excluding IFRS 16 effect; excluding further potential acquisitions
[7] Before special items; including IFRS 16 including, NxStage operations
[8] Calculated at expected annual average exchange rates, for both net debt and EBITDA; including contributions from signed, but not yet closed acquisitions; including IFRS 16 effects, excluding further potential acquisitions

TARGETS, RESULTS, AND OUTLOOK

	TARGETS 2019[1]	RESULTS 2019[1]	OUTLOOK 2020[4,6]
Business segments			
Fresenius Medical Care			
Sales (growth, in constant currency)	3% – 7%[2,5]	**5%**[2,5]	Mid-to-high single-digit %-range[7]
Net income[3] on comparable basis[4] (growth, in constant currency)	-2% – +2%[2,5]	**-2%**[2,5]	Mid-to-high single-digit %-range[7]
Fresenius Kabi			
Sales (growth, organic)	3% – 6%	**4%**	3% – 6%
EBIT[4] (growth, in constant currency)	3% – 6%	**3%**	-4% – 0%
Fresenius Helios			
Sales (growth, organic)	2% – 5%	**5%**	3% – 6%
EBIT (growth)	-5% – -2 %	**-4%**	3% – 7 %[8]
Fresenius Vamed			
Sales (growth, organic)	~10%	**16%**	4% – 7 %
EBIT (growth)	15% – 20%	**19%**	5% – 9%[8]

[1] Adjusted for IFRS 16 effects
[2] 2018: adjusted for divestitures of Care Coordination activities
[3] Net income attributable to shareholders of Fresenius Medical Care AG & Co. KGaA
[4] Before special items
[5] Excluding NxStage operations
[6] Including IFRS 16
[7] Including NxStage operations
[8] In constant currency

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TO OUR SHAREHOLDERS

1

LETTER TO OUR SHAREHOLDERS

Play video statement

Stephan Sturm
Chairman of the Management Board

Dear shareholders,

Sustainability is a term that shapes many current debates like perhaps no other. The medium- and long-term consequences of actions, whether those of individuals or organizations, are being examined ever more closely. Short-term effects and success are becoming less important. More importance is being given to the long-term impact of decisions and acts – on people, on the economy, and on the planet.

Sustainability is also a term that describes Fresenius' approach and actions like perhaps no other. And not just recently. Sustainability is a defining characteristic of our company and has been for more than 100 years. Short-term success is very welcome when it happens, naturally, but for us it is not the decisive thing. For us, what is decisive is medium- and long-term success. In short: sustainable success. This is what has made us the globally active healthcare group that we are today.

Sustainability is decisive in what we do: We help sick people, and we help healthy people to stay healthy. We are not a startup, and we do not need to follow trends and fashions. Our task is different. We need to offer healthcare that is high quality, yet affordable. Healthcare that is reliable over the long term, and yet is constantly analyzed and further developed to make it even better. As expressed in just a few words in our motto: Forward-thinking healthcare. Millions of patients around the world rely on us.

It is a huge responsibility. One that we can only meet if our success remains sustainable – not just today and tomorrow, but also the day after tomorrow. For this reason, in all our activities and decisions we keep the future firmly in view. This was the case in the year we are reporting on today – 2019 was a year of investments! We further increased our already significant investments in research and development, and in continuing to develop our business. Our goal is to prepare Fresenius even better for the coming decade – in other words, to remain sustainably successful.

» Sustainability is also a term that describes Fresenius' approach and actions like perhaps no other. And not just recently. «

To achieve this, we are willing to accept a little less financial success in the short term. Investments cost money, and when we invest more than usual it temporarily impacts our earnings. But we are securing our continued growth and our future. Success will be measured, above all, in medical terms: Even greater numbers of patients, even better treatments, and even more forward-thinking healthcare. Success will, of course,

Sustainability is deeply embedded in Fresenius' thoughts and actions. This has been the case for more than 100 years, and this will continue.

also pay off financially, which means Fresenius will continue to be an attractive investment in the future. 2019 was not just a year of investments, it was also a year of continued growth.

We set new records in sales and earnings – for the 16th consecutive year! Even though, due to our increased investments, our net income rose by only one-half percent. In contrast, we were able to increase our sales – as expected, and also in constant currency – by 6 percent. The number of our employees – the basis of our success – increased to more than 294,000. We are proposing the 27th consecutive increase in our dividend. That is also an expression of sustainability and our long-term orientation.

Those are the numbers. What we achieved in 2019 in concrete terms, I would like to tell you about now, with the help of a few examples:

At Fresenius Medical Care, we closed the acquisition of NxStage. This was an important step in strengthening our position in home dialysis – a form of therapy that will grow steadily in importance, especially in the United States but also in other parts of the world. The integration is well underway, and we are investing heavily in the infrastructure needed to make home dialysis widely available. In addition, we launched the 4008A – a new dialysis machine developed especially for emerging markets – in more countries, including China. In this way, in these countries, we are significantly improving chronic kidney disease patients' access to life-saving dialysis. In Schweinfurt, Germany, our most important dialysis machine plant celebrated its 40th anniversary – every second dialysis machine used worldwide comes from this facility! At the same time, we continued to expand our international network of dialysis clinics, which now numbers almost 4,000 locations worldwide.

Fresenius Medical Care closed in 2019 the acquisition of NxStage Medical, Inc. – an important step in strengthening our position in home dialysis.

Fresenius Kabi, meanwhile, put our first biosimilar on the market – Idacio, an imitation drug of the anti-inflammatory Humira for treating rheumatoid arthritis. In Eysins, Switzerland, we opened a new research and development center for biosimilars. This is a new therapy area for which we have big expectations, and so far, there is every indication they will be fulfilled.

Fresenius Kabi opened a new research and development center for biosimilars in Eysins, in the Swiss canton of Vaud. This strengthens Fresenius Kabi's capability to develop new biosimilars, particularly in the areas of autoimmune diseases and oncology.

We also invested heavily in the expansion and modernization of our production facilities. The focus of this was the U.S., but we also comprehensively expanded our clinical nutrition plant in Wuxi, China, for example, and will continue this in 2020. In the U.S. we faced greater pressure on prices and even stronger competition. This resulted in a small sales decline in this market – one of Fresenius Kabi's most important – that our outstanding growth in the emerging markets could not fully offset. We are working intensively to create the basis for new growth in the U.S. We will also continue to resolutely pursue our excellent growth opportunities in other markets.

» Additionally, we pushed ahead with digitalization at our hospitals, and launched the Helios Patients Portal. «

At Fresenius Helios, it was again a mixed picture last year. In Germany, we continued to feel the impact of regulatory changes and the trend toward more outpatient care. At the same time, measures we have implemented are beginning to have an effect. We have successfully started new business models, for example in occupational medicine. We have also significantly expanded our preventive medicine offering and opened new Helios Prevention Centers in several major cities, including Berlin and Munich. At these centers we offer patients comprehensive check-ups from a single source. Long waiting times are avoided and, if medical treatment is required, the patient has direct access to the Helios healthcare network. Additionally, we pushed ahead with digitalization at our hospitals, and launched the Helios Patients Portal. This online platform offers the patient a range of functions, from making appointments online to accessing test results. Not to be overlooked, we surpassed our goal of recruiting 1,000 nursing and care staff: We are delighted to welcome 1,300 new and dedicated colleagues to our company.

As expected, growth at Quirónsalud in Spain was strong again. We acquired another hospital, this one in Albacete, in the southeast of the country. This is a superb addition to our existing network in the region. In Madrid, we completed work on the country’s first proton beam therapy center on schedule. Proton beam therapy is a very advanced and much less invasive form of cancer treatment. Trial operation of the center is now underway, and we want to officially open it this year.

We also substantially increased our presence in Colombia with several acquisitions. Quirónsalud now operates five hospitals in the two major cities of Cali and Medellin. The acquisition of CediMed gave us the country’s leading provider of medical diagnostic services. And in February of this year we reached agreement on another acquisition, in the capital, Bogota.

In Madrid, Quirónsalud completed work on Spain’s first proton beam therapy center, investing about €40 million. The center’s opening is planned for this year.

At Fresenius Vamed, as well, 2019 was marked by excellent development. We successfully completed the integration of the rehabilitation facilities transferred from Helios. Vamed is now one of the leading providers of post-acute care in Europe. We largely completed the modernization of University Hospital Schleswig-Holstein (UKSH) with the opening of new main clinic buildings in the German cities of Kiel and Lübeck. This project encompassed renovations and new construction at

Fresenius Vamed successfully completed the integration of the rehabilitation facilities transferred from Fresenius Helios. This strengthened Fresenius Vamed's position as one of Europe's leading providers of post-acute care.

both UKSH locations. With a total cost of €1.7 billion, it is the largest public-private partnership project in the field of European healthcare. Additional important projects are underway, or have been agreed, on nearly every continent.

At our corporate headquarters in Bad Homburg, we celebrated a milestone with the completion of our new Fresenius Campus. By connecting our two new office buildings, with their total of more than 750 workplaces, to our existing facilities, we have created a modern and interactive place to work. The new buildings also made it possible for us to end leasing arrangements on various office spaces dispersed around the area. In my letter last year, I talked about our goal of increasing cooperation within our company. Here is one of many examples of how this is being realized.

» 2019 was another successful year for Fresenius. We continued to grow, and we set important markers for the future. «

In summary, 2019 was another successful year for Fresenius. We continued to grow, and we set important markers for the future. But 2019 also showed us that to remain successful, we will have to do even more. Competition has become more intense; price pressures have increased. Regulation has increased in some sectors. This means that we must do more to be, and to remain, successful. For example, we must, as described above, invest more. We did a lot this past year, and we achieved a lot. We will continue to emphasize this approach. At the same time, we must control our costs even more than before. This is the only way we will be able to retain the financial maneuvering room to invest – investments for our future.

This future continues to look good. We are needed – more than ever! Demand for high-quality medicine continues to grow around the world. We are in an excellent position to meet this demand and thereby remain successful. In 2020, we expect sales to increase by 4 to 7 percent. Net income should rise by 1 to 5 percent, an increase much more dynamic than was the case in the investment year 2019. We are, then, expecting another record year.

The new Fresenius Campus in Bad Homburg was completed in 2019. Fresenius has invested a total of about €70 million in the expansion of the company's headquarters.

What the impact of the global spread of the coronavirus will be on these goals is something I cannot determine at this point. What I can say is this: We are doing everything we can to protect our employees, maintain production and deliveries, and ensure that our patients continue to receive the best possible care. In this respect, we have a special responsibility because we are a healthcare company. And we must meet this responsibility. So far, we have had good success in doing so, within the framework of constantly changing eventualities. Accordingly, there is no reason currently for us to adjust our 2020 guidance.

We also confirm our medium-term outlook. Average annual sales through 2023 should increase by 4 to 7 percent and net income by 5 to 9 percent. This means we expect another substantial growth acceleration through 2023.

As in past years, this forecast is wholly based on expectations for organic growth. When the small-to-medium acquisitions that we regularly pursue are included, both measures should be about one percentage point higher. We also continue to look out for larger acquisitions. For example, we still believe it is sensible to expand the Fresenius Kabi portfolio. Entry into a third hospital market in Europe is another interesting option. If good opportunities arise, we will seize them. We are not dependent on acquisitions. We are capable of healthy and sustainable growth on our own power. And I am very confident that we will achieve this.

» The guiding principle in all that we do is and remains the well-being of our patients. «

Sustainability is deeply embedded in our thoughts and actions, and it is there for all our shareholders to see. This has been the case for more than 100 years, and this will continue. Sustainability applies to all levels of endeavor: Our pursuit of ever better medicine for ever more people, our efforts to be a reliable partner for the global health system, and our commitment to being a good employer for almost 300,000 people. To our continuing success and a growth strategy oriented to the long term. And, of course, we underscore our commitment to the best possible use of this planet's resources.

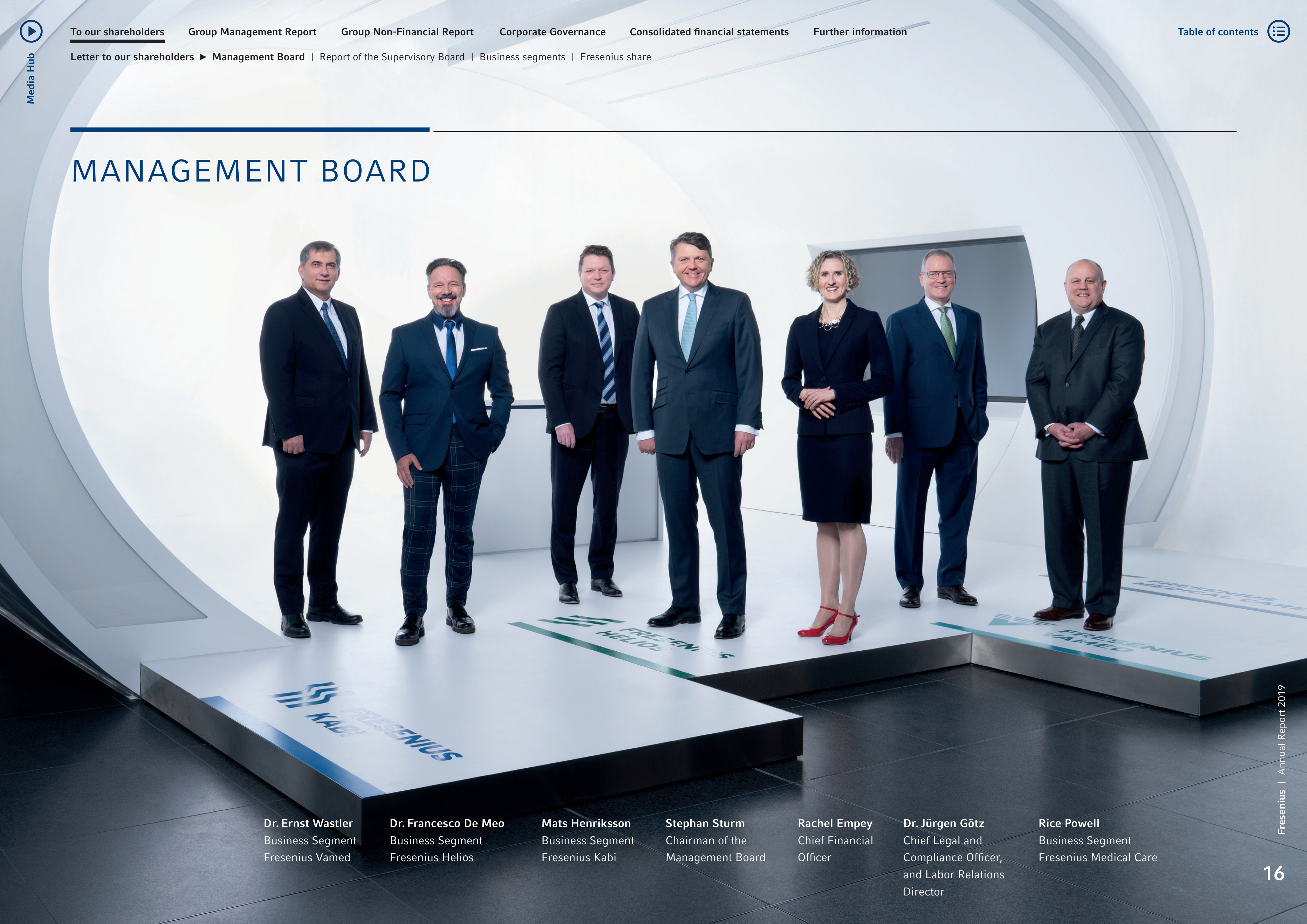
To make this even clearer and more transparent, we will set up this year a sustainability council at the corporate level, which will report directly to me. This body will develop sustainability goals that we will present to you at the Annual General Meeting in May 2021.

The guiding principle in all that we do is and remains the well-being of our patients. We are committed to them, their health and their lives. If we keep this goal in mind, not only will our patients be well, but it will also ensure continued success for Fresenius.

Yours sincerely,

Stephan Sturm
Chairman of the Management Board

MANAGEMENT BOARD



Dr. Ernst Wastler
Business Segment Fresenius Vamed

Dr. Francesco De Meo
Business Segment Fresenius Helios

Mats Henriksson
Business Segment Fresenius Kabi

Stephan Sturm
Chairman of the Management Board

Rachel Empey
Chief Financial Officer

Dr. Jürgen Götz
Chief Legal and Compliance Officer, and Labor Relations Director

Rice Powell
Business Segment Fresenius Medical Care

REPORT OF THE SUPERVISORY BOARD

Dr. Gerd Krick
Chairman

REPORT OF THE SUPERVISORY BOARD

In 2019, the Supervisory Board of Fresenius SE & Co. KGaA fulfilled its obligations in accordance with the provisions of the law, the articles of association, and the rules of procedure. It regularly advised the Management Board of the general partner, Fresenius Management SE, regarding the management of the Company and supervised the management in accordance with its Supervisory Board responsibilities.

COOPERATION BETWEEN THE MANAGEMENT AND THE SUPERVISORY BOARD

Carrying out its monitoring and advisory activities, the Supervisory Board was regularly kept informed by the management in a timely and comprehensive oral and written manner about, among other things:

- all important matters relating to business policy,
- the course of business,
- profitability,
- the situation of the Company and of the Group,
- corporate strategy and planning,
- the risk situation,
- risk management and compliance, and
- important business events.

Based on the reports provided by the Management Board of the general partner, the Supervisory Board discussed all significant business transactions in both the Audit Committee and in its plenary meetings. The Management Board of the general partner discussed the Company's strategic direction with the Supervisory Board. The Supervisory Board passed resolutions within its legal and company statutory authority.

The Supervisory Board of Fresenius SE & Co. KGaA convened for four regular meetings in 2019 – in March, May, October, and December. Before the meetings, the Management Board of the general partner sent detailed reports and comprehensive approval documents to the members of the Supervisory Board. At the meetings, the Supervisory Board discussed in detail the sales and earnings growth, based on the reports provided by the general partner's Management Board. They also discussed significant company decisions.

All matters requiring Supervisory Board approval were submitted with sufficient time for proper scrutiny. After reviewing the related approval documents and following detailed consultation with the Management Board of the general partner, the Supervisory Board approved all matters submitted to it.

The Supervisory Board was also informed about any important business events occurring between meetings. In addition, the Chairman of the general partner's Management Board regularly informed the Chairman of the Supervisory Board in separate meetings about the latest development of the business and forthcoming decisions and discussed them with him.

With the exception of Prof. Dr. Löw-Friedrich and Ms. Stars, both of whom were unable to attend the Supervisory Board meeting in December, all of the meetings of the Supervisory Board and the Audit Committee in 2019 were attended by all current members of the Supervisory Board and the Audit Committee of Fresenius SE & Co. KGaA. Thus, every member of the Supervisory Board of Fresenius SE & Co. KGaA attended more than half of the Supervisory Board Meetings and meetings of the committees to which they belong in 2019.

Participation in meetings of the Supervisory Board and the Audit Committee is reported individually for each member on the Company's website. Information on this can be found under "Supervisory Board".

MAIN FOCUS OF THE SUPERVISORY BOARD'S ACTIVITIES

In 2019, the Supervisory Board mostly focused its monitoring and consulting activities on business operations and investments carried out by the business segments. The Supervisory Board thoroughly reviewed and discussed all business activities of significance to the Company with the Management Board of the general partner. The Supervisory Board also dealt with the following items:

- 2020 budget
- medium-term planning of the Fresenius Group
- business segment strategies (particularly the business outlook for Fresenius Kabi and Fresenius Vamed)
- completion of the FCPA investigation at Fresenius Medical Care

At its meetings and within the Audit Committee, the Supervisory Board also kept itself regularly informed about the Group's risk situation and risk management activities as well as compliance.

At the meeting on March 14, 2019, the Supervisory Board dealt intensively with the audit and approval of the financial statements, the consolidated financial statements (IFRS) as well as the management report and Group management report of Fresenius SE & Co. KGaA. The results for 2018 were discussed on the basis of a detailed report provided by the Chairman of the Audit Committee and statements by the auditor. At the same meeting, a resolution was passed on profit distribution proposed by the general partner, Fresenius Management SE, and the Group Non-financial Report for 2018. In addition, the business segments reported in detail on the course of business in the first two months of the fiscal year. The focus was on Fresenius Kabi. The final planning for the years 2019 to 2021 was also presented. Another item discussed was the agenda of the Annual General Meeting of Fresenius SE & Co. KGaA on May 17, 2019. Finally, the Supervisory Board conducted its annual efficiency review at this meeting.

At its meeting on May 17, 2019, immediately following the Annual General Meeting, the Supervisory Board passed resolutions on the appointment of the auditor of the annual and consolidated financial statements as well as the auditor of the Group Non-financial Report for 2019. In addition, the Management Board reported on business performance for the months January through April 2019.

At the Supervisory Board meeting on October 11, 2019, the members of the Supervisory Board were informed in detail about business performance from January through September 2019. The focus was on the Fresenius Vamed business segment. The Management Board of the general partner reported on the conclusion of the FCPA investigation at Fresenius Medical Care, and compliance, regulatory topics, and legal risks. Furthermore, as a precautionary measure to avoid possible uncertainties in connection with the announced amendment to the German Corporate Governance Code, a resolution was passed on the declaration of conformity with the German Corporate Governance Code.

The meeting of the Supervisory Board on December 5, 2019, focused on the development of business in 2019. Plans for the years 2020 to 2022 for the Group and separately for all four segments were also presented. The Chairman of the Audit Committee reported in detail on the status of preparation of the financial statements. Furthermore, a resolution was again passed on the declaration of conformity with the German Corporate Governance Code.

CORPORATE GOVERNANCE

On October 29, 2019, and December 20, 2019, the Supervisory Board and the Management Board of the general partner jointly issued a Declaration of Conformity in accordance with the German Corporate Governance Code under Section 161 of the German Stock Corporation Act (AktG).

The Management Board of the general partner and the Supervisory Board of Fresenius SE & Co. KGaA have a duty to act in the best interests of the Company. In performing their activities, they do not pursue personal interests or bestow unjustified benefits on others. Any secondary activities or dealings with the Company by members of the corporate bodies must immediately be reported to, and approved by, the Supervisory Board.

There were no conflicts of interest of Supervisory Board members in 2019.

There are regular separate preliminary meetings of the employee representatives and consultations among the shareholder representatives.

The members of the Supervisory Board independently take on necessary training and further education measures required for their tasks. They keep themselves regularly informed, through internal and external sources, about the latest requirements with regard to their supervisory activities. The Supervisory Board at all times ensures that its members are suitably qualified, keep their professional knowledge up to date, and further develop their judgment and expertise. Fresenius provides appropriate support in this regard. External experts as well as experts from the Company provide information about important developments, for example about relevant new laws and precedents, or changes in the IFRS accounting and auditing standards. In addition, the Company holds an onboarding event for new members of the Supervisory Board.

For more information on Corporate Governance at Fresenius, please see the Corporate Governance Declaration and Report on pages 136 to 163 of the Annual Report. Fresenius has disclosed the information on related parties on page 256 of the Annual Report.

GROUP NON-FINANCIAL REPORT

KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, audited the Group Non-financial Report for 2019. This was done in accordance with a resolution of the Supervisory Board of May 17, 2019, and the subsequent appointment.

The Group Non-financial Report and the audit report of the appointed auditor were made available to each member of the Supervisory Board of the Company in good time. At their meetings on March 11 and 12, 2020, the Audit Committee and then the Supervisory Board discussed all the documents in detail.

The auditor delivered a detailed report on the results of the audit at each of these meetings. The Audit Committee and the Supervisory Board approved the auditor's findings. The Audit Committee's and the Supervisory Board's own review also found no objections to the Group Non-financial Report. At its meeting on March 12, 2020, the Supervisory Board approved the Group Non-financial Report presented by the general partner.

The Group Non-financial Report is published on pages 91 to 135 of the Annual Report and the auditor's findings are published on page 134 f. of the Annual Report.

WORK OF THE COMMITTEES

The Audit Committee held three meetings and four conference calls in 2019. The main focus of its monitoring activities was on the preliminary audit of the annual financial statements of Fresenius SE & Co. KGaA and the Group for 2018 and discussions with the auditor about their reports and the terms of reference of the audit. Another matter dealt with by the Audit Committee was its recommendation to the Supervisory Board regarding which auditing firm to propose as auditor for the annual financial statements and consolidated financial statements for 2019. The Supervisory Board proposed to the 2019 Annual General Meeting,

a) to elect KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, as auditor of the annual financial statements and consolidated financial statements for the 2019 fiscal year and as auditor for the possible audit review of the half-yearly financial report for the first half of 2019 and other interim financial information within the meaning of Section 115 (7) WpHG for 2019, and

b) to appoint PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, as auditors for the possible review of interim financial information for the 2020 fiscal year prepared before the 2020 Annual General Meeting.

This proposal was based on a recommendation to this effect by the Audit Committee. The Audit Committee also dealt with the following items in detail:

- the 2019 quarterly reports,
- monitoring reports on progress of acquisitions,
- Compliance and Internal Audit with a focus on the accounting-based internal control system of Fresenius Medical Care,
- review of the risk management system, the internal control system, and the internal auditing system, and
- approval of non-auditing services provided by KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin.

The Chairman of the Audit Committee reported regularly in subsequent Supervisory Board meetings on the work of the committee.

The Chairman of the Audit Committee maintains a regular dialog between the Supervisory Board and the Audit Committee, on the one hand, and auditors, on the other, even outside of meetings.

The Company's Nomination Committee did not meet in 2019.

The Joint Committee is responsible for approving certain important transactions of Fresenius SE & Co. KGaA and certain legal transactions between the Company and the Else Kröner-Fresenius-Stiftung. In 2019, no transactions were carried out that required its approval. For this reason, it did not meet in 2019.

There is no Mediation Committee because the Supervisory Board of Fresenius SE & Co. KGaA does not appoint the Management Board members of Fresenius Management SE.

For more information about the committees, their composition, and their work methods, please refer to the Corporate Governance Declaration and Report on pages 136 to 163 and page 267 f. of the Annual Report.

PERSONNEL

Dr. Karl Schneider resigned from the Joint Committee as of December 31, 2019. Mr. Klaus-Peter Müller was appointed his successor with effect from January 1, 2020. Otherwise, there were no changes to the composition of the Management Board of the general partner Fresenius Management SE and the Supervisory Board of Fresenius SE & Co. KGaA and its committees in 2019.

FINANCIAL STATEMENTS AND CONSOLIDATED FINANCIAL STATEMENTS

KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, audited the accounting records, the annual financial statements prepared in accordance with the accounting principles of the German Commercial Code (HGB), and the Company's management report for 2019. The firm was elected as auditor in accordance with a resolution passed at the Annual General Meeting of Fresenius SE & Co. KGaA on May 17, 2019, and was subsequently commissioned by the Supervisory Board. The Company's financial statements, management report, and the consolidated financial statements were prepared in accordance with IFRS accounting principles and with the regulations governing such statements under Section 315e of the German Commercial Code (HGB). The auditors of KPMG issued their unqualified audit opinion for these statements.

The financial statements, the consolidated financial statements, the management reports, and the auditor's reports were submitted to each member of the Company's Supervisory Board within the required time. At their meetings on March 11 and 12, 2020, the Audit Committee and then the Supervisory Board discussed all the documents in detail.

The auditor gave a detailed report on the results of the audit at each of these meetings. The auditor found no weaknesses in the risk management system or the internal control system with regard to the accounting process. The auditor attended all meetings of the Supervisory Board and all meetings and conference calls of the Audit Committee.

The Audit Committee and the Supervisory Board approved the auditor's findings. Independent reviews by the Audit Committee and the Supervisory Board raised no objections to the Company's financial statements and management report or the consolidated financial statements and the Group management report. At its meeting on March 12, 2020, the Supervisory Board approved the financial statements and management reports presented by the general partner and the statements contained therein with respect to future development.

The Supervisory Board concurs with the general partner's proposal for the 2019 profit distribution.

The Supervisory Board would like to thank the members of the Management Board of the general partner and all employees for their achievements.

Bad Homburg v. d. H., March 12, 2020

The Supervisory Board of Fresenius SE & Co. KGaA

Dr. Gerd Krick
Chairman

FRESENIUS MEDICAL CARE. Fresenius Medical Care achieved solid growth in 2019. We are working successfully to offer even more patients even better and more individual treatment options. The integration of the NxStage product line has led to record growth in the number of home dialysis patients.

Fresenius Medical Care is the world's leading provider of products and services for people with chronic kidney failure. Around 3.5 million patients with this disease worldwide regularly undergo dialysis treatment. When the kidney function of patients with this disease fails, dialysis takes over the vital task of cleansing the blood of toxins and surplus water. Fresenius Medical Care offers products and services along the entire dialysis value chain from a single source. In our global network of 3,994 dialysis clinics, we care for more than 345,000 patients. At the same time, we operate 45 production sites, to provide dialysis products such as dialysis machines, dialyzers, and related disposables. In addition, Fresenius Medical Care offers non-dialysis services, among others, in the field of Care Coordination.

Our strategy is geared towards sustainable growth. We aim to continuously improve the quality of life of patients with kidney disease by offering innovative products and treatment concepts of the highest quality. We have successfully launched our 4008A dialysis machine, specifically designed for emerging markets, in the important growth market of China.

BUSINESS DEVELOPMENT

Fresenius Medical Care's sales increased by 6% (2% in constant currency) to €17,477 million in 2019 (2018: €16,547 million). Adjusted sales[1] increased by 8% (5% in constant currency) to €17,329 million in 2019 (2018: €16,026 million). Organic sales growth was 5%. Currency translation effects increased sales by 3%. They resulted, in particular, from the appreciation of the U.S. dollar against the euro.

SALES BY REGION

€ in millions	2019	2018	Change	Currency translation effects	% of total Fresenius Medical Care sales
North America	**12,195**	11,570	5%	5%	69%
Europe/Middle East/Africa	**2,693**	2,587	4%	0%	16%
Asia-Pacific	**1,859**	1,689	10%	3%	11%
Latin America	**709**	686	3%	-18%	4%
Corporate	**21**	15	37%	1%	0%
Total	**17,477**	16,547	6%	4%	100%

[1] 2018 adjusted for divestitures of Care Coordination activities; 2019 adjusted for the adoption of IFRS 16 ("IFRS 16 effect") and NxStage
The key financial data is presented in accordance with the presentation of Fresenius Medical Care. For a detailed reconciliation please refer to the tables on page 59.

Sales of health care services rose by 5% to €13,872 million (1% in constant currency). Sales of health care products rose by 10% to €3,605 million (8% in constant currency).

In 2019, the reported operating result (EBIT) decreased by 25% to €2,270 million (-28% in constant currency). This corresponds to an operating margin of 13.0% after 18.4% in the previous year. Adjustments on accounts receivable in legal dispute paired with reduced patient attribution and a decreasing savings rate for ESCOs weighed on earnings. These effects were partially offset by the remeasurement effect of the fair value of the investment in Humacyte, Inc.

Adjusted EBIT[1] remained on the previous year's level at €2,296 million (-4% in constant currency). On an adjusted basis, the EBIT[1] margin fell from 14.3% to 13.2%.

Reported net income[2] decreased by 39% (-42% in constant currency) to €1,200 million (2018: €1,982 million). The adjusted net income[1,2] decreased by 2% in constant currency.

REGIONAL DEVELOPMENT

North America remained Fresenius Medical Care's largest business region. In 2019, sales increased by 5% (0% in constant currency) to €12,195 million (2018: €11,570 million). Reported EBIT decreased by 33% to €1,794 million (2018: €2,665 million), with a reported EBIT margin of 14.7% (2018: 23.0%).

SALES BY SEGMENT

€ in millions	2019	2018	Change
Health care services[1]	**13,872**	13,264	5%
Health care products[2,3]	**3,605**	3,283	10%
Total	**17,477**	16,547	6%

[1] Sales from dialysis services and Care Coordination
[2] Sales from dialysis products such as dialysis machines, dialyzers, and related disposables, and non-dialysis products
[3] Including sales generated by corporate functions of €21 million in 2019 and €15 million in 2018

The average revenue per treatment in the United States was US$352 in 2019, compared to US$354 in 2018. The average cost per treatment in the United States increased from US$289 in 2018 to US$296 in 2019.

In 2019, the business development outside of North America, in the business segments EMEA (Europe/Middle East/Africa), Asia-Pacific, and Latin America, was impacted by currency translation effects. Sales increased by 6% (8% in constant currency) to €5,261 million (2018: €4,962 million). Reported EBIT increased by 12% to €820 million (2018: €732 million). The EBIT margin was 15.6% (2018: 14.7%).

FRESENIUS MEDICAL CARE BY REGION

	North America	Europe/ Middle East/ Africa	Latin America	Asia-Pacific	Total 2019	Change 2019/2018
Dialysis clinics (December 31)	2,579	781	234	400	**3,994**	2%
Dialysis patients (December 31)	211,064	66,217	34,810	33,005	**345,096**	4%
Treatments	32,138,448	10,042,109	5,388,330	4,579,220	**52,148,107**	4%

ACQUISITIONS / DIVESTITURES

In 2019, Fresenius Medical Care further expanded its clinical network, worldwide. We have further reinforced our activities in China with new product launches.

With the acquisition of NxStage Medical, Inc. in 2019, we have strengthened our vertically integrated dialysis business, improving quality of care and clinical outcomes for dialysis patients. NxStage develops, produces, and markets an innovative product portfolio of medical devices for use in home dialysis as well as in the critical care setting. Fresenius Medical Care reported record growth in home dialysis and now treats more than 25,000 patients at home in North America.

TREATMENT QUALITY

Again in 2019, physicians and clinical staff in our dialysis clinics offered patients the highest-quality treatment. Please see page 95 ff. of the Group Non-financial Report for further details on treatment quality.

[1] On a comparable basis: 2018 before special items and after adjustments; 2019 before special items (transaction-related expenses, gain related to divestitures of Care Coordination activities, expenses associated with the cost optimization program), adjusted for IFRS 16 effect, excluding effects from NxStage transaction
[2] Net income attributable to Fresenius Medical Care AG & Co. KGaA

The key financial data is presented in accordance with the presentation of Fresenius Medical Care. For a detailed reconciliation please refer to the tables on page 59.

FRESENIUS KABI. In 2019, the excellent growth in the emerging markets was particularly noteworthy, partially offsetting the somewhat softer performance in North America. With organic sales growth of 4% and EBIT growth in constant currency of 3%, we achieved our 2019 financial outlook.

Fresenius Kabi specializes in the therapy and care of chronically and critically ill people. The portfolio includes IV drugs, i.e., intravenously administered generic anesthetics, analgesics, anti-infectives, and drugs for the treatment of oncological and other critical diseases. We also develop biosimilars focusing on oncology and autoimmune diseases, and we launched our first biosimilar product in Europe in 2019. Another product segment is clinical nutrition. In this segment, we are one of the few companies worldwide that offer both parenteral and enteral nutrition products. The infusion therapy portfolio includes infusion solutions and blood volume substitutes. In the medical devices/transfusion technology segment, we offer infusion and nutrition pumps, as well as consumables, for the administration of pharmaceuticals and clinical nutrition products. Moreover, our portfolio includes products used in the collection and processing of blood and cell components, as well as in transfusion medicine and cell therapy.

BUSINESS DEVELOPMENT

In 2019, Fresenius Kabi increased sales by 6% to €6,919 million. Organic sales growth was 4%. Currency translation effects increased sales by 2%. This resulted from the appreciation of serveral currencies, mainly of the U.S. dollar against the euro.

SALES BY REGION

€ in millions	2019	2018	Change	Currency translation effects	% of total Fresenius Kabi sales
Europe	**2,313**	2,248	3%	0%	33%
North America	**2,424**	2,359	3%	5%	35%
Asia-Pacific	**1,506**	1,300	16%	2%	22%
Latin America/Africa	**676**	637	6%	-8%	10%
Total	**6,919**	6,544	6%	2%	100%

In Europe, we achieved organic sales growth of 2% based on the good development of the clinical nutrition product segment. In North America, organic sales growth was -2%. Intensifying competition on selected molecules, a further easing of tailwinds from drug shortages as well as a shift in clinical practice towards non-opioids in hospital-based pain management weighed on the sales development. In the emerging markets and developing countries, Fresenius Kabi achieved significant sales growth, especially with clinical nutrition products. Organic sales growth in Latin America was 15%. In Asia-Pacific, we achieved organic sales growth of 14%. EBIT[1] improved by 5% to €1,200 million. Currency translation effects increased EBIT[1] by 2%.

ACQUISITIONS / INVESTMENTS

In the United States, Fresenius Kabi continued its extensive investment program at its manufacturing sites. The aim of these investments is, among other things, to further increase the degree of modernization and automation and thus to make a significant contribution to the continuous increase in efficiency and to further raise our quality standards in these plants. In 2019, we made considerable progress with our investment program and continued to work on equipping our plants with state-of-the-art technologies for the manufacture of pharmaceutical products; the investment program will be continued over the coming years.

We opened our new research and development center for biosimilars in Eysins in the Swiss canton of Vaud. The new development center is an important step in expanding our capacity to develop new biosimilar products.

Due to the demand for enteral products in China, we are expanding our production capacity there. In 2019, we completed the planned expansion of the site at our plant in Wuxi to include additional production lines for our EasyBag tube feed. This makes it possible for us to supply the local market with these products directly and efficiently. Fresenius Kabi is also building a new production building on the Wuxi Campus, where enteral nutrition products that have the status of Foods for Special Medical Purposes will be manufactured. At the same time, Fresenius Kabi is expanding its enteral nutrition research and development activities in Wuxi.

PRODUCT SEGMENTS

In the segment of generic IV drugs, we have expanded our product portfolio to additional regional markets. There were more than 85 product launches of IV drugs worldwide. In the area of biosimilars[2], we received marketing authorization from the European Commission in April for Idacio, an Adalimumab biosimilar, for all indications of the reference medicine, and were subsequently able to launch our first biosimilar in Europe. In addition, the attending physicians and their patients can receive access to KabiCare, a program designed to train and support physicians and patients with information material on biosimilars, autoimmune diseases, and treatment with Idacio.

In clinical nutrition, we successfully further expanded the market presence of our products for parenteral nutrition. With our three-chamber bags, we are the global leader in the multi-chamber bag product segment for parenteral nutrition. New products enable us to offer our customers a comprehensive range of therapies. In 2019, we started to launch our new product SmofKabiven Low Osmo Peripheral, for example, a three-chamber bag that provides patients with a time-efficient energy delivery. We also achieved growth in enteral nutrition, particularly in the Asia-Pacific and Latin America regions. In 2019, we moved ahead with the internationalization of our product portfolio and launched our Fresubin sip and tube feed products in South Korea and Australia.

SALES BY PRODUCT SEGMENT

€ in millions	2019	2018	Organic sales growth
IV drugs	**2,939**	2,874	-1%
Clinical nutrition	**1,898**	1,763	9%
Infusion therapy	**834**	796	3%
Medical devices/ Transfusion technology	**1,248**	1,111	11%
Total	**6,919**	6,544	4%

EARNINGS DEVELOPMENT

€ in millions	2019	2018	Change
Europe	**328**	355	-8%
North America	**907**	894	1%
Asia-Pacific/ Latin America/Africa	**476**	398	20%
Administrative and corporate R & D expenses	**-511**	-508	1%
EBIT[1]	**1,200**	1,139	5%
Net income[1,2]	**802**	742	8%

[1] On a comparable basis: before special items and adjusted for IFRS 16 effect
[2] Net income attributable to the shareholders of Fresenius SE & Co. KGaA

In infusion therapy, we worked on further expanding our infusion solutions business in the United States.

In the medical devices product segment, we launched our ProNeo product portfolio in Europe in 2019. The ProNeo portfolio includes a comprehensive range of transnasal feeding tubes and accessories that meet the specific requirements of enteral nutrition application in neonatal and pediatric wards. In the transfusion technology product segment, we have begun to introduce the Amicus Blue cell separator in Europe. This cell separator can also be used for extracorporeal photopheresis.

[1] On a comparable basis: before special items and adjusted for IFRS 16 effect
[2] For additional information on the biosimilars activities please see page 42 of the Group Management Report.

For a detailed overview of special items please see the reconciliation table on page 61.

FRESENIUS HELIOS. We achieved our sales and earnings outlook. The investments made in connection with regulatory requirements in Germany are showing positive effects. The business in Spain continues to grow dynamically. We have strengthened our presence in Latin America.

Fresenius Helios is Europe's leading private hospital operator. The company comprises Helios Germany and Helios Spain (Quirónsalud); both are part of the holding company Helios Health. Helios Germany operates 86 hospitals, around 125 outpatient clinics, and 8 prevention centers. The company is the largest provider of inpatient and outpatient care in Germany. Helios Germany offers high-quality treatment across the entire range of medical services. Quirónsalud operates 47 hospitals, 71 outpatient centers, and around 300 occupational risk prevention centers. Quirónsalud is Spain's largest private hospital operator with a comprehensive range of inpatient and outpatient medical care. In addition, the company is active in Latin America with 4 hospitals and as a provider of medical diagnostics.

BUSINESS DEVELOPMENT

Fresenius Helios increased sales by 3% (5%[1]) to €9,234 million in 2019. Organic sales growth was 5%.

Helios Germany's sales declined by 1% (increased by 3%[1]) to €5,940 million. Organic sales growth was 3%, positively influenced by price effects. The reclassification of nursing staff funding from other income to sales also contributed to growth. The measures initiated in 2018 to increase sales and implement regulatory requirements were successfully continued. For example, vacancies were filled in the area of specialized medical personnel. In addition, the areas of prevention and occupational health care were expanded and digital services were developed, such as the Helios patient portal. This platform allows patients in Germany to access their medical documents such as doctor's letters, medical reports, or laboratory results, and make appointments with doctors, online.

SALES AND EARNINGS DEVELOPMENT

€ in millions	2019	2018	Change
Sales	**9,234**	8,993	3%
Helios Germany	**5,940**	5,970	-1%
Helios Spain	**3,292**	3,023	9%
EBIT[1]	**1,015**	1,052	-4%
Helios Germany	**576**	625	-8%
Helios Spain	**434**	413	5%
EBIT margin[1] in %	**11.0**	11.7	
Helios Germany	**9.7**	10.5	
Helios Spain	**13.2**	13.7	
Net income[1,2]	**670**	686	-2%

[1] Adjusted for IFRS 16 effect
[2] Net income attributable to shareholders of Fresenius SE & Co. KGaA

[1] Adjusted for the post-acute care business transferred from Fresenius Helios to Fresenius Vamed as of July 1, 2018.

In order to benefit from the continuing trend towards increasing outpatient treatment, Helios Germany restructured its outpatient clinics and strengthened its patient service in 2019.

Helios Spain increased sales by 9% to €3,292 million. Organic sales growth was 7%.

The EBIT[1] of Fresenius Helios decreased by 4% to €1,015 million (-3%[2]). The EBIT margin was 11.0%. The EBIT[1] of Helios Germany fell by 8% (-6%[2]) to €576 million, the EBIT margin to 9.7%. The EBIT development was adversely affected by investments in connection with regulatory requirements.

The EBIT[1] of Helios Spain rose by 5% to €434 million. The EBIT margin was 13.2%.

INVESTMENTS

Investments in Germany focused on the construction and modernization of hospitals in Duisburg, Wuppertal, and Wiesbaden as well as digitalization projects such as the Helios patient portal.

In Spain, Fresenius Helios invested in building expansions, including the Sagrado Corazón hospital in Seville. The opening of the new facility is planned for 2021. The total investment is approximately €20 million.

The construction of a proton therapy center in Madrid was completed on schedule and during an initial pilot phase a small number of selected patients have already been treated. It is the first center of its kind for cancer treatment in Spain.

ACQUISITIONS / NEW HOSPITAL BUILDINGS

In May 2019, Helios Spain acquired a hospital in Albacete that is an excellent complement to the region's existing network of clinics. In addition, the company acquired Digest, an outpatient center in Badalona, and opened additional outpatient centers in Alicante, Algeciras, Bilbao, and Toledo.

In 2019, Helios Spain continuously expanded its presence in the attractive private hospital market in Colombia. In the metropolis of Medellín, the acquisition of Clínica Medellín was completed in April. Clínica Medellín operates two hospitals with a total of about 185 beds. The total investment was more than €50 million. The acquisitions of two further centrally located hospitals in Medellín, Clínica Las Vegas and Clínica del Prado, were completed in December 2019, and January 2020, respectively. The hospitals have a total of around 300 beds. The total transaction volume amounted to approximately €50 million.

Helios Spain has also signed an agreement to acquire Centro Médico Imbanaco (CMI), which is located in the metropolis of Cali. The hospital has about 350 beds and is one of the most prestigious private hospitals in Latin America. The total transaction volume amounts to approximately €300 million. Closing is expected in the first quarter of 2020. A further agreement has been signed to acquire Clínica de la Mujer, located in Colombia's capital city Bogotá. The hospital has a special focus on gynecology, pediatrics and obstetrics, and generated sales of about €20 million in 2019. The transaction is expected to close in the second quarter of 2020.

In addition, Helios Spain acquired CediMed, a leading provider of medical diagnostics and laboratory services in Colombia. The transaction volume amounts to approximately €40 million.

	2019	2018	Change
Acute clinics Germany	**83**	83	0%
Beds	**28,380**	28,802	-1%
Acute clinics Spain	**51**	47	9%
Beds	**7,288**	7,019	4%
Patient numbers Germany	**5,566,613**	5,321,445	5%
Patients treated in hospital	**1,206,654**	1,218,199	-1%
Patients treated as outpatients	**4,354,527**	4,073,047	7%
Patient numbers Spain	**15,396,051**	13,318,066	16%
Patients treated in hospital	**845,560**	437,855	93%
Patients treated as outpatients	**14,550,491**	12,880,211	13%

REGULATORY CHANGES

The Act to Strengthen Nursing Staff (PpSG) entered into force on January 1, 2019, in Germany, aiming to increase the number of staff in the nursing professions. In contrast to 2018, in 2019, each additional or increased nurse position at the bed was completely refinanced by the health insurers. Fresenius Helios was able to recruit additional nursing staff in all its hospitals as part of a large-scale campaign. From 2020, nursing costs will be deducted from the standardized base rates and the costs for direct nursing patient care will instead be fully reimbursed by the health insurance companies via separate care budgets at costs.

In addition, since 2019, a regulation setting a minimum level for nursing staff has applied to hospitals in Germany for the following areas: geriatrics, intensive care, cardiology, and trauma surgery. In 2020, the areas of heart surgery, neurology, neurological stroke units, and early neurological rehabilitation will be added.

[1] Adjusted for IFRS 16 effect
[2] Adjusted for the post-acute care business transferred from Fresenius Helios to Fresenius Vamed as of July 1, 2018.

FRESENIUS VAMED. In 2019, we recorded excellent sales development of 31% and organic sales growth of 16%. The integration of post-acute care facilities in Germany has been successfully completed and further strengthens our service business. A very strong order book secures future growth in the project business.

Fresenius Vamed manages projects, provides services for hospitals and other health care facilities worldwide, and is a leading post-acute care provider in Central Europe. Our portfolio ranges along the entire value chain: from project development, planning, and turnkey construction, via maintenance and technical management, to total operational management, as illustrated in the diagram on page 29. Our offerings target different areas of health care, from prevention to acute care, rehabilitation, and nursing care. We are active in 95 countries on 5 continents. This comprehensive range of competencies enables us to support complex health care facilities efficiently and successfully at each stage of their life cycle. As a specialist provider that can deliver the full spectrum of services worldwide, we are in a unique position. We have thus far successfully completed around 960 projects.

BUSINESS DEVELOPMENT

In 2019, Fresenius Vamed increased sales by 31% (19% [1]) to €2,206 million. Organic growth was 16%. Currency translation effects had no major impact on sales.

EBIT [2] grew by 19% (6% [1]) to €131 million (2018: €110 million). The EBIT margin decreased to 5.9% (2018: 6.5%). EBIT [2] in the project business remained on the previous year's level at €30 million. In the service business, EBIT [2] grew by 26% to €101 million. Net income [2,3] improved to €85 million (2018: €72 million).

SALES BY REGION

€ in millions	2019	2018	Change	% of total Fresenius Vamed sales
Europe	**1,823**	1,312	39%	83%
Africa	**81**	109	-26%	3%
Asia-Pacific	**198**	221	-10%	9%
Latin America	**104**	46	126%	5%
Total	**2,206**	1,688	31%	100%

SALES BY BUSINESS SEGMENT

€ in millions	2019	2018	Change	% of total Fresenius Vamed sales
Project business	**807**	712	13%	37%
Service business	**1,399**	976	43%	63%

[1] Adjusted for the post-acute care business transferred from Fresenius Helios to Fresenius Vamed as of July 1, 2018.
[2] Adjusted for IFRS 16 effect
[3] Net income attributable to VAMED AG

PROJECT BUSINESS

VAMED's project business comprises consulting on projects, project development, planning, turnkey construction, and financing management of projects. VAMED responds flexibly to the local needs of clients, providing custom-tailored solutions all from one source. We also carry out projects in cooperation with partners. With 26 implemented projects, VAMED is a pioneer in public-private partnership (PPP) projects.

In Europe, VAMED has continued its positive development. The modernization of the University Hospital Schleswig-Holstein (UKSH), the largest PPP project in the German health care sector, marks a major milestone: in 2019, the newly built central clinics at the Kiel and Lübeck sites were handed over. We were commissioned with the turnkey construction of hospitals in Velbert and Duisburg.

In Austria, VAMED is implementing numerous projects at Vienna's General Hospital (AKH) until 2030. Modernization work is being carried out and new buildings erected without interrupting operations. We are also realizing other projects, in Germany, Austria, Switzerland, the Netherlands, and Poland, amongst others.

ORDER INTAKE AND ORDER BACKLOG FOR PROJECTS

€ in millions	2019	2018	Growth
Order intake	**1,314**	1,227	7%
Order backlog (December 31)	**2,865**	2,420	18%

We have also obtained important contracts in Africa, including the turnkey construction of four general hospitals in Ivory Coast as well as construction contracts in Ghana and Mozambique. In the Asia-Pacific region, new orders were received from India, Malaysia, Thailand, China, Laos, and Sri Lanka. In the Middle East, we received an expansion order to supply medical technology to the United Arab Emirates and a construction contract in Jordan. In Latin America, VAMED is responsible for new projects in Bolivia as well as Trinidad and Tobago.

VAMED VALUE CHAIN

Project business			Service business	
Project development and consulting	**Planning and financial engineering**	**Project management and construction**	**Services** ▶ technical ▶ commercial ▶ infrastructural	**Operational management** ▶ technical management ▶ total operational management

SERVICE BUSINESS

Modular in design, our service offering encompasses every aspect of technical, commercial, and infrastructural facility management as well as the total operational management for health care facilities. The service business includes building and equipment maintenance, medical technology management, and technical management. Our integrated portfolio of services is aimed at the optimal operation of a health care facility.

In 2019, we provided services for about 890 health care facilities with 205,000 beds worldwide as part of the technical operational management. The acquisition of IHSS Limited, a leading provider of sterile services in the United Kingdom, strengthens the high-end services sector.

In Austria, we continued the partnership we have maintained since 1986 with Vienna's General Hospital (AKH). In Germany, amongst others, we have been providing technical services for UKSH since mid-2015. In addition, we received new orders in important European markets such as Germany, Austria, the United Kingdom, Croatia, and Spain.

The health care facilities that VAMED acquired from Fresenius Helios with a focus on inpatient rehabilitation and care were successfully integrated.

This acquisition makes VAMED one of the leading private providers of rehabilitation services in Europe. In Austria, we are the largest private provider of rehabilitation services and have expanded our range to include new outpatient rehabilitation facilities. In Switzerland, we are the second-largest private rehabilitation provider. We also operate other well-known rehabilitation facilities in the Czech Republic and the United Kingdom.

VAMED VITALITY WORLD

With the range of services offered by VAMED Vitality World, we are building a bridge between preventive medicine and health tourism in spa and health resorts. We are a leader in the Austrian market and currently operate nine thermal and health care spa resorts.

FRESENIUS SHARE. In 2019, Fresenius increased its Group sales guidance and achieved its Group earnings guidance. This contributed to a significant recovery in the Fresenius share price of 18% during the year. Based on the healthy business development, we propose the 27th consecutive dividend increase.

STOCK MARKETS AND DEVELOPMENT OF THE FRESENIUS SHARE

After a volatile start to the year, which was marked by fears of recession and geopolitical risks, the financial markets rose significantly as the year progressed. Furthermore, the slight improvement in the trade conflict between the United States and China towards the end of the year had a calming effect on the markets.

The **DAX** increased by 25%; the **EURO STOXX 50** gained 25% for the year. The **STOXX Europe 600** index ended the year up by 23%. In this index, the subsector STOXX Europe 600 Health Care increased by 28%. The leading U.S. indices performed as follows: the **S&P 500** and the **Dow Jones Industrial Average** both increased, by 29% and 22%, respectively.

The closing price for the Fresenius share on December 31, 2019, was €50.18 and thus 18% above the closing price of 2018.

The **market capitalization** of Fresenius was €28 billion as of December 31, 2019, an increase of 18% compared to the previous year. The average daily **trading volume on Xetra** increased by 3% to 1,693,849 Fresenius shares compared to the previous year (2018: 1,648,837). The DAX trading volume decreased by 16% in the same comparison time period.

Fresenius shares remain an attractive investment. Anyone who invested €1,000 ten years ago and reinvested the dividends would have increased their capital to €3,465 as of December 31, 2019. That is an average annual return of 15% (before expenses and taxes).

In the United States, Fresenius has a Sponsored Level I American Depositary Receipt (ADR) program. In this program, four Fresenius ADRs correspond to one Fresenius share. The ADRs are traded in the OTCQX International Premier market segment.

CAPITAL STRUCTURE

The total number of issued shares at the end of 2019 was 557,379,979 (December 31, 2018: 556,225,154 shares). The increase is due to the exercise of options in accordance with stock option plans. Information on stock option plans can be found on pages 248 to 256 of the Notes to this Annual Report.

INVESTOR RELATIONS

Our investor relations activities are in accordance with the transparency rules of the German Corporate Governance Code. We communicate comprehensively, promptly, and openly with private and institutional investors, as well as financial analysts. The equal treatment of all market actors is very important to us.

We maintained our intense **dialog with the capital markets** in 2019. In addition to its conference calls and webcasts, Fresenius gave presentations in major European, U.S., Canadian, and Asian financial markets. We expanded our contacts with institutional investors and analysts at 33 international investor conferences, 21 roadshows, and in numerous one-on-one meetings. We also organized field trips with banks, giving investors and analysts the opportunity to discuss matters with the Management Board.

The Fresenius investor relations team and the management team were recognized in the results of the Extel Survey, a broad survey conducted by the company Thomson Reuters, which annually surveys some 15,000 investors and analysts on various aspects of good investor relations. On this occasion, the Fresenius investor relations team was honored, once again, as the best in the MedTech sector in Europe.

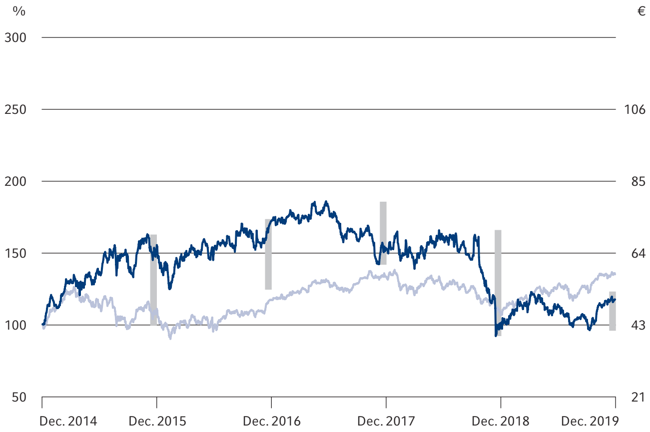
In addition, Fresenius' management and investor relations team leads the "Manager Magazin" long-term ranking for the best average score over three years for the best financial communication of DAX companies.

We also continued the dialog with our **private investors**, especially via the Internet. Furthermore, we participate in private shareholder events. At www.fresenius.com/events-and-presentations our private shareholders can follow live webcasts of the conference calls and can make use of the continuously increasing range of information offered on our website and social media channels.

If you would like to contact us or find out about our 2020 financial calendar, please take a look at the last page of this Annual Report. For additional information visit us at www.fresenius.com/investors.

RELATIVE SHARE PRICE PERFORMANCE 2015 – 2019

FRESENIUS SHARE VS. DAX



■ Fresenius share in % ■ DAX in % ▬ Fresenius high and low in €

ABSOLUTE SHARE PRICE PERFORMANCE 2019

FRESENIUS SHARE IN €

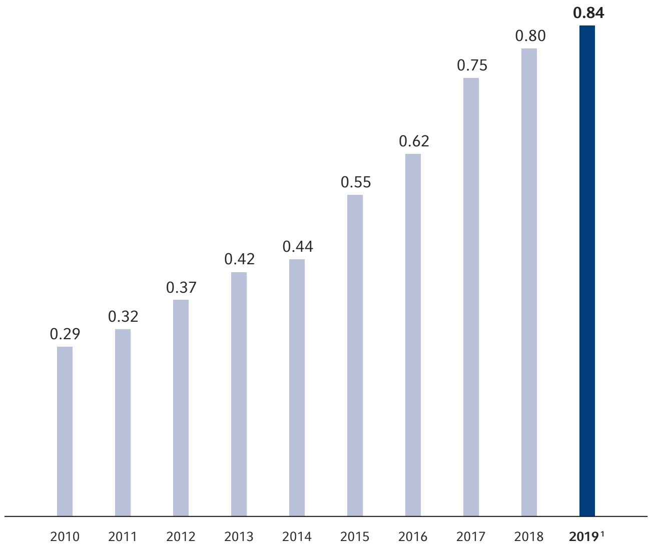
■ Fresenius share ▬ Monthly price range

KEY DATA OF THE FRESENIUS SHARE

	2019	2018	2017	2016	2015
Number of shares	**557,379,979**	556,225,154	554,710,473	547,208,371	545,727,950
Stock exchange quotation[1] in €					
High	**52.42**	70.94	79.65	74.26	69.75
Low	**40.74**	38.99	60.58	53.05	42.41
Year-end quotation	**50.18**	42.38	65.07	74.26	65.97
Market capitalization[2] in million €	**27,969**	23,573	36,095	40,636	36,002
Total dividend distribution in million €	**468.0**[3]	445.0	416.0	343.1	300.2
Dividend per share in €	**0.84**[3]	0.80	0.75	0.62	0.55
Earnings per share in €[4]	**3.37**	3.37	3.28	2.85	2.64

[1] Xetra closing price on the Frankfurt Stock Exchange
[2] Total number of ordinary shares multiplied by the respective Xetra year-end quotation on the Frankfurt Stock Exchange
[3] Proposal
[4] Net income attributable to shareholders of Fresenius SE & Co. KGaA; before special items, incl. IFRS 16

DEVELOPMENT OF DIVIDENDS IN €



[1] Proposal

DIVIDEND

In 2019, Fresenius again delivered good financial results. For the 27th consecutive year, we are proposing to our shareholders to increase the dividend – by 5% per share, to €0.84 (2018: €0.80). The proposed dividend distribution to the shareholders of Fresenius SE & Co. KGaA will be €468 million, equivalent to 24% of Group net income. Based on the proposed dividend and the closing price at the end of 2019, the dividend yield is 1.7%.

SHAREHOLDER STRUCTURE

The charts opposite show the shareholder structure at the end of 2019. The Else Kröner-Fresenius-Stiftung was the largest shareholder of Fresenius SE & Co. KGaA, with 26.6% of the shares. According to notifications pursuant to the German Securities Trading Act (WpHG), Allianz Global Investors GmbH and BlackRock, Inc. each held about 5% of the shares. For further information on notifications, please visit www.fresenius.com/shareholder-structure.

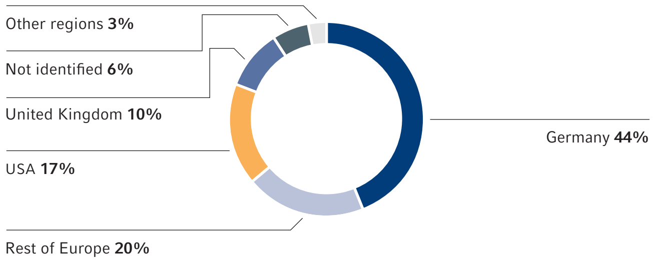
As of December 31, 2019, a **shareholder survey** identified the ownership of about 94% of our subscribed capital. The shareholder base of Fresenius is solid: a total of approximately 600 institutional investors held about 350 million shares or 62% of the subscribed capital; 29.9 million shares were identified as retail holdings. The **10 largest investors** held about 23% of the share capital. Our shares were mostly held by investors in Germany, the United States, and the United Kingdom.

ANALYST RECOMMENDATIONS

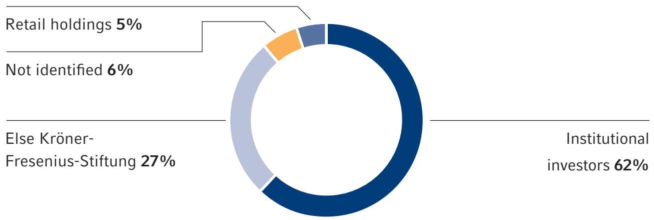
The recommendations published by financial analysts are an important guide for institutional and private investors when making investment decisions. According to our survey, as of February 18, 2020, we were rated with 13 “buy”, 7 “hold”, and no “sell” recommendations.

The list of banks that provide regular analyst coverage of Fresenius and their latest recommendations can be found at www.fresenius.com/analysts-and-consensus.

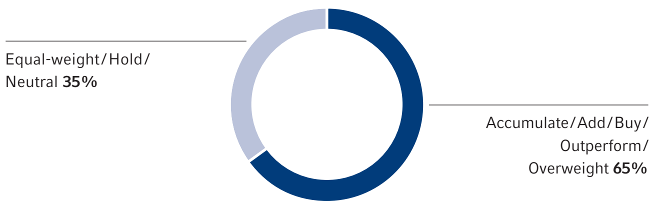
SHAREHOLDER STRUCTURE BY REGION



SHAREHOLDER STRUCTURE BY INVESTORS



ANALYST RECOMMENDATIONS



GROUP MANAGEMENT REPORT

2

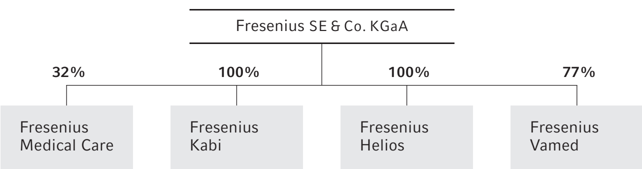
GROUP MANAGEMENT REPORT. In 2019, Fresenius made significant investments in all business segments to lay the foundation for future growth. We achieved our targets for both Group sales and earnings in 2019.

FUNDAMENTAL INFORMATION ABOUT THE GROUP

THE GROUP'S BUSINESS MODEL

Fresenius is a global health care Group in the legal form of an SE & Co. KGaA (a partnership limited by shares). We offer products and services for dialysis, hospitals, and outpatient medical care. In addition, Fresenius focuses on hospital operations. We also manage projects and provide services for hospitals and other health care facilities worldwide.

GROUP STRUCTURE



The operating business comprises four **business segments,** all of which are legally independent entities managed by the operating parent company Fresenius SE & Co. KGaA. The business segments are organized on a regional level and have a decentralized structure.

- **Fresenius Medical Care** offers services and products for patients with chronic kidney failure. As of December 31, 2019, Fresenius Medical Care treated 345,096 patients at 3,994 dialysis clinics. Dialyzers and dialysis machines are among the most important product lines. In addition, Fresenius Medical Care offers dialysis-related services, among others, in the field of Care Coordination.
- **Fresenius Kabi** specializes in intravenously administered generic drugs (IV drugs), clinical nutrition, and infusion therapies. The company is also a supplier of medical devices and products for transfusion technology. In addition, Fresenius Kabi develops products with a focus on oncology and autoimmune diseases within the biosimilars segment of Fresenius Kabi.
- **Fresenius Helios** is Europe's leading private hospital operator. The company comprises Helios Germany and Helios Spain (Quirónsalud). At the end of 2019, Helios Germany operated a total of 86 hospitals, around 125 outpatient clinics, and 8 prevention centers. In Spain, Quirónsalud operated 47 hospitals, 71 outpatient centers, and around 300 occupational risk prevention centers at the end of 2019. In addition, Quirónsalud is active in Latin America with 4 hospitals and as a provider of medical diagnostics.
- **Fresenius Vamed** manages projects and provides services for hospitals as well as other health care facilities worldwide and is a leading post-acute care provider in Central Europe. The portfolio ranges along the entire value chain –

from project development, planning, and turnkey construction, via maintenance and technical management, to total operational management.

Fresenius has an international sales network and maintains more than 90 production sites. Large production sites are located in the United States, China, Japan, Germany, and Sweden.

IMPORTANT MARKETS AND COMPETITIVE POSITION

Fresenius operates in more than 90 countries through its subsidiaries. The **main markets** are Europe with 43% and North America with 41% of sales, respectively.

Fresenius Medical Care holds the leading position worldwide in dialysis care as it serves about 10% of all dialysis patients, as well as in dialysis products, with a market share of about 36%. **Fresenius Kabi** is among the leading companies for large parts of its product portfolio in Europe and has significant market shares in the growth markets of Asia-Pacific and Latin America. In the United States, Fresenius Kabi is one of the leading suppliers of generic IV drugs. Further information on the market position of Fresenius Kabi can be found in the market description on page 47 f. **Fresenius Helios** is Europe's leading private hospital operator. Helios Germany and Helios Spain are the largest private hospital operators in their respective home markets. **Fresenius Vamed** is one of the world's leading companies in its field.

EXTERNAL FACTORS

Overall, the legal and economic factors for the Fresenius Group were largely unchanged in 2019. The life-saving and life-sustaining products and therapies that the Group offers are of intrinsic importance for people worldwide. Therefore, the business development of our company is fundamentally stable and relatively independent of economic cycles. For detailed information on our markets, please see pages 46 ff. Furthermore, the diversification across four business segments and our global reach provide additional stability for the Group.

Fluctuating exchange rates, particularly between the U.S. dollar and the euro, have an effect on the income statement and the balance sheet. In 2019, the average annual exchange rate between the U.S. dollar and the euro of 1.12 was below the 2018 rate of 1.18, and therefore had a positive currency translation effect on the income statement. Furthermore, negative currency translation effects on the income statement resulted, in particular, from the depreciation of Latin American currencies (especially the Argentinian peso) against the euro in the 2019 fiscal year. In particular, as a result of the first time adoption of IFRS 16 and the exchange rate changes (from 1.15 U.S. dollars on December 31, 2018, to 1.12 U.S. dollars on December 31, 2019), the balance sheet total increased by 18% (17% in constant currencies).

In 2019, the Fresenius Group was involved in various legal disputes resulting from business operations. Although it is not possible to predict the outcome of these disputes, none is expected to have a significant adverse impact on the assets and liabilities, financial position, and results of operations of the Group. Further information regarding legal matters can be found on pages 225 to 232 of the Notes.

We carefully monitor and evaluate country-specific, political, legal, and financial conditions. This also applies to the potential impact on our business of the United Kingdom's decision to leave the European Union and the ongoing uncertainty about the conditions of Brexit. We do not expect this to have a material impact on our business at this time. The share of sales generated in the United Kingdom is not material in relation to Group sales. We do not expect any negative effects on our financing either, as only an immaterial portion of our credit lines is provided by banks domiciled in the United Kingdom. Project teams in all divisions concerned are identifying potential effects in terms of logistics, taxes, customs duties, and potential regulations, among other things, and initiating appropriate measures, if necessary.

MANAGEMENT AND CONTROL

In the legal form of a KGaA, the Company's corporate bodies are the General Meeting, the Supervisory Board, and the general partner, Fresenius Management SE. Fresenius Management SE is wholly owned by Else Kröner-Fresenius-Stiftung. The KGaA has a **two-tier management system** – management and control are strictly separated.

The **general partner**, represented by its **Management Board**, conducts the business and represents the Company in dealings with third parties. The Management Board generally has seven members. According to the Management Board's rules of procedure, each member is accountable for his or her own area of responsibility. However, the members have joint responsibility for the management of the Group. In addition to the Supervisory Board of Fresenius SE & Co. KGaA, Fresenius Management SE has its own Supervisory Board. The Management Board is required to report to the Supervisory Board of Fresenius Management SE regularly, in particular on its corporate policy and strategies, business profitability, current operations, and any other matters that could be of significance for the Company's profitability and liquidity. The Supervisory Board of Fresenius Management SE also advises and supervises the Management Board in its management of the Company. It is prohibited from managing the Company directly. However, the Management Board's rules of procedure require it to obtain the approval of the Supervisory Board of Fresenius Management SE for specific activities.

The members of the Management Board are appointed and dismissed by the Supervisory Board of Fresenius Management SE. Appointment and dismissal is in accordance with Article 39 of the SE Regulation. The articles of association of Fresenius Management SE also provide that deputy members of the Management Board may be appointed.

The **Supervisory Board of Fresenius SE & Co. KGaA** advises and supervises the management of the Company's business by the general partner, reviews and approves the annual financial statements and the consolidated financial statements, and performs the other functions assigned to it by law and the Company's articles of association. It is involved in corporate planning and strategy, and in all matters of fundamental importance for the Company. The Supervisory Board of Fresenius SE & Co. KGaA has six shareholder representatives and six employee representatives. A Nomination Committee of the Supervisory Board of Fresenius SE & Co. KGaA has been instituted for election proposals for the shareholder representatives. Its activities are aligned with the provisions of law and the Corporate Governance Code. The shareholder representatives are elected by the **Annual General Meeting of Fresenius SE & Co. KGaA**. The European works council elects the employee representatives to the Supervisory Board of Fresenius SE & Co. KGaA.

The Supervisory Board must meet at least twice per calendar half-year. The Supervisory Board of Fresenius SE & Co. KGaA has two permanent **committees:** the Audit Committee, consisting of five members, and the Nomination Committee, consisting of three members. The members of the committees are listed on page 268 of this Annual Report. The Company's annual corporate governance declaration pursuant to Section 315d and Section 289f of the German Commercial Code (HGB) describes the procedures of the Supervisory Board's committees on page 141 f. The declaration can also be found on the website www.fresenius.com/corporate-governance.

The description of both the **compensation system** and individual amounts paid to the Management Board and Supervisory Board of Fresenius Management SE, and the Supervisory Board of Fresenius SE & Co. KGaA, are included in the Compensation Report on pages 150 ff. of this Annual Report. The Compensation Report is part of the Group's Management Report.

CAPITAL, SHAREHOLDERS, ARTICLES OF ASSOCIATION

The subscribed capital of Fresenius SE & Co. KGaA amounted to 557,379,979 ordinary shares as of December 31, 2019 (December 31, 2018: 556,225,154).

The shares of Fresenius SE & Co. KGaA are non-par-value bearer shares. Each share represents €1.00 of the capital stock. Shareholders' rights are regulated by the German Stock Corporation Act (AktG – Aktiengesetz).

Fresenius Management SE, as general partner, is authorized, subject to the consent of the Supervisory Board of Fresenius SE & Co. KGaA: to increase the subscribed capital of Fresenius SE & Co. KGaA by a total amount of up to €125 million, until May 17, 2023, through a single or multiple issuance of new bearer ordinary shares against cash contributions and/or contributions in kind **(Authorized Capital I)**. In principle, the shareholders shall be granted a subscription right. In certain cases, however, the right of subscription can be excluded.

In addition, there are the following **Conditional Capitals**:

- The subscribed capital is conditionally increased by up to €4,735,083.00 through the issuance of new bearer ordinary shares **(Conditional Capital I)**. The conditional capital increase will only be executed to the extent that convertible bonds for ordinary shares have been issued under the 2003 Stock Option Plan and the holders of these convertible bonds exercise their conversion rights.
- The subscribed capital is conditionally increased by up to €4,296,814.00 through the issuance of new bearer ordinary shares **(Conditional Capital II)**. The conditional capital increase will only be executed to the extent that subscription rights have been issued under the 2008 Stock Option Plan, the holders of these subscription rights exercise their rights, and the Company does not use its own shares to service the subscription rights or does not exercise its right to make payment in cash.
- The general partner is authorized, with the approval of the Supervisory Board, until May 17, 2023, to issue option bearer bonds and/or convertible bearer bonds, once or several times, for a total nominal amount of up to €2.5 billion. To fulfill the granted subscription rights, the subscribed capital of Fresenius SE & Co. KGaA was increased

conditionally by up to €48,971,202.00 through issuance of new bearer ordinary shares **(Conditional Capital III)**. The conditional capital increase shall only be implemented to the extent that the holders of convertible bonds issued for cash, or of warrants from option bonds issued for cash, exercise their conversion or option rights and as long as no other forms of settlement are used.

- The share capital is conditionally increased by up to €24,257,969.00 by the issuance of new ordinary bearer shares **(Conditional Capital IV)**. The conditional capital increase will only be implemented to the extent that subscription rights have been, or will be, issued in accordance with the Stock Option Program 2013 and the holders of subscription rights exercise their rights, and the Company does not grant own shares to satisfy the subscription rights.

The Company is authorized, until May 17, 2023, to purchase and use its **own shares** up to a maximum amount of 10% of the subscribed capital. In addition, when purchasing its own shares, the Company is authorized to use equity derivatives with possible exclusion of any tender right. The Company had not utilized these authorizations as of December 31, 2019.

As the **largest shareholder**, Else Kröner-Fresenius-Stiftung, Bad Homburg, Germany, informed the Company on December 12, 2019, that it held 148,298,594 ordinary shares of Fresenius SE & Co. KGaA. This corresponds to an equity interest of 26.6% as of December 31, 2019.

Amendments to the articles of association are made in accordance with Section 278 (3) and Section 179 (2) of the German Stock Corporation Act (AktG) in conjunction with Article 17 (3) of the articles of association of Fresenius SE & Co. KGaA. Unless mandatory legal provisions require otherwise, amendments to the articles of association require a simple majority of the subscribed capital represented in the resolution. If the voting results in a tie, a motion is deemed rejected. Furthermore, in accordance with Section 285 (2) sentence 1 of the German Stock Corporation Act (AktG), amendments to the articles of association require the consent of the general partner, Fresenius Management SE. The Supervisory Board is entitled to make such amendments to the articles of association that only concern their wording without a resolution of the General Meeting.

Under certain circumstances, a **change of control** as the result of a takeover bid would impact our major long-term financing agreements, which contain customary change of control provisions that grant creditors the right to request early repayments of outstanding amounts in case of a change of control. The majority of our financing arrangements, in particular our bonds placed in the capital markets, however, require that the change of control is followed by a decline or a withdrawal of the Company's rating or that of the respective financing instruments.

GOALS AND STRATEGIES

Demographic change is posing fundamental challenges to societies. People worldwide are not only living longer, the pace of population aging is also increasing significantly. Thus, countries around the world are facing major challenges with respect to their health and social systems. As people across the world get older, diminished well-being as well as chronically ill and critically ill patients are becoming a major global public health challenge[1]. A longer life, however, also offers opportunities for individuals and societies. The extent to which these opportunities can be leveraged depends heavily on one factor: health.

In line with our corporate purpose "Forward thinking health care to improve the quality of life of patients", Fresenius develops profitable, innovative, and affordable solutions for these megatrends. Our aspiration is to offer better medicine and health care services to ever more people. Every business decision we make is consistently guided by the well-being of our patients. It is at the center of everything we do. However, economic success is not an end in itself for Fresenius; it rather enables us to keep investing in better medicine.

OUR STRATEGIC FOCUS

Fresenius invests in and manages a diversified portfolio of health care businesses that create value. With our four business segments we focus on a defined number of health care areas. We continuously develop those business areas and strive to assume leading positions in the respective health care markets and segments. Fresenius has defined strategic priorities to pursue its goal to strengthen the position of the Company as a leading global provider of products and therapies for critically and chronically ill patients:

- **Profit from megatrends**: gearing businesses towards the megatrends health and demographics

[1] WHO 2018: "Ageing and health"

- **Create value**: long-term value creation by allocating capital to profitable growth areas
- **Act responsibly**: commitment to responsible management and ethical business principles
- **Collaborate**: fostering intragroup cooperation to leverage synergies

OUR CORE COMPETENCIES

QUALITY

At Fresenius, the patient always comes first. We commit ourselves to strive for the highest quality in our products, services, and therapies. All business segments make an overall contribution to increasing the quality and efficiency of health care. This enables access to high-quality and affordable medical care for a growing number of people.

For Fresenius Medical Care, customer health and product safety mean creating a safe and healthy clinical environment. The quality and safety of its products and services are the foundation of Fresenius Medical Care's success. Fresenius Kabi's corporate philosophy "caring for life" describes the company's commitment to improving the quality of life of its patients. The quality and safety of its products and services is hence of paramount importance to Fresenius Kabi. Fresenius Helios places great importance on high standards of treatment quality, hygiene, patient safety, and care in its hospitals. Also at Fresenius Vamed, quality processes are designed based on established standards.

INNOVATION

Fresenius' goal is to continue building on its strength in technology, its competence and quality in patient care, and its ability to manufacture cost-effectively. Developing products and systems that provide a high level of safety and user-friendliness and enable tailoring to individual patient needs is an inherent part of our strategy of sustainable and profitable growth. We will continue to develop ever more effective products and treatment methods for critically and chronically ill patients to offer best-in-class medical standards.

In 2019, Fresenius Medical Care, for example, strengthened its position in home dialysis and became a world leader by acquiring the U.S.-based medical technology and services company NxStage. Fresenius Medical Care also strives to identify new opportunities in value-added technologies and approaches on an ongoing basis, for example through the Fresenius Medical Care Ventures fund. Fresenius Kabi is currently developing biosimilars with a focus on oncology and autoimmune diseases, making affordable treatments accessible for even more patients. Fresenius Helios' goal is to foster knowledge sharing across its international hospital network and use innovation to develop the best health care services and therapies for its patients. Moreover, Fresenius Helios is driving forward initiatives focused on occupational medicine for employees, prevention programs, or the reduction of waiting times for appointments with specialists, for example by offering digital services. Fresenius Vamed's goal is to realize further projects in integrated health care services and to support patient-oriented health care systems more efficiently.

IMPROVE PROFITABILITY

Fresenius is committed to continuously improving Group profitability. We foster intragroup coordination and collaboration, seeking both sales growth and efficiency. To contain costs, we particularly concentrate on making our production plants more efficient, exploiting economies of scale, leveraging the existing marketing and distribution infrastructure more intensively, and practicing strict cost control. We continue to identify specific measures that optimize our portfolio and make Fresenius an even more effective organization.

By focusing on our operating cash flow and employing efficient working capital management, we will increase our investment flexibility and improve our balance sheet ratios.

Another goal is to optimize our weighted average cost of capital (WACC) by deliberately employing a balanced mix of equity and debt funding.

In the present capital market conditions, we believe we optimize our cost of capital if we hold the net debt/EBITDA ratio within a range of 3.0 to 3.5 (including IFRS 16 adoption).

DRIVE INTERNATIONALIZATION

Fresenius' goal is to ensure and expand its long-term position as a leading international provider of products and services in the health care industry. To this end, and to geographically expand our business, we plan to grow organically as well as through selective small to medium-sized acquisitions, complementing our existing portfolio. We are constantly seeking new above-average growth opportunities in developing as well as in emerging countries. Our aim is to strengthen our activities in these regions and successively introduce further products from our portfolio into these markets.

Fresenius Medical Care is the worldwide leader in dialysis, with a strong market position in the United States. Future opportunities in dialysis will arise from further expansion in dialysis care and products worldwide. Fresenius Kabi is the market leader in infusion therapy in Europe and Latin America.

In Europe and the key markets in Asia-Pacific (including China) and Latin America, Fresenius Kabi is the leader in the clinical nutrition market. In the United States, Fresenius Kabi is one of the leading players in the market for generic IV drugs. In addition, Fresenius Kabi is one of the most important providers of transfusion technology. Fresenius Kabi plans to roll out products from its existing portfolio to the United States and other growth markets. Market share is to be expanded further through the launch of new products in the field of IV drugs, infusion therapy, clinical nutrition, and medical devices/transfusion technology.

With 86 hospitals, Fresenius Helios operates in nearly all of Germany. Building on this, Fresenius Helios is now in the position to develop new patient care models. To benefit from the trend towards outpatient treatment, Helios Germany has been expanding outpatient service offerings in a separate division. Helios Spain has attractive growth opportunities through the expansion and construction of hospitals, and potential for further consolidation in the highly fragmented private hospital market in Spain. Helios exploits upcoming opportunities for cross-border synergies in areas such as laboratory services and joint purchasing. The cross-border exchange of experience and knowledge is gradually creating the economic prerequisites for the further internationalization of our hospital business.

Fresenius Vamed will further expand its position as a global specialist for projects and services for hospitals and other health care facilities. With the integration of Fresenius Helios' German inpatient rehabilitation business, Fresenius Vamed is strengthening its position as one of the leading providers of private rehabilitation services in Europe. Furthermore, the collaboration with Fresenius Helios will be further intensified. This applies, for example, to technical services or purchasing, where Fresenius Helios is cooperating with Fresenius Vamed for selected products.

EMPLOYEES

The commitment of our more than 290,000 employees worldwide is key for the success and sustained growth of Fresenius. We firmly believe in a culture of diversity, as we are convinced that different perspectives, opinions, experiences, and values enable Fresenius to continue successfully growing as a global health care company. To tackle the upcoming challenges, attracting new employees is key for the growth of our company. We regularly participate in recruiting events and career fairs to attract new talent, and invite our management to meet future Fresenius employees at "Meet the Board". Not only do we try to attract new talent, we also want to retain and develop our people at Fresenius. We offer a variety of flexible working-time models and incentive programs to ensure that our long-term needs for highly qualified employees are met. Furthermore, we offer our employees opportunities to develop their careers in an international and dynamic environment.

CORPORATE PERFORMANCE CRITERIA

The Management Board makes operational and strategic management decisions based on our Group-wide performance indicators for growth, profitability, liquidity, capital efficiency, and capital management. The most important financial performance indicators for us are explained below and a definition is provided in the glossary of financial terms on pages 272 to 274.

GROWTH

In line with our growth strategy, sales growth (in constant currency) of the Group and, in our business segments, organic sales growth in particular are of central importance.

PROFITABILITY

We use earnings before interest and taxes (EBIT) and EBIT growth (in constant currency) to measure the profitability of the segments. At Group level, we primarily use net income and net income growth (in constant currency). In order to be able to better compare the operating performance over several periods, the results are adjusted by special items if necessary.

LIQUIDITY

At the corporate level, cash flow margin is used as the main liquidity indicator. In order to further analyze and optimize the contributions of our business segments to operating cash flow, we also use the additional performance indicators DSO[1] (days sales outstanding) and SOI[1] (scope of inventory). These show the amount of receivables or inventories in relation to the sales or costs of the services rendered during the past reporting period.

CAPITAL EFFICIENCY

We work as profitably and efficiently as possible with the capital provided to us by shareholders and lenders. In order to manage this, we primarily calculate the Return on Invested Capital (ROIC)[2] and the Return on Operating Assets (ROOA)[2].

CAPITAL MANAGEMENT

We use the ratio of net debt and EBITDA as the key parameter for managing the capital structure. This measure indicates the degree to which a company is able to meet its payment obligations. Our business segments usually hold leading positions in growing and mostly non-cyclical markets. Since the majority of our customers are of high credit quality, they generate mainly stable, predictable cash flows. According to the management assessment, the Group is therefore able to use debt to finance its growth to a greater extent than companies in other industries.

FINANCIAL PERFORMANCE INDICATORS

Growth	Profitability	Liquidity	Capital efficiency	Capital management
Sales growth (in constant currency) **Sales growth** (organic)	**Operating income (EBIT)** +/- Financial result - Income taxes - Minority interests = **Net income** **EBIT growth** (in constant currency) **Net income growth** (in constant currency)	Operating cash flow ÷ Sales = **Cash flow margin**	EBIT - Income taxes = NOPAT ÷ Invested capital = **ROIC** EBIT ÷ Operating assets = **ROOA**	Net debt ÷ EBITDA = **Leverage ratio**

INVESTMENT AND ACQUISITION PROCESS

Our investments and acquisitions are carried out using a detailed coordination and evaluation process. As a first step, the Management Board sets the Group's investment targets and the budget based on investment proposals. In the next step, the respective business segments and the internal Acquisition & Investment Council (AIC) determine the proposed projects and measures, taking into account the overall strategy, the total investment budget, and the required and potential return on investment. We evaluate investment projects based on commonly used methods, such as internal rate of return (IRR) and net present value (NPV). Within the framework of the due diligence process, opportunities and risks associated with the potential acquisition target are analyzed and assessed. In addition to reviewing the business model, key financial figures and tax issues, and the resulting company valuation, this also includes a comprehensive analysis of the market and competitive environment, regulatory framework conditions, and legal aspects. Furthermore, the assessment also implies various issues relating to compliance, production, research & development, quality, information technology, human resources, and the environment. Based on investment volume, a project is submitted for approval to the executive committees or respective managements of the business segments, to the Management Board of Fresenius Management SE, and/or its Supervisory Board.

RESEARCH AND DEVELOPMENT

Product and process development and the improvement of therapies are at the core of our growth strategy. Fresenius focuses its R & D efforts on its core competencies in the following areas:

- Dialysis
- Generic IV drugs
- Biosimilars
- Infusion and nutrition therapies
- Medical devices

[1] Does not reflect a core performance indicator
[2] For a detailed calculation of ROIC and ROOA please see page 274

Apart from new products, we are concentrating on developing optimized or completely new therapies, treatment methods, and services.

As part of the 2019 investment year, research and development activities were intensified and additional investments made in our research and development centers.

We opened our new research and development center for biosimilars in Eysins in the Swiss canton of Vaud. The new development center is an important step in expanding our capacity to develop new biosimilar products. At the same time, Fresenius Kabi is also expanding its enteral nutrition research and development activities in Wuxi.

Research and development **expenses**[1] were €677 million (2018: €649 million), approximately 6.8% of our product sales (2018: 6.7%). Research services provided by third parties are mainly used by Fresenius Kabi, especially in the field of biosimilars. Detailed figures are included in the segment reporting on page 172 f.

As of December 31, 2019, there were 3,412 employees in research and development (2018: 3,042). Of that number, 1,200 were employed at Fresenius Medical Care (2018: 970) and 2,200 at Fresenius Kabi (2018: 2,072).

Our main research sites are in Europe, the United States, and India. Product-related development activities are also carried out in China.

FRESENIUS MEDICAL CARE

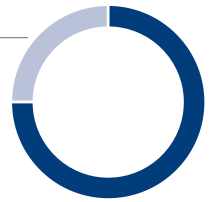
Health care systems face major financial challenges not only at present, but also in the long term. With regard to our R & D activities, this confirms our intention to develop innovative products that both meet high quality standards and are also affordable. From our experience in operating our own dialysis centers and the care of patients at home, we know that these are not incompatible goals.

Our R & D strategy is globally oriented. This will enable us to respond even better to the growing global demand for high-quality and cost-efficient treatment methods. However, we also take regional market conditions into account and offer a diverse product portfolio. In the future, we want to provide **innovative, competitive products** even more efficiently and focus more strongly on developing countries.

In addition to R & D activities carried out at our company, we collaborate with external partners with the aim of building a comprehensive innovation and technology network. These include numerous academic institutions, such as research institutes at prestigious universities in the United States. Another partner is the Renal Research Institute (RRI) in New York. This subsidiary of Fresenius Medical Care North America is a renowned institution in the field of clinical research into chronic kidney failure. Together we are working on fundamental issues relating to dialysis treatment. We are increasingly collaborating with start-ups to support an open culture that promotes innovation and to gain access to the latest technologies both in our core business and in adjacent areas that are of future strategic interest to us.

We are also developing a portfolio of products that meet the strictest requirements in terms of quality and efficiency, especially for the **emerging markets**.

R & D EXPENSES BY SEGMENT[1]



KEY FIGURES RESEARCH AND DEVELOPMENT

	2019	2018	2017	2016	2015
R & D expenses, € in millions[1]	**677**	649	538	515	438
as % of product sales[1,2]	**6.8**	6.7	5.7	5.5	5.0
R & D employees	**3,412**	3,042	2,772	2,770	2,247

[1] 2019 and 2018 before revaluations of biosimilars contingent purchase price liabilities
[2] 2015, 2016, 2018, 2019 excluding impairment losses from capitalized in-process R & D activities

[1] Before revaluations of biosimilars contingent purchase price liabilities

FRESENIUS KABI

Fresenius Kabi's research and development activities concentrate on products for the therapy and care of critically and chronically ill patients. Our products help to support medical advancements in acute and post-acute care and improve the patients' quality of life. At the same time, our products are helping to ensure that an increasing number of people worldwide have access to high-quality, modern therapies.

Our **development expertise** includes all the related components, such as the drug raw material, the pharmaceutical formulation, the primary packaging, the medical device needed for application of drugs and infusions, and the production technology. In the area of biosimilars, we have specialized in the development of products for the treatment of oncology and autoimmune diseases.

In the area of **IV drugs**, we are continuously working on the extension of our drug portfolio. What matters most to us here is that we launch new generic drug formulations directly after the patents of the branded products expire. In addition, we are working on the continuous improvement of non-patented IV drugs already on the market, such as new formulations and dosage forms, as well as primary packaging. In 2019, we had more than 100 projects in the area of generics. We focus, among other things, on complex formulations such as active ingredients in liposomal[1] solutions and product improvements that bring added value to both medical staff and patients. Thus, we develop ready-to-use products that are especially convenient and safe and help to prevent application errors in day-to-day medical care. These are, for example, ready-to-use solutions in our freeflex infusion bags and pre-filled syringes. Drugs in pre-filled syringes are simpler and safer to use than traditional applications. In 2019, we introduced several products in pre-filled syringes, including the cytostatic drug Fulvestrant, which we introduced in the United States as a pre-filled, ready-to-use syringe. This type of application helps to increase safety in everyday medical life.

In the **biosimilars business**, we have a pipeline of molecules at different stages of development, with a focus on autoimmune and oncology diseases. A biosimilar is a biological medicine highly similar to another already approved biological medicine (which is called the "reference medicinal product"). The development of a biosimilar is different from the development of new drugs. For example, there is no need for basic research to prove the mechanism of action, or for extended toxicity or dose-finding studies, since this has already been established for the reference medicinal product. The focus is instead on similarity to the reference medicinal product, to ensure efficacy and safety.

On April 3, 2019, we received the European marketing authorization from the European Commission[3] for Idacio, an adalimumab[2] biosimilar, for all indications of the reference medicine, which can be used for chronic inflammatory diseases such as rheumatoid arthritis, Crohn's disease, and psoriasis (skin disease). We launched Idacio in 2019 on important European markets and submitted it for marketing authorization in several more countries outside of Europe.

The clinical development of MSB 11455, a biosimilar candidate of Pegfilgrastim[4], has already been successfully finalized and the preparation of the submission for marketing authorization is underway. Pegfilgrastim stimulates the formation of white blood cells (leukocytes) in certain cancer treatments. MSB 11456[5], a biosimilar candidate of Tocilizumab, which is used in chronic inflammatory diseases such as rheumatoid arthritis, is in the clinical phase of development.

Clinical nutrition provides care for patients who cannot nourish themselves normally or sufficiently. This includes, for example, patients in intensive care and those who are seriously or chronically ill or malnourished. Early and correct intervention can help prevent malnutrition and its consequences.

In **parenteral nutrition**, we focus on products that make a significant contribution to improving clinical treatment and the nutritional condition of patients, and on innovative containers such as our multi-chamber bags that are safe and convenient in everyday use.

[1] Liposomes are tiny capsules used as a vehicle for active pharmaceutical ingredients. They allow for a targeted transportation of these ingredients to the location where they are needed within an organism.
[2] Idacio is a biosimilar of Humira® and has not yet been approved by all relevant health authorities. Humira® (Adalimumab) is a registered trademark of AbbVie Biotechnology Ltd.
[3] The decision of the European Commission is valid in all the 28 member countries of the European Union plus in the European Economic Area (EEA) countries Norway, Iceland, and Liechtenstein.
[4] MSB 11455 is developed as a biosimilar candidate of Neulasta® and has not yet been approved by the relevant health authorities. Neulasta® (Pegfilgrastim) is a registered trademark of Amgen Inc.
[5] MSB 11456 is a biosimilar candidate of Tocilizumab and has not yet been approved by the relevant health authorities. Actemra®/RoActemra® (Tocilizumab) are registered trademarks of Chugai Seiyaku Kabushiki Kaisha.

In addition to our own research, Fresenius Kabi also supports external research projects that contribute to improving the nutritional care of critically ill patients. As part of this approach, in 2019, we developed “Jumpstart”, a funding program to support research by young scientists on parenteral nutrition for critically ill patients and to give them the opportunity to receive a research prize to support their research work. An independent jury, consisting of internationally renowned scientists in the area of clinical nutrition, is responsible for selecting the fellows. The first Jumpstart Research Prize was awarded at this year’s congress of the European Society for Parenteral and Enteral Nutrition (ESPEN).

In 2019, we continued the development of parenteral formulations. We are concentrating on formulations that are tailored to the needs of individual patient groups. In addition to global development projects, we are working on products for specific markets such as the United States, China, and Europe.

In the development of our **enteral nutrition**, we are focusing our research and development activities on product concepts that support therapeutic compliance and thus the success of therapy. In our development work, it is important to us that we develop products that can optimally satisfy the needs of special patient groups. These include, for example, developing products with a wide variety of flavors to offer a wide choice of daily treatments, as well as products with a higher concentration of nutrients to facilitate the intake of the necessary amount thereof. In our development work, we also work continuously to adapt the formulations of our products to regional and local requirements.

In the area of **infusion solutions**, we are continuously working on improved and new primary containers with the aim of increasing the efficiency and safety in the daily hospital routine. These include, for example, port systems that do not require the use of needles and thus reduce the risk of injury and the number of steps involved in their application. We are also continuously working on our product range and opening up new markets or expanding our product range in established markets.

In our work in **medical devices**, we are constantly working on further developing our existing portfolio, as well as on new products. Particularly in the field of infusion technology, new software connections can contribute to simplifying daily work in hospitals. In 2019, we completed the development work on our new Vigilant Software Suite and began to introduce it in the market. The Vigilant Software Suite enables all software solutions used in hospitals in our infusion pump system Agilia Connect to be combined into one therapy information system, thus creating more data and license security. In 2019, we received the CE mark for the Vigilant Software Suite.

In addition, development work on our new infusion management system is almost complete. This system features modern operating systems and will enable new therapy and treatment procedures in the intensive care unit and operating room.

In **transfusion technology**, we are working intensively on products for use in extracorporeal photopheresis. In this therapy method, certain blood cells outside the body are treated with ultraviolet light (phototherapy). This method is used to treat various immunological diseases, among others to kill malignant immune cells (lymphocytes) outside the body. In 2019, we received the CE mark for our Amicus cell separator for use in extracorporeal photopheresis.

We are working intensively on further product developments in the area of apheresis. In 2019, for example, we updated our software in order to increase the volume of plasma collected during the donation process when using our Amicore apheresis device.

EMPLOYEES

The knowledge, experience, and commitment of our employees are critical to our success. For this reason, Fresenius values a culture of **diversity**. The interplay of a wide range of views, opinions, cultural backgrounds, experiences, and values helps us to achieve our full potential and contributes to our success.

The **number of employees** increased by 6% to 294,134 employees at the end of 2019.

Personnel expenses for the Fresenius Group were €14,355 million in 2019 (2018: €13,426 million), equivalent to 40.5% of sales (2018: 40.0%). Personnel expenses are above the previous year’s level. Personnel expenses per employee were at €49.5 thousand (2018: €48.6 thousand) and at €48.7 thousand in constant currency. In Germany, Fresenius companies have signed tariff agreements with IG BCE, Marburger Bund, and ver.di (labor union for services). There were no significant structural changes to compensation or employment agreements in 2019.

PERSONNEL EXPENDITURE

€ in millions	2019	2018	2017
Fresenius Medical Care	**6,800**	6,440	6,898
Fresenius Kabi	**1,754**	1,506	1,443
Fresenius Helios	**4,878**	4,815	4,672
Fresenius Vamed	**774**	545	358
Corporate/Others	**149**	120	125
Total	**14,355**	13,426	13,496

HUMAN RESOURCES MANAGEMENT

We are constantly adapting our human resources tools to meet new requirements arising from demographics, the transformation to a service economy, skills shortages, and the compatibility of job and family life. For example, we offer **flexible working hours**.

EMPLOYEE RECRUITMENT AND PERSONNEL DEVELOPMENT

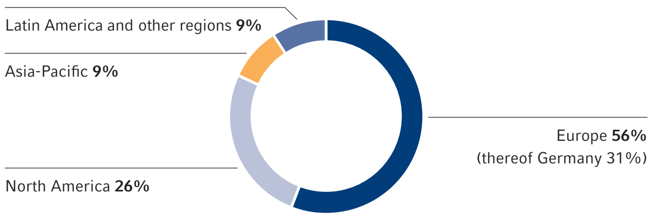
In order to ensure that our long-term needs for **highly qualified employees** are met, and to recruit new employees, we make use of online personnel marketing, regularly participate in recruiting events and careers fairs, and organize our own recruiting events. In addition, we try to encourage long-term retention with attractive development programs.
The approaches and measures for employee recruitment and personnel development in the business segments are based on the market requirements of each segment. They are coordinated, developed, and realized independently for each business segment.

At Fresenius, qualifications and experience are the only things that matter in the selection of personnel. Consequently, at Fresenius we have the aspiration that women and men with comparable qualifications will continue to have the same career opportunities. As of December 31, 2019, the proportion of female employees within the Fresenius Group was 68%. Women also held 32% of senior management positions, based on the number of worldwide participants in the Long Term Incentive Plan 2018 (LTIP 2018). Detailed information on the statutory targets for the participation of women and men in management positions is available within the Corporate Governance Declaration pursuant to Section 315d and Section 289f of the German Commercial Code (HGB) on our website, see www.fresenius.com/corporate-governance, as well as on page 144 f. of the Annual Report.

You can visit our award-winning **careers portal** at www.career.fresenius.com.

Further information on employment management can be found in our Group Non-financial Report on pages 114 ff. of our Annual Report.

EMPLOYEES BY REGION



NUMBER OF EMPLOYEES

	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2017	Change 2019/2018	% of total as of Dec. 31, 2019
Fresenius Medical Care	**128,300**	120,328	121,245	7%	44%
Fresenius Kabi	**39,627**	37,843	36,380	5%	14%
Fresenius Helios	**106,377**	100,144	105,927	6%	36%
Fresenius Vamed	**18,592**	17,299	8,667	7%	6%
Corporate/Other	**1,238**	1,136	1,030	9%	0%
Total	**294,134**	276,750	273,249	6%	100%

CHANGES TO THE MANAGEMENT BOARD

Dr. Jürgen Götz, Chief Legal and Compliance Officer, and Labor Relations Director, has asked the Supervisory Board of Fresenius Management SE not to renew his current contract after the end of the appointment period. He will therefore leave the Management Board of Fresenius Management SE at his own request on June 30, 2020.

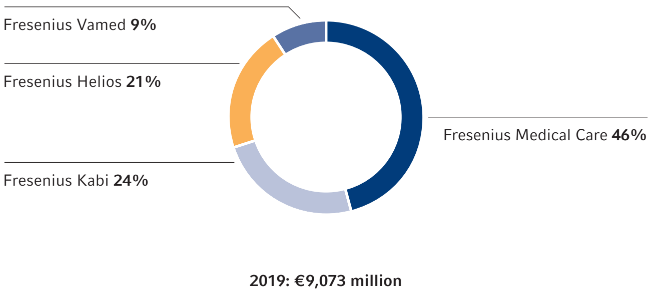
PROCUREMENT

In 2019, the cost of raw materials and supplies and of purchased components and services was €9,073 million (2018: €8,135 million) and increased by 12% due to business expansion.

An efficient value chain is important for our profitability. In an environment characterized by ongoing cost-containment pressure from health insurers, as well as price pressure, security and quality of supply play an important role. Within each business segment of the Fresenius Group, **procurement processes** are coordinated centrally, enabling us to bundle similar requirements, negotiate global framework agreements, constantly monitor market and price trends, and ensure the safety and quality of materials.

€ in millions	2019	2018
Cost of raw materials and supplies	7,545	6,895
Write-downs of raw materials, supplies, and purchased components	0	0
Cost of purchased components and services	1,528	1,240
Total	9,073	8,135

COST OF MATERIAL BY BUSINESS SEGMENT [1]



[1] Before consolidation

QUALITY MANAGEMENT

The quality of our products, services, and therapies is the basis for optimal medical care. All processes are subject to the highest quality and safety standards, for the benefit of the patients and to protect our employees. Our quality management has the following three main objectives:

- to identify value-enhancing processes oriented toward efficiency and the needs of our customers
- to monitor and manage these processes on the basis of performance indicators
- to improve procedures

Further information on quality management at Fresenius can be found in our Opportunities and Risk Report on page 81 f. as well as our Group Non-financial Report on pages 94 ff. of our Annual Report.

RESPONSIBILITY, ENVIRONMENTAL MANAGEMENT, SUSTAINABILITY

We orient our activities within the Fresenius Group to long-term goals, and thus ensure that our work is aligned to the needs of patients and employees, as well as shareholders and business partners, in a sustainable manner. Our **responsibility as a health care Group** goes beyond our business operations. We are committed to protecting nature as the basis of life and using its resources responsibly. It is our mission to constantly improve our performance in the areas of environmental protection, occupational health and technical safety, and product responsibility and logistics, and to comply with legal requirements.

Further information can be found in our Group Non-financial Report on pages 125 ff. of our Annual Report.

ECONOMIC REPORT

HEALTH CARE INDUSTRY

The health care sector is one of the world's largest industries and we are convinced that it shows excellent growth opportunities.

The main **growth factors** are:

- rising medical needs deriving from aging populations,
- the growing number of chronically ill and multimorbid patients,
- stronger demand for innovative products and therapies,
- advances in medical technology, and
- the growing health consciousness, which increases the demand for health care services and facilities.

In the **emerging countries**, additional drivers are:

- expanding availability and correspondingly greater demand for basic health care, and
- increasing national incomes and hence higher spending on health care.

At the same time, the **cost of health care** is rising and claiming an ever-increasing share of national income. Health care spending averaged 8.8% of GDP in the OECD countries in 2018, with an average of US$3,994 spent per capita.

As in previous years, the United States had the highest per capita spending (US$10,586). Germany ranked fourth among the OECD countries with US$5,986.

In Germany, 85% of **health spending** was funded by public sources in 2018, above the average of 74% in the OECD countries.

Most of the OECD countries have enjoyed large gains in **life expectancy** over the past decades, thanks to improved living standards, public health interventions, and progress in medical care. In 2017, average life expectancy in the OECD countries was 80.7 years.

Health care structures are being reviewed and cost-cutting potential identified in order to contain the steadily rising **health care expenditures**. However, such measures cannot compensate for the cost pressure. Market-based elements are increasingly being introduced into the health care system to create incentives for cost- and quality-conscious behavior. Overall treatment costs will be reduced through improved quality standards. In addition, ever-greater importance is being placed on disease prevention and innovative reimbursement models linked to treatment quality standards.

HEALTH CARE SPENDING AS % OF GDP

in %	2018	2010	2000	1990	1980	1970
USA	16.9	16.4	12.5	11.3	8.2	6.2
France	11.2	11.2	9.5	8.0	6.7	5.2
Germany	11.2	11.0	9.8	8.0	8.1	5.7
Switzerland	12.2	10.7	9.8	7.9	6.6	4.9
Spain	8.9	9.0	6.8	6.1	5.0	3.1
China	5.0	4.4	4.5	-	-	-

Our most important **markets** developed as follows:

THE DIALYSIS MARKET

In 2019, the **global dialysis** market (products and services) was worth approximately €80 billion. In constant currency, the global dialysis market grew by about 4%.

Worldwide, approximately 4.3 million **patients with chronic renal failure** were treated in 2019. Of these patients, around 3.5 million received dialysis treatments and about 815,000 were living with a transplanted kidney. About 89% were treated with hemodialysis and 11% with peritoneal dialysis. Fresenius Medical Care reported strong growth in home hemodialysis and now treats more than 25,000 patients at home in North America.

The major growth driver is the growing number of patients suffering from diabetes and high blood pressure, two diseases that often precede the onset of chronic kidney failure.

The **number of dialysis patients** worldwide increased by 6% in 2019. In the United States, Japan, and Western and

Source: OECD Health Data 2019; data on the dialysis market is based on company research, Database for China 2016

Central Europe, patient growth was slower than in economically weaker regions, where growth is mostly above 6%.

The **prevalence rate**, which is the number of people with terminal kidney failure treated per million population, differs widely from region to region. The significant divergence in prevalence rates is due, on the one hand, to differences in age demographics, incidence of renal risk factors, genetic predisposition, and cultural habit, such as nutrition. On the other hand, access to dialysis treatment is still limited in many countries. A great many individuals with terminal kidney failure do not receive treatment and are therefore not included in the prevalence statistics.

Dialysis care

In 2019, the global **dialysis care market** (including renal pharmaceuticals) was worth around €66 billion.

About 10% of worldwide dialysis patients were treated by Fresenius Medical Care. With 3,994 dialysis clinics and 345,096 dialysis patients in around 50 countries, Fresenius Medical Care operates by far the largest and most international network of clinics. In the United States, Fresenius Medical Care treated approximately 38% of dialysis patients in 2019. The market for dialysis care in the United States is already highly consolidated.

Outside the United States, the market for dialysis care is much more fragmented. Here, Fresenius Medical Care **competes** mainly with clinic chains, independent clinics, and with clinics that are affiliated with hospitals.

Dialysis **reimbursement systems** differ from country to country and often vary even within individual countries. The public health care programs, the Centers for Medicare & Medicaid Services (CMS), cover the medical services for the majority of all dialysis patients in the United States.

Dialysis products

In 2019, the global **dialysis products market** was worth around €14 billion.

Fresenius Medical Care is the leading provider of dialysis products in the world, with a **market share** of 36%.

Fresenius Medical Care is the leading supplier worldwide of hemodialysis products, with a market share of 41%, and has a market share of approximately 16% in the worldwide market of products for peritoneal dialysis.

Care Coordination

The field of **Care Coordination** currently includes health services relating to vascular surgery, coordinated delivery of pharmacy services, and outpatient care, for example.

Chronic diseases such as diabetes or cardiovascular diseases are steadily increasing, and account for more than two-thirds of all deaths worldwide. In many countries, the majority of the health expenditure is spent on the treatment of chronic diseases. To counteract the increasing cost pressure, more and more health care systems – such as that in the largest market for Fresenius Medical Care, the United States – are no longer compensating for individual services, but rather for holistic and coordinated care.

A reasonable estimate of the market volume of coordinated care is not possible due to the large number of different services. We currently offer coordinated care services mainly in North America and Asia-Pacific. Our services in Care Coordination are adapted to the requirements of these markets. The spectrum of our coordinated care services may vary across countries and regions, depending on the particular reimbursement system or market specifics.

THE MARKET FOR GENERIC IV DRUGS, BIOPHARMACEUTICALS, CLINICAL NUTRITION, INFUSION THERAPY, AND MEDICAL DEVICES / TRANSFUSION TECHNOLOGY [1]

The global market for generic IV drugs, biopharmaceuticals, clinical nutrition, infusion therapy, and medical devices/transfusion technology was worth about €97 billion in 2019.

Thereof, the global **market for generic IV drugs** was worth about €38 billion[2]. Fresenius Kabi was able to enter additional market segments of the global addressable market due to targeted investments and the expansion of our product portfolio, in the areas of complex formulations, liposomal solutions, and pre-filled syringes, among other items.

The market for IV drugs grew by 2% worldwide and by 3% in the important European market. The market growth is mainly achieved through products that are brought to market when the original drug goes off patent, as well as through

[1] Market data based on company research and refers to Fresenius Kabi's relevant markets. This is subject to annual volatility due to currency fluctuations and patent expiries of original drugs in the IV drug market, among other things.
[2] Market definition adjusted as in prior year: among other items, sales volume of non-patented branded drugs is included.

original off-patent products that are offered at steady prices due to a unique selling proposition. Additionally, market growth is based on price increases for single molecules by individual competitors. In the United States, the most important generic IV drug market for Fresenius Kabi, the company is one of the leading suppliers. Competitors include Pfizer, Sanofi, Sandoz, Teva Pharmaceutical Industries, and Hikma.

The **biopharmaceutical market segment** is one of the fast-growing segments in the health care business. The relevant market for the targeted original biopharmaceuticals, all in the therapeutic areas of oncology and autoimmune diseases, is worth about €37 billion and grew by 13%.

In 2019, the global **market for clinical nutrition** was worth about €9 billion. In Europe, the market grew by about 4%. In Latin America, the clinical nutrition market saw growth of up to 10%. In Asia-Pacific, the market for enteral nutrition grew by about 10%. In the area of parenteral nutrition, Fresenius Kabi's important market for three-chamber bags grew by 10% in Asia-Pacific. In Africa, these two segments also showed positive growth. There is growth potential in clinical nutrition worldwide, because nutrition therapies are often not yet sufficiently used in patient care, although studies have proven their medical and economic benefits. In cases of health- or age-induced nutritional deficiencies, for example, the administration of clinical nutrition can reduce hospital costs through shorter stays and less nursing care. In the market for clinical nutrition, Fresenius Kabi is one of the leading companies worldwide. In parenteral nutrition, the company is the leading supplier worldwide. In the market for enteral nutrition, Fresenius Kabi is one of the leading suppliers in Europe, Latin America, and China. In parenteral nutrition, competitors include Baxter, B. Braun, JW Pharma, and Kelun Pharma. In the market for enteral nutrition, Fresenius Kabi competes with, among other companies, Abbott, Nestlé, and Danone.

In 2019, Fresenius Kabi considers its global **market for infusion therapy** to have been worth about €6 billion. In Europe, the market for infusion therapies grew by around 1%, with growth in Latin America, Africa, and Asia-Pacific of up to 5% in individual regions. After the strong growth in 2018 due to the recovery of the previous supply shortages, the U.S. market showed a slight decline in 2019. Infusion therapies (e.g., electrolytes) are part of the medical standard in hospitals worldwide. Market growth is mainly driven by increasing product demand in emerging markets. Fresenius Kabi is the market leader in infusion therapy in Europe and Latin America. Competitors include B. Braun and Baxter.

In 2019, the global **market for medical devices** was worth about €4 billion and grew by 4%. In the medical devices market, the main growth drivers are IT-based solutions that focus on application safety and therapy efficiency. In the medical devices segment, Fresenius Kabi ranks among the leading suppliers worldwide. International competitors include Baxter, B. Braun, and Becton, Dickinson and Company, as well as ICU Medical.

In 2019, the global **market for transfusion technology** was worth about €3 billion and grew by about 4%. In the transfusion technology market, the areas of plasma collection, therapeutic apheresis, and cell therapy are experiencing positive growth. The decline in the demand for blood bags triggered by new treatment methods in Europe and the United States in recent years is coming to an end. In transfusion technology, Fresenius Kabi is one of the world's leading companies. Competitors include Haemonetics, Macopharma, and Terumo.

THE HOSPITAL MARKET [1]

In 2017, the market of acute care hospitals in **Germany** was about €102 billion [2], as defined by total costs of the German acute care hospitals (gross). Personnel expenses accounted for about 62% of hospital costs, and material costs for 38%. Personnel and material expenses rose by 5% and 3%, respectively.

The admissions in the acute care hospital market decreased by 0.5% in 2017.

The economic situation of the German hospitals worsened compared with the previous year. In 2018, about 40% of the hospitals recorded losses. A further 9% broke even,

[1] Most recent market data available: German Federal Statistical Office, 2017 data; German Hospital Institute (DKI), Krankenhaus Barometer 2019
[2] The market is defined by total costs of the German acute care hospitals (gross), less academic research and teaching.

and 51% were able to generate a profit for the year. In 2017, about 30% recorded losses and about 60% were profitable.

The often difficult economic and financial situation of the hospitals is accompanied by significant **investment needs** driven by medical and technological advances, higher quality requirements, and necessary modernizations. Moreover, the federal states failed to meet their statutory obligation to provide sufficient financial resources in the past. This results into a continuously increasing investment backlog. The German Hospital Institute (DKI)[1] estimates that the annual investment requirement at German hospitals is at least €6.8 billion. This is about two and a half times the funding for investment currently being provided by the federal states.

Helios Germany is the country's leading hospital operator in terms of sales, with a share of about 5.4%[2] in the acute care market. The hospitals of Helios Germany compete mainly with individual hospitals or local and regional hospital associations. Among private hospital chains, our main competitors are Asklepios, Rhön-Klinikum, and Sana Kliniken.

The so-called change in value figure is relevant for the increase in the **reimbursement** of hospital treatments. It is used to compensate for rising costs in the hospital market, particularly with regard to personnel and material costs. The change in value figure is redetermined each year for the following year. For 2019 it was 2.65% (2018: 2.97%).

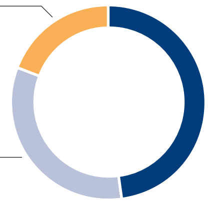
On January 1, 2019, the Act to Strengthen Nursing Staff (PpSG) entered into force. In contrast to 2018, in 2019, each additional or increased nurse position at the bed was completely refinanced by the health insurers. In addition, since 2019, a regulation setting a minimum level for nursing staff has applied to hospitals in Germany for the following areas: geriatrics, intensive care, cardiology, and trauma surgery.

The **private Spanish hospital market** volume was about €15 billion[3] in 2018. In particular, the increasing number of privately insured patients is opening up growth opportunities for private operators. Private supplemental insurance in Spain is relatively inexpensive. It is required in order to make use of services in private hospitals. Among other factors, the comparatively short waiting times for scheduled treatments make private hospitals attractive.

The opportunity for private hospital operators to expand their networks by building additional new hospitals opens up further potential. Since the Spanish market is highly fragmented, it has consolidation potential.

Quirónsalud is the market leader in Spain, with a market share of approximately 12% in the private hospital market in terms of sales. Quirónsalud competes with a large number of stand-alone private hospitals, as well as with smaller regional hospital chains such as Asisa, HM Hospitales, Hospiten, Ribera, Salud Sanitas, and Vithas.

HOSPITAL BEDS BY OPERATOR



Source: German Federal Statistical Office, 2017 data

KEY FIGURES FOR INPATIENT CARE IN GERMANY

	2017	2016	2015	2014	2013	Change 2017/2016
Hospitals	**1,942**	1,951	1,956	1,980	1,996	-0.5%
Beds	**497,182**	498,718	499,351	500,680	500,671	-0.3%
Length of stay (days)	**7.3**	7.3	7.3	7.4	7.5	--
Number of admissions (millions)	**19.44**	19.53	19.24	19.15	18.79	-0.5%
Average costs per admission in €[1]	**5,439**	5,205	5,060	4,893	4,792	4.5%

[1] Total costs, gross

Source: German Federal Statistical Office, 2017 data

[1] German Hospital Institute (DKI), Krankenhaus Barometer 2019
[2] Measured by 2018 sales in relation to gross total costs of acute care hospitals minus scientific research and teaching in Germany (latest available data: Federal Statistical Office, 2017 data)
[3] Market data based on company research and refers to the addressable market of Quirónsalud. Market definition includes neither public-private partnership (PPP) nor occupational risk prevention centers (ORP). The market definition may differ from the definition in other contexts (e.g., regulatory definitions).

THE MARKET FOR PROJECTS AND SERVICES FOR HOSPITALS AND OTHER HEALTH CARE FACILITIES

The **market for projects and services for hospitals and other health care facilities** is very fragmented. Therefore, an overall market size cannot be determined. The market is country-specific and depends, to a large extent, on factors such as public health care policies, government regulation, and levels of privatization, as well as demographics and economic and political conditions. In markets with **established health care systems** and mounting cost pressure, the challenge for health care facilities is to increase their efficiency. Here, demand is especially high for sustainable planning and energy-efficient construction, optimized hospital processes, and the outsourcing of medical-technical support services to external specialists. This enables hospitals to concentrate on their core competency – treating patients. In addition to offering services for health care facilities worldwide, Fresenius Vamed itself is active as a post-acute care provider in several countries, including Germany, Austria, Switzerland, the Czech Republic, and the United Kingdom. Through the integration of the post-acute care business of Fresenius Helios, Fresenius Vamed has become a leading provider in this field in Central Europe. In **emerging markets**, the focus is on building and developing infrastructure and improving the level of health care.

Fresenius Vamed has no **competitors** that cover its comprehensive portfolio of services across the entire life cycle. As a result, Fresenius Vamed has a unique selling proposition of its own. Depending on the service, the company competes with international companies and consortia, as well as with local providers.

OVERALL BUSINESS DEVELOPMENT

THE MANAGEMENT BOARD'S ASSESSMENT OF THE EFFECT OF GENERAL ECONOMIC DEVELOPMENTS AND THOSE IN THE HEALTH CARE SECTOR FOR FRESENIUS

Overall, the development of the world economy had an only negligible impact on our industry in 2019. On the whole, the health care sector, both in mature and growth markets, developed positively, with continued increasing demand for health services. This had a positive effect on our business development.

THE MANAGEMENT BOARD'S ASSESSMENT OF THE BUSINESS RESULTS AND SIGNIFICANT FACTORS AFFECTING OPERATING PERFORMANCE

In 2019, Fresenius made significant investments in all business segments to lay the foundation for future growth. We achieved our Group sales and earnings targets for fiscal year 2019. Hence, the Management Board is of the opinion that the Fresenius Group's performance in 2019 was successful overall.

Fresenius Medical Care's sales (adjusted[1]) in constant currency increased by 5% to €17,329 million (2018: €16,026 million). On an adjusted basis[2], net income attributable to shareholders of Fresenius Medical Care increased by 2% (-2% in constant currency) to €1,369 million (2018: €1,341 million).

Fresenius Kabi achieved organic sales growth of 4%. EBIT[3] increased by 5% (increased by 3% in constant currency) to €1,200 million (2018: €1,139 million).

Organic sales growth of Fresenius Helios was 5%. EBIT[4] decreased by 4% to €1,015 million (decreased by 3%[5] in constant currency; 2018: €1,052 million). Fresenius Vamed achieved organic sales growth of 16%. EBIT[4] grew by 19% (6%[5]) to €131 million (2018: €110 million).

[1] On an adjusted basis: 2018 adjusted for divestitures of Care Coordination activities; 2019 adjusted for IFRS 16 effect, excluding effects from NxStage transaction
[2] 2018 before special items (gain related to divestitures of Care Coordination activities, FCPA-related charge), after adjustments; 2019 before special items (transaction-related expenses, gain related to divestitures of Care Coordination activities, expenses associated with the cost optimization program), adjusted for IFRS 16 effect, excluding effects from NxStage transaction
[3] On a comparable basis: before special items and adjusted for IFRS 16 effect
[4] Adjusted for IFRS 16 effect
[5] Adjusted for the post-acute care business transferred from Fresenius Helios to Fresenius Vamed as of July 1, 2018

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

COMPARISON OF THE ACTUAL BUSINESS RESULTS WITH THE FORECASTS

For 2019, we had assumed that strong demand for our products and services would continue. This proved to be the case.

The table on the right shows the guidance development for 2019 for the Group as well as for the business segments.

Due to the healthy business development in 2019, we increased our **Group sales**[1] **guidance** during the course of the year. Moreover, we have achieved our **Group net income**[2,3] guidance.

Fresenius invested €2,463 million in **property, plant and equipment** (2018: €2,163 million). At 7.0%, the investments in property, plant and equipment are above the prior-year level of 6.5% as percentage of sales.

Operating cash flow[4] was €3,514 million (2018: €3,742 million). The cash flow margin was 9.9%[4] (including IFRS 16 12.0%; 2018: 11.2%) and therefore in line with our expectations. We had expected to achieve a cash flow margin between 10% and 12%.

Group net debt/EBITDA was 3.14[4,5,6] (December 31, 2018: 2.71[5]) and excluding the acquisition of NxStage 2.89[4,5], therefore slightly above our expected target.

Group ROIC was 7.4%[4,7] (2018: 8.3%[7]), and Group ROOA was 8.2%[4,7] (2018: 9.0%[7]). The change is mainly driven by higher average operating assets and the NxStage acquisition.

ACHIEVED GROUP TARGETS 2019

	Guidance 2019, published February 2019[1]	Guidance adjustment/ update, published May 2019	Guidance adjustment/ update, published July 2019	Achieved in 2019
Group				
Sales (growth, in constant currency)	3% – 6%[2,3]	3% – 6%[2,6]	4% – 7%[2,6]	6%[2,6]
Net income[4] (growth, in constant currency)	~0%[3,5]	~0%[5,6]		0%[5,6]
Fresenius Medical Care				
Sales on a comparable basis (growth, in constant currency)	3% – 7%[2,3]			5%[2,3]
Net income on a comparable basis[3,7,10] (growth, in constant currency)	-2% – +2%			-2%
Fresenius Kabi				
Sales (growth, organic)	3% – 6%			4%
EBIT[8,9] (growth, in constant currency)	3% – 6%			3%
Fresenius Helios				
Sales (growth, organic)	2% – 5%			5%
EBIT[9] (growth)	-5% – -2%			-4%
Fresenius Vamed				
Sales (growth, organic)	~10%			16%
EBIT[9] (growth)	15% – 20%			19%

[1] Expectation for Group sales 2019 and Group net income 2019 already communicated in December 2018
[2] 2019 adjusted for IFRS 16 effect; 2018 adjusted for divestitures of Care Coordination activities at Fresenius Medical Care (FMC)
[3] Excluding effects from NxStage transaction
[4] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[5] Before special items (transaction-related expenses, gain related to divestitures of Care Coordination activities, expenses associated with the cost optimization program at FMC, revaluation of biosimilars contingent purchase price liabilities), adjusted for IFRS 16 effect; base 2018 before special items and after adjustments
[6] Including effects from NxStage transaction
[7] Net income attributable to shareholders of Fresenius Medical Care AG & Co. KGaA
[8] Before special items
[9] Adjusted for IFRS 16 effect
[10] Before special items (transaction-related expenses, gain related to divestitures of Care Coordination activities, expenses associated with the cost optimization program at FMC), adjusted for IFRS 16 effect; base 2018 before special items and after adjustments

[1] On a comparable basis: 2018 adjusted for divestitures of Care Coordination activities at FMC; 2019 adjusted for IFRS 16 effect, including effects from NxStage transaction
[2] Net income attributable to the shareholders of Fresenius SE & Co. KGaA
[3] On a comparable basis: 2018 before special items, adjusted for divestitures of Care Coordination activities at FMC; 2019 before special items and adjusted for IFRS 16 effect
[4] Adjusted for IFRS 16 effect
[5] Both net debt and EBITDA calculated at LTM average exchange rates; before special items, pro forma closed acquisitions/divestitures
[6] Including the acquisition of NxStage
[7] Pro forma closed acquisitions; before special items

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

RESULTS OF OPERATIONS, FINANCIAL POSITION, ASSETS AND LIABILITIES

RESULTS OF OPERATIONS

Sales

Group sales[1] on a comparable basis increased by 8% (6% in constant currency) to €35,524 million (2018: €33,009 million). Group sales were €35,409 million including an IFRS 16 effect of -€115 million (2018: €33,530 million). The chart on the right shows the various influences on Fresenius' Group sales.

In 2019, Fresenius Medical Care faced negative effects from adjustments on accounts receivable in legal dispute. The weaker development of Fresenius Kabi in North America was partially offset by strong sales growth in the Emerging Markets. Fresenius Helios' sales were positively impacted by DRG price increases. Fresenius Vamed benefited from excellent business momentum and the integration of the post-acute business. In addition to that, there were no major effects due to changes in **product mix** or changes in **prices** in 2019 for the Group.

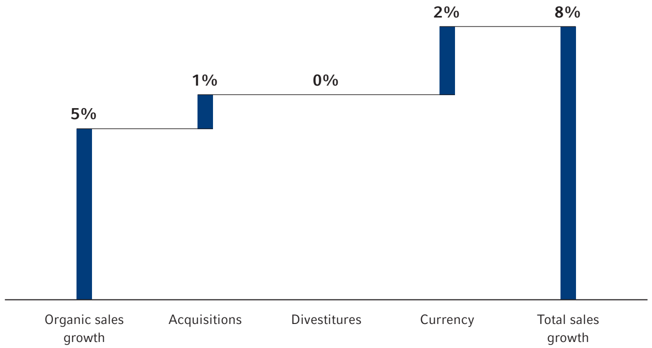
Positive currency translation effects of 2% were mainly driven by the appreciation of the U.S. dollar against the euro.

Sales growth by region is shown in the table on the right.

Sales growth in the business segments was as follows:

- Sales of Fresenius Medical Care on a comparable basis[1] increased by 10% (6% in constant currency) to €17,592 million (2018: €16,026 million). Organic sales growth was 5%. Currency translation effects increased sales by 4%. Sales were €17,477 million including an IFRS 16 effect of -€115 million (2018: €16,547 million). Sales growth was influenced by negative effects from adjustments on accounts receivable in legal dispute.
- Fresenius Kabi increased sales by 6% to €6,919 million (2018: €6,544 million). Declining sales volumes due to intensified competition on selected molecules, missing tailwinds from drug shortages, and a declined number of prescriptions for opioid drugs in hospital-based pain management weighed on the sales development. In the emerging markets and developing countries, Fresenius Kabi achieved significant sales growth, especially with clinical nutrition products. Organic sales growth was 4%.

SALES GROWTH ANALYSIS



Excluding IFRS 16; on a comparable basis

Positive currency translation effects (2%) were mainly related to the appreciation of the U.S. dollar against the euro.

SALES BY REGION

€ in millions	2019[1]	2018[1]	Change	Organic sales growth	Currency translation effects	Acquisitions/ divestitures	% of total sales[2]
North America	**14,658**	13,340	10%	3%	6%	1%	41%
Europe	**15,178**	14,484	5%	4%	0%	1%	43%
Asia-Pacific	**3,732**	3,366	11%	8%	2%	1%	11%
Latin America	**1,545**	1,387	11%	19%	-12%	4%	4%
Africa	**411**	432	-5%	-4%	-1%	0%	1%
Total	**35,524**	33,009	8%	5%	2%	1%	100%

[1] On a comparable basis: 2018 adjusted for divestitures of Care Coordination activities at FMC; 2019 adjusted for IFRS 16 effect, including NxStage
[2] In relation to the contribution to Group sales

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

- Fresenius Helios increased sales by 3% (5%[1]) to €9,234 million (2018: €8,993 million). Organic sales growth was 5%. Sales of Helios Germany decreased by 1% (increased by 3%[1]) to €5,940 million (2018: €5,970 million). Organic sales growth of 3% was positively influenced by pricing effects. The reclassification of nursing staff funding from other income to sales also contributed to growth. Helios Spain increased sales by 9% (organic growth: 7%) to €3,292 million (2018: €3,023 million), mainly due to the excellent operating performance based on increased admissions.
- Fresenius Vamed increased sales by 31% (19%[1]) to €2,206 million (2018: €1,688 million). Sales in the project business increased by 13% to €807 million (2018: €712 million). Sales in the service business grew by 43% to €1,399 million (2018: €976 million). The increase in sales is due to strong momentum in both the project and service businesses as well as increased sales from services for Fresenius Helios. In addition, the revenue development was positively influenced by the completed integration of the post-acute care business. **Order intake** in the project business again developed well; it increased to €1,314 million (2018: €1,227 million). Fresenius Vamed increased its **order backlog** by 18% to €2,865 million (December 31, 2018: €2,420 million). Fresenius Vamed is the only business segment within the Fresenius Group whose business is also significantly influenced by order intake and order backlog.

SALES BY BUSINESS SEGMENT

€ in millions	2019[3]	2018[3]	Change	Organic sales growth	Currency translation effects	Acquisitions/ Divestitures	% of total sales[4]
Fresenius Medical Care	**17,592**	16,026	10%	5%	4%	1%	50%
Fresenius Kabi	**6,919**	6,544	6%	4%	2%	0%	19%
Fresenius Helios	**9,234**	8,993	3%	5%	0%	-2%	26%
Fresenius Vamed	**2,206**	1,688	31%	16%	1%	14%	5%
Total	**35,524**	33,009	8%	5%	2%	1%	100%

ORDER INTAKE AND ORDER BACKLOG – FRESENIUS VAMED

€ in millions	2019	2018	2017	2016	2015
Order intake	**1,314**	1,227	1,096	1,017	904
Order backlog (December 31)	**2,865**	2,420	2,147	1,961	1,650

Earnings structure

In 2019, **Group net income[2] before special items** was €1,879 million including an IFRS 16 effect of -€36 million (2018: €1,871 million). In 2019, **earnings per share[2] before special items** were €3.37 including an IFRS 16 effect of -€0.07 (2018: €3.37). The weighted average number of shares was 556.8 million.

Group net income[2,3] on a comparable basis increased by 2% (0% in constant currency) to €1,915 million (2018: €1,872 million). **Earnings per share[2,3] on a comparable basis** increased by 2% (0% in constant currency) to €3.44 (2018: €3.37).

Reported Group net income[2] was €1,883 million including an IFRS 16 effect of -€36 million (2018: €2,027 million). **Reported earnings per share[2]** were €3.38 (2018: €3.65). Inflation effects did not have a significant impact on our results of operations.

Group EBITDA before special items was €7,104 million including an IFRS 16 effect of €934 million (2018: €6,055 million). **Group EBITDA[3] on a comparable basis** increased by 2% (0% in constant currency) to €6,170 million (2018: €6,032 million). **Group EBITDA reported** was 7,083 (2018: €6,745 million)

Group EBIT before special items was €4,688 million including an IFRS 16 effect of €89 million (2018: €4,561). **Group EBIT[3] on a comparable basis** increased by 1% (-2% in constant currency) to €4,599 million (2018: €4,547 million). **Group EBIT reported** was €4,631 million (2018: €5,251 million).

[1] Adjusted for the post-acute care business transferred from Fresenius Helios to Fresenius Vamed as of July 1, 2018
[2] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[3] On a comparable basis: 2018 before special items and adjusted for divestitures of Care Coordination activities at FMC; 2019 before special items and adjusted for IFRS 16 effect
[4] In relation to the contribution to Group sales

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

EBIT development by business segment was as follows:

The presentation of the business segments' earnings development is provided before special items. The special items are reported in the Group Corporate/Other segment.

- Fresenius Medical Care's EBIT[1] was €2,356 million, including an IFRS 16 effect of €75 million (2018: €2,306 million). On a comparable basis, EBIT[2] remained at the previous year's level (decreased in constant currency by 4%) to €2,281 million (2018: €2,292 million). Adjustments on accounts receivable in legal dispute paired with reduced patient attribution and a decreasing savings rate for ESCOs weighed on earnings. These effects were partially offset by the remeasurement of the fair value of the investment in Humacyte, Inc. The EBIT margin[2] on a comparable basis decreased to 13.0% (2018: 14.3%). EBIT reported decreased by 28% in constant currency to €2,270 million (2018: €3,038 million), and the EBIT margin was 13.0% (2018: 18.4%).
- Fresenius Kabi's EBIT[1] was €1,205 million, including an IFRS 16 effect of €5 million (2018: €1,139 million). EBIT[3] on a comparable basis increased by 5% (increased by 3% in constant currency) to €1,200 million (2018: €1,139 million). Excellent EBIT growth in the emerging markets partially offset the weaker financial performance in North America. The EBIT margin[3] was 17.3% (2018: 17.4%).
- The EBIT of Fresenius Helios was €1,025 million, including an IFRS 16 effect of €10 million (2018: €1,052 million). Adjusted for IFRS 16, EBIT decreased by 4% (decreased by 3%[4]) to €1,015 million (2018: €1,052 million). The EBIT margin was 11.0%[5] (2018: 11.7%). The EBIT of Helios Germany was €577 million, including an IFRS 16 effect of €1 million (2018: €625 million). Adjusted for IFRS 16, the EBIT of Helios Germany decreased by 8% (-6%[4]) to €576 million (2018: €625 million). The EBIT margin was 9.7%[5] (2018: 10.5%). Ongoing investments for preparatory structural measures to counter regulatory headwinds continued to weigh on Helios Germany's financial performance. The EBIT of Helios Spain was €443 million, including an IFRS 16 effect of €9 million (2018: €413 million). Adjusted for IFRS 16, the EBIT of Helios Spain increased, mainly due to the strong operating performance,

STATEMENT OF INCOME (SUMMARY)

€ in millions	2019	2018	Change
Sales	**35,409**	33,530	6%
Cost of goods sold	**-25,061**	-23,696	-6%
Gross profit	**10,348**	9,834	5%
Selling, general, and administrative expenses	**-5,101**	-4,739	-8%
Gain related to divestitures of Care Coordination activities	**29**	809	-96%
Research and development expenses	**-645**	-653	1%
Operating income (EBIT)	**4,631**	5,251	-12%
Interest result	**-719**	-587	-22%
Income before income taxes	**3,912**	4,664	-16%
Income taxes	**-883**	-950	7%
Net income	**3,029**	3,714	-18%
Noncontrolling interest in profit	**-1,146**	-1,687	32%
Net income (on a comparable basis)[1,2]	**1,915**	1,872	2%
Net income[1]	**1,883**	2,027	-7%
Earnings per ordinary share in € (on a comparable basis)[1,2]	**3.44**	3.37	2%
Earnings per ordinary share in €[1]	**3.38**	3.65	-7%
EBITDA[2]	**6,170**	6,032	2%
Depreciation and amortization[2]	**-1,571**	-1,485	-6%

[1] Net income attributable to the shareholders of Fresenius SE & Co. KGaA
[2] On a comparable basis: 2018 before special items and adjusted for divestitures of Care Coordination activities at FMC; 2019 before special items and adjusted for IFRS 16 effect

[1] Before special items
[2] On a comparable basis: 2018 before special items and adjusted for divestitures of Care Coordination activities at FMC; 2019 before special items and adjusted for IFRS 16 effect
[3] Before special items and adjusted for IFRS 16 effect
[4] Adjusted for the post-acute care business transferred from Fresenius Helios to Fresenius Vamed as of July 1, 2018
[5] Adjusted for IFRS 16 effect

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

by 5% to €434 million (2018: €413 million), with a margin of 13.2%[1] (2018: 13.7%).

- The EBIT of Fresenius Vamed was €134 million, including an IFRS 16 effect of €3 million (2018: €110 million). Adjusted for IFRS 16, EBIT increased by 19% (6%[2]) to €131 million (2018: €110 million). The EBIT margin was at 5.9% (2018: 6.5%). Both the service and the project business showed strong growth momentum.

GROUP RETURN RATIOS

in %	2019[1]	2019[1,2]	2018[1]	2017[1]	2016	2015[1]
EBITDA margin	**20.1**	**17.4**	18.1	18.5	18.7	18.3
EBIT margin	**13.2**	**12.9**	13.6	14.3	14.6	14.3
Return on sales (before taxes and noncontrolling interest)	**11.2**	**11.5**	11.9	12.3	12.6	12.1

[1] Before special items
[2] Adjusted for IFRS 16 effect

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

Development of other major items in the statement of income

Group gross profit increased by 5% (3% in constant currency) to €10,348 million (2018: €9,834 million). The gross margin decreased to 29.2% (2018: 29.3%). The cost of sales increased by 6% to €25,061 million (2018: €23,696 million). Cost of sales as a percentage of Group sales remained on the previous year's level at 70.8% (2018: 70.7%).

Selling, general, and administrative expenses consisted primarily of personnel costs, marketing and distribution costs, and depreciation and amortization. These expenses including other operating income and expenses increased by 8% to -€5,101 million (2018: -€4,739 million). This change is mainly due to the increase of number of employees. Their ratio as a percentage of Group sales increased to 14.4% (2018: 14.1%). **R & D expenses** decreased by 1% to €645 million (2018: €653 million). **Depreciation and amortization** was €2,452 million, including an IFRS 16 effect of €845 million (2018: €1,494 million). The ratio as a percentage of sales was 6.9% (4.5%[1]; 2018: 4.5%). **Group personnel costs** increased to €14,355 million (2018: €13,426 million). The personnel cost ratio was 40.5% (2018: 40.0%).

Group net interest before special items was -€714 million, including an IFRS 16 effect of -€204 million (2018: -€570 million). **On a comparable basis, Group net interest**[3] improved by 7% to -€510 million (2018: -€549 million), mainly due to refinancing activities as well as lower interest rates. **Group net interest reported** was -€719 million (2018: -€587 million).

The **Group tax rate before special items** was 23.3% (2018: 22.0%). **Group tax rate**[3] **on a comparable basis** was 23.4% (2018: 22.1%), and thus in line with expectations. **Group tax rate reported** was 22.6% (2018: 20.4%). The increase was driven by positive one-time effects in the prior-year relating to the U.S. tax reform.

Noncontrolling interest before special items was -€1,170 million, including an IFRS 16 effect of -€49 million. **Noncontrolling interest**[3] **on a comparable basis** was -€1,219 million (2018: -€1,243 million), of which 96% was attributable to the Noncontrolling interest in Fresenius Medical Care.

[1] Adjusted for IFRS 16 effect
[2] Adjusted for the post-acute care business transferred from Fresenius Helios to Fresenius Vamed as of July 1, 2018
[3] On a comparable basis: 2018 before special items and adjusted for divestitures of Care Coordination activities at FMC; 2019 before special items and adjusted for IFRS 16 effect

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

RECONCILIATION FRESENIUS GROUP

€ in millions	2019	2018	Growth rate	Growth rate in constant currency
Sales reported	**35,409**	33,530	6%	4%
Divestitures of Care Coordination activities at FMC (Fresenius Medical Care)	-	-521		
IFRS 16 effect	115	-		
Sales on a comparable basis	**35,524**	33,009	8%	6%
EBIT reported (after special items)	**4,631**	5,251	-12%	-14%
Transaction costs Akorn	3	35		
Revaluations of biosimilars contingent purchase price liabilities	-32	7		
Gain related to divestitures of Care Coordination activities	-29	-809		
Transaction costs NxStage	24	-		
Expenses associated with the cost optimization program at FMC	91	-		
Impact of FCPA-related charge	-	77		
EBIT (before special items)	**4,688**	4,561	3%	0%
Divestitures of Care Coordination activities at FMC	-	-14		
IFRS 16 effect	-89	-		
EBIT on a comparable basis	**4,599**	4,547	1%	-2%
Net interest reported (after special items)	**-719**	-587	-22%	-20%
Bridge financing costs Akorn	-	17		
Revaluations of biosimilars contingent purchase price liabilities	5	-		
Net interest (before special items)	**-714**	-570	-25%	-22%
Divestitures of Care Coordination activities at FMC	-	21		
IFRS 16 effect	204	-		
Net interest on a comparable basis	**-510**	-549	7%	9%

RECONCILIATION FRESENIUS GROUP

To present the underlying operational business performance and in order to compare the results with the scope of the guidance provided for fiscal year 2019, key figures are presented before special items and additionally adjusted for the IFRS 16 effect and the divestitures of Care Coordination activities at Fresenius Medical Care.

Consolidated results for 2019 include special items from transaction-related expenses (e.g., NxStage), revaluations of biosimilars contingent purchase price liabilities, gains/losses related to divestitures of Care Coordination activities at Fresenius Medical Care (FMC), and expenses associated with the cost optimization program at FMC. Transaction-related costs in 2018 are mainly legal and consulting fees, as well as costs of the financing commitment for the Akorn transaction (transaction-related expenses). Moreover, in 2018, special items arose from the impact of the FCPA-related charge at Fresenius Medical Care.

The special items shown within the reconciliation tables are reported in the Group Corporate/Other segment.

RECONCILIATION FRESENIUS GROUP

€ in millions	2019	2018	Growth rate	Growth rate in constant currency
Income taxes reported (after special items)	**-883**	-950	7%	10%
Transaction costs Akorn	**0**	-10		
Bridge financing costs Akorn	**-**	-5		
Revaluations of biosimilars contingent purchase price liabilities	**8**	-2		
Gain related to divestitures of Care Coordination activities	**-20**	136		
Transaction costs NxStage	**-6**	-		
Expenses associated with the cost optimization program at FMC	**-24**	-		
Impact of FCPA-related charge	**-**	-49		
Income taxes (before special items)	**-925**	-880	-5%	-2%
Divestitures of Care Coordination activities at FMC	**-**	-3		
IFRS 16 effect	**-30**	-		
Income taxes on a comparable basis	**-955**	-883	-8%	-5%
Noncontrolling interest reported (after special items)	**-1,146**	-1,687	32%	35%
Gain related to divestitures of Care Coordination activities	**34**	466		
Transaction costs NxStage	**-12**	-		
Expenses associated with the cost optimization program at FMC	**-46**	-		
Impact of FCPA-related charge	**-**	-19		
Noncontrolling interest (before special items)	**-1,170**	-1,240	6%	9%
Divestitures of Care Coordination activities at FMC	**-**	-3		
IFRS 16 effect	**-49**	-		
Noncontrolling interest on a comparable basis	**-1,219**	-1,243	2%	6%
Net income reported (after special items) [1]	**1,883**	2,027	-7%	-9%
Transaction costs Akorn	**3**	25		
Bridge financing costs Akorn	**-**	12		
Revaluations of biosimilars contingent purchase price liabilities	**-19**	5		
Gain related to divestitures of Care Coordination activities	**-15**	-207		
Transaction costs NxStage	**6**	-		
Expenses associated with the cost optimization program at FMC	**21**	-		
Impact of FCPA-related charge	**-**	9		
Net income (before special items) [1]	**1,879**	1,871	0%	-1%
Divestitures of Care Coordination activities at FMC	**-**	1		
IFRS 16 effect	**36**	-		
Net income on a comparable basis [1]	**1,915**	1,872	2%	0%

[1] Net income attributable to shareholders of Fresenius SE & Co. KGaA

IFRS 16 RECONCILIATION FRESENIUS GROUP

PROFIT AND LOSS STATEMENT

€ in millions	2019 Before special items, adjusted for IFRS 16 effect	IFRS 16 effect	Before special items, according to IFRS 16
Sales	35,524	-115	35,409
EBITDA	6,170	934	7,104
Depreciation and amortization	-1,571	-845	-2,416
EBIT	4,599	89	4,688
Net interest	-510	-204	-714
Income taxes	-955	30	-925
Noncontrolling interest	-1,219	49	-1,170
Net income[1]	1,915	-36	1,879

BALANCE SHEET

€ in millions	December 31, 2019 Adjusted for IFRS 16 effect	IFRS 16 effect	According to IFRS 16
Right-of-use assets	190[2]	5,769	5,959
Lease liabilities	414[3]	6,025	6,439
Equity	26,836	-256	26,580
Total assets	61,237	5,769	67,006

CASH FLOW

€ in millions	2019 Adjusted for IFRS 16 effect	IFRS 16 effect	According to IFRS 16
Operating cash flow	3,514	749	4,263
Cash flow before acquisitions and dividends	1,081	749	1,830
Free cash flow	-2,294	749	-1,545
Cash provided by/used for financing activities	1,217	-749	468

[1] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[2] Reclassification from machinery, equipment, and rental equipment under capital leases as of December 31, 2018
[3] Reclassification from capital lease obligations and other liabilities as of December 31, 2018

RECONCILIATION BUSINESS SEGMENTS

FRESENIUS MEDICAL CARE — Reconciliation according to Fresenius Medical Care

€ in millions	2019	2018	Growth rate	Growth rate in constant currency
Sales reported	**17,477**	16,547	6%	2%
Divestitures of Care Coordination activities	-	-521		
IFRS 16 effect	**115**	-		
NxStage operations	**-263**	-		
Sales adjusted	**17,329**	16,026	8%	5%
EBIT reported	**2,270**	3,038	-25%	-28%
Gain related to divestitures of Care Coordination activities	**-29**	-809		
Divestitures of Care Coordination activities	-	-14		
IFRS 16 effect	**-75**	-		
NxStage operations	**15**	-		
Transaction costs NxStage	**24**	-		
Expenses associated with the cost optimization program	**91**	-		
Impact of FCPA-related charge	-	77		
EBIT adjusted	**2,296**	2,292	0%	-4%
Net income reported[1]	**1,200**	1,982	-39%	-42%
Gain related to divestitures of Care Coordination activities	**-49**	-673		
Divestitures of Care Coordination activities	-	4		
IFRS 16 effect	**70**	-		
NxStage operations	**63**	-		
Transaction costs NxStage	**18**	-		
Expenses associated with the cost optimization program	**67**	-		
Impact of FCPA-related charge	-	28		
Net income adjusted[1]	**1,369**	1,341	2%	-2%

[1] Net income attributable to Fresenius Medical Care AG & Co. KGaA

RECONCILIATION BUSINESS SEGMENTS

FRESENIUS MEDICAL CARE — Reconciliation according to the Fresenius Group

€ in millions	2019	2018	Growth rate	Growth rate in constant currency
Sales reported	**17,477**	16,547	6%	2%
Divestitures of Care Coordination activities	-	-521		
IFRS 16 effect	**115**	-		
Sales on a comparable basis	**17,592**	16,026	10%	6%
EBIT reported (after special items)	**2,270**	3,038	-25%	-28%
Gain related to divestitures of Care Coordination activities	**-29**	-809		
Transaction costs NxStage	**24**	-		
Expenses associated with the cost optimization program	**91**	-		
Impact of FCPA-related charge	-	77		
EBIT (before special items)	**2,356**	2,306	2%	-2%
Divestitures of Care Coordination activities	-	-14		
IFRS 16 effect	**-75**	-		
EBIT on a comparable basis	**2,281**	2,292	0%	-4%
Net income reported (after special items)[1]	**1,200**	1,982	-39%	-42%
Gain related to divestitures of Care Coordination activities	**-49**	-673		
Transaction costs NxStage	**18**	-		
Expenses associated with the cost optimization program	**67**	-		
Impact of FCPA-related charge	-	28		
Net income (before special items)[1]	**1,236**	1,337	-8%	-11%
Divestitures of Care Coordination activities	-	4		
IFRS 16 effect	**70**	-		
Net income on a comparable basis[1]	**1,306**	1,341	-3%	-6%

[1] Net income attributable to Fresenius Medical Care AG & Co. KGaA

RECONCILIATION BUSINESS SEGMENTS

FRESENIUS KABI

€ in millions	2019	2018	Growth rate	Growth rate in constant currency
Sales reported	**6,919**	6,544	6%	4%
Transaction costs Akorn	**3**	34		
Revaluations of biosimilars contingent purchase price liabilities	**-32**	7		
EBIT (before special items)	**1,205**	1,139	6%	3%
IFRS 16 effect	**-5**	-		
EBIT on a comparable basis	**1,200**	1,139	5%	3%

FRESENIUS HELIOS

€ in millions	2019	2018	Growth rate	Growth rate in constant currency
Sales reported	**9,234**	8,993	3%	3%
German post-acute care business transferred from Fresenius Helios to Fresenius Vamed	**-**	-226		
Sales adjusted for German post-acute care business	**9,234**	8,767	5%	5%
EBIT reported	**1,025**	1,052	-3%	-3%
IFRS 16 effect	**-10**	-		
EBIT adjusted for IFRS 16 effect	**1,015**	1,052	-4%	-4%
German post-acute care business transferred from Fresenius Helios to Fresenius Vamed	**-**	-10		
EBIT adjusted for IFRS 16 effect and German post-acute care business	**1,015**	1,042	-3%	-3%

FRESENIUS VAMED

€ in millions	2019	2018	Growth rate	Growth rate in constant currency
Sales reported	**2,206**	1,688	31%	30%
German post-acute care business acquired from Fresenius Helios	**-465**	-230		
Sales adjusted for German post-acute care business	**1,741**	1,458	19%	19%
EBIT reported	**134**	110	22%	21%
IFRS 16 effect	**-3**	-		
EBIT adjusted for IFRS 16 effect	**131**	110	19%	18%
German post-acute care business acquired from Fresenius Helios	**-43**	-27		
EBIT adjusted for IFRS 16 effect and German post-acute care business	**88**	83	6%	5%

FINANCIAL POSITION

Financial management policies and goals

The financing strategy of the Fresenius Group has the following main objectives:

- Ensure financial flexibility
- Optimize the weighted average cost of capital

Ensuring financial flexibility is key to the financing strategy of the Fresenius Group. This is achieved through a broad spectrum of financing instruments, taking market capacity, investor diversification, flexibility, credit covenants, and the current **maturity profile** into consideration. The Group's maturity profile is characterized by a broad spread of maturities with a large proportion of mid- to long-term financing. We also take into account the currency in which our earnings and cash flows are generated when selecting the **financing instruments**, and match them with appropriate debt structures in the respective currencies.

The Group's main debt financing instruments are shown in the chart on the right. Sufficient **financial cushion** is assured for the Fresenius Group by unused syndicated and bilateral credit lines. In addition, Fresenius SE & Co. KGaA and Fresenius Medical Care AG & Co. KGaA maintain commercial paper programs. The Fresenius Medical Care accounts receivable securitization program offers additional financing options.

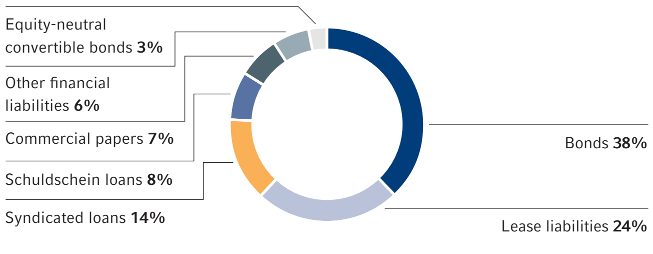
Another main objective of the Fresenius Group's financing strategy is to **optimize the weighted average cost of capital** by employing a balanced mix of equity and debt. Due to the Company's diversification within the health care sector and the strong market positions of the business segments in global, growing, and non-cyclical markets, predictable and sustainable cash flows are generated. These allow for a reasonable proportion of debt, i.e., the use of a comprehensive mix of financial instruments. A capital increase may also be considered in exceptional cases to ensure long-term growth, for example to finance a major acquisition.

In line with the Group's structure, financing for Fresenius Medical Care and the rest of the Fresenius Group is conducted separately. There are no joint financing facilities and no mutual guarantees. The Fresenius Kabi, Fresenius Helios, and Fresenius Vamed business segments are financed primarily through Fresenius SE & Co. KGaA, in order to avoid any structural subordination.

Financing

Fresenius meets its financing needs through a combination of operating cash flows generated in the business segments and short-, mid-, and long-term debt. In addition to bank loans, important financing instruments include bonds, Schuldschein loans, convertible bonds, commercial paper programs, and an accounts receivable securitization program.

FINANCING MIX OF THE FRESENIUS GROUP



Dec. 31, 2019: €27,258 million

According to IFRS 16

Financing activities in 2019 were mainly carried out to refinance existing financial liabilities, to improve terms and the maturity profile, and to expand the financial scope.

- In January 2019, Fresenius SE & Co. KGaA issued bonds with a total volume of €1.0 billion in two tranches with maturities of six and ten years. The coupon of the €500 million six-year bond is 1.875% at an issue price of 99.257%. The €500 million ten-year bond has a coupon of 2.875% and was issued at an issue price of 99.164%.
- In June 2019, Fresenius Medical Care US Finance III, Inc. issued a US$500 million bond. The bond has a maturity of ten years and a coupon of 3.75%. The issue price was 98.461%.
- In August 2019, the revolving credit facility of the syndicated credit agreement of Fresenius SE & Co. KGaA was increased by a total of €100 million in order to expand the financing scope.

- In September 2019, Fresenius SE & Co. KGaA issued Schuldschein loans with a total volume of €700 million consisting of tranches of fixed and variable interest rates and maturities of four, seven and ten years. In addition, two variable interest rate Schuldschein loans in the total amount of €156 million were called in and repaid early in April 2019.
- In November 2019, Fresenius Medical Care AG & Co. KGaA issued bonds with a total volume of €1.75 billion. They consist of three tranches with maturities of four, seven, and ten years. The coupon of the four-year €650 million bond is 0.250% at an issue price of 99.901%. The coupon of the seven-year €600 million bond is 0.625% at an issue price of 99.238%. The coupon of the €500 million ten-year bond is 1.250% at an issue price of 99.832%.
- In January 2020, Fresenius SE & Co. KGaA issued bonds with a total volume of €750 million. The bonds have a maturity of eight years and an annual coupon of 0.750%. The issue price was 99.514%.

Fresenius SE & Co. KGaA and Fresenius Medical Care AG & Co. KGaA maintain commercial paper programs under each of which up to €1.0 billion in short-term debt can be issued. As of December 31, 2019, €953 million of Fresenius SE & Co. KGaA's commercial paper program was utilized. Under Fresenius Medical Care AG & Co. KGaA's commercial paper program, €1.0 billion were outstanding.

The Fresenius Group has drawn about €4.8 billion of bilateral and syndicated credit lines. In addition, as of December 31, 2019, the Group had approximately €4.0 billion in unused credit lines available (including committed credit lines of about € 2.9 billion). These credit facilities are mainly available for general corporate purposes. They are generally unsecured.

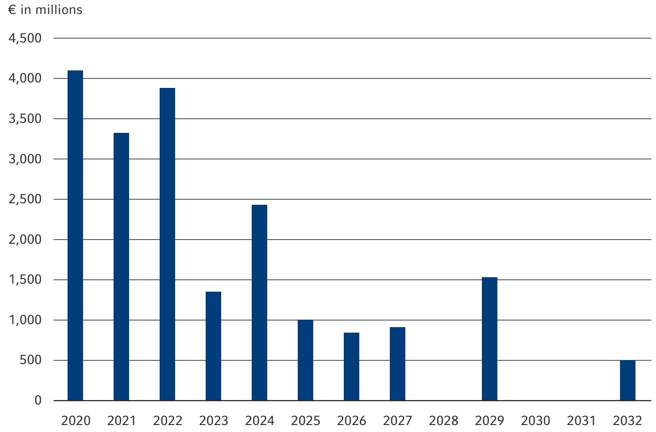
As of December 31, 2019, both Fresenius SE & Co. KGaA and Fresenius Medical Care AG & Co. KGaA, including all subsidiaries, complied with the covenants under their debt arrangements.

Detailed information on the Fresenius Group's financing can be found on pages 209 to 216 of the Notes. Further information on financing requirements in 2020 is included in the Outlook section on page 75.

Effect of off-balance-sheet financing instruments on our financial position and liabilities

Fresenius is not involved in any off-balance-sheet transactions that are likely to have a significant impact on its financial position, expenses or income, results of operations, liquidity, investments, assets and liabilities, or capitalization in present or in future.

MATURITY PROFILE OF THE FRESENIUS GROUP FINANCING FACILITIES [1,2]



[1] As of December 31, 2019, major financing instruments, including commercial papers
[2] Excluding lease liabilities

FINANCIAL POSITION – FIVE-YEAR OVERVIEW

€ in millions	2019	2019 [2]	2018	2017	2016	2015
Operating cash flow	**4,263**	**3,514**	3,742	3,937	3,585	3,349
as % of sales	**12.0**	**9.9**	11.2	11.6	12.2	12.0
Working capital [1]	**8,812**	**8,812**	7,721	7,771	6,998	6,091
as % of sales	**24.9**	**24.8**	23.0	22.9	23.7	21.8
Investments in property, plant and equipment, net	**2,433**	**2,433**	2,077	1,705	1,616	1,484
Cash flow before acquisitions and dividends	**1,830**	**1,081**	1,665	2,232	1,969	1,865
as % of sales	**5.2**	**3.0**	5.0	6.6	6.7	6.7

[1] Trade accounts receivable and inventories, less trade accounts payable and payments received on accounts
[2] Adjusted for IFRS 16 effect

Liquidity analysis

In general, key sources of liquidity were **operating cash flows** and **cash inflow from financing activities** including short-, mid-, and long-term debt. Cash flow from operations is influenced by the profitability of the business of Fresenius and by net working capital, especially accounts receivable. Cash inflow from financing activities is generated from short-term borrowings through the commercial paper programs, and by drawing on bilateral bank facilities. Additionally, Fresenius Medical Care can sell receivables under its accounts receivable securitization program. Mid- and long-term funding are mostly provided by the syndicated credit agreements of Fresenius SE & Co. KGaA and Fresenius Medical Care, as well as by bonds, Schuldschein loans, and convertible bonds. Fresenius is convinced that its existing credit facilities and proceeds from other financing activities, as well as the operating cash flows and additional sources of short-term funding, are sufficient to meet the Company's foreseeable liquidity needs.

Dividend

The general partner and the Supervisory Board will propose a dividend increase to the Annual General Meeting. For 2019, a dividend of €0.84 per share is proposed (2018: €0.80 per share). This is an increase of 5%. The total dividend distribution will also increase by about 5% to €468 million (2018: €445 million).

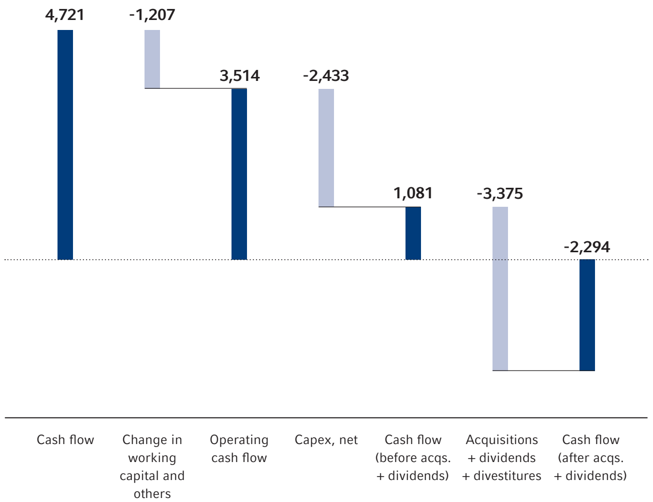
Cash flow analysis

Operating cash flow increased by 14% to €4,263 million, including an IFRS 16 effect of €749 million (2018: €3,742 million). Adjusted for IFRS 16, Group operating cash flow was €3,514 million (2018: €3,742 million) with a margin of 9.9% (including IFRS 16 12.0%; 2018: 11.2%). The decrease is mainly due to the FCPA payment of €206 million at Fresenius Medical Care.

Operating cash flow was more than sufficient to meet all financing needs for investment activities, excluding acquisitions, whereby cash used for capital expenditure was €2,459 million, and proceeds from the sale of property, plant and equipment were €26 million (2018: €2,149 million and €72 million, respectively).

Cash flow before acquisitions and dividends was €1,830 million, including an IFRS 16 effect of €749 million (2018: €1,665 million). Adjusted for IFRS 16, cash flow

CASH FLOW IN € MILLIONS [1]



[1] Adjusted for IFRS 16 effect

CASH FLOW STATEMENT (SUMMARY)

€ in millions	2019	2019 [1]	2018	Change	Change [1]	Margin
Net income	3,029	3,114	3,714	-18%	-16%	
Depreciation and amortization	2,452	1,607	1,494	64%	8%	
Change in working capital and others	-1,218	-1,207	-1,466	17%	18%	
Operating cash flow	4,263	3,514	3,742	14%	-6%	12.0%
Capital expenditure, net	-2,433	-2,433	-2,077	-17%	-17%	
Cash flow before acquisitions and dividends	1,830	1,081	1,665	10%	-35%	5.2%
Cash used for acquisitions, net	-2,423	-2,423	613	--	--	
Dividends paid	-952	-952	-904	-5%	-5%	
Cash flow after acquisitions and dividends	-1,545	-2,294	1,374	--	--	
Cash provided by/used for financing activities	468	1,217	-369	--	--	
Effect of exchange rate changes on cash and cash equivalents	22	22	68	-68%	-68%	
Change in cash and cash equivalents	-1,055	-1,055	1,073	-198%	-198%	

[1] Adjusted for IFRS 16 effect

The detailed cash flow statement is shown in the consolidated financial statements.

before acquisitions and dividends was €1,081 million (2018: €1,665 million), particularly due to increased investments. This was sufficient to finance the Group dividends of €952 million.

Group dividends consisted of dividend payments of €445 million to the shareholders of Fresenius SE & Co. KGaA, payments of €355 million by Fresenius Medical Care to its shareholders, and dividends paid to third parties of €262 million (primarily relating to Fresenius Medical Care). These payments were partially offset by the dividend of €110 million that Fresenius SE & Co. KGaA received as a shareholder of Fresenius Medical Care.

The cash outflow for acquisitions was €2,423 million.

Cash flow after acquisitions and dividends was -€1,545 million, including an IFRS 16 effect of €749 million (2018: €1,374 million). Adjusted for IFRS 16, cash flow after acquisitions and dividends was -€2,294 million (2018: €1,374 million).

Overall, cash provided by financing activities was €468 million, including an IFRS 16 effect of -€749 million (2018 cash used for financing activities: -€369 million). Adjusted for IFRS 16, cash used for financing activities was €1,217 million. The negative IFRS 16 effect in cash used for financing activities reverses the positive IFRS 16 effect on each of the following items: operating cash flow, cash flow before acquisitions and dividends, and cash flow after acquisitions and dividends.

Cash and cash equivalents decreased by €1,055 million to €1,654 million as of December 31, 2019 (December 31, 2018: €2,709 million). Cash and cash equivalents were positively influenced by currency translation effects of €22 million (2018: positive effect of €68 million).

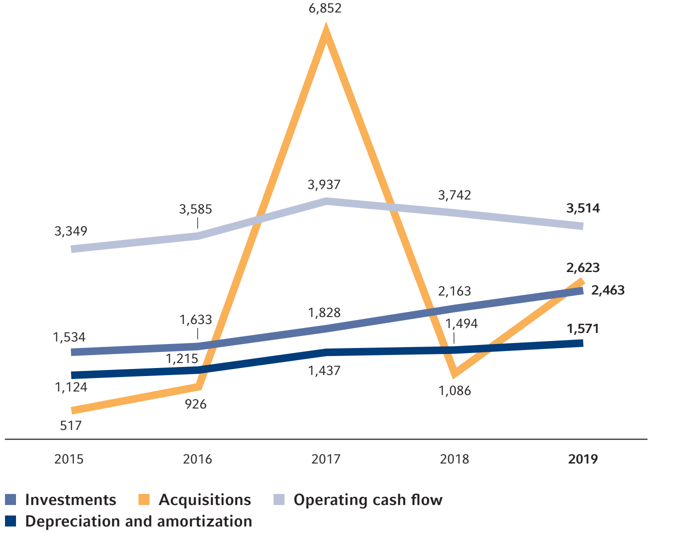
Investments and acquisitions

In 2019, the Fresenius Group provided €5,086 million (2018: €3,249 million) for investments and acquisitions. **Investments in property, plant and equipment** increased to €2,463 million (2018: €2,163 million). At 7.0% of reported sales (2018: 6.5%), this was above the depreciation level[1] of €2,416 million and serves as the basis for enabling expansion and preserving the Company's value over the long term. A total of € 2,623 million was invested in **acquisitions** (2018: €1,086 million). Of the total capital expenditure in 2019, 48% was invested in property, plant and equipment and 52% was spent on acquisitions.

The cash outflow for acquisitions is primarily related to the following business segments:

- Fresenius Medical Care's acquisition spendings were mainly related to the acquisition of NxStage and the purchase of dialysis clinics.

INVESTMENTS, ACQUISITIONS, OPERATING CASH FLOW, DEPRECIATION AND AMORTIZATION IN € MILLIONS – FIVE-YEAR OVERVIEW[1]



[1] Adjusted for IFRS 16 effect; depreciation and amortization before special items

INVESTMENTS / ACQUISITIONS BY BUSINESS SEGMENT

€ in millions	2019	2018	Thereof property, plant and equipment	Thereof acquisitions	Change	% of total
Fresenius Medical Care	**3,422**	2,014	1,125	2,297	70%	67%
Fresenius Kabi	**812**	615	726	86	32%	16%
Fresenius Helios	**693**	501	482	211	38%	14%
Fresenius Vamed	**85**	540	56	29	-84%	2%
Corporate/Other	**74**	-421	74	0	175%	1%
Total	**5,086**	3,249	2,463	2,623	57%	100%

[1] Before special items

- Fresenius Kabi's acquisition spending was mainly for already planned acquisition-related milestone payments relating to the acquisition of the biosimilars business from Merck KGaA.
- Fresenius Helios' acquisition spending was mainly for the acquisition of clinics and outpatient clinics in Spain and Colombia and the purchase of outpatient clinics in Germany.
- Fresenius Vamed's acquisition spending was mainly for the purchase of technical service providers.

The main investments in property, plant and equipment were as follows:

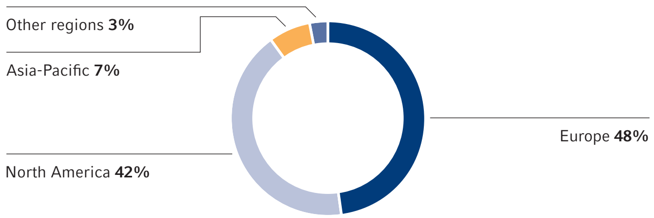
- modernization of existing, and equipping of new, dialysis clinics at Fresenius Medical Care.
- optimization and expansion of production facilities, primarily in North America and Europe for Fresenius Medical Care, and for Fresenius Kabi, primarily in Europe, North America, and Asia. Significant individual projects for Fresenius Kabi were investments in the production plant in Melrose Park near Chicago and investments in Wilson, North Carolina, and Wuxi. The aim of these investments is, among other things, to further increase the degree of modernization and automation and thus to make a significant contribution to the continuous increase in efficiency and to further raise our quality standards in these plants.
- new building and modernization of hospitals at Fresenius Helios. The most significant individual projects were, among other locations, hospitals in Duisburg, Wuppertal, and Wiesbaden, and the construction of a proton beam therapy center in Madrid.

Investments in property, plant and equipment of €529 million will be made in 2020, to continue with **major ongoing investment projects** on the reporting date. These are investment obligations mainly for hospitals at Fresenius Helios, as well as investments to expand and optimize production facilities for Fresenius Medical Care and Fresenius Kabi. These projects will be financed from operating cash flow.

Acquisition of NxStage Medical, Inc.

On February 21, 2019, Fresenius Medical Care acquired all of the outstanding shares of NxStage for US$30.00 per common share. The total acquisition value of this business combination, net of cash acquired, is US$1,976 million (€1,741 million at date of closing). NxStage is a leading medical technology company that develops, produces, and markets an innovative product portfolio of medical devices for use in home dialysis and in the critical care setting. NxStage has been consolidated as of February 21, 2019.

INVESTMENTS BY REGION



2019: €2,463 million

INVESTMENTS AND ACQUISITIONS

€ in millions	2019	2018	Change
Investment in property, plant and equipment	**2,463**	2,163	14%
thereof maintenance	**47%**	47%	
thereof expansion	**53%**	53%	
Investment in property, plant and equipment as % of sales	**7.0**	6.5	
Acquisitions	**2,623**	1,086	142%
Total investments and acquisitions	**5,086**	3,249	57%

ASSETS AND LIABILITIES

Asset and liability structure

The Group's **total assets** were €67,006 million, including an IFRS 16 effect of €5,769 million. Adjusted for IFRS 16, Group total assets increased by 8% (7% in constant currency) to €61,237 million (Dec. 31, 2018: €56,703 million). The increase is mainly driven by business expansion. Inflation had no significant impact on the assets of Fresenius in 2019.

Current assets increased by 3% (3% in constant currency) to €15,264 million (Dec. 31, 2018: €14,790 million). Within current assets, trade accounts receivable increased by 12% to €7,176 million (Dec. 31, 2018: €6,434 million). At 75 days, average days sales outstanding was slightly above the previous year's level (74 days).

Inventories increased by 13% to €3,633 million (Dec. 31, 2018: €3,218 million). The scope of inventory in 2019 was 63 days (Dec. 31, 2018: 60 days). The ratio of inventories to total assets decreased to 5.4% (Dec. 31, 2018: 5.7%).

Non-current assets were €51,742 million, including an IFRS 16 effect of €5,769 million. Adjusted for IFRS 16, non-current assets increased by 10% (9% in constant currency) to €45,973 million (Dec. 31, 2018: €41,913 million). Additions to property, plant and equipment, and to goodwill had an effect. The goodwill and intangible assets in the amount of €31,606 million (Dec. 31, 2018: €28,843 million) has proven sustainable and increased mainly due to the acquisitions made in fiscal year 2019. The addition to the goodwill from acquisitions was €1,732 million in fiscal year 2019. Please see page 203 ff. of the Notes for further information.

Shareholders' equity, including noncontrolling interest, was €26,580 million, including an IFRS 16 effect of -€256 million. Adjusted for IFRS 16, total shareholders' equity increased by 7% (6% in constant currency) to €26,836 million (Dec. 31, 2018: €25,008 million). **Group net income** attributable to Fresenius SE & Co. KGaA increased shareholders' equity by €1,883 million. The equity ratio, including noncontrolling interest, was 39.7%. Adjusted for IFRS 16, the equity ratio was 43.8% (Dec. 31, 2018: 44.1%).

The liabilities and equity side of the balance sheet shows a solid financing structure. Total shareholders' equity, including noncontrolling interest, covers 51% of non-current assets (Dec. 31, 2018: 60%). Shareholders' equity, noncontrolling interest, and long-term liabilities cover all non-current assets and 38% of inventories.

Long-term liabilities were €26,542 million, including an IFRS 16 effect of €5,275 million. Adjusted for IFRS 16, long-term liabilities increased by 15% to €21,267 million (15% in constant currency; Dec. 31, 2018: €18,420 million). **Short-term liabilities** were €13,884 million, including an IFRS 16 effect of €750 million. Adjusted for IFRS 16, short-term liabilities decreased by 1% to €13,134 million (-1% in constant currency; Dec. 31, 2018: €13,275 million).

The Group has neither provisions nor accruals that are of major significance as individual items.

ASSETS AND LIABILITIES – FIVE-YEAR OVERVIEW

€ in millions	2019	2019[2]	2018	2017	2016	2015
Total assets	**67,006**	**61,237**	56,703	53,133	46,697	43,233
Shareholders' equity[1]	**26,580**	**26,836**	25,008	21,720	20,849	18,453
as % of total assets[1]	**40**	**44**	44	41	45	43
Shareholders' equity[1]/non-current assets, in %	**51**	**58**	60	54	60	56
Debt	**27,258**	**21,233**	18,984	19,042	14,780	14,769
as % of total assets	**41**	**35**	33	36	32	34
Gearing in %	**96**	**73**	65	80	63	74

[1] Including noncontrolling interest
[2] Adjusted for IFRS 16 effect

Group debt was €27,258 million, including an IFRS 16 effect of €6,025 million. Adjusted for IFRS 16, Group debt increased by 12% (11% in constant currency) to €21,233 million (Dec. 31, 2018: €18,984 million). Its relative weight in the balance sheet was 41% (35%[1]; Dec. 31, 2018: 33%). Approximately 34% (28%[1]) of the Group's debt is denominated in U.S. dollars. Liabilities due in less than one year were €5,508 million (Dec. 31, 2018: €4,944 million), while liabilities due in more than one year were €21,750 million (Dec. 31, 2018: €14,040 million).

Group **net debt** was €25,604 million, including an IFRS 16 effect of €6,025 million. Adjusted for IFRS 16, Group net debt increased by 20% (20% in constant currency) to €19,579 million (Dec. 31, 2018: €16,275 million), mainly due to the acquisition of NxStage by Fresenius Medical Care.

The net debt to equity ratio including noncontrolling interest (gearing) is 96% (73%[1]; Dec. 31, 2018: 65%).

The **return on equity after taxes**[2] (equity attributable to shareholders of Fresenius SE & Co. KGaA) decreased to 11.2% (11.3%[1]; Dec. 31, 2018: 12.1%). The return on total assets after taxes and before noncontrolling interest[2] decreased to 4.6% (5.1%[1]; 2018: 5.5%).

Group **ROIC** was 6.7%[2] (7.4%[1,2]; 2018: 8.3%[2]), and Group **ROOA** was 7.6%[2] (8.2%[1,2]; 2018: 9.0%[2]). Within the position invested capital, the goodwill of €27.7 billion had a significant effect on the calculation of ROIC. It is important to take

[1] Adjusted for IFRS 16 effect
[2] Before special items; pro forma closed acquisitions/divestitures

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

FIVE-YEAR OVERVIEW FINANCING KEY FIGURES

	Dec. 31, 2019[1,2]	Dec. 31, 2019[1,2,5]	Dec. 31, 2018[1,2]	Dec. 31, 2017[1,2]	Dec. 31, 2016[2]	Dec. 31, 2015[1]
Debt/EBITDA	3.8	3.4	3.2	3.1	2.7	2.9
Net debt/EBITDA[3]	3.6	3.1	2.7	2.8	2.3	2.7
Net debt/EBITDA[4]	3.6	3.1	2.7	2.8	2.4	2.7
EBITDA/net interest[1]	9.9	12.1	10.6	9.6	9.5	8.4

[1] Before special items
[2] Pro forma acquisitions/divestitures
[3] At LTM average exchange rates for both net debt and EBITDA
[4] Net debt at year-end exchange rate; EBITDA at LTM average exchange rates
[5] Adjusted for IFRS 16 effect

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

ROIC AND ROOA BY BUSINESS SEGMENTS

	ROIC			ROOA		
in %	2019	2019[4]	2018	2019	2019[4]	2018
Fresenius Medical Care[1,2]	6.5	7.6	9.5	7.6	8.5	10.0
Fresenius Kabi[1,2]	9.5	9.9	10.2	10.5	10.8	11.1
Fresenius Helios[1]	5.2	5.5	5.8	6.1	6.3	6.8
Fresenius Vamed[3]	7.1	9.0	10.1	7.0	8.3	9.1
Group[1,2]	6.7	7.4	8.3	7.6	8.2	9.0

[1] Pro forma acquisitions
[2] Before special items
[3] ROIC: invested capital is insignificant due to prepayments, cash, and cash equivalents
[4] Adjusted for IFRS 16 effect

into account that approximately 67% of the goodwill is attributable to the strategically significant acquisitions of

- National Medical Care in 1996,
- Renal Care Group and HELIOS Kliniken in 2006,
- APP Pharmaceuticals in 2008,
- Liberty Dialysis Holdings in 2012,
- Hospitals of Rhön-Klinikum AG in 2014,
- Quirónsalud and the biosimilars business in 2017, as well as
- NxStage in 2019.

Those have significantly strengthened the competitive position of the Fresenius Group.

In 2019, the Fresenius Group's return on invested capital (ROIC) substantially exceeded our cost of capital. The WACC (weighted average cost of capital) of Fresenius Medical Care was 5.59%; the WACC of the other business segments was 5.46%.

Currency and interest risk management

The nominal value of all foreign currency hedging contracts was €2,147 million as of December 31, 2019. These contracts had a market value of -€12 million. The nominal value of interest rate hedging contracts was €180 million. These contracts had a market value of around €1 million. Please see the Opportunities and Risk Report on page 84 f. and the Notes on pages 235 to 244 for further information.

CORPORATE RATING

The credit quality of Fresenius is assessed and regularly reviewed by the leading rating agencies Moody's, Standard & Poor's, and Fitch. Fresenius continues to be rated investment grade by all rating agencies.

On May 23, 2019, Standard & Poor's raised the Fresenius corporate rating from BBB- with positive outlook to BBB with stable outlook.

The table below shows the company rating and the respective outlook as of December 31, 2019.

RATING OF FRESENIUS SE & CO. KGAA

	Dec. 31, 2019	Dec. 31, 2018
Standard & Poor's		
Corporate Credit Rating	**BBB**	BBB-
Outlook	**stable**	positive
Moody's		
Corporate Credit Rating	**Baa3**	Baa3
Outlook	**stable**	stable
Fitch		
Corporate Credit Rating	**BBB-**	BBB-
Outlook	**stable**	stable

OVERALL ASSESSMENT OF THE BUSINESS SITUATION

At the time this Group Management Report was prepared, the Management Board continued to assess the development of the Fresenius Group as positive. Demand for our products and services continues to grow steadily around the world.

OUTLOOK

This Group Management Report contains forward-looking statements, including statements on future sales, expenses, and investments, as well as potential changes in the health care sector, our competitive environment, and our financial situation. These statements were made on the basis of the expectations and assessments of the Management Board regarding events that could affect the Company in the future, and on the basis of our mid-term planning. Such forward-looking statements are subject, as a matter of course, to risks, uncertainties, assumptions, and other factors, so that the actual results, including the financial position and profitability of Fresenius, could therefore differ materially – positively or negatively – from those expressly or implicitly assumed or described in these statements. For further information, please see our Opportunities and Risk Report on pages 76 ff.

GENERAL AND MID-TERM OUTLOOK

The outlook for the Fresenius Group for the coming years continues to be positive. We are able to treat patients and supply customers reliably, continuously striving to optimize our costs, to adjust our capacities, and to improve our product mix, as well as to expand our products and services business. We expect these efforts to increase our earnings in the coming years. In addition, good growth opportunities for Fresenius are, above all, presented by the following factors:

- **The sustained growth of the markets in which we operate:** Fresenius still sees very good opportunities to benefit from the growing health care needs arising from aging populations, with their growing demand for comprehensive care, and technical advances, but driven also by the still insufficient access to health care in the developing and emerging countries. There are above-average growth opportunities for us not only in the markets of Asia-Pacific and Latin America, but also in Africa. Efficient health care systems with appropriate reimbursement structures will evolve over time in these countries, as economic conditions improve. We will strengthen our activities in these regions and introduce further products from our portfolio into these markets successively.
- **The expansion of our regional presence:** the fast-growing markets in Asia-Pacific, Latin America, and Africa especially offer further potential to strengthen our market position. China, for instance, offers excellent growth opportunities over the long term, not only in infusion and nutrition therapies, IV drugs, and medical devices for Fresenius Kabi, but also for Fresenius Medical Care in dialysis. We plan to further roll out additional products and therapies from our existing portfolio in countries where we do not yet offer a comprehensive range. Fresenius Helios is also present outside Germany with Quirónsalud, Spain's largest private hospital operator. Fresenius Helios also sees good opportunities for further international growth, including in Latin America. Here, Quirónsalud is already represented in Colombia and Peru.
- **The broadening of our services business:** for Fresenius Medical Care, opportunities to extend into new markets or to expand its market share arise if a country opens up to private dialysis providers or allows cooperation between public and private providers through public-private partnerships. Whether or not private companies can offer dialysis treatment, and in what form, depends on the health care system of the country in which they operate and its legal framework. Fresenius Helios has an extensive nationwide hospital network in Germany and Spain. Based on this platform, Fresenius Helios aims to develop and offer innovative, integrated care offerings. In addition, Helios Germany is expanding outpatient services in a separate division. Patient care should be further improved through the exchange of knowledge and experience (best practice) between Helios Germany and Quirónsalud. Growth opportunities in Spain arise from exploiting synergies,

the expansion and construction of hospitals, and further consolidation potential in the highly fragmented Spanish private hospital market, in particular. The close integration of Quirónsalud's facilities for occupational risk prevention within the Spanish hospital network offers additional growth opportunities. In addition, Fresenius Helios is seizing opportunities in Latin America through acquisitions to exploit potential in the private hospital market. Fresenius Vamed continues to expand its high-end services, such as sterile processing.

- **The broadening of our products business:** at Fresenius Medical Care, we see the planned expansion of the core business with dialysis products as a growth driver. At Fresenius Kabi, we plan to expand our IV drugs product business. We develop generic drug formulations that are ready to launch at the time of market formation, directly after the patents of the branded products expire. We also develop new formulations for non-patented drugs. Furthermore, we develop ready-to-use products that are especially convenient and safe, including, for example, pre-filled syringes and ready-to-use solutions in our freeflex infusion bags.
- **The development of innovative products and therapies:** these will create the potential to further expand our market position in the regions. In addition to innovation, best-in-class quality, reliability, and the convenience of our products and therapies are key factors here. In our dialysis business, we expect home therapies to gain further importance, leading to growth potential for Fresenius Medical Care. In addition, Fresenius Kabi develops new dosage forms for its products. In the area of biosimilars, Fresenius Kabi specializes in the development of products for the treatment of oncology and autoimmune diseases and has a pipeline of molecules at various stages of development. Helios Germany and Spain, as well as Fresenius Vamed, have been developing innovative business areas such as digital offerings in their own division.
- **Selective acquisitions:** besides retaining organic sales growth as the basis for our business, we will continue to utilize opportunities to grow by making small and mid-sized acquisitions that expand our product portfolio and strengthen our regional presence.

We are also exploiting any opportunities for potential within our operations for **cost-management** and **efficiency-enhancement** measures. These include plans for cost-efficient production and a further-optimized procurement process.

The outlook takes account of all events known at the time the annual financial statements were prepared that could influence our operating performance in 2020 and beyond. Significant risks are discussed in the Opportunities and Risk Report. As in the past, we will do our utmost to achieve and – if possible – exceed our targets.

FUTURE MARKETS

We expect the consolidation process to continue among competitors in our markets in Europe, Asia-Pacific, and Latin America. Consequently, we expect that there will be opportunities for us to penetrate new markets, both by expanding our regional presence and by extending our product portfolio. New markets will open up as **Fresenius Medical Care** successively rolls out its product and services portfolio, especially in emerging countries. Fresenius Medical Care is committed to preparing its business portfolio for further sustainable, profitable growth by investing in future growth markets in its product and service businesses, such as China.

Fresenius Kabi plans to introduce products already offered outside the United States into that country as well. It also aims to further roll out its product portfolio internationally, especially in the fast-growing markets of Asia-Pacific and Latin America. Market share is to be expanded further through the launch of new products in the field of IV drugs and medical devices for infusion therapy and clinical nutrition. In Fresenius Kabi's biosimilars business, we are developing products focusing on oncology and autoimmune diseases, which will be introduced to the market over the next few years.

With its broad hospital network across Germany, **Fresenius Helios** is able to develop new patient care models. In addition, Helios Germany is expanding outpatient services in a separate division. The increasing number of privately insured patients in Spain is opening up opportunities for private operators like Helios Spain. Fresenius Helios also sees good opportunities for further international growth, among others, in Latin America.

Fresenius Vamed is expecting to grow in the life cycle and PPP project areas, both with regard to the project and the services business. Moreover, the company intends to further expand its position with follow-up orders, as well as to enter new target markets. Furthermore, Fresenius Vamed will continue to strengthen its position as a leading post-acute care provider in Central Europe.

HEALTH CARE SECTOR AND MARKETS

The health care sector is considered to be widely independent of economic cycles. The demand, especially for life-saving and life-sustaining products and services, is expected to increase, given that they are medically needed and the population is aging. Moreover, medical advances and the large number of diseases that are still difficult to cure – or are incurable – are expected to remain growth drivers.

In the emerging countries, the availability of basic health care and the demand for high-quality medical treatment are increasing. As per-capita income increases, individuals increasingly have to cope with the illnesses associated with lifestyle diseases.

On the other hand, experts estimate that further financial constraints in the public sector could result in more pricing pressure and a slowdown in revenue for companies in the health care industry. Some countries are experiencing significant financing problems in the health care sector due to the strained public finance situation. Especially in the industrialized countries, increased pressure to encourage saving can be expected as health care costs constitute a large portion of the budget.

It will be increasingly important for companies in the health care sector to increase patient benefit, to improve treatment quality, and to offer preventive therapies. In addition, especially those products and therapies that are not only medically but also economically advantageous will be of increasing importance.

THE DIALYSIS MARKET

The global dialysis market is expected to grow by about 4% at constant exchange rates in 2020.

The number of dialysis patients worldwide is expected to rise by approximately 6% in 2020, although significant regional differences will remain. For the United States, Japan, and the countries of Central and Western Europe, where prevalence is already relatively high, we forecast patient growth in the region from under 1% to just over 3%. In economically weaker regions, the growth rates are even higher.

Overall, factors such as aging populations and the growing number of people suffering from diabetes and hypertension, which are ailments often preceding terminal kidney failure, are contributing toward continued growth of the dialysis markets. The life expectancy of dialysis patients is also rising thanks to ongoing advances in treatment quality and the rising standard of living, especially in the emerging countries.

Further information is provided on pages 46 f. of the Group Management Report.

THE MARKET FOR GENERIC IV DRUGS, BIOPHARMACEUTICALS, CLINICAL NUTRITION, INFUSION THERAPY, AND MEDICAL DEVICES/TRANSFUSION TECHNOLOGY [1]

We expect the global market for generic IV drugs, biopharmaceuticals, clinical nutrition, infusion therapy, and medical devices/transfusion technology to grow by around 5% in 2020.

In 2020, the **market for generic IV drugs** is expected to grow by approximately 3% worldwide. The demand for generic drugs is likely to grow because of their significantly lower price in comparison to the originator drugs' price. The growth dynamic will continue to be driven by originator drugs going off patent, as well as by original off-patent products that are offered at steady prices due to a unique selling proposition. A factor working in the opposite direction is the price erosion for original off-patent drugs and generic drugs that are already on the market.

We expect Fresenius Kabi's relevant **market for biopharmaceuticals** to grow by around 8% in 2020.

In 2020, we expect worldwide growth of 4% in the **clinical nutrition market**. Growth perspectives are supported by increasing awareness of the need for early nutritional intervention, which is reflected in the latest guidelines and the increased practice of mandatory malnutritional screening. We see additional potential in the still underlying high percentage of people affected by malnutrition who do not yet have

[1] Market data refers to Fresenius Kabi's addressable markets. Those are subject to annual volatility due to currency fluctuations and patent expiries of original drugs in the IV drug market, among other things. Percentage increase based on market value (price × volume).

Source: Company research

access to nutritional services. Continued high growth potential is projected in Asia-Pacific, Latin America, and Africa. We assume growth of up to 10% in individual countries.

We expect the market for infusion therapy in Europe to grow by around 1% over the prior year's level in 2020. Despite a slightly growing blood volume substitutes market, continuous price pressure in the tender-driven standard-solutions business is expected to affect growth. Outside Europe, we also estimate the market for infusion therapy to grow by approximately 1% in 2020, whereby Latin America is expected to grow by up to 8%.

In 2020, the **market for medical devices** is expected to grow by up to 3% and the **market for transfusion technology** by up to 4%.

THE HOSPITAL MARKET

The number of hospital admissions in Germany declined slightly in 2017. No reliable figures are available yet for 2018 and 2019. However, we assume a further decline in inpatient hospital admissions and an increase in outpatient treatments as a result of the increasing provision of outpatient services.

The so-called change in value figure is relevant for the increase in the **reimbursement of hospital treatments** in Germany. For 2020 it was set at 3.66%. In addition, the hospital funding system provides for various increases and reductions for acute hospitals. For surplus services agreed in advance with the health insurance companies, hospitals have to accept the so-called fixed cost degression discount on surplus services of up to 35%. The exact amount of the discount is negotiated between the hospitals and the health insurance companies.

As a result of the Act to Strengthen Nursing Staff (PpSG), the nursing costs will be excluded from the DRG from 2020; instead, the costs for patient-oriented nursing care will be fully reimbursed by the health insurance funds via separate nursing budgets at prime costs. Measures to relieve the burden on nursing care are also to be financially supported to a certain extent from 2020. In addition, the regulation setting a minimum level for nursing staff has been extended to the areas of heart surgery, neurology, neurological stroke units, and early neurological rehabilitation as of 2020.

In order to factor medical outcomes into the remuneration, the Federal Joint Committee defines quality indicators. The specific financial terms and details are currently being worked out in a consistent overall concept. However, we do not expect any adverse effects from this since the Helios Group is well prepared for quality-based remuneration thanks to its clear focus on quality and transparency of medical outcomes.

The future expectations with respect to their economic situation vary among the German hospitals: according to the Krankenhaus Barometer 2019 survey by the German Hospital Institute (DKI), only one sixth (17%) of the hospitals expect their economic situation to improve in 2020, whereas 44% expect it to worsen.

Moreover, investment needs are growing while government support is declining. The Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI) forecasts that more hospitals will respond to economic pressures by joining together into networks and bundling their services. Networks offer opportunities for individual hospitals to reduce costs, for example in purchasing.

We expect the private hospital market in **Spain** to continue to grow by 2% to 3% in 2020. The continuing increase in the number of privately insured patients should also open up opportunities for private operators in the future.

Relevant indicators, for example nationwide health care spending and bed density, indicate the further market development potential in the Spanish health care system compared with other EU countries. This also provides opportunities for the establishment of new hospitals. In addition, the highly fragmented private Spanish hospital market offers further consolidation potential.

Source: Company research; German Hospital Institute (DKI), Krankenhaus Barometer 2019

THE MARKET FOR PROJECTS AND SERVICES FOR HOSPITALS AND OTHER HEALTH CARE FACILITIES

For 2020, we expect the worldwide demand for projects and services for hospitals and other health care facilities to grow at a low single-digit rate.

In the Central European markets with **established health care systems**, we expect solid growth and a continued rise in demand. This is due to demographic developments and an increasing need for investment and modernization in public health care facilities. Demand is particularly strong for services, i.e., the maintenance and repair of medical and hospital technology, facility management, technical or overall operational management, and the optimization of infrastructural processes – especially within the framework of public-private partnership models. Additional growth opportunities arise from the fact that public institutions are increasingly outsourcing non-medical services to private service providers. In addition, an expansion of the range of post-acute services in Europe is expected.

In the **emerging markets**, we anticipate an overall dynamic development. Growth in markets such as Africa, Latin America, and southeast Asia will initially be driven by the demand for efficient, needs-oriented medical care. In China and the Middle East, growth will be driven by the development of infrastructure and the creation of new care services, as well as research and training facilities.

GROUP SALES AND EARNINGS

Based on the 2019 financial results, Fresenius confirms the targets for the years 2020 to 2023. Group sales are projected to grow organically with a compounded annual growth rate (CAGR) of 4% to 7% in the timeframe 2020 to 2023. Group net income [1,2] is projected to increase organically with a CAGR of 5% to 9% in the timeframe 2020 to 2023. Small and medium-sized acquisitions are expected to contribute an incremental CAGR of approx. 1% point to both sales and net income growth.

In 2020, we expect to increase Group sales [3] by 4% to 7% in constant currency. We project Group net income [1,4] to increase by 1% to 5% in constant currency. Contributions from signed, but not yet closed acquisitions are included in this guidance.

The guidance for fiscal year 2020 does not include any effects from the coronavirus (COVID-19) outbreak, since it is too early to quantify those. From the current perspective, Fresenius does not expect a significant negative financial impact [5].

[1] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[2] Before special items
[3] Base 2019: €35,409 million, including IFRS 16, including NxStage operations
[4] Base 2019: €1,879 million, before special items, including IFRS 16, including NxStage operations
[5] Taking into account minority interest structures across the Group

GROUP FINANCIAL MEDIUM-TERM TARGETS

	CAGR 2020 – 2023 [1]
Organic sales growth	4% – 7%
Organic net income growth [2]	5% – 9%

[1] Before special items
[2] Net income attributable to shareholders of Fresenius SE & Co. KGaA

GROUP FINANCIAL TARGETS 2020

	Targets 2020 [1]	Fiscal year 2019 [2]
Sales growth (in constant currency)	4% – 7%	€35,409 m
Net income [3] growth (in constant currency)	1% – 5%	€1,879 m
Dividend	Continue profit-driven dividend policy	Proposal +5% per share

[1] Before special items
[2] Before special items, including IFRS 16, including NxStage operations (see table on page 75)
[3] Net income attributable to shareholders of Fresenius SE & Co. KGaA

FINANCIAL TARGETS BY BUSINESS SEGMENT 2020

	Targets 2020 [1]	Fiscal year 2019 [2]
Fresenius Medical Care		
Sales growth (in constant currency)	Mid-to-high single-digit %-range	€17,477 m
Net income [3] growth (in constant currency)	Mid-to-high single-digit %-range	€1,236 m
Fresenius Kabi		
Sales growth (organic)	3% – 6%	€6,919 m
EBIT growth (in constant currency)	-4% – 0%	€1,205 m
Fresenius Helios		
Sales growth (organic)	3% – 6%	€9,234 m
EBIT growth (in constant currency)	3% – 7%	€1,025 m
Fresenius Vamed		
Sales growth (organic)	4% – 7%	€2,206 m
EBIT growth (in constant currency)	5% – 9%	€134 m

[1] Before special items
[2] Before special items, including IFRS 16 effects, including NxStage operations (see table on page 75)
[3] Net income attributable to shareholders of Fresenius Medical Care AG & Co. KGaA

SALES AND EARNINGS BY BUSINESS SEGMENT

In 2020, we expect sales and earnings development in our business segments as shown below:

For 2020, **Fresenius Medical Care** expects sales to grow in the percentage range of mid-to-high single digits[1] in constant currency. Net income attributable to shareholders of Fresenius Medical Care AG & Co. KGaA is expected to grow in the percentage range of mid-to-high single digits[1,2,3] in constant currency.

For 2020, **Fresenius Kabi** expects organic sales growth of 3% to 6%[1] and EBIT development in constant currency of -4% to 0%[1,2].

For 2020, **Fresenius Helios** expects organic sales growth of 3% to 6%, and EBIT growth in constant currency of 3% to 7%.

For 2020, **Fresenius Vamed** expects to achieve organic sales growth of 4% to 7% and EBIT growth in constant currency of 5% to 9%.

FRESENIUS GROUP / FRESENIUS MEDICAL CARE / FRESENIUS KABI – 2019 BASE FOR GUIDANCE 2020

€ in millions	Fresenius Group	Fresenius Medical Care	Fresenius Kabi
Sales (as reported = base for guidance)	**35,409**	**17,477**	**6,919**
Transaction costs Akorn			3
Revaluations of biosimilars contingent purchase price liabilities			-32
EBIT (before special items = base for Kabi guidance)			**1,205**
Net income (as reported)	**1,883**	**1,200**	
Transaction costs Akorn	3		
Revaluations of biosimilars contingent purchase price liabilities	-19		
Gain related to divestitures of Care Coordination activities	-15	-49	
Transaction costs NxStage	6	18	
Expenses associated with the cost optimization program at FMC	21	67	
Net income (before special items = base for FSE & FMC guidance)	**1,879**	**1,236**	

FINANCING

For 2020, we expect continued strong cash flow with a cash flow margin between 12% and 14%.

In addition, unused credit lines under syndicated or bilateral credit facilities from banks provide us with a sufficient financial cushion.

Financing activities in 2020 are largely geared to refinancing existing financial liabilities. Fresenius Medical Care's upcoming maturities mainly comprise the equity-neutral convertible bond in January 2020, which was already refinanced through the issuance of bonds in November 2019, bonds in October 2020, and repayments under the syndicated credit agreement. At Fresenius SE & Co KGaA, refinancing activities are mainly related to the bonds due in July 2020, which were issued in 2013.

Without further acquisitions, we expect some deleveraging: the net debt / EBITDA[4] ratio by the end of 2020 is expected to be towards the top end of the self-imposed target corridor of 3.0 – 3.5 x.

[1] Details of the base 2019 can be found in the table opposite.
[2] 2020 before special items
[3] Net income attributable to shareholders of Fresenius Medical Care AG & Co. KGaA
[4] Calculated at expected annual average exchange rates, for both net debt and EBITDA; including contributions from signed, but not yet closed acquisitions; including IFRS 16 effects, excluding further potential acquisitions

INVESTMENTS

In 2020, we expect to invest about 6% to 7% of sales in property, plant and equipment. About 45% of the capital expenditure planned will be invested at Fresenius Medical Care, about 30% at Fresenius Kabi, and around 20% at Fresenius Helios. At Fresenius Medical Care, investments will primarily be used for the expansion of production capacity, optimizing production costs, and the establishment of new dialysis clinics.

Fresenius Kabi will primarily invest in expanding and maintaining production facilities, as well as in introducing new manufacturing technologies. At Fresenius Helios, we will primarily invest in the new buildings, in the modernizing and equipping of existing hospitals, and newly acquired hospitals.

The regional focus of the Group's investment spending will be on Europe and North America, which will account for about 60% and 30%, respectively. The remainder will be invested in Asia, Latin America, and Africa. About 30% of total funds will be invested in Germany.

We assume that the return on operating assets (ROOA) and the return on invested capital (ROIC) will be broadly stable over 2019.

DIVIDEND

The dividend increases provided by Fresenius in the last 26 years show impressive continuity. Our dividend policy aims to align dividends with earnings-per-share growth (before special items) and thus broadly maintains a payout ratio of 20% to 25%. Fresenius intends to continue its profit-driven dividend policy in 2020.

OPPORTUNITIES AND RISK REPORT

The Fresenius Group is exposed to a number of risks due to the complexity and the dynamics of its business. These risks are inevitable consequences of entrepreneurial activities. **Opportunities can only be exploited when there is a willingness to take risks**.

As a provider of products and services for the severely and chronically ill, we are relatively independent of economic cycles. The diversification into four business segments, which operate in different segments of the health care market, and the global footprint further minimize the Group's risk profile. Our many years of experience, as well as our regularly leading market position, serve as a solid basis for a realistic assessment of risks.

At the same time, we will continue to take advantage of the wide-ranging opportunities for sustainable growth and expansion that the health care market offers to the Fresenius Group.

OPPORTUNITIES MANAGEMENT

Managing opportunities is an ongoing, integral part of corporate activity. To be successful over the long term, we consolidate and improve on what we have already achieved and create new opportunities. The organization and management of the Fresenius Group have a decentralized, regional structure. This enables us to recognize and analyze trends, requirements, and opportunities in the often fragmented markets and to focus our actions accordingly. We maintain regular contact and dialog with research groups and scientific institutions to explore new prospects, and keep a close watch on markets and competitors in order to identify opportunities.

Within the Group, opportunities and synergies can be exploited through continuous communication involving the exchange of information and know-how between the business segments. Anticipated future opportunities for the Fresenius Group are discussed in the **Outlook** starting on page 70.

RISK MANAGEMENT

FRESENIUS RISK MANAGEMENT SYSTEM

Risk management is a continuous process. Identifying, controlling, and managing risks are key tools of solid corporate governance. The **Fresenius risk management system** is closely linked to its corporate strategy. Opportunities are not recorded in the risk management system.

Markets are kept under constant observation and close contact is maintained with customers, suppliers, and institutions. These policies allow us to swiftly identify and react to changes in our business environment.

Using standardized processes, risk situations are evaluated regularly and compared with specified requirements. If negative developments emerge, responses can be initiated at an early stage.

Responsibilities for **processes and monitoring risks** have been assigned as follows:

- The business segments and their operational business units are responsible for identifying, assessing, and managing risks.
- The managers responsible are required to report any relevant changes in the risk profile to the Management Board without delay.

- The Management Board of the Fresenius Group has overall responsibility for effective risk management and regularly discusses the current risk situation.
- The Audit Committee of the Supervisory Board monitors the quality and effectiveness of the risk management system every six months.

The risk management system is supported both at Group level and in the business segments by our **risk controlling** and our **management information system**. Detailed monthly and quarterly reports are used to identify and analyze deviations of actual versus planned business development. In addition, the risk management system includes a **control system** that provides an overview of organizational processes and safeguards, as well as internal controls and audits, which help us identify significant risks at an early stage and counteract each one individually.

The functionality and effectiveness of our risk management system is reviewed regularly by the Audit Committee of the Supervisory Board, the Management Board, and the Internal Audit department of the Group. Conclusions arising from the audits are taken into account in the ongoing refinement of the system, to allow prompt reaction to changes in our environment. This system has thus far proved effective. The control system is also regularly reviewed by the Management Board and the Internal Audit department. Moreover, the external auditor reviews whether the control system set up by the Management Board is suitable for the early identification of risks that would put the continued existence of the Company in danger. The insights gained from the audit regarding the internal financial reporting controls are also taken into account in the continued development of the system.

Fresenius has ensured that the organizational structure and systems for identifying, assessing, and controlling risks, and for developing countermeasures, are designed appropriately and that they are properly functional. However, there can be no absolute certainty that this will enable all risks to be fully identified and managed.

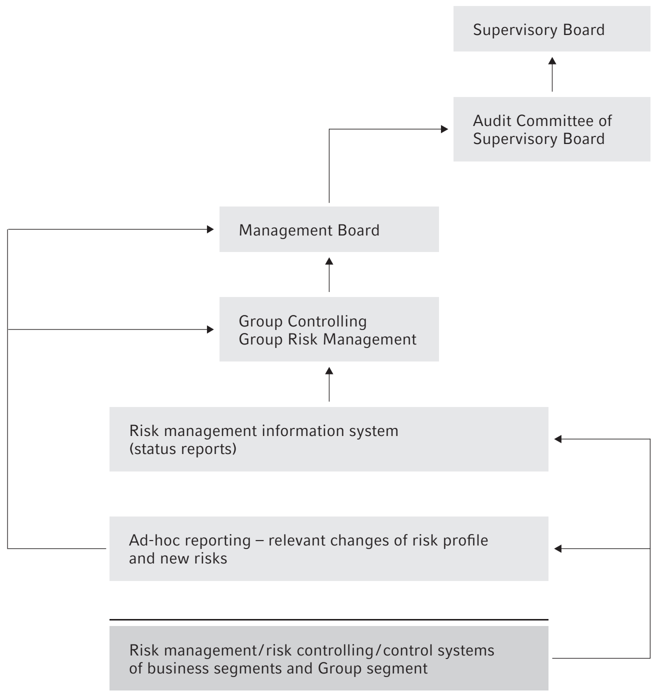
INTERNAL FINANCIAL REPORTING CONTROLS

Numerous measures and internal controls assure the correctness and reliability of accounting processes and financial reporting, including the preparation of annual financial statements, consolidated financial statements, and management reports in compliance with applicable principles. Our **four-tier reporting process** especially promotes intensive discussion and ensures control of the financial results. At each reporting level, i.e.,

- local entity
- region
- business segment
- Group

financial data and key figures are reported, discussed, and compared with the prior-year figures, budget, and latest forecast on a monthly basis. In addition, all parameters, assumptions, and estimates that are of relevance for the externally reported Group and segment results are discussed intensively with the department responsible for preparing the Group's consolidated financial statements. These matters are also reviewed and discussed quarterly by the Supervisory Board's Audit Committee.

STRUCTURE OF THE FRESENIUS RISK MANAGEMENT SYSTEM



Control mechanisms, such as automated and manual reconciliation procedures, are further precautions put in place to assure that financial reporting is reliable and that transactions are correctly accounted for. All consolidated entities report according to Group-wide standards, which are determined at the head office. These are regularly adjusted to allow for changes made to the accounting regulations. The consolidation proposals are supported by the IT system. In this context, reference is made to the comprehensive consolidation of internal Group balances. To prevent abuse, we take care to maintain a strict separation of functions. **Management control and evaluations** also help to ensure that risks with a direct impact on financial reporting are identified and that controls are in place to minimize them. Moreover, changes in accounting principles are closely monitored and employees involved in financial reporting are instructed regularly and comprehensively. External experts and specialists are engaged if necessary. The Treasury, Tax, Controlling, and Legal departments are involved in supporting the preparation of the financial statements. Finally, the information provided is verified once more by the department responsible for preparing the consolidated financial statements.

Fresenius Medical Care is subject to the controls of Section 404 of the **Sarbanes-Oxley Act**.

In the third quarter of 2019, Fresenius Medical Care identified a significant weakness in its accounting-related internal control system relating to revenue recognition in North America. It affected the determination of the transaction price for certain legally disputed service compensation arrangements. Remedies have already been initiated and Fresenius Medical Care has taken steps to strengthen its control system.

RISK AREAS

OVERALL ECONOMIC RISKS AND RISKS DUE TO THE OPERATING FRAMEWORK

At present, the **development of the global economy** presents no significant risk to the Fresenius Group. In 2020, we expect overall economic growth to continue. Moreover, Fresenius is affected only to a small extent by general economic fluctuations. We expect demand for our life-saving and life-sustaining products and services to continue to grow. Furthermore, Fresenius is striving for balanced distribution of its business in the main global regions and between established and emerging markets.

The risk situation for each business segment depends in particular on the development of their respective relevant markets. **Country-specific political, legal, and financial conditions** are therefore monitored and evaluated carefully, particularly in the current macroeconomic environment. This applies, for example, to countries with budget problems as a result of their debt burden, in particular with regard to our accounts receivable.

This applies in particular to any initiatives by the U.S. administration with regard to potential changes to the current health care programs.

This also applies to the potential impact on our business of the United Kingdom's decision to leave the European Union and the ongoing uncertainty about the conditions of Brexit. We do not expect this to have a material impact on our business at this time. The share of sales generated in the United Kingdom is not material in relation to Group sales. We do not expect any negative effects on our financing either, as only an immaterial portion of our credit lines is provided by banks domiciled in the United Kingdom. Project teams in all divisions concerned are identifying potential effects in terms of logistics, taxes, customs duties, and potential regulations, among other things, and initiating appropriate measures, if necessary.

RISKS IN THE HEALTH CARE SECTOR

Risks related to changes in the health care market are of major importance to the Fresenius Group. The main risks are the financing of health care systems and the corresponding reimbursement systems, as well as the development of new products and therapies.

Financing of health care and reimbursement systems

In our largely regulated business environment, **changes in the law** – also with respect to reimbursement – can have a major impact on our business success. This applies especially in the United States, where a large portion of our sales are generated, and where changes in the government **reimbursement system**, in particular in the reimbursement of dialysis treatments, for example, could have a considerable impact on our business. In 2019, approximately 33% of Fresenius Medical Care's sales worldwide were attributable to

U.S. federal health care benefit programs, such as **Centers of Medicare and Medicaid (CMS)**. A reduction in reimbursement rates or reimbursed services could result in significantly lower sales and operational results.

Medicare has implemented an end-stage renal disease (ESRD) **prospective payment system (ESRD PPS)**, which expanded the scope of the products and services covered by a bundled rate. Due to pressure to reduce health care costs, increases in the reimbursement rate by the U.S. government have been limited.

As part of the PPS, our dialysis clinics in the United States participate in the **Quality Improvement Program (QIP)**. Medicare reimbursement benefits can be reduced by up to 2% based on the previous year's benefits if clinics do not meet the quality standards of the QIP. Underlying quality measures are reviewed, extended, and amended annually by the CMS. A material failure by Fresenius Medical Care to achieve the minimum client quality standards under the QIP could materially and adversely affect our business, financial condition, and results of operations.

In addition, Fresenius Medical Care participates in various value-oriented compensation programs under which we receive fixed compensation to cover all or a defined amount of treatment costs for a defined number of patients:

- The CMS Comprehensive ESRD Care Model allows dialysis providers and physicians to form ESRD Seamless Care Organizations (ESCOs) that seek to deliver better health outcomes for ESRD patients with chronic kidney failure while lowering the CMS' costs. ESCOs that achieve the program's minimum quality requirements and generate reductions in treatment costs for CMS above certain threshold values will receive a share of the cost savings. However, ESCOs that include dialysis chains with more than 200 facilities are required to share in the risk of cost increases and reimburse CMS a share of any such increases. In 2019, Fresenius Medical Care's operating result was adversely affected by the impact of a reduction in patients enrolled in the ESCO program and a decrease in the cost savings rate based on reports under discussion for current and prior program years.
- In addition, Fresenius Medical Care has entered into per capita sub-capitations and risk-based and value-based agreements with certain insurers to provide health care to private and Medicare Advantage patients with end-stage renal disease. These agreements provide for the establishment of a basic amount per patient per month. If we provide complete care at costs below the basic amount, we retain the difference. However, if the costs of complete care exceed the basic amount, we may be obliged to pay the difference to the insurer.

Inadequate pricing of products or an unsuitable cost estimate for the service portfolio for beneficiaries and ineffective cost management may have a material adverse effect on our financial position, net assets, and operational results.

Fresenius Medical Care mitigated the impact of the PPS and the additional above-referenced reimbursement models and other legislative initiatives by two broad measures:

- First, Fresenius Medical Care works with medical directors and treating physicians to generate options for efficiency increases consistent with QIP and good clinical practice and negotiates cost savings on the purchasing of pharmaceuticals.
- Second, Fresenius Medical Care introduces new initiatives in order to achieve efficiency increases and better patient outcomes by increasing care upon initiation of dialysis, increasing the percentage of patients using home dialysis, and generating additional cost reductions in its clinics.

The U.S. administration has publicly announced its intention to pursue significant changes to existing health care insurance programs, especially programs in connection with the Patient Protection and Affordable Care Act. In addition, options to restructure the Medicare program in the direction of a defined-contribution, "premium support" model and to shift Medicaid funding to a block grant or per capita arrangement, with greater flexibility for the states, are also likely to be considered.

The U.S. administration also announced its decision to end subsidies, known as cost-sharing reduction (CSR) payments, to health insurance companies to help pay out-of-pocket costs of low-income Americans, in 2017. Some private insurers have stated that they will need much higher premiums and may withdraw from the insurance exchanges created under the Affordable Care Act if the subsidies were eliminated. We cannot predict how the ongoing litigation in this regard might be determined. As a result, significant increases in insurance premiums and a reduction in the availability of insurance through such exchanges could reduce the number of Fresenius Medical Care's privately insured patients and shift such patients to Medicare and Medicaid. Because Medicare and Medicaid reimbursement rates are generally lower than the reimbursement rates paid by private insurers, a shift of privately insured patients to Medicare and Medicaid could have a material adverse impact on the result of operations of Fresenius Medical Care.

Further requirements for dialysis clinics and changes in reimbursement from government and private insurers for our entire product and service portfolio in the United States could have a material adverse effect on our business and operating results. For example, the ballot initiatives introduced at the state level could result in further regulation of clinic staffing requirements, state inspection requirements, and a cap on private insurer margins. Such additional state regulations would increase the cost of operating dialysis clinics and create additional costs. This could have a material adverse effect on our business in the affected states.

In addition, a portion of dialysis treatment in the United States is reimbursed by **private health insurance companies** and **integrated care organizations**, with reimbursements generally higher than the reimbursements provided by the government health care program. As a result, payments from private health insurers contribute a significant portion to Fresenius Medical Care's profits. In 2019, approximately 34% of Fresenius Medical Care's sales from health care services were attributable to private health insurance companies in the North American segment. If these organizations in the United States manage to push through a reduction in the reimbursements, or the share of reimbursements by private health insurers, it would significantly reduce the sales revenues and operating earnings for the products and services of Fresenius Medical Care.

A portion of Fresenius Medical Care's patients who are currently covered by private insurers may elect to transition to government-funded reimbursement programs that reimburse us at lower rates for our services if efforts to restrict or eliminate the charitable funding of patient insurance premiums are successful.

Changes in reimbursement from government and private insurers for our entire product and service portfolio in the United States could have a material adverse effect on our business and operating results.

The same applies to the hospital market in Germany, where the **DRG system** (Diagnosis-Related Groups) is intended to increase the efficiency of hospitals while reducing health care spending. Patients are largely assigned to hospitals by the public health and pension insurers. It is therefore important for Helios Germany that the contracts between its hospitals and the insurers and health care institutions are maintained. We not only monitor legislative changes intensively, but also work together with governmental health care institutions.

As a result of the Act to Strengthen Nursing Staff (PpSG), from 2020, nursing costs will be deducted from the standardized base rates (DRG), and the costs for direct patient care will instead be fully reimbursed by the health insurance companies via separate care budgets. In 2019, each additional or increased nurse position at the bed was completely refinanced by the health insurers.

In the German market, Helios Germany sees a general trend towards outpatient treatment, which could lead to lower growth in the number of inpatient cases. In response to this trend, Helios Germany is expanding outpatient services offerings in a separate division. If Helios Germany does not succeed in sustainably adapting its business model through suitable measures, this could lead to a decline in the number of cases and have a material adverse effect on our business and result of operations.

Quirónsalud, our private chain of clinics in Spain, operates hospitals through **PPP contracts (public-private partnership)**, among other methods. These are part of the public health system in Spain. The company has thus been given responsibility in certain areas of health care for the citizens of Spain with statutory health insurance. Quirónsalud receives compensation for its services in the form of a per capita lump sum or remuneration for the specific service rendered. If Quirónsalud were to lose the concession to operate hospitals with PPP contracts or renegotiations with public or private insurance companies resulted in worse conditions for doing so, or if hospitals are not able to compensate for lower reimbursement rates by cutting costs, this could have a material adverse effect on our net assets, financial position, and results of operations.

Reductions in health care spending could also negatively affect the pricing of Fresenius Kabi products.

Changes in the law, the reimbursement method, and the health care programs could affect the scope of payments for services, as well as for insurance coverage and the product business. This could have a significant adverse impact on our business operations as well as net assets, financial position, and results of operations. Generally, our aim is to counter such possible regulatory risks through enhanced performance and cost reductions.

Development of new products and therapies

The **introduction of new products and services**, or the development of advanced technologies by competitors, could render one or more of our products and services less competitive or even obsolete, and thus have a significant negative impact on future sales, the prices of products, and our range of services. This includes the introduction of generic or patented drugs by competitors, which may have an impact on sales and operational results.

Cooperation with medical doctors and scientists allows us to identify and support relevant technological innovations. These enable us to keep abreast of developments in alternative treatment methods and to evaluate and adjust our corporate strategy, if necessary.

OPERATING RISKS

Our operational business around the world is exposed to a number of **risks** and to extensive **government regulation**, which include, among others:

- The quality, safety, and efficacy of medical and pharmaceutical products, supplies, and therapies;
- The operation and licensing of hospitals, other health care facilities, manufacturing facilities, and laboratories;
- The planning, construction, equipment, and management of pharmaceutical and medical-technological production facilities;
- The planning, construction, equipping, and management of health care facilities;
- Permits from public authorities and monitoring of clinical and non-clinical research and development activities;
- Product releases and approvals for new products and product modifications;
- Checks and reviews by enforcement authorities of compliance with applicable pharmaceutical legislation;
- Compliance with due diligence obligations, warranty obligations, and product liability regulations;
- The accurate reporting of and billing for reimbursements by government and private insurers;
- The labeling and designation of pharmaceutical products and their marketing;
- Attracting qualified personnel;
- Compensation of medical personnel and financial arrangements with physicians and other referral sources;
- Access to, collection, publication, use, and security of health information and other protected data.

If Fresenius fails to comply with laws or regulations, this may give rise to a number of consequences, including monetary penalties, increased compliance costs, exclusion from governmental reimbursement programs, or a complete or partial curtailment of our authorization to conduct business, any of which could have a material adverse effect on our business reputation, net assets, financial condition, or results of operations.

Significant risks of operations for the Fresenius Group are described in the following sections.

Production, products, and services

Compliance with **product specifications and manufacturing regulations** is ensured by our quality management systems, which are structured in accordance with the internationally recognized **quality standards ISO 9001** and **ISO 13485** and take into account relevant international and national regulations. These are implemented by internal standards such as quality and work procedure manuals. Regular internal and external audits are carried out at the Group's production sites, distribution companies, and dialysis clinics. These audits test compliance with requirements and regulations in all areas – from management and administration to production and clinical services, all the way to patient satisfaction. Our production facilities comply with the Good Manufacturing Practice (GMP) of the markets they supply. Our facilities are audited by local public health authorities, such as the U.S. Food and Drug Administration (FDA) or the European Medicines Agency (EMA), and other authorities. If an authority detects any deficiencies, Fresenius will immediately take appropriate rectifying measures.

Non-compliance with the requirements of these authorities in our production facilities or at our suppliers could lead to regulatory actions, such as warnings, product recalls, production interruptions, monetary sanctions, or delays in new product approvals. Any of these regulatory actions could adversely affect our business reputation and our ability to generate sales and result in significant expenses.

In addition, **production** could be adversely affected by events such as natural disasters, infrastructure disruptions, regulatory rulings, or supply disruptions, e.g., of raw materials, or technical failures.

Potential risks arising from the start-up of **new production sites or the introduction of new technologies** are countered through careful planning, regular analysis, and continual progress reviews.

Providing **medical services** in our hospitals, rehabilitation clinics, and dialysis clinics is generally subject to inherent risks. For example, disruptions to processes, including causes such as natural disasters or technical failures, involve risks for patients and the clinic. In addition, there are operational risks, for example regarding hygiene. We counteract these risks with strict operating procedures, continual personnel training, and patient-oriented work procedures. Furthermore, we are constantly striving to improve the standard of patient treatment through our quality management systems.

Performance risks associated with Fresenius Vamed's **project business** are countered through professional project management and control, and with a proven system tailored to each business activity for identifying, evaluating, and minimizing these risks. This system consists of organizational measures, such as standards for pricing-in risks when preparing quotations. Risks are assessed even before accepting orders and are subsequently updated during regular project controlling. To avert the risk of default, financial measures are taken, such as checking creditworthiness and, as a rule, safeguarding through prepayments, letters of credit, and secured credits.

Procurement

On the **procurement side**, we counter risks – which mainly involve possible price increases or the lack of availability of raw materials and goods – by appropriately selecting and working together with our suppliers through long-term framework agreements in certain purchasing segments and by bundling volumes within the Group.

We counter the risk of poor-quality purchased raw materials, semi-finished products, and components mainly by requiring our suppliers to meet strict quality standards. This includes a structured qualification process, which comprises audits, document and advance sample inspections, as well as regular quality controls of deliveries. We only purchase high-quality products with proven safety and suitability from qualified suppliers that conform to our specifications and standards.

Competition

Growing **competition**, among other things induced by the reentry of competitors into the U.S. market for generic IV drugs after production halts, can have a material adverse effect on the future pricing and sale of our products and services. The introduction of generic or patented drugs by competitors may have an impact on the sales and operational results of our products.

In the United States, most hospitals are members of one or more **group purchasing organizations (GPOs)** which award contracts to pharmaceutical manufacturers through a competitive bidding process. Currently, there are three main GPOs in the United States – Vizient, Premier, and Health Trust.

Fresenius Kabi derives a large percentage of its revenue from sales to hospitals that purchase products in accordance with these GPO contracts. To win and retain contracts with GPOs, Fresenius Kabi must be a reliable supplier of a high-quality product line, remain price-competitive, and comply with all applicable laws and regulations. GPOs also have purchasing agreements with other manufacturers, and the bidding process for products is highly competitive. Most of the agreements Fresenius has with GPOs in the United States can be terminated at short or medium notice. If Fresenius Kabi does not succeed in fulfilling and maintaining its existing contracts or if new contracts are concluded on less favorable terms, this could have an adverse effect on our sales, financial position, and operational results.

The main customers in the area of transfusion technology are plasma companies and blood centers. There are four major plasma companies globally. Blood centers are more fragmented, but they have consolidated in recent years in response to lower demand for red cells resulting from blood-saving efforts at hospitals. Fresenius Kabi remains competitive by providing innovation, award-winning customer services, and continuously improving its cost structure and efficiency.

Generally, the health care markets are characterized by price pressure (including from tenders), competition, and efforts to contain costs. These factors could result in lower sales and adversely affect our business, financial position, and operational results.

Referrals from doctors

Our hospitals, rehabilitation clinics, and dialysis clinics are dependent on patients selecting them for their medical treatment. To a large extent, patients rely on the recommendation of their attending physicians, who make their recommendations based on various factors, including the quality of the medical treatment and the competence of the clinic staff, as well as the distance to the clinic, and the availability of appointments for treatment. If we are unable to meet these criteria, physicians may recommend fewer or no patients at all to our clinics. In addition, Fresenius Helios could receive fewer referrals from doctors' practices because they increasingly perceive Fresenius Helios' outpatient services as competition or because they no longer take rehabilitation clinics with a certain medical focus into account when making their choice. These factors could result in lower sales and adversely affect our business, financial position, and operational results.

Payment defaults

As a rule, we assess the creditworthiness of new customers in order to limit the risk of **late payment and defaults** by customers. We also conduct follow-up assessments and review credit lines on an ongoing basis. We monitor receivables outstanding from existing customers, and assess the risk of default. This particularly applies to countries with budgetary problems and countries exposed to political risks. In 2019, we again worked on the status of our receivables, by taking measures such as factoring.

Personnel

The Company addresses **potential shortages of qualified personnel** through appropriate measures for employer branding, as well as recruitment, upskilling, and retention of qualified staff.

In order to increase the awareness and attractiveness of the Fresenius Group, our employer branding relies on a mix of university marketing, company-internal events (such as the Fresenius Career Day “Meet the Board” involving our top management), and digital employer branding (e.g., by expanding our career website and our presence on social media channels).

To ensure a sustainable supply of qualified staff, we offer, for example, targeted programs for young academic talent with subsequent retention programs, as well as comprehensive apprenticeships for students who just graduated high school.

With more than 4,950 apprentices and dual students, Fresenius is one of the biggest training companies in Germany. The number of our study program offerings has further increased. In 2019 we offered the programs Digital Business Management, Industrial Safety, Environmental Technology, Business Engineering, and Medical Technology in cooperation with the Baden-Württemberg Cooperative State University for the first time.

We provide information about our apprenticeship and study program offerings on our career website, as well as at our respective training locations through various marketing activities and vocational orientation offers (e.g., vocational information days, Night of Apprenticeship, high school student internships, Apprentices' Navigation System).

Furthermore, we offer young academic talent the opportunity to gain initial practical experience and to establish contacts within our company in the context of internships and working student positions before or during their studies or in the context of their final papers.

Depending on their customer and market structure, our business segments adopt different approaches and measures for personnel development. We strengthen employee loyalty to our company by offering our employees attractive development opportunities and fringe benefits and variable compensation and work time models. In addition, we promote international and interdisciplinary cooperation.

By using target-group-specific measures, Fresenius addresses the overall shortage of specialized hospital personnel. We thereby aim to recruit qualified and dedicated personnel, thus ensuring our high standard of treatment quality.

Since January 1, 2019, the German hospital market has also been subject to the "Verordnung zur Festlegung von Personaluntergrenzen in pflegeintensiven Bereichen in Krankenhäusern" (PpUGV – Ordinance on the Minimum Requirements for Nursing Personnel in Hospitals). This ordinance stipulates minimum staffing levels for nursing personnel in certain areas of the hospital. Further planned statutory regulations on minimum personnel levels in additional hospital departments with beds may further intensify competition for qualified nursing staff. Helios Germany is therefore working intensively on additional measures to make it particularly attractive as an employer for nursing staff. These include the compatibility of family and career (e.g., through childcare facilities at hospital sites or the possibility of part-time work), attractive further and advanced training opportunities, occupational health management, and career opportunities.

Additional information on our measures to recruit, develop, and retain qualified personnel can be found in our Group Non-financial Report from page 114 onwards.

FINANCIAL RISKS

Currency and interest-rate risks

The international operations of the Fresenius Group expose us to a variety of **currency risks**. In addition, the financing of the business exposes us to certain **interest rate risks**. We use derivative financial instruments as part of our risk management to try to avoid negative impacts of these risks. However, we limit ourselves to non-exchange-traded, marketable instruments, used exclusively to hedge our underlying transactions and not for trading or speculative purposes. The majority of our transactions are conducted with banks that have a high rating.

The Fresenius Group's foreign **exchange risk management** is based on a policy approved by the Management Board that defines the targets, organization, and handling of the risk management processes. In particular, the policy assigns responsibilities for the determination of currency risks, the execution of hedging transactions, and the regular risk management reporting. These responsibilities correspond to the decision-making structures in the other business processes of the Group. Decisions on the use of derivative financial instruments in **interest rate management** are made in close consultation with the Management Board. Hedging transactions using derivatives are carried out by the Corporate Treasury department of the Fresenius Group – apart from a few exceptions in order to adhere to foreign currency regulations. These transactions are subject to stringent internal controls. This policy ensures that the Management Board is fully informed of all significant risks and current hedging activities.

The Fresenius Group is protected, to a large extent, against **currency and interest rate risks**. As of December 31, 2019, approximately 60% of the Fresenius Group's debt was protected against increases in interest rates either by fixed-rate financing arrangements or by interest rate hedges; consequently, 40% was exposed to interest rate risks. A sensitivity analysis shows that a rise of 0.5 percentage points in the reference rates relevant for Fresenius would have an impact of approximately 1% on Group net income.

As a global company, Fresenius is widely exposed to **translation effects** due to foreign exchange rate fluctuations. The exchange rate of the U.S. dollar to the euro is of particular importance because of our extensive operations in the United States. Translation risks are not hedged. A sensitivity analysis shows that a one cent change in the exchange rate of the U.S. dollar to the euro would have an annualized effect of about €130 million on Group sales, about €24 million on EBIT, and about €7 million on Group net income.

As a globally active company, we have production facilities in all the main currency areas. In the service businesses, our revenue and cost base largely coincide. The Fresenius Group uses a Cash-Flow-at-Risk (CFaR) model in order to estimate and quantify such **transaction risks** from foreign currencies. The foreign currency cash flows that are reasonably expected to occur within the following 12 months, less any hedges, form the basis for the analysis of the currency risk. As of December 31, 2019, the Fresenius Group's cash flow at risk was €59 million. Hence, with a probability of 95%, a potential loss in relation to the forecast foreign exchange cash flows of the next 12 months will not be higher than €59 million. Further details on financial risks can be found on pages 235 to 244 in the Notes.

Recoverability of assets

Financial risks that could arise from acquisitions and investments in property, plant and equipment, and in intangible assets, are assessed through careful and in-depth reviews assisted by external consulting firms. The intangible assets, including goodwill, product rights, trade names, and management contracts, contribute a considerable part to the total assets of the Fresenius Group. Goodwill and other intangible assets with an indefinite useful life carried in the Group's consolidated balance sheet are **tested for impairment** each year. A significant deterioration in our prospects for the future or in the general economic environment could result in additional depreciation being necessary. Further information can be found on pages 203 ff. of the Notes.

Taxes and duties

As a global corporation, Fresenius is subject to numerous **tax codes and regulations**. Risks arising therefrom are identified and evaluated on an ongoing basis. The Fresenius Group's companies are subject to regular tax audits. Any changes in tax regulations or adjustments resulting from tax audits, and additional customs, import duties, and trade barriers could lead to higher tax duties payments.

Debt and liquidity

Fresenius' debt as of December 31, 2019, was €27,258 million including the lease liabilities according to IFRS 16. The **debt** could limit the Company's ability to pay dividends, arrange refinancing, be in compliance with its credit covenants, or implement the corporate strategy. If the conditions on the relevant financial markets deteriorate significantly, financing risks could arise for Fresenius. We reduce these risks through a high proportion of mid- and long-term funding with a balanced maturity profile.

Some of our major financing agreements contain covenants requiring us to comply with certain financial ratios and additional financial criteria. Non-compliance with these covenants could result in a default and acceleration of the debt under the respective agreements. We counteract this risk by taking the relevant performance indicators into account in our Group planning and continuously monitoring their development. This enables us to take countermeasures at an early stage.

Additional information on conditions and maturities can be found on pages 209 ff. of the Notes and on pages 62 ff. of the Group Management Report.

Inflation risks

As an international company, we are exposed to varying **inflation rates and price developments**. We are also active in high-inflation countries such as Argentina. Due to the development of inflation in Argentina, our subsidiaries operating there have applied IAS 29, Financial Reporting in Hyperinflationary Economies, since July 1, 2018.

RISKS ASSOCIATED WITH RESEARCH AND DEVELOPMENT AND PRODUCT APPROVAL

The **development of new products and therapies** always carries the risk that the ultimate goal might not be achieved, or it might take longer than planned. This is particularly true for the Fresenius Kabi biosimilar products. The development of biosimilar products entails additional risks, such as significant development costs and the still-developing regulatory and approval processes. Regulatory approval of new products requires comprehensive, cost-intensive preclinical and clinical studies. Furthermore, there is a risk that regulatory authorities either do not grant, or delay, product approval, or withdraw an existing approval. In addition, adverse effects of our products that may be discovered after regulatory approval or registration may lead to a partial or complete withdrawal from the market, due either to legal or regulatory actions or our voluntary decision to stop marketing a product.

In January 2018, for example, the Coordination Group for Mutual Recognition and Decentralized Procedures – human (CMDh) at the European Medicines Agency (EMA) recommended that drugs containing hydroxyethyl starch (HES) be withdrawn from the market. This position was not taken unanimously and was therefore referred to the European Commission for a decision. In April 2018, the Standing Committee of the European Commission referred the matter back to the Pharmacovigilance Risk Assessment Committee (PRAC) of the EMA. The PRAC maintained its recommendation to suspend regulatory approvals. As a result, the CMDh of the EMA took the position in July 2018 that regulatory approvals would be maintained under the condition that risk-minimizing measures are implemented. These include controlled distribution to accredited hospitals/centers, training and direct communication with health care professionals, and warnings on the packaging. In July 2018, the European Commission approved this position. These required risk-minimization measures for the HES products were initiated in 2019. Based on the results of a consumer study, the effectiveness of the measures will be reassessed in 2020.

Similar measures could also be taken by authorities in non-EU countries.

The Fresenius Group spreads its risk widely by conducting development activities in various product segments. We also counteract risks from research and development projects by regularly analyzing and assessing development trends and examining the progress of research projects. We also strictly comply with the legal regulations for clinical and chemical-pharmaceutical research and development.

With IV drugs, it is also crucial that new products are continually brought to the market in a timely manner. Therefore, we monitor the development of new products on the basis of detailed project plans and focus on achieving specific milestones. In this way, we can take countermeasures if defined targets are called into question.

Fresenius Medical Care as well as Fresenius Kabi are subject to typical patent risks. This includes an inadequate protection by patents of the technologies and products that we developed. Competitors may copy our products without bearing comparable research and development costs.

RISKS FROM ACQUISITIONS

The **acquisition and integration** of companies carries risks that can adversely affect the net assets, financial position, and results of operations of Fresenius. Acquisition processes often include closing conditions, including but not limited to antitrust clearance, fulfillment of representations and warranties, and adherence to laws and regulations. Non-compliance with such closing conditions by either party to an acquisition could lead to litigation between the parties or with others and thus claims against Fresenius.

Following an acquisition, the acquired company's structure must be integrated while clarifying legal questions and contractual obligations. Marketing, patient services, and logistics must also be unified. During the integration phase, there is the risk that key managers will leave the company and that both the course of ongoing business processes and relationships with customers and employees will be harmed. In addition, change-of-control clauses may be claimed. The integration process may prove more difficult or require more time and resources than expected. Risks can arise from the operations of the newly acquired company that Fresenius regarded as insignificant or was unaware of. An acquisition may also prove to be less beneficial than initially expected. **Future acquisitions** may be a strain on the finances and management of our business. Moreover, as a consequence of an acquisition, Fresenius may become directly or indirectly liable towards third parties, or claims against third parties may turn out to be non-assertable.

We counter risks from acquisitions through detailed integration roadmaps and strict integration and project management, so that countermeasures can be initiated in good time if there are deviations from the expected development.

INFORMATION TECHNOLOGY RISKS

The Company's processes are growing ever more complex as a result of the Fresenius Group's steady growth and increasing internationalization. Correspondingly, the **dependence on information and communication technologies**, and on the systems used to structure procedures and – increasingly – harmonize them internationally, intensifies. A failure of these systems could temporarily lead to an interruption of other parts of our business and thus cause serious damage. Fresenius counters these risks with various security measures, controls, and audits. In addition, we counter these risks with constant investment in hardware and software, as well as by improving our system know-how. Potential risks are covered by a detailed contingency plan, which is regularly improved and tested. Redundant systems are maintained for all key systems, such as IT systems or communications infrastructure.

The loss of sensitive data or the **non-compliance with data protection laws, regulations, and standards** could damage our competitive position, our reputation, and the entire company. Moreover, significant penalties could be imposed against Fresenius or one of its subsidiaries in case of a data protection breach. To comply with all legal requirements, we have implemented comprehensive data protection management systems, which provide the appropriate technical and organizational measures and controls for the protection of personal data. Fresenius SE & Co. KGaA and all business segments maintain data protection organizations, including a data protection officer, based on their corporate structure. Data protection guidelines describe the binding requirements for data protection and data handling in all business segments. Further information about our Data Protection Management Systems can be found in the Group Non-financial Report on pages 106 ff.

In addition, the increased integration of IT systems and the use of new technologies such as cloud computing within our business processes means that **cyberattacks** could penetrate our internal and external systems, and attackers could cause damage or gain sensitive information. The existing IT security architecture, with various security measures at different levels, protects the systems in our data centers. Access to sensitive or critical data from outside the protected data center network is prevented by the use of secure protocols and cryptographic measures. In addition, annual penetration tests are carried out for applications with critical data (for example, patient or personnel data).

A comprehensive access protection system, for example procedures to assign and monitor authorizations and password guidelines, is in place to minimize organizational risks, such as tampering or unauthorized access. In addition, there are company guidelines regulating the granting of access authorization, and compliance with these rules is monitored. We also conduct operation- and security-related audits.

Fresenius implemented a Cyber Emergency Response Team to defend cyber attacks and to detect risks and threats at an early stage as well as to mitigate or minimize potential resulting damages.

COMPLIANCE AND LEGAL RISKS

Compliance risks

Fresenius is subject to comprehensive government regulation and control in nearly all countries. In addition, Fresenius must comply with general rules of law, which differ from country to country. There could be far-reaching legal repercussions or reputation damage should Fresenius fail to comply with these laws or regulations.

We must comply with these rules and regulations, which particularly monitor the safety and effectiveness of our medical products and services. Corruption is a core risk area across all business segments. Antitrust law, data protection, money laundering, sanctions, and human rights are further significant risk areas. Therefore, it is of special importance to us that our **compliance programs** and guidelines are adhered to. Through compliance, we aim to meet our own expectations and those of our partners, and to orient our business activities to generally accepted standards and local laws and regulations.

At Fresenius, we have implemented worldwide risk-oriented **Compliance Management Systems**. These systems take into account the respective markets in which Fresenius operates. They are tailored to the specific requirements of each business segment. Furthermore, we at Fresenius assess compliance risks using a standardized methodology.

Each business segment has appointed a Chief Compliance Officer to oversee the development, implementation, and monitoring of the relevant business segment's Compliance Management System. In line with their organizational and business structure, the business segments have established compliance responsibilities at the respective organizational levels. The Corporate Compliance department of Fresenius SE & Co. KGaA supports the compliance officers in each business segment with standardized tools, processes, and methods, and reports to the Chief Legal and Compliance Officer, and Labor Relations Director of Fresenius SE & Co. KGaA.

Our compliance programs set binding rules of conduct for our employees. We believe that we have taken adequate measures to ensure that national and international rules are observed and complied with. Despite our comprehensive Compliance Program we cannot fully exclude any misconduct of individual employees or business partners that might cause damage to the Company.

Further information about our Compliance Management Systems can be found in the Group Non-financial Report on pages 111 ff.

Legal risks

Risks that arise from **legal disputes** or administrative proceedings are continually identified, analyzed, and communicated within the Company. Companies in the health care industry are regularly exposed to actions for breach of their duties of due care, product liability, breach of warranty obligations, patent infringements, treatment errors, and other claims. This can result in high claims for damages and substantial costs for legal defense, regardless of whether a claim for damages is actually justified. This is especially true for legal disputes in the United States, where costs for legal defense and claims for damages can be exceptionally high. Legal actions can also result in an inability to insure risks of this type at acceptable terms in the future. Products from the health care industry can also be subject to recall actions, which could have a negative effect on our reputation, the financial position, and results of operations.

The Fresenius Group is routinely involved in various legal disputes or administrative proceedings arising in the ordinary course of its business. However, although the outcome cannot be predicted, we currently do not expect any material adverse effect on our net assets, financial position, and results of operations from the legal matters currently pending.

Further information regarding legal matters that might have a material adverse effect on our financial position, net assets, and operational results can be found on pages 225 to 232 of the Notes.

OTHER RISKS

Our international orientation also gives rise to the following risks, which could have an adverse effect on our business and thus on our financial position, and operational results:

- Political, social, or economic instability, especially in developing and emerging countries;
- Civil unrest, armed conflict, or outbreaks of disease, e.g., pandemics, for instance caused by the coronavirus;
- Natural disasters, terrorist attacks, and other unforeseen events;
- Different labor law conditions and difficulties in meeting the global demand for qualified personnel;
- Different and less stable regulations protecting intellectual property;
- Delays in the transport and delivery of our products.

More detailed information on environmental management at Fresenius and on assistance in the event of natural disasters and other crises can be found in the Group Non-financial Report on pages 125 ff. and/or 98 f. and 102.

Risks involving management and control systems, were, based on our established risk management and controlling processes, not considered to be significant.

ASSESSMENT OF OVERALL RISK

The basis for evaluating overall risk is the risk management employed by Fresenius, which is regularly audited by management. Potential risks for Fresenius include factors beyond our direct control. These also include the macroeconomic development, which we constantly monitor. They also include factors immediately within our control, such as operating risks, which we anticipate and to which we react with appropriate measures, as required. There are currently no recognizable risks regarding future performance that appear to present a long-term and material threat to the Fresenius Group's net assets, financial position, and results of operations. We have created organizational structures that provide all the conditions needed to rapidly alert us to possible risk situations and to be able to take suitable countermeasures.

RISKS AFFECTING THE ONE-YEAR FORECAST PERIOD

The chart opposite shows the significant risks that could lead to deviations from the expected business performance within the one-year forecast period. Compared with last year, the risk of pandemics has been incorporated due to the latest developments regarding the coronavirus. Furthermore, the probability of IT risks was increased from low to medium because of an increasing number of cyber attacks. In addition, the probability of risks regarding the quality of our products and services has been decreased from medium to low based on the investments and measures taken to enhance quality assurance. Moreover, risks related to compliance, which had previously been included under Litigations, are now shown separately. Due to constantly increasing regulatory requirements and tightening penalties, the potential impact of compliance risks has been increased to medium. Apart from that, no changes have occurred in the classification and the potential effects of risks. Within the regulatory environment, due to possible initiatives by the U.S. administration, we are exposed to risks relating to changes to the existing health care programs. In relation to reimbursement rates, possible changes to patient structures in the United States increase the risk in relation to reimbursements by private health insurance schemes.

RISKS AFFECTING THE ONE-YEAR FORECAST PERIOD

Probability of occurrence / Potential impact	Low	Medium	High
High	▶ Currencies and interest rates		
Medium	▶ Global economic conditions and constitution of the financial markets	▶ Regulatory environment ▶ Reimbursement rates and prices ▶ Market trends: lower adm. growth ▶ Personnel ▶ Pandemics ▶ Inform. technology	
Low	▶ Procurement ▶ Litigations ▶ Tax	▶ Quality ▶ Natural disasters ▶ Compliance	

In classifying risk, qualitative assessments are applied first of all, followed by quantitative factors. The scales for the classification of potential impact and probabilities are shown in the following two figures:

Potential impact	Description of impact
High	Significant negative impact on the one-year forecast
Medium	Moderate negative impact on the one-year forecast
Low	Insignificant negative impact on the one-year forecast

Probability of occurrence	Classification
High	≥ 66% to 100%
Medium	≥ 33% to < 66%
Low	0% to < 33%

EFFECTS ON OUR MEDIUM-TERM GOAL

Fundamentally, all the risk areas and risks listed in the risk report could lead to our failing to achieve our medium-term goal. We believe the following will be of particular significance in this respect:

- Risks relating to the quality, safety, and effectiveness of our products and services (Operating risks, see page 81 ff.);
- Risks arising from the financing of health systems and potential changes in reimbursement systems (Risks in the health care sector, see page 78 ff.);
- Risks arising from the regulatory environment and compliance with laws and regulations (General economic risks and risks in the general operating framework, see page 78).

SEPARATE GROUP NON-FINANCIAL REPORT

3

GROUP NON-FINANCIAL REPORT. We are committed to responsible and sustainable management as part of our corporate culture and day-to-day business practice. We place great importance on fulfilling our legal and ethical responsibility as a company. Only by doing so can we be perceived as a trustworthy and reliable partner in the health care sector.

OUR RESPONSIBILITY

At Fresenius, our patients' well-being always comes first. For more than 100 years, our mission has been to preserve life, promote health, and improve patients' quality of life. Economic success is not an end in itself for Fresenius, but rather a means that enables us to continuously invest in better medicine.

Every business decision we make is ultimately guided by the well-being of our patients. It is at the center of everything we do. We are committed to integrity in the way we conduct business with our partners as well as to socially responsible behavior, and open communication.

In the Fresenius Code of Conduct, we have set ourselves binding rules for our activities. They apply to all employees, executives, and board members of the Fresenius Group and are designed to help them make the right decisions in their daily work. In addition, the Code of Conduct is the basis for the respective codes of the individual business segments. The structure of this Group Non-financial Report is therefore aligned with our Code of Conduct and the Codes of the four business segments.

The **material non-financial topics** that Fresenius has defined in its Code of Conduct for all employees are reflected in the materiality analysis on which this Group Non-financial Report is based:

- We take **responsibility for our patients' well-being** and are committed to the highest quality in our products, therapies, and services.
- We want to **do the right thing** and comply with all applicable rules and laws. In addition to legal requirements, we adhere to high ethical standards and rules of good corporate governance.
- We largely owe our success and growth to the commitment of our more than 290,000 employees worldwide. Our aim is therefore to be perceived as an **attractive employer** to attract talent, retain employees, and allow them to develop their skills further in the long term.
- We think and act long term in our business decisions. It therefore goes without saying that we **protect nature as the basis of life** and treat resources with care.

- We are **committed to respecting human rights** as defined by international standards, such as the Declaration of Human Rights of the United Nations.

THE GROUP'S BUSINESS MODEL

Fresenius is a global health care Group in the legal form of an SE & Co. KGaA (a partnership limited by shares). We offer products and services for dialysis, hospitals, and outpatient medical care. In addition, Fresenius focuses on hospital operations. We also manage projects and provide services for hospitals and other health care facilities worldwide.

The operating business comprises four business segments, all of which are legally independent entities managed by the operating parent company Fresenius SE & Co. KGaA. The business segments have a regional and decentralized structure.

- **Fresenius Medical Care** offers services and products for patients with chronic kidney failure. As of December 31, 2019, Fresenius Medical Care treated 345,096 patients at 3,994 dialysis clinics. Dialyzers and dialysis machines are among the most important product lines. In addition, Fresenius Medical Care offers dialysis-related services, among others, in the field of Care Coordination.
- **Fresenius Kabi** specializes in intravenously administered generic drugs (IV drugs), clinical nutrition, and infusion therapies. The company is also a supplier of medical devices and products of transfusion technology. In addition, Fresenius Kabi develops products with a focus on oncology and autoimmune diseases within the biosimilars segment of Fresenius Kabi.
- **Fresenius Helios** is Europe's leading private hospital operator. The company comprises Helios Germany and Helios Spain (Quirónsalud). At the end of 2019, Helios Germany operated a total of 86 hospitals, around 125 outpatient clinics, and 8 prevention centers. In Spain, Quirónsalud operated 47 hospitals, 71 outpatient centers, and around 300 occupational risk prevention centers at the end of 2019. In addition, it is active in Latin America with 4 hospitals and as a provider of medical diagnostics.
- **Fresenius Vamed** manages projects and provides service for hospitals as well as other health care facilities worldwide and is a leading post-acute care provider in Central Europe. The portfolio ranges along the entire value chain – from project development, planning, and turnkey construction, via maintenance and technical management, to total operational management.

Fresenius has an international sales network and maintains more than 90 production sites. Large production sites are located in the United States, China, Japan, Germany, and Sweden.

For additional information on the Group's business model, especially legal and economic factors, as well as key markets and competitive positions, please see page 35 ff. of the Group Management Report.

STRUCTURE OF THE NON-FINANCIAL REPORT

The separate Fresenius Group Non-financial Report was prepared pursuant to Sections 315b and 315c in connection with Sections 289c to 289e of the German Commercial Code (HGB). Non-financial information is reported in reference to the international sustainability standard of the Global Reporting Initiative (GRI) as a framework within the meaning of Section 289d of the German Commercial Code. A limited assurance engagement on the information in this report has been performed by KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin.

References to data or information outside of the Group Management Report are considered further information and are not part of the separate Group Non-financial Report. Additional information is part of this Group Non-financial Report.

The report is published annually and is an integral part of the Annual Report. Similar to the consolidated financial statements, this separate Group Non-financial Report encompasses all fully consolidated Fresenius entities over which Fresenius SE & Co. KGaA has legal or effective control.

The business models of the four segments set individual standards for the effective management of material non-financial topics (see the following section "Materiality analysis") at an operational level. Fresenius as the parent company ensures that uniform standards are implemented worldwide as a framework. The business segments are responsible for incorporating these into their respective operating processes.

NON-FINANCIAL ACTIVITY AREAS AT FRESENIUS

Serving the well-being of the patient	Doing the right thing	Being an attractive employer	Protecting nature as the basis of life	Caring for human rights
Social matters	Anti-corruption and bribery	Employee matters	Environmental matters	Human rights
▶ Quality of medical outcomes and patient satisfaction, patient safety ▶ Quality and safety of products ▶ Data protection	▶ Code of Conduct ▶ Compliance organization ▶ Compliance Management Systems (Prevent, Detect, Respond)	▶ Personnel structure and diversity ▶ Attract talent, retain and develop employees ▶ Employee engagement and participation ▶ Profit-sharing scheme ▶ Occupational health and safety	▶ Water ▶ Energy ▶ GHG emissions ▶ Waste ▶ Wastewater	▶ No exploitative nor illegal child or forced labor ▶ Working conditions ▶ Non-discrimination ▶ Data protection

MATERIALITY ANALYSIS

The content of this Group Non-financial Report is closely aligned with our business model, legal requirements, and the interests of our stakeholders. In 2017, we defined the material non-financial topics for the Fresenius Group in a three-step process comprising an external analysis, followed by an internal analysis, and a final prioritization and validation of the identified topics.

The non-financial aspects requiring disclosure pursuant to Section 289c (3) HGB were determined based on the materiality requirements of the HGB. Material in this respect are those aspects that are relevant for understanding Fresenius' business performance, results of operations, and position, as well as for understanding the effects of its own business activities on the non-financial aspects. For example, the aspect "Social matters"[1] includes the following material topics: quality of medical outcomes and patient satisfaction, quality and safety of products, and data protection. As "Anti-corruption and bribery" is an integral part of the Compliance Management System, Fresenius reports on the Code of Conduct, the compliance organization, and the Compliance Management Systems under this aspect. A list of the non-financial activity areas identified as being material can be found in the overview above.

In 2019, Fresenius Medical Care conducted a materiality analysis. A detailed description of this analysis is available in the company's own Non-financial Report. From a Fresenius Group perspective, no additional topics were identified that would result in a change in the reporting scope of this report. Further, there were no developments or events in 2019 that would have required an adjustment of the activity areas and the associated material topics.

The material topics identified for the Group are explained separately based on the way they are managed in the individual business segments. On topics such as data protection, compliance, and human rights we report Group-wide concepts.

SUSTAINABILITY GOVERNANCE STRUCTURE

At Fresenius, the topic of sustainability is the responsibility of the Group Chief Executive Offer (CEO). The Investor Relations & Sustainability department reports directly to the CEO, coordinates the implementation of sustainability guidelines and standards at operational level, and is responsible for the non-financial reporting of the Fresenius Group. In addition, Investor Relations & Sustainability supports the business segments in developing policies and management concepts on the topic of sustainability. On the business segment level, each CEO has named a person responsible for the coordination of all sustainability matters. The Management Board and the Supervisory Board of Fresenius SE & Co. KGaA review the progress and the results of the sustainability management, which are then published in the Group Non-financial Report. The Supervisory Board is supported in this process by the auditor's limited assurance engagement.

Fresenius Medical Care AG & Co. KGaA is a listed company and has its own sustainability governance structure. Here, too, sustainability is firmly established at Management Board level. The Sustainability Decision Board, which is headed

[1] The guidelines of the Global Reporting Initiative (GRI) as an internationally acknowledged framework for sustainability reporting define "social matters" as the impact of companies' activities on their customers' health, among other things. Above and beyond this, the guidelines for non-financial reporting drawn up by the European Union demand, for example, that companies disclose material information regarding health, safety, and consumer satisfaction under the aspect of social matters.

by the CEO, supports the Management Board in coordinating Fresenius Medical Care's sustainability efforts. Together with the Sustainability Decision Board, the Management Board takes the final decision concerning sustainability targets and the incorporation of sustainability aspects in the company's strategy.

Another important part of Fresenius Medical Care's global sustainability governance is the Corporate Sustainability Committee, which acts as an advisory and steering committee. It comprises senior representatives from all regions and global functions who have been nominated to adequately represent regional and functional interests in the company's sustainability activities. The Sustainability Decision Board and the Corporate Sustainability Committee enable the Corporate Sustainability Office to manage Fresenius Medical Care's sustainability activities.

DEVELOPMENTS IN 2019

The Management Board of Fresenius Group discussed the way forward for the company's sustainability program in three meetings in 2019. The CEOs of the four business segments reviewed their sustainability programs and the current reporting and have defined measures for continuous improvement of their respective programs and reporting. We report on initial progress achieved in the respective activity areas on the individual business segment's level.

Fresenius Medical Care has established a Global Sustainability Program in 2019. As part of the program, the company has defined eight sustainability areas, which allow it to manage key sustainability topics. These include patients, employees, anti-corruption and bribery, data privacy and security, human/labor rights, supply chain, environment, and occupational health and safety. For further information, please see Fresenius Medical Care's separate Non-financial Report.

NON-FINANCIAL RISKS

The Fresenius Group has not identified any material risks related to its own operations, business relationships, products, or services that are very likely to have an adverse effect on the non-financial aspects mentioned above or on the Group's business operations. For further information and a detailed overview of the Group's risk management, please see pages 76 ff. of the Group Management Report.

SERVING THE WELL-BEING OF THE PATIENT

At Fresenius, our aspiration is: better medicine for more and more people. Our commitment to always strive for the highest quality in our products, services, and therapies is derived from this. The most important non-financial aspect by which we measure our success is our patients' well-being. We achieve this through the medical quality of our treatments and services, the safety and quality of our products, as well as through patient satisfaction in the individual business segments and the protection of personal data.

QUALITY AND SAFETY OF OUR PRODUCTS, SERVICES, AND THERAPIES

Our patients' health depends on the quality of our products, services, and therapies. All business segments therefore contribute toward increasing the overall quality and efficiency of health care. This allows us to provide access to high-quality and affordable medical care for a growing number of people.

To achieve this, it is important that every Fresenius employee ensures that all applicable **quality and safety regulations** are consistently adhered to in his or her area of responsibility. Our employees who are directly involved in manufacturing products or providing medical services in our production plants, care centers, and clinics have a special obligation to exercise due care.

In all our business segments, we **have sophisticated, value-enhancing processes** in place that are geared toward efficiency and the needs of our customers. In the area of quality management, we focus on monitoring and managing these processes and improving procedures by means of performance indicators.

The individual business segments adapt their quality management systems to their respective business models and set priorities accordingly. We present the specific requirements, management approaches, and results in separate sub-sections for each business segment.

FRESENIUS MEDICAL CARE – QUALITY OF CARE AND PATIENT SATISFACTION

Life expectancy is increasing worldwide. The result is an aging population that requires improved medical care and accelerates demand for dialysis products and services. We intend to respond to today's global health care challenges with innovative technologies and treatment concepts. In doing so, we apply different frameworks in our clinics and production facilities to measure and continuously improve the quality of our products and services.

Quality of care and patient satisfaction are key components of Fresenius Medical Care's corporate activities. The company treats over 345,000 patients in its 3,994 dialysis clinics around the world. The patients' well-being is a top priority, and key to the company's success all over the world. To continuously deliver on this commitment, it is important to coordinate the interpretation of clinical science and medical practice patterns on a global basis. For this reason, Fresenius Medical Care established a Global Medical Office in 2019. Headed by the **Global Chief Medical Officer**, this office is tasked with evaluating coordinated data from clinical scientific research and medical practice to improve treatment outcomes. This includes facilitating cooperation and knowledge transfer across the entire Fresenius Medical Care network.

At a regional level, responsibility for the quality of our dialysis care services lies with our Chief Medical Officers, the Chief Clinical Office, and the interdisciplinary patient care teams. They develop and review internal standards and policies relating to quality. Furthermore, they continuously measure and assess the quality of care at our dialysis clinics based on generally recognized quality standards and international guidelines. These include the Kidney Disease: Improving Global Outcomes (KDIGO) foundation, the Kidney Disease Outcome Quality Initiative (KDOQI), the European Renal Best Practice Guidelines (ERBP) as well as industry-specific clinical benchmarks and our own quality targets (see table on page 96).

Quality parameters to measure quality of care

As a health care company, Fresenius Medical Care's success depends on its health care services improving outcomes. To this end, the company has defined a set of quality parameters, which it continuously monitors to make sure that the quality of care remains on a consistently high level. As part of this approach, Fresenius Medical Care regularly provides executives in the individual operating segments as well as the Management Board with aggregated data on the quality of care. In addition, the company publishes selected results of its treatment analyses on a quarterly basis to create transparency on the quality of patient care and to emphasize the importance of the social responsibility towards patients at Fresenius Medical Care.

Fresenius Medical Care evaluates a variety of medical indicators to measure the quality of care provided in its dialysis clinics. These quality parameters include the following:

- **Kt/V** provides information about the effectiveness and efficiency of dialysis. It is calculated by dividing the product of urea clearance (K) and the duration of treatment (dialysis time, t) by the volume of body space to be cleaned of toxins (the urea distribution volume in the patient, V).
- The **hemoglobin value** in patients' blood should be kept within a defined range. Hemoglobin is the component of red blood cells that transports oxygen within the human body. An insufficient level of hemoglobin in the blood indicates anemia. Anemia not only affects patients' quality of life but is also associated with multiple comorbidities, including an increased risk of cardiovascular morbidity and mortality.
- **Albumin, calcium, and phosphate levels** in the blood are indicative of a patient's general nutritional status and point to disorders in the mineral and bone metabolism of patients with chronic kidney disease.
- **Catheters** are associated with a serious risk of infection and an increase in the number of days spent in hospital. In contrast, a permanent vascular access (arteriovenous fistula/arteriovenous graft) is associated with reduced risk and supports effective dialysis treatment. Fresenius Medical Care records the number of patients who do not use a catheter as a vascular access for dialysis.

- The **number of days** in hospital is relevant for determining the quality of care because more days spent in hospital significantly reduce the quality of life for dialysis patients and are particularly cost-intensive for health care systems.

For 2019, the company included the quality parameters of 89% of its dialysis clinics worldwide in the table of quality parameters by operating segment.

For reasons of comparability, all data shown in the table are collected at the same time. As Fresenius Medical Care continuously measures the quality of patient care, medical data collected at a later point in time as well as lab test results might affect the quality parameters retroactively, requiring adjustments at a later stage.

FRESENIUS MEDICAL CARE: QUALITY PARAMETERS BY OPERATING SEGMENT

			North America		Europe, Middle East, Africa		Latin America		Asia-Pacific	
	Description	Possible impact if too low	2019	2018	2019	2018	2019	2018	2019	2018
Kt/V[1] ≥ 1.2	Effectiveness of dialysis: measures how well the body is cleaned of uremic toxins	More days spent in hospital; increased mortality	**97%**	97%	**94%**	95%	**91%**	91%	**95%**	96%
Hemoglobin[2,3,4] = 10 – 12 g/dl	Hemoglobin is responsible for transporting oxygen around the body	Indicator for anemia	**71%**	72%	**82%**	82%	**50%**	53%	**56%**	58%
Calcium[1] = 8.4 – 10.2 mg/dl	Measures the patient's nutritional status and mineral balance	Marker for increased mortality	**81%**	86%	**79%**	81%	**76%**	75%	**74%**	74%
Albumin[5] ≥ 3.5 g/dl			**81%**	81%	**89%**	90%	**91%**	90%	**87%**	89%
Phosphate[1,6] ≤ 5.5 mg/dl			**60%**	62%	**80%**	81%	**76%**	75%	**63%**	67%
Patients without catheter (after 90 days)[7]	Measures the number of patients with vascular access	More days spent in hospital	**81%**	83%	**78%**	79%	**79%**	80%	**83%**	86%
Days in hospital per patient year[8]	Result of complications during dialysis	Restrictions in quality of life	**10.3**	10.8	**7.5**	7.8	**4.3**	4.2	**2.6**	3.3

[1] KDOQI guidelines (Kidney Disease Outcomes Quality Initiative)
[2] KDIGO guidelines (Kidney Disease: Improving Global Outcomes)
[3] ERBP standard (European Renal Best Practice)
[4] EMEA data includes patients with Hb > 12 g/dl without erythropoiesis-stimulating agents (ESA)
[5] European Reference Material ERM®-DA470k
[6] Phosphate specified as mg/dL of phosphorus
[7] Where we as the care provider are directly responsible, the proportion of patients with permanent vascular access serves as an indirect quality indicator
[8] Days spent in hospital over a 365-day dialysis treatment period per patient

Relating to the fourth quarter of the respective year

Approaches to enhance the quality of dialysis care

Fresenius Medical Care is committed to continuously improving the quality of life of patients affected by kidney disease. For this reason, the company is working on various schemes to offer even more flexible treatment, including new options for home dialysis and new, value-based care models for patients with chronic kidney disease. Fresenius Medical Care's recent acquisition of NxStage, which manufactures and distributes hemodialysis machines for home use, is just one aspect of the company's efforts to promote the benefits of home dialysis treatment and provide industry-leading solutions to patients and physicians. Home dialysis expands the choice of dialysis treatment modalities, helping patients to live more independently.

As a further example of Fresenius Medical Care's approach to advance the quality of dialysis care, the company has entered into a strategic global partnership with Humacyte Inc., a medical research and development company. Fresenius Medical Care's investment in Humacyte gives the company the opportunity to offer patients a dialysis vascular access option with the potential to significantly improve clinical efficacy and safety, including minimizing catheter contact time. Furthermore, Fresenius Medical Care is investing in **technologies for home therapies**, including innovations for remote patient monitoring, portals for patients, caregivers, and providers, as well as telehealth, which, combined with predictive analytics and artificial intelligence, will make it easier to clinically manage patients between visits to a doctor and avoid unnecessary hospitalizations.

One important key element of Fresenius Medical Care's growth strategy is to combine all aspects of dialysis-related care and coordinate them more effectively. As part of this approach, Fresenius Medical Care is participating in a **pilot project** called the **End Stage Renal Disease (ESRD) Seamless Care Organization (ESCO) program**. An ESCO is a group of dialysis facilities, nephrologists, and other health care providers in the North America region who work together to coordinate and improve the quality of care patients receive. An integrated care team is dedicated to providing holistic, high-quality care that meets the patient's individual needs and preferences, with a focus on outcome-based reimbursement rather than offering single products or services. The ESCO pilot project will run until the end of 2020.

Thanks to the company's ongoing **efforts to improve patient care**, Fresenius Medical Care North America came top in the industry in the U.S. government's Five Star Quality of Care Rating. In the rating, one to five stars are awarded to facilities based on a series of measurements relating to their clinical performance and patient outcomes. In 2019, the company had the highest percentage of clinics rated with four or five stars of all major dialysis providers in the U.S. More than 94% of the company's dialysis centers were rated with three stars and more for clinical quality, with a total of 762 centers achieving the highest five-star rating, up from 659 last year.

Patient satisfaction as a quality parameter

As part of Fresenius Medical Care's commitment to providing sustainable clinical care to its patients, the company has set out clear and consistent general principles regarding patient care for all members of staff who interact with patients in its own dialysis centers. According to these principles, clinical care must be consistent with national and international scientific guidelines, Fresenius Medical Care's policy, and the physician's orders. In line with Fresenius Medical Care's Code of Ethics and Business Conduct, the company expects all staff, among other things, to:

- act ethically, fairly, courteously, competently and timely when dealing with patients,
- treat all patients with dignity and respect,
- involve patients and families in treatment planning and processes whenever appropriate,
- accurately answer questions by patients and families,
- respond to and attempt to resolve all concerns and complaints promptly and thoroughly.

Patient surveys are a meaningful and essential source of information to measure, manage, and improve the services and care Fresenius Medical Care offers to patients. The company carries out the surveys in various countries to assess whether it is meeting patients' expectations or is lacking in any areas. Fresenius Medical Care uses the results to identify process improvements and consequently to improve patients' quality of life and the care the company gives each individual patient.

To improve local responsiveness, responsibility for patient surveys lies with each region. In the U.S., for example, the federal public health care authority, the Centers for Medicare and Medicaid Services (CMS), determines the content of patient satisfaction surveys. The EMEA, Latin America, and Asia-Pacific regions also conduct surveys as a tool to measure patients' experience and improve the quality of health care services. In EMEA and Latin America, the surveys are part of the quality management system. In all three regions, the survey results are analyzed and discussed with central functions at country level to identify and act upon strengths and weaknesses in the area of patient care.

Another way to seek and respond to patient feedback are the **patient grievance processes** established at Fresenius Medical Care. To foster a culture of open communication and continuous improvement, Fresenius Medical Care has established grievance processes in all regions to enable a positive patient experience based on dignity and respect. Depending on the region, the company offers its patients various channels through which they can express their concerns, such as complaints and suggestion books and boxes, dedicated hotlines and e-mail addresses as well as a web form on the company's website. Although all patients have the right to file a grievance without fear of reprisal or denial of services, some patients may not feel comfortable with doing so. For this reason, Fresenius Medical Care gives patients and their representatives the option of filing grievances anonymously.

Patient support in emergency situations

Fresenius Medical Care operates dialysis facilities in many regions of the world with diverse geographic, social, and economic conditions. To be able to continue providing its patients with their vital dialysis treatment, even in extreme conditions such as severe storms or floods, the company has developed a robust **emergency response program**, so that it can operate smoothly in the event of a crisis or disaster. As part of the program, Fresenius Medical Care has established a system of regionally organized emergency response teams. Their task is to mobilize very quickly at local level to help keep the clinics running without interruptions and provide treatment and supplies to patients regardless of the dialysis provider.

In addition to our disaster response activity, Fresenius Medical Care donates funds, dialysis machines, and medical supplies to organizations that urgently require help. The company's response to the life-threatening conditions caused by Hurricane Dorian in the U.S. in 2019 is a good example of its social responsibility and strong commitment to patients. The **Disaster Response Team** prepared for the storm well in advance and actively monitored its track so that the company could continue caring for its patients. Furthermore, affected employees were provided with emergency housing, personal goods, generators, fuel, food, and water so that they could continue to care for and treat patients. Applying best practices from prior hurricane seasons, we made sure that all patients and staff were accounted for after the storm and were happy to report only minor damages to the facilities.

FRESENIUS MEDICAL CARE – QUALITY OF PRODUCTS

Quality management in our product business covers the entire product's lifecycle from research and development to production and application. We strive to create a safe and healthy clinical environment and take the quality, safety, and efficacy of the medical and pharmaceutical products that we develop and manufacture very seriously.

Innovations and research & development

Our worldwide R & D activities are centrally managed by our Global Research and Development (GRD) function, with a focus on developing innovative products that are not only of high quality, but also affordable. In doing so, GRD enables us to respond to the worldwide rise in demand for high-quality yet cost-efficient treatment methods. In addition to our internal R & D activities, we collaborate with external partners, including academic institutions, renowned universities, and start-ups, promoting an open culture of innovation and enabling access to the latest technologies.

To continuously grow our core business and expand into new business areas, we also invest in early-stage companies. As an important part of our innovation culture, we carefully consider the ethical implications of our R & D activities.

Access to medicine and health care services

People living in low- and middle-income countries often have poor access to medicine and health care services, including kidney treatment. To facilitate access to dialysis treatment, we have developed a **targeted portfolio** specifically designed to meet the needs of emerging markets. In 2018, we launched the 4008A dialysis machine to bring life-saving dialysis within reach of the increasing number of patients who need urgent access to this treatment. The 4008A machine meets high therapy standards while reducing costs for health care systems. At the same time, it is designed to be robust and easy to handle, making it ideal for use in challenging infrastructures and remote locations.

In a systematic review of patients' access to treatment around the world, it is estimated that almost two million people in Asia with end-stage renal disease who needed dialysis were not receiving it – that is twice the number of patients being treated. In response to this treatment gap, the 4008A dialysis machine has so far been primarily deployed in India, with other countries across the Asia-Pacific region to follow.

Product quality and safety as the basis of Fresenius Medical Care's business

Our operations are subject to extensive governmental regulation in virtually every country in which we operate. In the European Union, this includes legislation on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) EC 1907/2006, the Restriction of Hazardous Substances (RoHS) 2011/65/EU, the Medical Device Directive 93/42/EEC, and the new Medical Device Regulation (EU) 2017/745.
To fulfill our commitment to product quality and safety while complying with the numerous relevant regulatory requirements, our processes are embedded in comprehensive quality management systems (QMS). As a result, all of our products and procedures comply with quality and safety standards from their development to market approval, manufacturing and use in clinics, through to training customers and dealing with complaints.

As we believe that quality management systems create more leverage via best-practice sharing and a more integrated global and regional organization, we have harmonized the local quality management systems in EMEA, Latin America, and Asia-Pacific and, where applicable, in North America into one **consolidated quality management system**. This multi-year initiative will enable GRD and Global Manufacturing, Quality and Supply (GMQS) to leverage synergies, allowing us to respond faster to market developments, and work together more efficiently and effectively to design and manufacture innovative, high-quality products that better support treatment outcomes for renal patients. In December 2018, the consolidated quality management system was successfully audited by the notified body TÜV Süd and achieved ISO 9001 and ISO 13485 certification.

To produce safe products with a reliable quality, our plants are subjected to regular external quality audits and reviews in accordance with local requirements. The table below shows the certification of our GMQS-managed production sites in accordance with ISO 9001/13485 and the Good Manufacturing Practice (GMP)/current Good Manufacturing Practice (cGMP) guidelines.

In addition to audits carried out by notified bodies and authorities, including the U.S. Food and Drug Administration (FDA), the German Ministry of Health, and other applicable national health authorities, our local sites are subject to management reviews and regular internal quality audits. Any cases of non-conformance detected as part of these quality audits are forwarded to the respective department to determine and implement appropriate corrective and preventive measures.

CERTIFICATION OVERVIEW FOR GMQS-MANAGED PRODUCTION SITES AT FRESENIUS MEDICAL CARE

Region	ISO 9001/13485	GMP/cGMP
North America[1]	2 out of 8 production sites	8 out of 8 production sites
EMEA[1]	12 out of 12 production sites	All sites producing pharmaceutical products are certified in accordance with GMP
Asia-Pacific[2]	6 out of 6 production sites	4 out of 6 production sites
Latin America	1 out of 4 production sites	4 out of 4 production sites

[1] In addition to ISO 9001/13495 and GMP/cGMP certification, two of the sites in North America as well as seven of the sites in EMEA are certified by the Medical Device Single Audit Program (MDSAP).
[2] Excluding one plant that does not produce finished products, so that no certification is necessary.

Global Quality Policy and quality manuals

Another cornerstone of our commitment to product quality and safety is our Global Quality Policy, which was jointly developed and approved by GMQS and GRD. As a key component of our quality management system, the Global Quality Policy describes our overarching quality objectives and reflects our commitment to providing uncompromised product and service quality, while maintaining compliance with relevant regulations.

In addition to our Global Quality Policy, all regions have developed quality manuals, which are maintained at local level. These contain a detailed description of our quality systems, including corporate oversight responsibilities, policies, and procedures, as well as sub-system policies according to ISO 9001 and ISO 13485 and other documents needed to allow effective process planning, operation, and control.

Reporting adverse events and product complaints

Patient safety is of utmost importance to Fresenius Medical Care. We strive to ensure compliance with legal requirements related to monitoring the adverse effects of drugs – also called pharmacovigilance – and medical devices – known as technovigilance. To this end, we collect and review adverse events and product complaints.

In addition to compliance with applicable legal requirements, we have included the topic of reporting adverse events and product complaints in our Code of Ethics and Business Conduct.

As articulated in the Code, we require all staff involved in relevant tasks to understand, be familiar with, and follow Fresenius Medical Care's principles regarding the reporting of adverse events and product complaints.

FRESENIUS KABI – QUALITY AND PRODUCT SAFETY

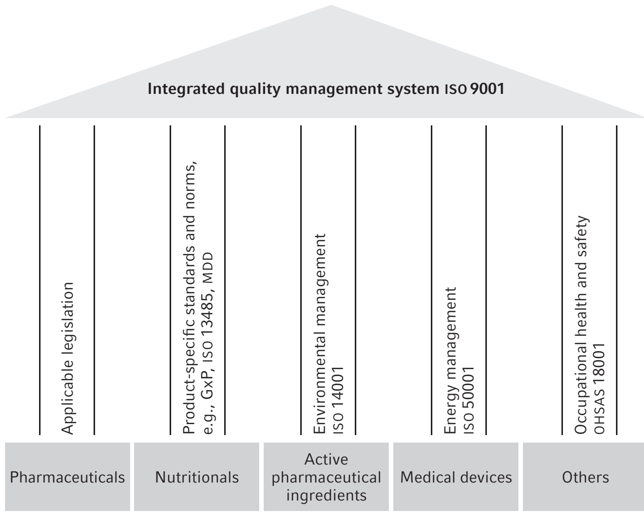
Fresenius Kabi's corporate philosophy **"caring for life"** describes the company's commitment to improving the quality of life of its patients. The quality and safety of its products and services is therefore of paramount importance to Fresenius Kabi. An important goal of the quality management at Fresenius Kabi is to monitor the applicability, efficacy, and safety of products and services, as well as the success of therapies, and their continuous improvement. To ensure this, Fresenius Kabi has established an integrated quality management system, a monitoring and reporting system, and product risk management.

Principles of quality management

The overarching **goals of quality management** at Fresenius Kabi are to ensure the well-being of patients, as well as the quality and safety of products, services, and therapies. Fresenius Kabi has established quality processes and standards for its quality management and has defined the following **principles**:

- clear assignment of responsibilities
- qualification and training of employees
- monitoring of product and patient safety
- transparent and documented processes and procedures

INTEGRATED QUALITY MANAGEMENT SYSTEM ISO 9001



- fulfillment of regulatory compliance
- continuous improvement
- checking of quality management effectiveness

The importance of quality management is reflected within the organization of Fresenius Kabi. The globally responsible quality managers directly report to the respective member of the Management Board. The Management Board is thus directly responsible for quality management.

Fresenius Kabi's quality management system is organized in accordance with the **ISO 9001 standard** and is binding for all Fresenius Kabi organizations. Compliance with the standard is certified by TÜV Süd in annual audits at global level and also covers local sites using matrix certification. 118 Fresenius Kabi organizations are included in the matrix certification process and are certified according to the ISO 9001 standard. The quality management system also takes applicable national and international regulations into account, including Good Clinical Practice (GCP), Good Manufacturing Practice (GMP), Good Distribution Practice (GDP), Guideline on Good Pharmacovigilance Practices (GVP), Medical Device Regulation (MEDDEV; MDR), the Code of Federal Regulations (CFR) of the U.S. Food and Drug Administration (FDA), as well as the ISO 13485 quality management standard for medical devices.

Audits and inspections

In 2019, 64 audits and inspections (2018: 91) were performed at Fresenius Kabi by regulatory authorities or certifying bodies, and 60 global internal audits (2018: 73) were carried out. The external audits and inspections comprised a total of 24 (2018: 38) inspections regarding Good Manufacturing Practices (GMP) by the U.S. Food and Drug Administration (FDA), the Australian Therapeutic Goods Administration (TGA), European regulatory authorities, and Quality System audits from TÜV Süd (notifying body for ISO 9001).

Based on the respective observations, an **audit and inspection score** has been developed. The score is calculated by addition of the number of critical and major observations identified during GMP inspections by the authorities mentioned above and the number of non-conformities identified during TÜV Süd ISO 9001 audits divided by the overall number of inspections and audits; critical observations, if any, are weighted with a multiplier compared to major observations. The audit and inspection score for 2019 was 1.5 (2018: 1.8)[1]. Observations have been and will be addressed by respective corrective and preventive actions (CAPAs) and effectiveness checks have been and will be defined. The observations did not impact the issuing of any GMP certificate nor the ISO 9001 certificate.

Core components of quality management

Fresenius Kabi has implemented a **global electronic quality management system, KabiTrack**, based on the Trackwise® software for all quality management processes. In 2018, the implementation was completed in all manufacturing plants, R&D departments, and market units. The system supports the local implementation of the centrally defined processes and enables the independent review of whether all requirements have been met.

The company has **processes and standards:** Fresenius Kabi has implemented a global quality management handbook, as well as standard operating procedures. They are applicable globally and cover all sites. By offering regular training on a global, regional, and local level, Fresenius Kabi ensures that employees are aware of those aspects of the quality management system that are relevant for their daily work.

The quality and safety of Fresenius Kabi's products, services, and therapies is of paramount importance. Our interactions with patients, users, and customers do not end with the supply of products or the provision of services but involve the monitoring of the applicability, effectiveness, and safety of our products on the market. The insights gained are the basis for identifying opportunities for continuous improvement of products and services. Fresenius Kabi therefore monitors and evaluates relevant information and feedback on the products, services, and therapies during their use.

Fresenius Kabi has set up a **monitoring and reporting system (vigilance system)** and a **product risk management system** covering all regions worldwide, in order to be informed about product quality and patient safety issues in a timely manner and deal with them appropriately. These early-warning systems are designed in such a way that trained complaints and safety officers worldwide record complaints and side effects in IT systems and forward messages to experts for review.

Vigilance system

The monitoring of adverse reactions or events (side effects) associated with the use of medicinal products is referred to as pharmacovigilance (drug safety). The statutory pharmacovigilance commitments relate to our medicinal products for human use. Similar regulations exist for medical devices.

Fresenius Kabi has established various standard operating procedures for the continuous monitoring of the benefit-risk ratio of its own products and assesses their successful implementation on the basis of specific indicators.

[1] For the calculation of the audit and inspection score Fresenius Kabi takes into account all information on findings from audits and inspections that is received by the company before December 31, 2019.

- Fresenius Kabi collects and assesses **reports** about individual **side effects** and reports them to health authorities worldwide according to regulatory requirements. Fresenius Kabi aims to submit more than 98% of all reports about side effects in a timely manner. The worldwide compliance rate for 2019 was 99.9% (2018: 99.6%). In Europe, in 2019, 99.6% (2018: 98.8%) percent of all adverse reactions were reported in due time to the European Medicines Agency (EMA).
- In addition, Fresenius Kabi regularly evaluates the benefit-risk ratio of its products based on safety-related information from various sources (e.g., adverse event reports, medical literature). The results of these analyses are submitted to authorities as **periodic safety reports**. Fresenius Kabi aims to submit more than 95% of periodic safety reports worldwide to authorities in due time. For 2019, the compliance rate was 99.1% (2018: 97.5%). In Europe, 97.5% of all periodic safety reports were submitted in due time to the European Medicines Agency (EMA) in 2019 (2018: 98.6%).
- According to regulatory requirements, Fresenius Kabi as a pharmaceutical company is obliged to describe its vigilance system in **a Pharmacovigilance System Master File (PSMF)**. Fresenius Kabi uses a global database to collect and evaluate vigilance data on a quarterly basis from all local marketing and sales units. These are then compiled in the PSMF. The goal is to receive timely data from all marketing and sales units worldwide. This is documented in the company's vigilance system. For 2019, the compliance rate was 100% (2018: 98%).

With the help of our vigilance activities, Fresenius Kabi ensures that the patients' safety of its products is always guaranteed, and that the company is able to identify any changes in the benefit-risk ratio at an early stage and react in a timely manner.

Product risk management

The global safety officers react promptly and appropriately to potential quality-related issues. They initiate and coordinate necessary actions on a global level, e.g., product recalls. With its **early-warning system**, Fresenius Kabi evaluates any quality-related information from various risk areas to identify risks at an early stage and take corrective and preventive actions. Information is obtained from databases for complaints and side effects, internal and external audits, and from key performance indicators used for internal control and optimization of quality processes. With these systems, Fresenius Kabi can evaluate the safety profile of any of its products at a global level.

Product recalls are initiated as a risk-minimizing measure in cooperation with the responsible regulatory authority. At the same time, the cause of the recall is analyzed. Where necessary, corrective measures are taken to prevent the cause of the recall in the future.

In 2019, no events with a material adverse impact were recorded that conflict with our quality management goals.

Fresenius Kabi regularly conducts **internal quality audits** to ensure the effectiveness of the quality management system and compliance with internal and external standards and regulations.

Suppliers of Fresenius Kabi related to manufacturing of products are subject to a qualification process based on the relevance of the delivered material or service. The qualification of suppliers, as well as their recertification, includes regular audits.

Inspections by regulatory authorities and **audits** by independent organizations and customers are performed along the entire value chain at Fresenius Kabi. Whenever these inspections reveal weaknesses or deficiencies, Fresenius Kabi promptly takes steps to deal with them.

FRESENIUS HELIOS – QUALITY MANAGEMENT, PATIENT SATISFACTION, AND PATIENT SAFETY

Fresenius Helios hospitals in both Germany and Spain aspire to achieving a high level of treatment quality, hygiene standards, patient safety, and quality of care. With the acquisition of Quirónsalud (Helios Spain), employees in both countries can learn from each other and build on their expertise. To this end, Helios Germany brings together colleagues from medicine and care in **specialist groups**. The leading physicians in a particular field from all Helios hospitals are grouped together in these specialist groups. The specialist groups ensure that the knowledge of their field is anchored in all hospitals. They represent their respective medical fields internally and externally, advise and decide on the introduction of standard processes, sensible innovations, campaigns, and medical products. Moreover, the company will gradually roll out the quality management and proven peer review approaches used by Helios Germany to Helios Spain. The professional exchange between Helios Germany and Quirónsalud in Spain takes place on a topic-related basis. Helios Germany intends to use Helios Spain's experience in closely integrating outpatient and inpatient care. More information on the structure of the German and Spanish hospital markets can be found on pages 48 f. of the Group Management Report.

Quality management at Helios Germany

The Helios hospitals have developed a quality management system based on the three pillars "measure – publish – improve". It is now used in a similar form by around 500 hospitals in Germany and Switzerland. The basis of this quality management system is the accounting data (routine data) from patient treatments: each treatment step in the hospital is precisely documented for later accounting with the health insurance companies. This routine data also shows whether the healing process takes longer than expected, and whether complications or even a death occurred. It also indicates whether a treatment took a normal course or whether mistakes were made.

At Helios, the quality of the medical outcomes is a decisive factor. In Germany, this is represented by the **German Inpatient Quality Indicators (G-IQI)**. Data from the Federal Statistical Office for all hospitals in Germany serves to provide comparative values. Helios Germany has defined concrete target values for 46 G-IQI quality indicators. They are derived from the aspiration to be better than the national average. In 2019, Helios Germany achieved this target for 44 of a total of 46 quality indicators. This corresponds to a target achievement rate of 96% (2018: 89%). For 2 indicators, the target value was not met.

This quality management system allows Helios Germany's hospitals to continuously compare themselves with each other or the national average: the hospitals receive monthly reports on the medical results of each individual department. Trends are identified at an early stage and, if necessary, more precise analyses are initiated. Since the quality results are continuously published in the hospitals and on the Internet, there is a considerable incentive for the hospital to find and implement improvement measures and to avoid mistakes.

Helios analyzes the cases – including treatments and medical routines – in hospitals that fail to meet individual targets, in order to identify and implement improvements. **Peer reviews** play a major role in this process. This review is a discussion between specially trained medical experts from Helios hospitals and from the **Initiative of Quality Medicine** (IQM) network, in which they question statistical abnormalities and systematically search for ways to identify improvements. Their insights are translated into concrete recommendations for action in the hospital with the aim of increasing patient safety. In 2019, a total of 60 peer reviews (2018: 55) were conducted at Helios Germany.

Helios Germany exchanges ideas and knowledge with other hospital operators in the IQM network. IQM members are committed to using three basic practices: quality measurement with administrative data, publication of results, and peer reviews. They provide inpatient care for approximately 7.8 million inpatients in more than 500 hospitals in Germany and Switzerland. In Germany, they account for 42% of inpatient care.

HELIOS QUALITY PERFORMANCE INDICATORS

Germany	**2019**	2018	2017	2016
Key indicators, total	**>1,500**	>1,500	>1,500	>1,500
G-IQI targets	**46**	46	45	46
Targets achieved	**96%**	89%	98%	93%
Peer reviews	**60**	55	69	58

Further information can be found at:
www.helios-gesundheit.de/unternehmen/was-wir-tun/medizin/qualitaet/qualitaetskennzahlen/

Quality management at Helios Spain

The quality of medical treatment and patient safety are of key importance for Helios Spain. The company gears its **quality management** to the requirements of the Joint Commission International and the European Foundation for Quality Management (EFQM). In addition, Helios Spain aims to ensure high quality levels by adhering to ISO standards. In 2017, Helios Spain also began implementing quality indicators in line with the G-IQIs used by Helios Germany. To achieve this, several IQIs were selected based on relevant and high-volume diseases. Also, Helios Spain partnered with Fundación IDIS (Instituto para el Desarrollo e Integración para la Sanidad) to calculate E-IQIs based on Spanish medical routine data and compare them with publicly available reference values. The result achieved in these indicators is compared to the objectives set for the IQM network.

Each hospital's results are published in a corporate business intelligence tool on a quarterly basis, making it easier for each hospital to perform an analysis of deviations from the Helios standards. This internal analysis is carried out by each hospital and is complemented by peer reviews in those hospitals and indicators that have the largest deviations. Helios Spain also conducted eight peer reviews in 2019 (2018: four).

Hygiene management

The goal of hygiene management at Fresenius Helios is to avoid infections within hospitals and quickly prevent them from spreading. A distinction is made between nosocomial (i.e., acquired in the hospital) infections and those brought in from the outside, for example by patients.

At **Helios Germany**, the **Helios Group Hygiene Regulation** (Helios Konzernregelung Hygiene), based on the recommendations of the Robert-Koch Institute, is mandatory for all employees and clinics. Helios Germany conducts regular training courses on hygiene management for its staff. In day-to-day operations, hygiene management is the responsibility of local, specially qualified nurses and hospital hygienists.

Helios is the only hospital operator in Germany to publish the number of pathogens in its clinics online every six months in the "Hygiene Insight" section. A separate chart for each clinic shows – over the last three years – how often the most important multiresistant pathogens have occurred. The three most important germ groups MRSA (Methicillin-resistant Staphylococcus aureus), VRE (Vancomycin-resistant Enterococci) and MRGN (Multi-resistant Gram-negative rods) are shown. This data shows how many patients have already brought the respective pathogen to the hospital and how many patients acquired it during their stay in the hospital.

Helios Spain conducts training courses on hygiene management on a regular basis. The company participates in the EPINE program (Prevalence Study of Nosocomial Infections in Spain), a surveillance system for nosocomial infections coordinated by the Spanish society of preventive medicine, public health, and hygiene, and supported by the Spanish Ministry of Health and the European Center for Disease Prevention and Control. In this system, data is collected locally by the infection control services of the participating hospitals. This data serves to carry out annual studies on the prevalence of nosocomial infections in Spanish hospitals. In addition, the data is used to develop measures and compare and assess the quality of care in hospitals.

As part of its quality management system, Helios Spain monitors a bundle of indicators related to hand hygiene compliance and to the prevention of nosocomial infections, such as the WHO Hand Hygiene Self-Assessment Framework or a central-line-catheter-related bacteremia incidence rate.

Patient safety

In addition to its medical quality measurement system, **Helios Germany** has developed its own system for measuring patient safety and made it mandatory for its hospitals in September 2019. It combines internationally established Patient Safety Indicators (PSI) from the U.S. Agency for Healthcare Research and Quality (AHRQ) with Helios Germany's own indicators. Helios Germany will publish a differentiated report on claims against its hospitals as of 2020 and is thus embracing international comparison with other hospitals.

A Group regulation calls on all employees to report certain claims in a binding manner. From 2020, Helios Germany will also report on these claims. The aim of this transparent reporting is to analyze and eliminate weaknesses in patient care. The indicators include, for example, the number of abdominal cloths or medical instruments forgotten in the body during operations, confusion of sides, serious medication errors, falls, but also incorrect diagnoses in the hospitals. In some countries, such as the United Kingdom or the United States, some of the indicators are already subject to legal reporting requirements.

In recent years, Helios Germany has introduced numerous measures to increase patient safety. Since 2009, checklists have been mandatory for all operations in all Helios clinics. The "pre" checklist assesses the risks associated with the operation before it takes place. The "peri" checklist helps to avoid treatment errors immediately before, during, and immediately after the operation: this reduces side mix-ups or surgical material forgotten in the body to a minimum. In addition, CIRS (Critical Incident Reporting System) reports for critical events are in use in all Helios clinics.

Helios Spain is convinced that excellence in patient safety is a leadership topic. In 2018, the Corporate Safety Committee of Helios Spain adopted a **patient safety strategy** based on the principles of international institutions such as the WHO and the Joint Commission International. It includes the certification of hospitals according to the standards of the Spanish Association for Standardization (Asociación Española de

Normalización, UNE). The first hospitals have already been certified in accordance with the standard UNE 179003, which governs risk management for patient safety in health services.

Helios Spain also pursues an open culture of patient safety and promotes internal reporting of clinical incidents in order to mitigate the risks to which patients may be exposed during health care processes. In 2018, the company added new functionalities to the corporate risk notification and management tool, which allow it to immediately and efficiently analyze incidents and implement actions focused on improving the safety of the patients.

In 2019, the new **corporate risk notification and management tool** was rolled out across all Helios Spain hospitals. In addition, and to strengthen the analysis process of adverse events, training on the Root Cause Analysis methodology was provided to the own hospitals. Thanks to the progressive improvement of Helios Spain's patient safety culture, also reflected in the increasingly efficient use of this tool, it has been possible to identify incidents that were repeated in some hospitals. To avoid similar incidents in the future, recommendations were sent to the entire network of hospitals.

Patient satisfaction

Helios Germany records patient satisfaction on digital mobile devices with the **Helios Service Monitor**. Once a week, employees at the hospital locations conduct short interviews with inpatients and record the data electronically and anonymously. The patient decides whether a member of staff should visit him or her for criticism in order to clarify and solve the problem. The goal is to react to patients' feedback within 24 hours.

The survey results can be summarized individually from any location into a daily, weekly, or monthly result. By evaluating this data, a general result can be obtained, and points of criticism can be identified. In this way, Helios Germany determines how satisfied the patients are with the care and service and can quickly initiate any necessary improvements. The monthly query results are automatically sent to the hospital management and authorized persons at the locations. The Service Monitor has been in use at all 86 Helios Germany hospital locations since mid-2019. The Service Monitor is used to reach a total of around 50% of inpatients.

Helios is convinced that transparency creates the best incentives for improvement. Helios Germany publishes further data on medical treatment quality, key indicators in the field of hygiene, and results of patient surveys in Germany online at www.helios-gesundheit.de.

At **Helios Spain,** the patient experience is a strategic pillar for the company. To measure the quality of the patients' experience, the company uses a Net Promoter Score (NPS) tool: 48 hours after a hospital stay, an e-mail is sent to patients asking if they would recommend the hospital and its services. Unsatisfied patients are interviewed to gain a better understanding of the criticism they raised. The results are analyzed centrally for Helios Spain and on a hospital level by field of care (hospitalization, surgical block, external consultations, and emergencies) and medical specialty. The target of the NPS system is to establish a continuous improvement path and meet patient expectations. The global NPS score has increased over recent years. Patient complaints are an additional source for collection of patient feedback. Complaints are handled based on standard operating procedures through an IT-based management system and a rate is calculated among all hospitals, also identifying areas for improvement.

In 2019, Helios Spain identified waiting times and lack of information as the main causes of dissatisfaction among patients. Therefore, the company has implemented a **"15/15" target** in all hospitals. A patient must get an appointment within 15 days, and the waiting time before the appointment starts must be under 15 minutes. In emergency departments, the maximum waiting time should not exceed 30 minutes.

FRESENIUS VAMED – QUALITY MANAGEMENT AND PATIENT SATISFACTION

Fresenius Vamed aligns its internal processes to established quality standards such as ISO 9001, ISO 14001, and ISO 13485, as well as the European Foundation for Quality Management (EFQM) standards. In addition, Fresenius Vamed's health care facilities are certified according to the Joint Commission International (JCI), ISO, or QMS Reha standards. To ensure adherence to quality standards, the company performs regular internal audits as well as external recertifications.

Fresenius Vamed uses performance indicators in the quality management system of its health care facilities for the sole purpose of optimizing existing internal processes, but not to manage the company.

Patient Satisfaction

Fresenius Vamed measures patient satisfaction in its health care facilities in a continuous and structured process. The company evaluates the data internally and implements improvement measures in the respective facilities.

PROTECTING DATA

As a globally operating company, we process the personal data of our patients, employees, customers, suppliers, and other business partners. We take responsibility for handling the data entrusted to us with care. This has priority for Fresenius as a trusted partner. We continuously enhance our data protection measures to fulfill our responsibility.

Fresenius respects the right to informational self-determination and the privacy of all those from whom we receive data in the course of our business. This also includes the processing of personal data by third parties on our behalf. This commitment is set out in the Fresenius Code of Conduct.

Data protection is a core task for us at Fresenius. We therefore constantly work on developing our data protection management systems to tackle new challenges. Operational activities in the area of data protection management are the responsibility of the functional departments. The functional departments are supported by basic processes of our Compliance Management System, such as risk analysis or investigation of possible data protection violations. We continuously work to fulfill the requirements of the **EU General Data Protection Regulation (GDPR)** and other applicable national data protection regulations.

ORGANIZATION

Fresenius SE & Co. KGaA and all business segments have data protection organizations in accordance with their organizational and business structure. These include appointed independent **data protection officers** who report to the respective company's management. The data protection organizations support the management of the respective companies in complying with and monitoring applicable legal data protection requirements. Fresenius Netcare also maintains its own data protection organization in order to fulfill its particular responsibility as a data processor for the business segments. All data protection organizations have both advisory and monitoring functions with complementary tasks.

The data protection officers are contact persons for national and international supervisory authorities and are supported by competent **data protection advisors and coordinators** who are organized centrally, regionally, and locally, depending on the company structure. Quirónsalud has established Data Protection Committees at clinic level. In total, more than 300 employees at Fresenius are entrusted with data protection tasks.

Our goal is to establish comparable and effective data protection measures wherever we process personal data. For this purpose, data protection officers from all business segments meet regularly to discuss best practices and initiatives, for example in the context of Group Coordination Meetings and conferences.

RISK ASSESSMENT

We regularly assess risks related to data protection and IT security in every business segment, as well as at Fresenius SE & Co. KGaA, using standardized methods in a top-down approach.

All business segments and Fresenius SE & Co. KGaA record their data processing activities in central IT applications and subject them to a data protection review, including a risk assessment. For this purpose, we organize business processes in such a way that data protection is integrated into the design of new data processing activities as early as possible. This allows us to implement the principles of data protection and include the necessary technical and organizational measures in processing to meet the legal requirements, e.g., from the GDPR, and minimize potential risks. New or significantly changed IT systems are subject to a standardized review process to examine the implementation of data protection and IT security requirements.

DATA SUBJECT RIGHTS

We at Fresenius respect and protect the rights of all persons whose data we collect or process. This applies to employees, patients, and customers as well as to our business partners. We process, collect, store, and delete personal data for the respective legal purposes in accordance with legal requirements.

All business segments and Fresenius SE & Co. KGaA guarantee the rights of data subjects by informing them appropriately about their rights and through established processes and tools to ensure that requests are answered on time. We inform our employees on their rights through privacy employee notices. In addition, we have implemented technical and organizational measures to protect data subject rights according to the GDPR requirements.

We offer data subjects – both outside and inside the company – an easy way to request information on their data processed or saved by us. To this end, Fresenius SE & Co. KGaA and Fresenius Kabi have developed easily accessible technical solutions that can be used to send data subject requests. These requests are handled and answered centrally. With these solutions, we support data subjects in exercising their rights to access, rectification, restriction, objection, portability, and deletion of their personal data.

PATIENT DATA

The patient's well-being always comes first at Fresenius. This also applies in particular to how we handle their data. We are aware of our responsibility arising from the special bond of trust we have with them. Therefore, we take additional measures beyond the fundamental respect of data subject rights, to ensure the protection of their sensitive data. We design our processes accordingly to provide reasonable protection in the handling of our patients' personal information.

We inform all patients of whom we take care at Fresenius and whose data we process about their rights in an adequate manner. We process data of our patients only after obtaining consent or on a legal basis and only to the extent necessary. A **privacy impact assessment** is conducted for processing activities that involve processing of personal data, in particular patient data. We protect patient data by limiting access to the data required for processing, according to the principle of minimum access rights.

INTERNATIONAL DATA TRANSFER

As a globally operating company, we give high priority to ensuring an appropriate level of data protection in all international data transfers as defined by the GDPR.

All business segments and Fresenius SE & Co. KGaA only transfer data to third countries outside the European Union based on the adequacy decision of the European Commission, generally recognized certifications, or sufficient guarantees. To this end, we conclude additional agreements with data recipients besides the regular contracts. These contain EU model clauses provided by the European Commission.

In addition, Fresenius SE & Co. KGaA and Fresenius Kabi submitted **Binding Corporate Rules (BCR)**, i.e. mandatory internal guidelines, to the respective data protection authorities for review and approval and are already preparing their internal implementation. BCRs are used by the participating companies to establish a uniform level of data protection based on the standards of the GDPR and contribute to compliant processing of personal data in accordance with international law.

In addition, Helios Germany processes personal data – especially patient data – preferably within its internal networks. In particular, if data is processed in countries outside the European Union, the contractor will be examined carefully, and measures are implemented to guarantee compliance with privacy regulations.

DATA PROTECTION AND CYBERSECURITY

Fresenius takes responsibility for future-oriented health care. This includes the use of state-of-the-art information and communication technologies. As a result, we are committed to acting with special care when handling the data of our patients, employees, customers, and business partners. We ensure this by continuously working to improve our cybersecurity measures.

The data protection functions of the Fresenius Group work closely with the respective IT security departments when carrying out risk assessments. Based on the risk assessment, the data protection and IT security specialists develop and implement suitable measures to further minimize the identified risks. These are supplemented by data protection impact assessments and resulting security measures for processing activities that are likely to present a high risk for the rights of individuals.

We want to prevent loss of data and to ensure its confidentiality, availability, and integrity. To this end, we especially focus on the areas in our company in which cybersecurity risks can occur, such as on the protection of the IT within our clinics, production sites, and medical products against potential attacks.

All business segments and Fresenius SE & Co. KGaA work together to define common minimum cybersecurity standards for the Group. These standards are implemented and if necessary supplemented in the respective business segments and are continuously monitored.

To minimize cybersecurity risks, such as tampering or unauthorized access to critical corporate data, we have implemented **security concepts**. These include access controls, security measures to protect the interfaces of our secure networks, and adequate protection of Fresenius terminals (e.g., desktops, servers, mobile devices, etc.). We also carry out regular penetration tests for applications that work with sensitive data (e.g., patient or employee data). We maintain redundant systems for all critical systems, such as communications infrastructure or clinical information systems. A central Cybersecurity Dashboard acts as a platform to analyze current and emerging threats to our critical information assets and systems. To respond more efficiently to cybersecurity incidents, we intend to roll out this dashboard further, and to introduce additional automated response mechanisms. In 2019 for instance, we implemented the automatization platform "Phantom" to automatically react to potential cyber threats.

Our own **Cyber Emergency Response Team (CERT)** follows up on potential attacks against our IT infrastructure, suspected violations, and inquiries from people who have been affected by incidents or from the authorities. We take all identified weaknesses, potential violations, and new developments as an opportunity to improve our internal processes. If required by current developments, we take further measures to respond to cyber incidents in an effective and timely manner.

In November 2017, the Management Board of the Fresenius Group approved a new **global cybersecurity strategy**. Based on a cross-business-segment governance model ("CARE"), the strategy is designed to identify cyber risks and establish common, coordinated security policies. The purpose of these is to define global minimum security standards and to monitor the global security level. Within the CARE governance model, all business segments and their respective regions are responsible for determining and reporting on proper risk mitigation strategies and strategic goals. These should take into account any synergies with already-established security measures. Due to the importance of cybersecurity for the Fresenius Group, the position of a Group Head of Cybersecurity was created as of December 1, 2019, who will lead the central Cybersecurity organization and coordinate global activities Group-wide.

AWARENESS

Data protection is a shared effort by all employees of the Fresenius Group. This is based on the **joint commitment** of all business segments and Fresenius SE & Co. KGaA to data protection, as specified in their Codes of Conduct.

Furthermore, all business segments and Fresenius SE & Co. KGaA have created **policies for data protection** and handling personal data. These support our employees in implementing GDPR requirements and other relevant legal regulations within their area of responsibility. The data protection policies are complemented by other guidelines, standards, and operating procedures.

In addition, we **train** employees on current requirements and threats in relation to data protection and data security. To this end, we offer them a comprehensive range of e-learning courses, face-to-face training, and additional training measures. General training is supplemented with training measures for specific employee groups. In this way, we ensure that employees responsible for data processing activities are aware of current legal and internal requirements.

We inform new employees about confidentiality and handling sensitive data when they start work and commit them to secrecy. As an example, newly hired employees of Fresenius Helios in Germany are also given mandatory data protection training within a defined time period. Every Helios entity is required to provide evidence at least every two years that their employees are trained in data protection.

As another example, Fresenius Vamed also holds training courses on how to deal with critical incidents; in 2019, these continued to focus on data protection.

AUDITS AND MONITORING

A number of governance functions regularly perform controls with a different focus in all business segments to ensure compliance with data protection regulations.

The Internal Audit departments conduct independent audits in all business segments and Group entities. Hereby, aspects of data protection and IT security are included in the reviews, with a particular focus on compliance with data protection regulations and the consistent implementation of internal guidelines and processes. For this purpose, an exchange takes place with the respective data protection officer. All business segments and Fresenius SE & Co. KGaA have defined corresponding auditing concepts for this purpose.

In addition, **data protection controls** are part of various internal controls in the business segments; their effectiveness is reviewed by the responsible colleagues in the functional departments. We use insights on potential improvements identified in the audits and reviews to continuously enhance our data protection processes. For example, the audit concept at Helios Germany requires that each entity is reviewed regularly – at least once a year – with regard to data protection and IT security in an internal audit.

All employees of the Fresenius Group have the possibility to report potential violations of data protection regulations or internal guidelines via existing whistleblowing systems or dedicated e-mail addresses. We take all reports on potential violations as an opportunity to clarify the case as quickly as possible and to review and adjust our company processes where needed. If necessary, we inform affected persons about possible data protection violations promptly and in accordance with legal requirements.

DOING THE RIGHT THING

For us, compliance means more than acting in accordance with laws and regulations. Compliance means doing the right thing. This means: we adhere to all rules, including legal requirements, internal guidelines, our commitments, and ethical principles. Compliance is an integral part of our corporate culture and our daily work. Our **Fresenius Code of Conduct** defines the framework of our rules. In addition, all Fresenius business segments have implemented own Codes of Conduct. They cover the specifics of their businesses and reflect the values of the Fresenius Code of Conduct. Underlying guidelines, instructions, and process descriptions complement and specify the rules of the Code of Conduct. Our Compliance Management Systems are designed to achieve the implementation of these rules within the Company.

We take even possible misconduct seriously. Any illegal actions or violations of the rules may harm the individual and Fresenius. We do not tolerate non-compliance. If a violation of applicable regulations is detected, we will take the necessary actions to remediate the violation and prevent any recurrence. We also take all reports as an opportunity to review our company processes for possible improvements.

COMPLIANCE MANAGEMENT

COMPLIANCE ORGANIZATION

Responsibilities

Each of our business segments has appointed **Chief Compliance Officers**, dedicated members of the management board or a committee for compliance or a Compliance Committee, responsible for overseeing the development, implementation, and monitoring of the Compliance Management System (CMS) of the business segment. In line with the business structure and organization, the business segments have, moreover, established compliance responsibilities at the respective organizational levels. Within these structures, local management is responsible for compliance in the legal entities. In addition, more than 400 employees are working on compliance topics within the Fresenius Group. They support management and employees in all compliance-related questions. On the Group level, responsibility for Compliance lies with the Chief Compliance Officer of Fresenius SE & Co. KGaA, the member of the Management Board responsible for Legal, Compliance, and Labor Relations.

Corporate Compliance departments

The Corporate Compliance department of Fresenius SE & Co. KGaA supports the compliance functions of the business segments with standardized management tools, processes, and methodologies. To further develop the Group's **Compliance Management Systems**, Corporate Compliance develops global compliance initiatives in cooperation with the compliance functions of the business segments, supports them in segment initiatives and sets minimum standards in the risk areas relevant to all divisions. The Compliance departments in the business segments develop further segment-specific global compliance initiatives and support the responsible compliance colleagues in the divisions. In addition, the Corporate Compliance department of Fresenius SE & Co. KGaA is in charge of developing, implementing, and monitoring its own CMS. The Corporate Compliance department reports to the Chief Compliance Officer of Fresenius SE & Co. KGaA.

Compliance Steering Committee

The Compliance Steering Committee (CSC) is the **central consultative committee** at Fresenius SE & Co. KGaA for compliance topics. The CSC comprises the following participants of Fresenius SE & Co. KGaA: the Chief Compliance Officer, the Chief Financial Officer, and the Heads of Legal, Internal Audit, the Corporate Compliance department, and, where necessary, representatives of other governance functions. It facilitates exchange between governance functions. The committee consults on the developments of the Group's CMS and important compliance initiatives, current key risk areas as well as compliance-relevant topics of other governance functions, such as Internal Audit. In addition, participants discuss severe cases of potential misconduct and remediation actions. All business segments provide the CSC with an annual update on their Compliance Management Systems as well as on the results of the compliance risk analysis. CSC meetings are held every six to eight weeks, minimum six times per year. In 2019, eight CSC meetings took place.

Management Board

Corporate Compliance reports regularly, at least twice a year, on the status of the Compliance Management System of Fresenius SE & Co. KGaA and selected initiatives to the whole Management Board of Fresenius Management SE, which took place in June and November 2019. In addition, it receives an annual compliance report summarizing all corporate compliance initiatives.

Supervisory Board

The Supervisory Boards of Fresenius SE & Co. KGaA and the general partner, Fresenius Management SE, are regularly informed – at least once per year – about compliance within the Group. This reporting took place in October 2019.

Conference and group exchange

To ensure ethical conduct, we continuously review and question current practices and try to learn from best practices. In our **annual Compliance Conference**, the compliance functions of the business segments regularly share their experience. This dialogue enables us to learn from each other. In the course of the year, the Compliance Conference is complemented by **telephone conferences** that take place on a recurring basis, and regular jour fixes. In addition, subject matter experts from all business segments work together in regular cross-company group exchanges, in particular on antitrust law, foreign trade law, and international investigations.

COMPLIANCE MANAGEMENT SYSTEMS

We have set up risk-based Compliance Management Systems in all our business segments and at Fresenius SE & Co. KGaA's corporate level. They comprise three objectives: Prevent, Detect, and Respond. Emphasis is placed on preventing any acts of non-compliance before they occur. Such systems consider the markets Fresenius is operating in. They are tailored to the specific requirements of each business segment.

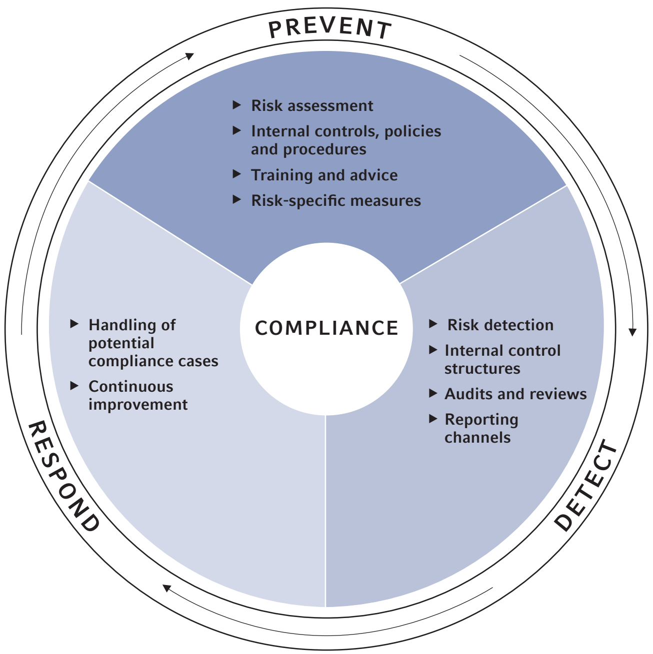
Prevent

Essential measures for prevention include a comprehensive risk recording and risk assessment, adequate and effective policies and procedures, regular training, and continuous advice.

Risk assessment

We detect, analyze, and evaluate compliance risks regularly using standardized methodologies in each business segment and at Fresenius SE & Co. KGaA. Depending on the corporate structure, these risk assessments cover more than 20 **risk groups** which, in addition to core compliance risks such as bribery and corruption, antitrust law, money laundering, data protection, and foreign trade, also include other significant business risks such as information security, the environment and occupational safety, quality, human resources, and intellectual property. The risk assessment is conducted in a top-down approach by the respective experts in the functions.

COMPLIANCE MANAGEMENT SYSTEMS (CMS)



In addition, Fresenius Kabi has performed an annual bottom-up risk assessment based on the same risk groups using its integrated risk management system since 2018. In 2019, more than 50 legal entities performed this assessment. In the coming year, we plan to launch bottom-up risk analysis in other divisions as well.

Once per year, the compliance functions of the business segments and Fresenius SE & Co. KGaA share significant insights from the individual risk assessments. Thereby, they identify relevant risk areas and material changes that are relevant for the Group and initiate the necessary measures.

We are continuously working on harmonizing and improving our risk management systems. In 2019, we carried out a project to establish a uniform Group-wide system for recording, assessing, and reporting risks. All business segments conduct their risk assessments according to a standardized methodology. With the introduction of a harmonized IT tool, we are merging existing risk processes and thus improving risk reporting and Group-wide transparency with regard to possible risks.

Across all business segments, bribery and anti-corruption is one of the **focus risk areas**. From a Fresenius Group perspective, antitrust, data protection, money laundering, foreign trade, and human rights are additional focus risk areas, which we will take up further in the course of the report.

Internal controls, policies, and procedures

In all our business segments and at Fresenius SE & Co. KGaA, the compliance functions support the management in establishing adequate internal compliance controls to ensure compliant business transactions in daily business. The internal controls are described in compliance policies and procedures on business segment and corporate level.

Training and advice

We support our employees in the compliant fulfillment of their tasks through regular training tailored to their function and the respective risk. Training covers the Codes of Conduct, company policies, or specific topics, such as anti-corruption, antitrust, and money laundering, as well as data protection and information security. **Compliance training** has a high priority for Fresenius. We rely on individual training measures for different functions and risk areas and various formats, such as face-to-face training, live webinars, video training that can be called up at any time, and classic online training courses in order to inform our employees specifically about the compliance content relevant to them. Key compliance training, such as the Fresenius Code of Conduct, is mandatory. To foster a risk-conscious and value-based company culture, we conduct targeted training for managers. For high-risk areas we conduct job-specific compliance training. In addition, we have processes in place to ensure participation in relevant compliance training. All compliance functions provide continuous advice to employees in compliance-related questions.

Anti-corruption measures

All business segments have defined anti-corruption measures as a central element of their Compliance Management Systems. We must not compromise the trust of our patients, business partners, and the public by non-compliant conduct. We do not tolerate any business that is initiated or carried out in an unfair manner, and we strictly oppose corruption and bribery. Our Fresenius Code of Conduct clearly states: "We never offer business partners or third parties any undue benefits. In this respect, undue refers to the intentions to influence the behavior or the decision of the recipient. We even avoid the appearance of inappropriate behavior. We also do not offer any undue benefits through third parties." With this clear regulation, we prohibit benefits with the intention of obtaining an undue advantage as well as advantages such as routine process accelerations, so-called "facilitation payments".

Our Codes of Conduct strictly prohibit every form of influence through undue practices.

The following **four principles** help us to act with integrity at Fresenius:

- We set appropriate remunerations: performance and reward must be equivalent – for us as well as for third parties.
- We document business arrangements transparently in agreements.
- We strictly separate sales transactions and transfers of value, received or granted: transfers of value must not be related to a potential sales transaction through timing or cause.
- We observe approval and disclosure requirements.

Cooperating with health care professionals and patient organizations

We take particular care to cooperate with health care professionals and organizations as well as patient organizations and public customers in a transparent way in accordance with the aforementioned four principles. Therefore, we set high standards for interaction with these partners, which we have outlined in various **guidelines** in our business segments. We are actively engaged in different organizations, such as Medicines for Europe and MedTech Europe, aiming to continuously enhance transparency in the health care sector and commit ourselves to the corresponding codes and principles. Furthermore, we disclose value transfers to health care professionals and patient organizations in our business segments according to applicable disclosure requirements.

Managing third-party risk

Our anti-corruption measures include selecting our partners carefully and according to objective criteria. In all our business segments and at Fresenius SE & Co. KGaA's corporate level, we have risk-based **due diligence processes** in place to determine the risks related to our business partners. Based on the risk profile determined for the business partner, we implement necessary mitigation measures, such as contractual commitments, to prevent corruption at the business partner and ensure the right to terminate the contract in case of breaches. If we detect potential misconduct on the part of our business partners, we will react accordingly, e.g., depending on the severity of the misconduct, with additional control measures.

Acquisitions and investments

We also take compliance risks into account for acquisition and investment decisions. For this, we perform specific **due diligence procedures** in all business segments. We consider the results in the decision making and implement safeguards, such as compliance representations and warranties in the contracts, if necessary. After an acquisition, we integrate the new entity into our Compliance Management Systems as soon as possible.

Antitrust

We have addressed the need for compliance with worldwide antitrust regulations in a **guideline** for all business segments. The guideline details principles of antitrust compliance and important elements of the antitrust compliance program, such as training, specific controls, and monitoring concepts. The business segments have implemented measures for continuous implementation of the guideline locally, in line with their risk profile and taking into account local regulatory requirements and the characteristics of their business models in the past year.

Money laundering

In line with the risk profiles of our business segments, we have established relevant measures to address money laundering risks across the Fresenius Group, implementing requirements of the anti-money-laundering law for companies trading in goods. This includes anti-money-laundering guidelines, specific topic-related risk analyses, **internal controls**, such as prohibiting certain cash transactions for the affected business units, as well as due diligence processes for relevant transactions. Implemented controls are outlined in policies and trained accordingly.

Foreign trade

We also deliver our life-saving products to countries that are subject to trade restrictions. Thereby, we take special care and aim to ensure that we comply with all currently applicable legal requirements, including sanctions and export controls. We have implemented risk-based measures in the relevant business segments, such as **monitoring processes** and dedicated IT system checks for deliveries that are subject to export or import controls. Thereby, we aim to ensure compliance with applicable sanctions and export control requirements, also in cases of short-term legal changes.

Detect

Risk detection

Through objective indicators we try to detect potential compliance risks early on. With the **Compliance Cockpit**, Fresenius Kabi, as an example, has a tool in place to give a yearly overview of compliance-relevant indicators of each legal entity. For this, it uses objective internal and external indicators. Fresenius Kabi reviews the Compliance Cockpit of all entities annually and determines required monitoring measures for entities with a higher risk profile.

Internal control structures

For cash and bank transactions, we have implemented controls such as the **four-eyes principle**, as well as complete monitoring of cash payments above certain thresholds. Thereby, we aim to ensure that all financial transactions are based on a legitimate purpose and are properly authorized and executed. Automated procedures and analyses of the adherence to value limits as well as further control processes for supplier databases in the affected business areas enable us to detect compliance risks early on.

Audits and reviews

In addition, the Corporate Compliance functions of Fresenius SE & Co. KGaA and Fresenius Kabi regularly perform functional reviews of compliance initiatives in the form of **workshops**. The compliance organization of Fresenius Kabi performed a total of 14 international workshops in 2019, also supported by the Corporate Compliance Department of Fresenius SE & Co. KGaA. These workshops serve as intensive on-site training for employees, as well as to evaluate their understanding of local compliance, the effectiveness of local implementation of internal guidelines such as the structuring of central compliance initiatives, and, if necessary, to improve them.

As an example, Helios Germany has implemented a **compliance indicator** in 2018, measuring the implementation of relevant company guidelines through a self-assessment in all clinics. The compliance indicator is used to plan further compliance measures, such as the regular transparency review, in selected hospitals. In this review, the company tests adherence to the regulations in the transparency guideline on a sample basis.

The **Internal Audit departments** of Fresenius perform independent audits of the compliance measures by auditing business segments and Group companies regarding implementation of policies and procedures and the effectiveness of the CMS. If the results of reviews or audits reveal any potential for improvement, necessary actions are defined in consultation with the responsible management. In 2019, the Internal Audit departments performed numerous compliance-related audits at Fresenius SE & Co. KGaA and in the business segments across the world, which also included audit steps relating to corruption, antitrust law, data protection, and IT security.

Reporting channels

If Fresenius employees are aware of potential misconduct, e.g., non-compliance with laws, regulations, or internal policies, they can contact their superior or the responsible compliance function to report a potential compliance case. In addition, they can report compliance cases anonymously, e.g., by telephone or online via **whistleblowing systems** or dedicated e-mail addresses. Most whistleblowing systems are open not only to employees, but also to third parties, such as customers, suppliers, and other partners, via the corporate website in local languages.

Respond

Handling of potential compliance cases

We follow up immediately on all reported or otherwise detected compliance cases. To this end, we objectively assess all cases of potential misconduct for their plausibility and potential severity first, in order to manage all potential misconduct consistently, fairly, and comprehensively. The severity of the case determines who is responsible for handling the case. If necessary, an investigation is performed either by an internal investigation team or with external support.

We take all reports as an opportunity to review our company processes for possible improvements. The implementation of measures is performed in a timely manner by the responsible management in cooperation with the responsible compliance function. Depending on the type and severity of misconduct, potential sanctions, such as actions under employment, civil, and criminal law, can be imposed. After finishing the investigation, we define and implement necessary remediation measures that prevent or at least impede future misconduct. We also learn from the circumstances underlying the agreements[1] between Fresenius Medical Care and the U.S. authorities and examine to what extent the recommendations of the independent monitor also contribute to the further development of compliance and financial controls' management systems in other business segments. Further relevant information regarding the Non-Prosecution Agreement as per Section 289c (3) no. 6 of the German Commercial Code (HGB) can be found on pages 224 f. of the Notes.

Continuous improvement

In order to identify and implement further possible improvements to our compliance measures, we analyze audit findings, compliance incidents, and feedback from consulting inquiries and workshops. Our aim is the continuous improvement of the compliance measures to fulfill our commitment to the highest quality of our products and services, integrity in dealing with our partners, responsible conduct, and reliability in our communication for the well-being of our patients in the future.

BEING AN ATTRACTIVE EMPLOYER

Fresenius' growth and success are largely thanks to the commitment of our more than 290,000 employees worldwide. Their achievements, skills, and dedication help our business segments to hold leading positions in their respective markets. We want to continue attracting, retaining, and developing talent at Fresenius. That is why we offer employees a wide range of development opportunities. Furthermore, we promote international and interdisciplinary cooperation as well as diversity in our business segments and regions. The importance we attach to employee matters is also reflected in our corporate structure: the member of the Group Management Board responsible for Legal, Compliance, and Labor Relations has central responsibility for all employee concerns.

Reporting on personnel matters covers the following key topics: personnel structure and diversity, employee participation, profit sharing, attracting, retaining, and developing talent, as well as occupational health and safety. The business models of our four segments set different standards for the management of material topics at an operational level. In the following section, we therefore report on Group-wide as well as segment-specific personnel concepts and measures.

[1] Non-Prosecution Agreement with the U.S. Department of Justice and Cease-and-Desist Order of the U.S. Securities and Exchange Commission

PERSONNEL STRUCTURE AND DIVERSITY

At the end of fiscal year 2019, the Fresenius Group had 294,134 employees. That was 17,384 or 6% more than in the previous year (December 31, 2018: 276,750). Based on **FTE (full-time equivalents)**, the increase was 7% in the Fresenius Group.

EMPLOYEES (FTE) BY BUSINESS SEGMENT

	2019	2018	2017	2016
Fresenius Medical Care	**120,659**	112,658	114,000	109,319
Fresenius Kabi	**38,264**	36,423	34,923	33,476
Helios Germany[1]	**53,423**	51,429	57,719	56,596
Helios Spain	**34,634**	31,094	29,087	n. a.
Fresenius Vamed	**14,770**	13,665	7,215	6,909
Corporate/Other	**1,154**	1,060	969	889
Total (FTE) as at Dec. 31	**262,904**	246,329	243,913	207,189

[1] Number of employees converted to the full collectively agreed working time on monthly average (Vollkräfte)

The regional picture shows that 31% of our employees are based in Germany, while the rest of Europe accounts for 25%. 26% of our staff were employed in North America at the end of 2019.

EMPLOYEES (HEADCOUNT) BY REGION

	2019	2018	2017	2016
Europe	**165,862**	158,939	154,172	119,434
thereof Germany	**91,014**	88,086	86,613	84,165
Europe excl. Germany	**74,848**	70,853	67,559	35,269
North America	**74,894**	72,672	75,083	72,803
Asia-Pacific	**27,457**	25,575	24,381	22,441
Latin America	**23,998**	17,610	17,709	16,283
Africa	**1,923**	1,954	1,904	1,912
Total as at Dec. 31	**294,134**	276,750	273,249	232,873

Our employee structure by **function** remained largely unchanged in 2019: Around 14% of our employees work in production, while 71% are in services. The high share of service personnel is mainly due to the number of nurses in our health care facilities.

The **proportion of female employees** in the Fresenius Group was 68% as at December 31, 2019 (December 31, 2018: 68%). The proportion of females in services or care is higher than in the area of production. This is reflected in the proportion of female employees in our business segments on page 124. The number of female participants in the Group-wide Long Term Incentive Plan (LTIP 2018) is a good indication for the share of women in management positions worldwide. According to this, the ratio of women among the 1,500 top executives was 31.6% as at December 31, 2019.

The **average age**[1] of Group employees was 41.0 years (2018: 41.0 years). The majority (55%) of our employees are between 30 and 50 years of age. We aim to maintain a well-balanced age structure within our Group. The distribution reflects the demand for a high proportion of skilled and experienced employees in our business segments.

The **length of service**[1] within the Group can vary due to acquisitions in the business segments. In 2019, it was 8.1 years on average (2018: 8.2 years).

In 2019, the **voluntary turnover rate**[1] was 11.0% (2018: 9.8%), due to various reasons. At Fresenius Medical Care, for example, we particularly encounter increased rates in emerging countries due to the economic growth there. At Fresenius Helios, the competition for talent in the hospital setting has led to various activities to attract new personnel. We also intensified the dialogue at Helios with our employees to decrease the voluntary turnover rate. Further information is included on pages 118 f. of the Group Non-financial Report.

The **rate of new hires**[1] in relation to the overall number of employees in each business segment provides proof of our efforts.

On page 124, we provide an overview of key figures relating to the personnel structure and diversity in the different business segments.

Fresenius respects and promotes a **culture of diversity**. We are convinced that the combination of different perspectives, opinions, cultural backgrounds, and experiences enables us to tap the potential that makes us successful as a global company. The knowledge and social skills of our employees and their different ethnic, social, and religious backgrounds help us to develop a particular sensitivity for the local needs of our customers and patients. The foundation for this company culture characterized by collaboration and mutual respect is the Fresenius Code of Conduct, which is binding for all Fresenius employees.

For further information on our diversity concept for the Management Board and the Supervisory Board, please see our Corporate Governance Declaration and Report on pages 142 ff. of our Annual Report.

[1] Fresenius Medical Care's 2017 data reflects country data representing 96% of all employees. Prior-year information and 2018 Group data, respectively, were adjusted to conform to the current year's presentation to reflect coverage of 100%. Helios Germany's data for 2016 and 2017 includes the post-acute care business in Germany. Fresenius Vamed's data for 2017 also includes temporary staff and, as of 2018, the German post-acute care business transferred from Fresenius Helios to Fresenius Vamed.

ATTRACTING TALENT, RETAINING AND DEVELOPING EMPLOYEES

The ongoing globalization of our markets is a challenge for our human resources management. For this reason, the four business segments gear their employee development concepts individually to specific market requirements and cultural differences. In doing so, we focus on three topics:

- **Attracting talent:** To ensure that we meet our demand for highly qualified employees and attract new employees, we rely on digital personnel marketing, organize our own recruiting events, and present the company at careers fairs. In recent years, we have significantly broadened our personnel marketing activities and expanded our global career website. In 2019, the market research institute Potentialpark named Fresenius the German company with the best online offering for applicants for the eighth consecutive year.
- **Retaining employees:** As an international health care Group, we create various incentives for employees, depending on the country and location. These include flexible working time models or the chance to participate in the company's success via variable renumeration models.
- **Developing employees:** We offer our employees the opportunity to develop their career in an international, dynamic environment. We are continuously adjusting our personnel management instruments to the latest trends and requirements. As well as Group-wide obligatory training courses on our Code of Conduct, the business segments offer compulsory training, e.g., in quality management, environmental management, or occupational health and safety. Individual training courses for employees and executives, as well as talent management geared to the respective business segments, complete our personnel development activities. Depending on their customer and market structures, our business segments pursue different concepts and measures for personnel development.

The Fresenius Group attaches great importance to **vocational training**. We trained more than 4,950 young people in more than 50 different occupations as well as in more 30 than degree programs together with universities of cooperative education at our German locations in 2019. We further increased the number of dual courses of study that we offer in cooperation with the Baden-Wuerttemberg Cooperative State University. For the first time, we are offering dual courses in Digital Business Management, in Information Technology (specialization in Applied Computer Science), and Safety Engineering (specialization in Environmental Engineering), as well as a Bachelor in Business Administration and Engineering (specialization in Electrical Engineering). As an alternative to the traditional channel of direct job entry, Fresenius also offers trainee programs for university graduates.

The **Fresenius training catalog** comprises courses for all employees. They include, for example, programs on the topics of communication and presentation, self-management, project management, and target-group-specific learning content.

In addition to the training catalog, Fresenius offers training in cooperation with departments or business segments through the learning management system **Fresenius Learning Center (FLC)**. Depending on the subject, these training programs consist of one or more modules. Most are provided as e-learning, i.e., traditional web-based training, but also include webinars or classroom training sessions. Employees in Germany who do not have their own computer or laptop, or who do not have a quiet work environment, can take the training courses they need at specially designed learning locations. Employees who have enrolled for a training module are required to start and successfully finish it within a defined period. Fresenius Medical Care, Fresenius Kabi, and the Group divisions of Fresenius manage and document the majority of their e-learning programs in the FLC system at Group headquarters in Bad Homburg. Fresenius Helios and Fresenius Vamed offer e-learning internally as needed and document the training activities in their own training management systems. In 2019, for example, new training modules on various compliance-specific topics were made available in the FLC. Further information can be found on page 111 f.

TRAINEES AND TRAINING RATIO FOR GERMANY

	2019	2018	2017	2016
Trainees[1]	**4,952**	4,354	4,019	3,743
Training ratio	**5.44**	4.94	4.64	4.45

[1] Includes vocational training and university students

Fresenius has established two Group-wide programs for **executives**. The program Maximizing Leadership Impact in cooperation with the Harvard Business School targets top executives. An executive program in cooperation with the University of St. Gallen, Switzerland, with a focus on strategy and change management, is designed for executives in middle and upper management.

FRESENIUS MEDICAL CARE

Lifelong learning and education as well as personal and professional development are crucial elements of employee motivation and prerequisites for a successful career. The company invests in its employees and provides them with attractive development opportunities, taking their roles and individual strengths into consideration. Functions, skills, and competencies differ within Fresenius Medical Care. This is reflected in the learning programs for either specific skills or selected leadership levels.

Employees participate in **training courses** on the Code of Ethics and Business Conduct and additional mandatory training related to areas such as workplace safety. In addition, employees can enroll in various e-learning courses and education opportunities based on their individual preferences and needs.

In 2018, Fresenius Medical Care implemented a global leadership **development program** for the top 400 leaders, built around the leadership expectations “define and shape vision & purpose”, “collaborate globally”, “lead innovation and positive change”, “be a good decision-maker”, and “develop our talent”. This is now the standard program to learn about the global leadership mindset. It was completed by the first approximately 100 participants in 2019.

To further boost the company’s efforts to manage global talent, it continued to refine the process for regularly reviewing leadership talent and succession planning and expanded its scope, including a focus on female and future talents. The results will be used by managers and HR colleagues to recognize and deliver “best-fit” solutions in the future, and are the basis for identifying, promoting, and developing future leaders at Fresenius Medical Care. In Asia-Pacific, the company continued to roll out a program for managers, called FAME, with a focus on providing essential management skills. It supplements programs already established in other regions like North America and EMEA in recent years.

Fresenius Medical Care has established a **global employee engagement framework** as a standard concept to collect feedback from all employees worldwide in a consistent manner. It takes place every two years. The first full cycle was completed in 2019. The global participation rate[1] was 68%, with a global engagement rate of 56%[2]. First insights show that one of the company’s strengths is a very strong identification with the products and services and the purpose to improve patients’ lives. Furthermore, results indicate that Fresenius Medical Care can further strengthen collaboration and provide employees with more development opportunities. The findings gained from the engagement process will be used to support local and global action plans and further improve engagement levels in the long term.

FRESENIUS KABI

Fresenius Kabi has created global, regional, and local structures for training and developing employees. All employees are trained and qualified according to their functions and tasks. All new employees receive mandatory training on the Code of Conduct. Furthermore, compulsory data protection and information security training was introduced for the employees at the end of 2018. In addition, all employees in production receive mandatory training on good manufacturing practice, as well as occupational health and safety and environmental protection. The global quality management department expanded the use of the FLC in the reporting period, leading to documented training activities in more than 50 countries with more than 20,000 people trained in 2019.

Leadership development at Fresenius Kabi has the aim of training and developing high performers and talents according to their individual requirements. Their performance should contribute to successfully executing the corporate strategy and to achieving the company’s growth targets. This is why Fresenius Kabi identifies talents, retains them within the company, and develops them further. The development of employees to executives requires continuous learning and a clear focus on the company values of Fresenius Kabi. The company uses an annual **talent review** for a dialogue on performance, competencies, and development potential. This talent review is the basis for identifying, evaluating, and developing executives and talents in all of Fresenius Kabi’s regions, divisions, and central functions worldwide.

[1] Number of employees that participated in Fresenius Medical Care’s engagement survey compared to the number of invited employees
[2] Calculated based on the percentage of affirmative answers to questions about employees’ opinion of Fresenius Medical Care, their desire to work for the company, and their motivation to contribute to the business success.

Fresenius Kabi is represented worldwide with its own locations, and numerous projects are thus placed in an intercultural environment. In many areas of the company, transnational teams are working on solutions to the manifold challenges in the health care sector. As the basis for the shared understanding of collaboration, Fresenius Kabi has defined a **value code** that has been introduced worldwide. These values are embodied in the company and the employees maintain a culture of cooperation across national borders, as well as across functions and hierarchies.

Fresenius Kabi uses **employee surveys** to sustainably increase employee satisfaction, to gain valuable insights into business processes, and to increase employee loyalty to the company. For example, the company has been conducting employee surveys in the United States and Canada for years, with an average participation of 80% of its employees. Fresenius Kabi plans to conduct the next employee survey in North America for the reporting year 2020. The on-site employee surveys are an integral part of local human resources work, and the results of this regular survey are important for the company, as they provide it with valuable information that helps to develop a stable and appreciative work environment for employees and to promote their engagement. In 2018, Fresenius Kabi began to conduct employee surveys in 13 countries of its Asia-Pacific region. In 2019, the company surveyed employees in Australia and New Zealand. As a measure derived from the survey results, for example, Fresenius Kabi offered leadership training in China. More than 80% of the workforce in these countries participated in the survey. The company will continue to conduct employee surveys in this region on a regular basis and plans to conduct employee surveys in other countries in the future.

FRESENIUS HELIOS

For many years, sharing and increasing the knowledge of Helios’ employees has been core to the corporate mission of the company. On the one hand, conveying and increasing knowledge directly influences the quality of medical services. On the other, it makes Fresenius Helios an attractive employer in the health care market. All employee training and development measures help Fresenius Helios to achieve its four corporate strategic goals: being best in service, leading medical quality, sustainable growth, and expansion of our market position. Nevertheless, Fresenius Helios faces strong competition in the recruitment of new personnel, mainly in the nursing area, driven by regulatory requirements, among other factors.

In 2019, the company’s focus in Germany was on retaining our employees by implementing various feedback formats and attracting new employees in the **nursing area**. It expanded the capacities for vocational training from around 1,200 to 1,700 nurses-to-be. Their classroom sessions are conducted at Fresenius Helios’ own training centers. Fresenius Helios initiated a nationwide recruiting campaign to attract experienced nurses, accompanied by local recruiting activities at its hospitals. The company was able to hire a total of around 1,300 additional nurses in 2019.

The company also intensified the dialogue with its employees in 2019, with the goal of improving the retention rate in the hospitals. The company aims to foster communication in the clinics and promote feedback reviews between management and employees. More than 1,500 colleagues from various clinic locations and from different professional groups were invited to dialogue workshops to gain valuable insights.

A further 600 employees from all areas and levels joined a structured process between November 2019 and February 2020, starting to develop a new vision, values, and mission statement for the company. The new vision and mission statement will be presented to all Fresenius Helios’ employees through an internal communication campaign in 2020. The company plans to publish a special edition of the internal corporate magazine, provide information on its intranet, and train the management. The management will then communicate and implement the new vision and the mission statement in their respective departments and wards in all Helios clinics.

The feedback Helios received from the dialogue formats provided valuable insights: our employees place great importance on comprehensive training and development opportunities within the company.

In Germany, the **Helios Academy** and 32 **Helios training centers** offer a wide range of competence-based training and educational opportunities for all professional groups in hospitals, to train either professional abilities or personal competencies, or to gain knowledge in the field of personal health and prevention. Further, hospitals without training centers offer a variety of different training and educational opportunities.

The **annual knowledge target** provides all employees with the opportunity to train via e-learning on a focus topic in the health care market.

Another focus of the company's work is the feedback from **appraisal interviews**. They are offered to all employees. One insight, which Helios also gained throughout the dialogue formats, was that the employees expect the company to value stable, well-working team structures. Helios will consider this relevant aspect in case of future internal organizational changes.

In order to support the compatibility of family and career, Helios offers care places in 35 kindergartens, which are affiliated with clinic locations or with which the company cooperates. Helios has also been approached regarding the desire for flexible working hours. However, it has to be ensured that patients are cared for at all times of the day.

Starting in 2019, a company-wide training program on patient-centered communication has been rolled out. It is a multi-step program with the aim of imparting communication skills, especially with regard to interaction with patients and their families, as well as colleagues. In 2019, a total of 40 employees were trained. In a next step, they will act as communication coaches at their clinic locations and in training centers, training nurses and other staff in 2020 and beyond.

Helios Germany promotes young talent in medical and nursing care through a **central talent management system**. The company offers a special development program for budding executives in medical care. Thanks to its trainee programs and management training, Helios Germany continues to enjoy a reputation as an attractive employer among university graduates.

At Helios Spain, we seek to attract, retain, and develop our employees in order to remain the leading provider of private-sector health services in Spain. The company has published a **human resources policy**, which is available on the website. It states that the company considers employees to be the most valuable of its assets. The goals are:

- Utilize employee qualifications and competencies as a fundamental element to support clinical management.
- Manage personnel in agreement with the company's ethical values and in a transparent and open manner.
- Make information available through our intranet.
- Consolidate and further develop a prevention policy, working toward a model of prevention that is scientifically based, comprehensive, integrated, and participatory, because doing so will safeguard the employees' safety and health.
- Maintain the intranet portal for the prevention of occupational risks. This portal is the point of entry for information on prevention issues.
- Use internal and external benchmarking as an element of in-depth knowledge, analysis, and motivation that can be used by professionals and help involve them in plans for continuous improvement.
- Institute a company-wide plan for internal communication.
- Establish an employee portal in all health centers.
- Develop continuous training together with the Office of the Director of Teaching and Research.

Helios Spain has implemented a **corporate talent plan** to support its employees. This incorporates a talent pool for internal exchange, as well as training activities. The company is continuously expanding the training program, focusing specifically on occupational health and safety, patient information, patient safety, and improving patient care.

FRESENIUS VAMED

One of Fresenius Vamed's key success factors is the individual performance of its employees based on their training, expertise, and project experience. The company gives high priority to enhancing this success factor. Fresenius Vamed offers its employees tailored programs for **professional training and development** to ensure that the company is ideally prepared for future health care developments. As part of its strategic personnel planning, the company uses the VAMED **Human Capital Management (HCM) program**, a scheme for identifying and developing high-potential employees to take on management and key player functions in the future.

Fresenius Vamed is also dedicated to qualifying and training young employees through its various **trainee programs**. They offer young people with above-average development potential the opportunity to acquire comprehensive specialist know-how and professional experience for a particular job profile. In addition, all employees are entitled to participate in courses and training offered by the **VAMED Academy**. These focus on specialist topics, as well as on self-development, leadership, and social and methodological skills. Various knowledge platforms, such as the International Medical Board (IMB), bundle the know-how of about 1,200 health care professionals who work for Fresenius Vamed.

EMPLOYEE PARTICIPATION

EXCHANGE WITH EMPLOYEE REPRESENTATIVES

Trust and cooperation between management, employees, and employee representatives is well-established at Fresenius and is an integral part of our corporate culture. An open and continuous dialogue between management and employee representatives, as well as unions, is important to us.

Fresenius acts responsibly towards its employees. This includes the commitment to comply with international labor and social standards, which are contained in our Code of Conduct and in the Human Rights Statement. For more information, see pages 130 ff.

Employees liaise with their supervisors, but they can also turn to their human resources or compliance officers, as well as to the works council, their union representatives, or other employee representatives. In Europe, about 77% of our employees are covered by a **collective bargaining agreement**. In some European countries, Fresenius is subject to industry-related collective agreements, e.g., in France, which are binding by law due to the industry to which we belong. If this is not the case, country-specific collective bargaining agreements can be negotiated with local trade unions or comparable social partners.

In European countries, workplace representation bodies are organized according to national law. The business segments are mainly responsible for dealing with local employee representatives and trade unions at country or site level. Our discussions with these representatives focus on local and regional circumstances. Together with the employee representatives, we aim to find tailored solutions for the challenges in the different locations.

In addition, Fresenius aims to maintain an open and ongoing exchange with globally active trade union associations such as UNI Global Union, Public Services International, and IndustriAll Global Union.

DIALOGUE AT EUROPEAN LEVEL

Fresenius SE & Co. KGaA has a European Works Council (EWC), which comprised 21 employee representatives as at December 31, 2019. They come from the member states of the EU and the EEA (European Economic Area) in which Fresenius employs staff.

The EWC is responsible for the participation of Fresenius employees in **cross-border measures**, insofar as these have a significant impact on the interests of Fresenius staff and affect at least two countries within its area of responsibility, such as the relocation or closure of companies or collective redundancies. Management informs and listens to the EWC, for example with regard to the following topics: the Group's structure, economic and financial situation, its expected development, the employment situation, investments, organizational changes, and the introduction of new work and production processes.

The EWC meets once a year, and its executive committee convenes three times a year. The European trade union federations IndustriAll and Public Services International attend the meetings at the invitation of the EWC. The main topics discussed in the EWC in the past year focused on the reorganization in Group segments, like transfusion medicine and digital transformation projects, as well as compliance-based questions on the human rights declaration. The EWC elects six employee representatives to the Supervisory Board of Fresenius SE & Co. KGaA, including at least one trade union representative.

PROFIT-SHARING SCHEME AND STOCK OPTION PLAN

For many years, Fresenius has offered employees in selected Germany-based Group companies a **stock-based profit-sharing scheme**. The Group distributes the bonus when it achieves its EBIT and earnings targets defined in the program. The current model is valid for the years 2019 to 2021. Within this period, the defined targets are: the Group net income has to increase compared to the previous year's figure. Further, Group EBIT has to increase by at least 5% compared to the previous year. In 2018, 6,228 eligible employees received a profit-sharing bonus for 2017. For 2018 and 2019, the Group did not achieve its earnings and EBIT targets for this program.

The stock-based **Long Term Incentive Plan 2018** (LTIP 2018) is a compensation instrument for executives, which links management's entrepreneurial responsibility to future opportunities and risks. More than 1,500 employees in executive positions participate in this program. For additional information, please see pages 247 ff. of the Notes.

Fresenius Medical Care also has its own share-based compensation scheme. Further information can be found in the Notes of the Annual Report 2019, see pages 252 ff.

OCCUPATIONAL HEALTH AND SAFETY

We consider ensuring the health and safety of our employees to be part of our corporate responsibility. The Fresenius Code of Conduct stipulates that work-related incidents must be prevented. All business segments focus on preventive measures and on the individual responsibility of employees when it comes to occupational health and safety. The occupational safety concepts are adapted to the business models of the four business segments and cover occupational health and safety in production as well as corporate health management for employees in health care facilities and in administration. They are not only aimed at protecting our employees, but also ensuring the well-being and safety of our patients.

All Fresenius business segments continuously record data on occupational health and safety in line with regulatory provisions. Provided that this data is consolidated, it is published in the following sections on the business segments.

OCCUPATIONAL HEALTH AND SAFETY AT FRESENIUS MEDICAL CARE

Fresenius Medical Care considers the health and safety of its employees part of its corporate responsibility. As voiced in the company's Code of Ethics and Business Conduct, it seeks to provide a safe, healthy, and productive work environment for the employees and business partners who assist in its business operations. Fresenius Medical Care is committed to safeguarding its employees against work-related illnesses and accidents. The company fosters a culture of continuous improvement and

- reports and analyzes work-related accidents and injuries,
- identifies their root causes, and
- implements corrective actions, as appropriate.

As part of this concept, Fresenius Medical Care has introduced **key performance indicators** (KPIs) in its production sites and dialysis clinics to collect and record incident data, and supply it to government authorities.

At Fresenius Medical Care, the topic of occupational health and safety is under local responsibility, allowing the company to better respond to legislative requirements at a local and regional level. As part of the Global Sustainability Program, the company will work on harmonizing management concepts in this area while complying with health and safety legislation and continually improving the performance in occupational health and safety.

At GMQS-coordinated plants, the topic of occupational health and safety is managed at local or plant level. Operational activities related to occupational health and safety are monitored and evaluated by specialized departments, which also assess external regulatory and legal requirements and incorporate them in the company's internal policies and guidelines in consultation with regional and local management.

As occupational health and safety in the field of health care is closely linked to injury prevention and employee education, Fresenius Medical Care provides health-related training on-site in its clinics. These courses cover topics including medication management, the safe use of sharps and disposables, hand hygiene as well as manual handling education, infection prevention, and emergency control. The clinics have applicable guidelines, policies, and procedures related to occupational health and safety in place. Internal **reviews** as well as external **audits** by government agencies and national regulatory bodies are regularly conducted to monitor compliance with corresponding regulations, policies, and procedures.

OCCUPATIONAL HEALTH AND SAFETY AT FRESENIUS KABI

The safety of Fresenius Kabi's employees at their workplace is our central concern. The aim is to avoid all work-related accidents. To achieve this goal, the company has implemented standard operating procedures (SOPs), other regulations, and instructions to provide a global framework for occupational health and safety. The implemented **occupational health and safety guidelines** focus on the following principles:

- implementing the necessary measures to ensure the health and safety of employees,
- ensuring and supporting continuous improvement,
- avoiding work-related injuries, illnesses, and other incidents, e.g., by adapting current practices to safe procedures or less dangerous technical activities,
- performing hazard and risk assessments for all routine and non-routine activities,
- complying with applicable legal requirements and other occupational health and safety requirements,
- providing and ensuring the continuous safe operation of facilities, machinery, and equipment,
- safe handling, use, storage, and proper disposal of hazardous substances.

Risk assessment is an important part of the occupational health and safety management. Based on the risk assessment, occupational health and safety measures are derived and performed locally. To support this, Fresenius Kabi has introduced a **management system for occupational health and safety** in accordance with the international standard OHSAS 18001. The management handbook and SOPs provide global management requirements for the certified organizations' local occupational health and safety management. The global management system is audited on an annual basis by TÜV Rheinland. Currently, 19 organizations of Fresenius Kabi are certified according to this standard. Local targets are set at the certified organizations to enhance the occupational health and safety management. The local management reviews the occupational health and safety management system at least once a year, with regard to its continued suitability, appropriateness, effectiveness, and potential for improvement.

The company is working on rolling out the certification according to OHSAS 18001 to all manufacturing plants by 2023[1]. Fresenius Kabi aims to improve occupational health and safety processes there and align them with internationally recognized standards.

Employees in the global **Environmental and Occupational Management department** analyze and evaluate working procedures, risks, objectives, and occupational health and safety programs, and enable the exchange of best practices in occupational health and safety throughout the company. Fresenius Kabi performs internal audits at its organizations to identify potential for improvement. If necessary, the company develops measures to tap this potential together with local responsible persons.

[1] The certification roll-out is going to be concluded at all manufacturing plants of Fresenius Kabi in 2023. The certification issuance from the individual certification companies may extend into the following year.

LOST TIME INJURY FREQUENCY RATE [1]

Fresenius Kabi	2019	2018
LTIFR	2.6	3.1

Fresenius Kabi documents all accidents that lead to lost working time – worldwide and for all employees, including temporary workers. All reported cases are categorized according to their impact on an employee's health and their severity. Further, the local management assesses the documented cases to decide whether technical improvements, other working equipment or instructions, or further training are required to avoid future work-related incidents and improve occupational health and safety for employees.

Fresenius Kabi calculates the **lost time injury frequency rate** (LTIFR) [1] from the data it collects and uses it as an indicator for occupational health and safety. This indicator improved again compared to the previous year. Moreover, no severe work-related accidents or fatalities were recorded at Fresenius Kabi in 2019.

OCCUPATIONAL HEALTH AND SAFETY AT FRESENIUS HELIOS

In Germany, the focus of our programs in the area of employee health in 2019 was on coping with stressful everyday situations, as explained on page 119 of the Group Non-financial Report. One of the aims of the company-wide training program "Patient-Centered Communication" was to train nursing staff to recognize critical conversational situations with patients and their families and to deal with them appropriately. In addition, numerous local measures were implemented at our clinics, addressing topics like the high workload in the nursing sector. These topics are also addressed at our annual nursing conference, which has been running since 2018. Around 1,300 of the company's nursing staff meet with doctors and clinic managers to discuss aspects of their careers, challenges in everyday working life, technical issues, and concepts for improving the working situation in the clinics.

Helios Germany works internally with time management reports that document **trends in absenteeism**. Whenever Helios Germany identifies deficits in its own hospitals, it takes corresponding measures and expands its corporate programs, for example, to promote occupational health or manage integration. Helios Germany is developing additional online training courses and will gradually roll these out throughout the company to strengthen employees' expertise in the area of occupational health and safety.

Helios Spain aims to develop an exemplary culture in the areas of health care, avoiding occupational health risks, and promoting healthy habits among its employees. This is also implemented in the company's **policy on workplace safety**. The policy is applicable at all levels and locations of the company. Helios Spain has harmonized occupational health and safety for the Group's hospitals and companies and developed a corporate training platform for specific, workplace-related risks. Various KPIs, including absenteeism and work-related injuries, are consolidated in a standardized system and evaluated. Based on this, measures are taken to reduce absenteeism or to avoid accidents at work.

OCCUPATIONAL HEALTH AND SAFETY AT FRESENIUS VAMED

All entities of Fresenius Vamed are responsible for complying with occupational health and safety regulations in their facilities. The occupational health and safety of the company's employees is an integral part of both its corporate culture and its mission statement.

All locations are subject to regular **occupational health and safety inspections**. Furthermore, the employees of Fresenius Vamed are provided with occupational medical care and are offered checkups.

All employees have access to a wide range of schemes through Fresenius Vamed's occupational health management program.

[1] LTIFR: Number of work-related accidents with at least one day's absence from work in relation to hours worked multiplied by 1,000,000.

EXTERNAL HIRES [1, 2]

in %	2019	2018	2017	2016
Fresenius Medical Care	**24.7**	21.7	n. a.	n. a.
Fresenius Kabi	**17.1**	16.9	19.8	19.0
Helios Germany	**15.4**	16.0	19.8	14.2
Helios Spain	**20.1**	27.6	n. a.	n. a.
Fresenius Vamed	**17.8**	22.5	11.0	n. a.
Corporate/Other	**11.2**	12.5	9.7	9.6

AVERAGE AGE [1]

	2019	2018	2017	2016
Fresenius Medical Care	**40.8**	40.8	41.7	n. a.
Fresenius Kabi	**38.7**	38.4	38.5	38.7
Helios Germany	**42.4**	42.6	42.7	42.6
Helios Spain	**41.0**	40.0	n. a.	n. a.
Fresenius Vamed	**41.2**	43.6	43.0	43.5
Corporate/Other	**39.1**	38.9	39.2	39.2
Total	**41.0**	41.0	41.5	41.5

AVERAGE LENGTH OF SERVICE [1]

in years	2019	2018	2017	2016
Fresenius Medical Care	**6.8**	7.1	7.0	n. a.
Fresenius Kabi	**8.6**	7.5	7.4	7.6
Helios Germany	**10.6**	10.8	10.5	10.8
Helios Spain	**8.4**	8.2	n. a.	n. a.
Fresenius Vamed	**6.9**	7.8	6.1	6.0
Corporate/Other	**7.3**	7.3	7.6	7.6
Total	**8.1**	8.2	8.1	8.4

EMPLOYEES BY FUNCTION

Dec. 31	2019	2018	2017	2016
Production	**42,572**	41,100	40,189	38,069
Service	**208,070**	194,868	194,117	161,495
Administration	**28,157**	26,112	25,015	19,955
Sales and marketing	**11,923**	11,628	11,156	10,584
R & D	**3,412**	3,04	2,772	2,770
Total	**294,134**	276,750	273,249	222,305

FEMALE EMPLOYEES

Dec. 31	2019	2018	2017	2016
Fresenius Medical Care	**69%**	69%	69%	69%
Fresenius Kabi	**50%**	69%	51%	51%
Fresenius Helios	**75%**	75%	76%	76%
Fresenius Vamed	**63%**	64%	56%	56%
Corporate/Other	**39%**	39%	39%	39%
Total	**68%**	68%	68%	68%

VOLUNTARY TURNOVER RATE [1]

in %	2019	2018	2017	2016
Fresenius Medical Care	**14.3**	13.2	12.2	n. a.
Fresenius Kabi	**9.2**	9.4	11.3	10.7
Helios Germany	**9.1**	6.9	6.0	5.3
Helios Spain	**7.6**	3.8	n. a.	n. a.
Fresenius Vamed	**7.6**	9.5	8.0	n. a.
Corporate/Other	**3.5**	3.8	2.7	2.5
Total	**11.0**	9.8	9.9	10.4

Calculated as the number of employees who left the organization voluntarily in relation to the number of employees at the end of the year.

AGE STRUCTURE [1]

	2019			2018			2017			2016		
Dec. 31	**Below 30**	**Between 30 and 50**	**Above 50**	Below 30	Between 30 and 50	Above 50	Below 30	Between 30 and 50	Above 50	Below 30	Between 30 and 50	Above 50
Fresenius Medical Care	**18%**	**56%**	**26%**	16%	57%	27%	18%	56%	26%	n.a.	n.a.	n.a.
Fresenius Kabi	**23%**	**60%**	**17%**	23%	60%	17%	25%	59%	16%	24%	60%	16%
Helios Germany	**19%**	**48%**	**33%**	18%	49%	33%	19%	49%	32%	19%	50%	31%
Helios Spain	**17%**	**61%**	**22%**	18%	62%	20%	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
Fresenius Vamed	**16%**	**50%**	**34%**	15%	50%	35%	18%	54%	28%	18%	53%	29%
Corporate/Other	**24%**	**54%**	**22%**	25%	54%	21%	24%	55%	21%	23%	57%	20%
Total	**19%**	**55%**	**26%**	18%	55%	27%	19%	55%	26%	20%	53%	27%

[1] Fresenius Medical Care's 2017 data reflects country data representing 96% of all employees. Prior-year information and 2018 Group data, respectively, were adjusted to conform to the current year's presentation to reflect coverage of 100%. Helios Germany's data for 2016 and 2017 includes the post-acute care business in Germany. Fresenius Vamed's data for 2017 also includes temporary staff and, as of 2018, the German post-acute care business transferred from Fresenius Helios to Fresenius Vamed.
[2] Calculated as the number of external hires in a business segment within the reporting period, relative to the number of employees at year-end.

PROTECTING NATURE AS THE BASIS FOR LIFE

Fresenius, as a health care Group, is aware of its responsibility of protecting nature and using its resources carefully. Environmental protection means monitoring and evaluating potential risks in our processes, and setting up proper measures to limit possible impacts.

The business segments use the ISO 14001 standard as the basis for their environmental management. Further entities were included in the certification processes in 2019 and we aim to expand the scope going forward. We also made progress in each business segment in the implementation of energy management systems according to ISO standard 50001, and, where applicable, increased the number of certified locations.

As the four business segments of the Fresenius Group align their **environmental management** to their individual business models, we present the environmental management approaches separately for each of them. Data on energy consumption[1], water consumption[1], and greenhouse gas emissions (GHG)[1] is reported for all business segments. The consumption of resources varies depending on the business model. We also report the consumption by resource in relation to personnel (FTE) and sales.

Water is an important resource for all four Fresenius business segments. Fresenius operates in highly regulated markets with regard to hygiene, sterility, and product quality. Water used in our health care facilities and production sites has to meet regulatory requirements. To safeguard our patients' and employees' health, we ensure that adequate management and control systems are in place. These include, for example, regular flushing of pipes in hospitals to prevent contamination, but also water treatment for production or dialysis.

Water management and **water treatment** are controlled locally within the Fresenius Group. The business segments are responsible for ensuring compliance with all applicable laws and regulations. Their operational environmental protection measures provide the respective framework for all related activities. The same applies to **wastewater**: the business segments are expected to treat wastewater from their facilities in compliance with local laws and regulations and develop and implement corresponding management provisions if necessary.

Fresenius[1] consumed a total of 57.3 million m^3 of water in fiscal year 2019 (2018: 56.2 million m^3). About 91% came from the municipal water supply, and 7% was sourced from ground water. In the hospital setting, nearly all water consumed is sourced from the municipal water supply. To be compliant with existing regulations regarding hospital hygiene, we can only use, for example, rainwater in areas that pose no risk to our patients' health.

FRESENIUS GROUP[1] WATER CONSUMPTION

m^3 in millions	2019	2018	2017
Fresenius Medical Care	**43.2**	42.1	n. a.
Fresenius Kabi	**9.6**	9.7	9.8
Fresenius Helios	**3.8**	3.7	3.2
Fresenius Vamed	**0.7**	0.7	0.3
Total	**57.3**	56.2	n. a.

FRESENIUS GROUP[1] RELATIVE WATER CONSUMPTION

in m^3	2019	2018
Water consumption/€1 million sales	**1,612**	1,676
Water consumption/FTE	**217.8**	228.2

FRESENIUS GROUP[1] ENERGY CONSUMPTION

MWh in millions	2019	2018	2017
Fresenius Medical Care	**2.42**	2.38	n. a.
Fresenius Kabi	**1.64**	1.65	1.57
Fresenius Helios	**1.09**	1.14	0.95
Fresenius Vamed	**0.16**	0.17	0.05
Total	**5.32**	5.34	n. a.

FRESENIUS GROUP[1] RELATIVE ENERGY CONSUMPTION

in MWh	2019	2018
Energy consumption/€1 million sales	**150**	159
Energy consumption/FTE	**20.2**	21.7

[1] Fresenius Medical Care figures include energy and water consumption at production sites, as well as electricity and water consumption at dialysis centers. Greenhouse gases are calculated based on energy data. Fresenius Kabi's data includes all facilities worldwide. The data from Fresenius Helios encompasses all company-owned hospitals in Germany, and as of 2018 also in Spain. Fresenius Vamed's data includes all fully consolidated health care facilities, and, as of 2018, the German post-acute care business transferred from Fresenius Helios to Fresenius Vamed. If data of the business segments is not available in time, it is extrapolated on the basis of existing data. An adjustment will be made in the next report. Prior-year information was adjusted to conform to the current year's presentation.

Production processes and patient treatments in hospitals and other health care facilities require a large amount of **energy**. The structural condition of our health care facilities also has a direct impact on energy consumption. Fresenius continuously invests in new construction projects and modernizations in line with the current energy efficiency standards and applicable regulations. In fiscal year 2019, Fresenius[1] consumed, as in 2018, a total of approximately 5.3 million MWh of energy from different sources, the majority relating to electricity, natural gas, and district heating. Energy management focuses above all on our patients' well-being and product safety. A safe and uninterruptible power supply is a top priority. Measures for saving energy are always considered with the utmost care. Furthermore, we continually optimize our energy procurement, based on consumption analysis and energy efficiency, and, where reasonable, evaluate the use of renewable energy. We also generate our own energy at numerous locations.

Among the aforementioned main energy sources, a major CO_2 driver is the demand for electricity. Accordingly, Scope 2 emissions are higher than Scope 1 emissions in all business segments. In fiscal year 2019, Fresenius[1] generated a total of 1,509 thousand t **CO_2 equivalents** (2018: 1,534 thousand t CO_2 equivalents).

In the health care industry, **waste** is strictly regulated. All Fresenius locations have to adhere to applicable laws and regulations regarding waste disposal, as well as global or local standard operating procedures and environmental management provisions. There are important interfaces between professional, safe disposal and the requirements for hygiene and sterility in production processes and hospital treatments. These range from selecting suitable disposal containers, cleaning and sterilization procedures to the occupational safety of our employees in the disposal of hazardous – e.g., infectious – waste.

Where necessary, the business segments set out specific rules and requirements in internal guidelines and communicate them, for example in local training courses. There are also controls in place, for example in the area of hygiene in our acute care clinics, to ensure compliance with regulations.

ENVIRONMENTAL MANAGEMENT AT FRESENIUS MEDICAL CARE

Fresenius Medical Care actively reduces the environmental impact of its operations by monitoring and continuously improving the environmental performance, using resources as efficiently as possible, and seeking to leverage the advantages of new technology. The company takes a strategic approach to improving the environmental performance based on internationally agreed standards such as ISO 14001.

In North America, environmental management is organized at a regional level. Fresenius Medical Care constantly monitors national and international regulations relating to environmental, chemical, and occupational health and safety issues so that internal policies, guidelines, and standard operating procedures (SOPs) are up to date. In compliance with applicable laws and internal guidelines, manufacturing sites, distribution centers, and laboratories are subject to regular audits. Furthermore, the company regularly analyzes energy, water, and waste and reviews them to reduce consumption and improve efficiency in all facilities. In the United States, 92% of the dialysis clinics are covered by this approach.

In EMEA, environmental management is part of Fresenius Medical Care's integrated management system. The aim here is to systematically control and reduce risks associated with

FRESENIUS GROUP[1] GREENHOUSE GAS EMISSIONS (GHG), SCOPE 1 AND 2

t CO_2 equivalents in thousands		2019	2018	2017
Fresenius Medical Care	Scope 1	**227**	219	n. a.
	Scope 2	**547**	557	n. a.
Fresenius Kabi	Scope 1	**165**	169	174
	Scope 2	**249**	255	248
Fresenius Helios	Scope 1	**107**	114	103
	Scope 2	**178**	182	152
Fresenius Vamed	Scope 1	**18**	19	3
	Scope 2	**18**	19	6
Total	Scope 1	**517**	521	n. a.
	Scope 2	**992**	1,013	n. a.

FRESENIUS GROUP[1] RELATIVE GHG EMISSIONS

t CO_2 equivalents	2019	2018
t CO_2 equivalents / €1 million sales	**42**	46
t CO_2 equivalents / FTE	**5.7**	6.2

[1] Fresenius Medical Care figures include energy and water consumption at production sites, as well as electricity and water consumption at dialysis centers. Greenhouse gases are calculated based on energy data. Fresenius Kabi's data includes all facilities worldwide. The data from Fresenius Helios encompasses all company-owned hospitals in Germany, and as of 2018 also in Spain. Fresenius Vamed's data includes all fully consolidated health care facilities, and, as of 2018, the German post-acute care business transferred from Fresenius Helios to Fresenius Vamed. If data of the business segments is not available in time, it is extrapolated on the basis of existing data. An adjustment will be made in the next report. Prior-year information was adjusted to conform to the current year's presentation.

environmental protection, comply with applicable legislation, and meet the expectations of customers and patients. The **Environmental Health & Safety (EHS) Basic System** also focuses on compliance and risk control in connection with environmental and employee matters. The EHS Basic System has broad coverage as it applies to all operational units within the integrated management system, i.e., with a certified quality management system. In addition, all operational units in EMEA are required to file an annual declaration of responsible management as well as show their compliance with environmental and occupational health and safety regulations.

Since the **environmental certification** strategy of GMQS is focused on but not limited to production sites with a high environmental impact, eight of the largest production sites in the EMEA region are certified according to ISO 14001 standards. Two of these production sites also have ISO 50001 certification. In addition, 48% of the dialysis clinics are certified according to ISO 14001. Compliance with ISO standards is regularly reviewed by internal and external experts. At present, 72% of the clinics in the EMEA region use the integrated software solution e-con5 for eco-controlling. This software is designed to monitor and reduce energy, water, and waste while improving the quality and consistency of environmental data. In the years to come, the company intends to increase the proportion of clinics using e-con5.

In Latin America, Fresenius Medical Care has implemented an **environmental management program** to control and improve the environmental performance in terms of energy, water, and waste in dialysis clinics. More than 90% of the clinics in this region use the integrated software solution e-con5 for eco-controlling. In addition, Fresenius Medical Care reviews the environmental data on a regular basis to control developments as well as target achievements and define measurements and activities for improvement.

In Asia-Pacific, environmental management within the GMQS organization is managed locally by each manufacturing site. This includes the management of water, wastewater, energy, waste, greenhouse gas emissions / air pollution, and noise, based on local regulations, which may differ from site to site. These topics are the focus of environmental management activities in the manufacturing facilities. The general target is to achieve environmental compliance and make improvements to reduce any negative environmental impact and risks for the patients and employees, as well as for the production facilities.

Fresenius Medical Care aims to conserve natural resources by means of environmentally sound and efficient operations. The corporate GMQS function encourages local **sustainability projects** as part of the Green & Lean Initiative to continuously improve the company's environmental performance and incorporate environmental management best practices into business operations. As part of this approach, each plant is responsible for defining, planning, and implementing environmental initiatives. Green & Lean reporting enables best practices to be shared between plants with a view to reducing emissions, promoting the responsible and efficient use of natural resources, as well as recycling waste and wastewater. The key objectives of the initiative are to achieve compliance with applicable environmental regulations, manage and reduce environmental risks, and establish environmentally sustainable operations.

IMPROVING THE ENVIRONMENTAL PERFORMANCE OF PRODUCTS AND SERVICES ALONG THE PRODUCT LIFE CYCLE

Fresenius Medical Care takes advantage of innovations and new technologies to improve the environmental performance of its products and services. Most of the water utilized is needed to produce dialysate during life-saving dialysis treatment in the dialysis centers around the world. The amount of dialysate and consequently the amount of water required per dialysis treatment is determined by a variety of factors, including the blood flow rate, the selected dialyzer, and the treatment method, most of which are the direct responsibility of the physician. In its efforts to save resources, it is of utmost importance to Fresenius Medical Care that resource efficiency does not compromise the quality of care or product quality. With the latest machine generations, the 5008 and 6008 series, the company has developed a dialysis machine that supports patient safety while being eco-friendly by automatically adjusting the dialysate flow to the effective blood flow. This allows the company to save substantial amounts of dialysate, water, and energy while maintaining a constant dialysis quality.

ENVIRONMENTAL MANAGEMENT AT FRESENIUS KABI

Fresenius Kabi has implemented mandatory environmental guidelines worldwide, which provide the framework for environmental protection in all Fresenius Kabi's organizations. The guidelines include general principles on how to address and prevent environmental risks as well as how to avoid environmental pollution. The **environmental protection process** applicable to all Fresenius Kabi's organizations comprises four steps:

- Identify environmental impacts
- Comply with the respective law or other regulatory provisions
- Evaluate environmental risks
- Identify measures to protect the environment

Each organization must identify environmental protection measures associated with environmental aspects of its activities and services. This can include: emissions to the air, water, or soil, consumption of natural resources and raw materials, waste and wastewater, packaging, transport, or other local environmental impacts. Each organization's impact on the environment is evaluated and necessary environmental protection measures are taken. Also, the company evaluates the effectiveness of the implemented measures aimed at environmental protection. In cases of environmental incidents, measures are defined to avoid negative environmental impacts as far as possible.

Environmental protection is also an important aspect of **product development** at Fresenius Kabi. In the enteral nutrition product segment, for example, the company has worked on reducing the use of plastics in packaging materials. The plastic used in the enteral container EasyBottle was already reduced in two steps by 2 g each per EasyBottle. The company took a further step towards reducing plastic in 2019: it began supplying the EasyBottle without a drinking straw. This reduces the bottle weight by 0.65 g, leading to a decrease in the total quantity of plastic required for the production of the Easybottle by almost 5 g per bottle, or more than 23% of the original weight, over the past few years.

The company also uses an **environmental management system** and as an **energy management system** in line with the international standards ISO 14001 and ISO 50001, which are improved on a continuous basis. Handbooks for both management systems as well as standard process guidelines provide all certified local units with a framework for their environmental and energy management. The focus of the two management systems at Fresenius Kabi is primarily on reducing energy and water usage, as well as wastewater, waste, and emissions – depending on the overall production volume.

Fresenius Kabi has **matrix certifications** for its global environmental and energy management systems, which are reviewed by TÜV Rheinland and audited annually. 35 Fresenius Kabi organizations are currently certified according to ISO 14001, and 14 organizations according to ISO 50001. Fresenius Kabi is working to introduce the environmental management system according to the international standard ISO 14001 and the energy management system according to the international standard ISO 50001 at all manufacturing plants worldwide by 2026[1].

The company continuously monitors certified organizations to ensure that they comply with the standard process guidelines that are binding for them. Globally appointed, independent auditors conduct regular internal audits of the organizations. Local management reviews the environmental and energy management system at least once a year to ensure the continued suitability, appropriateness, and effectiveness of the systems, and to identify potential for improvement. On a global level, the local management reviews of the environmental and energy management systems are consolidated, analyzed, and evaluated on an annual basis.

Appropriate corrective measures will be initiated if deviations from the requirements of the ISO 14001 or ISO 50001 management systems are identified. The same applies to opportunities for improvement at a global or local level. Whenever potential is identified, a review is carried out to plan and implement appropriate measures with the aim of continuously improving environmental and energy management.

Fresenius Kabi also expects careful and responsible handling of nature and its resources from its suppliers; this is set out in the **Suppliers' Code of Conduct**.

[1] The certification roll-out is going to be concluded at all Fresenius Kabi manufacturing plants in 2026. The certification issuance from the individual certification companies may extend into the following year.

Responsibility for environmental and energy management lies with the divisional and local organizations; global management responsibility lies with the central organization, which reports to the responsible member of Fresenius Kabi's management board. The responsible department analyzes and evaluates workflows and processes at the global and local levels, facilitating the exchange of practices that have proven to be efficient or exemplary. In 2019, for example, the company established an internal platform for exchanging information on energy and water management practices, which is directed at all relevant production sites. This has already produced initial ideas for improvements, which will be prioritized and examined for implementation. In addition, using internal audits, Fresenius Kabi identifies further improvement opportunities at its own sites and develops appropriate measures with locally responsible managers to tap that potential.

The certified organizations work on continuously improving their **energy and environmental performance**. For example, Fresenius Kabi replaced its existing cooling system at the Haina plant in the Dominican Republic with a new, more efficient one, saving 756 MWh of energy per year.

Last year, the share of recycled **waste**[1] in the total internally generated waste from manufacturing plants, compounding centers, and logistics sites changed as follows: for non-hazardous waste, the proportion changed from 77% to 76% compared to the previous year; for hazardous waste[2], from 87% to 79% in the same period.

ENVIRONMENTAL MANAGEMENT AT FRESENIUS HELIOS

The Infrastructure business unit[3] is responsible for environmental management at Fresenius Helios' German clinics. It reports directly to the Chief Operating Officer (COO).

The Infrastructure business unit supports the clinics in the centralized purchasing of services and products and the exchange of best practices. **Energy efficiency** and **drinking-water quality** are of particular importance. As drinking-water quality has to be ensured at all times and microbiological contamination must be prevented, Fresenius Helios manages the water consumption in its hospitals and clinics with regard to maintaining a continuously high water quality.

The business unit has established a central purchasing and management system to control **energy consumption** at all sites and clinics in Germany. It allows the company to compare consumption at its different locations and derive improvement measures based on this benchmark. The system also forms the basis for certification of all Helios Germany hospitals according to the German Energy Saving Act (EDL-G) and in line with the DIN EN 16247 standard. In 2019, Helios Germany initiated the nationwide implementation of an energy management system according to ISO 50001. Further, the implementation of an environmental management system according to ISO 14001 is planned from 2020 onwards. Following the implementation of the energy management system according to ISO 50001, we aim to start the certification of clinic locations according to ISO 14001 in 2021.

In Spain, we use the ISO 50001 standard for the certification of its hospitals' **energy management** and aim to make them more energy efficient. Helios Spain set up an energy management committee in 2016 to exchange best practices and experience in the company. Furthermore, it monitors its greenhouse gas emissions and plans to reduce them through energy efficiency measures. Helios Spain also uses the ISO 14001 standard for **environmental management** and aims to contribute to the sustainability of hospitals by controlling energy consumption, improving waste management, and increasing environmental awareness of workers. The certification process was started in 2011 for both standards and the first certificates were received in 2016. In 2019, 6 hospitals had already been certified according to ISO 50001 in Spain. In addition, 41 hospitals have already been certified according to ISO 14001, with others scheduled in 2020.

Helios Germany and Spain hospitals dispose of their **waste** and **wastewater** in line with overarching framework conditions and legal requirements, for example the German Recycling and Waste Management Act (Kreislaufwirtschaftsgesetz – KrWG) or the Spanish Ley 22/2011. Helios Spain only works with authorized service providers and encourages the reuse and recycling of waste wherever possible. In Germany, local municipalities and rural districts also issue specifications with regard to wastewater regulations that must be observed. Proper waste disposal is of great importance to hospitals.

[1] The share of recycled waste in total waste includes waste that is sent for recycling, reuse, and recovery, including energy recovery. As some confirmations, for example of the recovery quantity, are only available after the report has been prepared, these figures are estimated in some cases.
[2] Hazardous/non-hazardous waste in accordance with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal of March 22, 1989.
[3] The Infrastructure business unit was created as of August 15, 2018. The function combines the areas of construction and project management, plant technology, and sterile processing and authorized officers for the specific areas including environmental management at Helios Germany.

Fresenius Helios views waste disposal management as a process – from avoiding waste to consistently recycling or disposing of it in an environmentally friendly manner. At the same time, requirements pertaining to environmental protection, occupational health and safety, and infection protection and hospital hygiene have to be taken into account. This is particularly true for clinical waste, e.g., from the diagnosis and treatment of diseases.

ENVIRONMENTAL MANAGEMENT AT FRESENIUS VAMED

At Fresenius Vamed, responsibility for the environmental management of the consolidated health care facilities lies directly with the respective management. The careful use of energy sources and fresh water is of particular importance to Fresenius Vamed. Health care facilities built by Fresenius Vamed use construction and installation techniques that enable optimal **resource management**.

In Austria, Fresenius Vamed's energy management for companies in which it has a majority stake is certified in accordance with ISO 50001 and is audited regularly. The thermal baths and medical wellness facilities managed by Fresenius Vamed also introduced an **energy management system** in line with ISO 50001 in 2016 and had it certified by Quality Austria. Fresenius Vamed provides framework conditions for energy management in its different units. The units define measures to improve energy efficiency themselves on this basis, and implement them locally.

CARING FOR HUMAN RIGHTS

As a global health care company, we improve access to affordable, high-quality health care in many countries:

- **Fresenius Medical Care** provides a dialysis treatment somewhere around the globe every 0.6 seconds.
- **Fresenius Kabi** enables patients with medical needs to access modern therapies and affordable health care with a broad range of generic and biosimilar products.
- **Fresenius Helios** has invested more than €2 billion in the modernization and development of clinical services in Germany and Spain in the past five years, and thereby contributes to comprehensive high-quality health care.
- **Fresenius Vamed** is operating in countries in which the development of health care infrastructure is still at an early stage. Through this, Fresenius Vamed contributes decisively to facilitating access to health care facilities for patients.

We support these efforts with additional initiatives and projects worldwide:

- **Fresenius Medical Care,** in cooperation with the Sustainable Kidney Care Foundation, supports projects that give patients with acute kidney failure access to dialysis treatment in regions without an existing care structure.
- **Fresenius Kabi** supports the JumpStart Research Grant and thus supports young scientists in their research in the field of parenteral nutrition.
- **Helios Germany,** in cooperation with the aid organization Friedensdorf International, offers free treatment for children from crisis countries in German Helios clinics.
- **Fresenius Vamed** contributes to the improvement of health care for newborns and mothers by modernizing maternity wards in rural areas in Kenya, equipping the wards with modern medical devices and training local personnel as part of a project by the Austrian government.

We are committed to respecting and supporting the observance of human rights as they are defined by international standards, such as the United Nations Universal Declaration of Human Rights and the Fundamental Principles as published by the International Labor Organization (ILO)[1]. We consider this part of our responsibility as a company.

In 2018, we adopted a **Group-wide human rights statement**. It contains aspects of human rights that are of special importance for Fresenius. Our activities serve to respect human rights and shall support their protection. We strive to continuously develop these activities.

We are currently carrying out a Group-wide project on human rights due diligence in which we identify human rights issues and fields of action that are particularly relevant

[1] ILO Declaration on Fundamental Principles and Rights at Work, adopted June 1, 1998.

to the value chains by conducting an analysis in all business segments. In doing so, we take into account the business models of the segments, current public discussions, e.g., from non-governmental organizations and the general public, as well as current regulatory developments, such as the National Action Plans on Business and Human Rights. We plan to prioritize the identified fields of action and to start the implementation of first measures in 2020.

In our human rights statement, we express our position on the following areas in relation to human rights:

- **No exploitative nor illegal child nor forced labor**
  Taking responsibility for our employees is part of the corporate self-conception of the whole Fresenius Group. We do not tolerate the use or threat of violence, or any other form of coercion. In particular, we are dedicated to protecting children from exploitation. We strictly forbid using, supporting, or approving of exploitative and illegal child or forced labor. Processes in the local entities of all business segments serve to adhere to applicable laws on the prevention of exploitative and illegal child or forced labor. We expect our business partners to comply with these laws. Where it is required by local laws, we confirm compliance with these laws on the websites of our local entities.

- **Standing against discrimination and promoting equal opportunity**
  We support equal opportunities and take a clear stand against discrimination. No one may ever be discriminated against, e.g., for their skin color, race, gender, religion, political views, age, physical constitution, sexual orientation, appearance, or other personal characteristics. We also do not tolerate discrimination due to membership in unions or works councils. We interact openly, fairly, and appreciatively. All business segments have embedded these principles in their **Codes of Conduct**. Fresenius Kabi has established shared company values for all employees that form a worldwide common understanding of its corporate culture. They emphasize the importance of respectful collaboration among all employees. The values are part of the Code of Conduct and the quality management handbook at Fresenius Kabi. To promote equal opportunity, Fresenius Helios particularly emphasizes the compatibility of family and work, especially for employees working in shifts and on-call duty, and offers or supports child care. With these and other exemplary initiatives, we foster a company culture without discrimination at Fresenius. Further information and figures regarding our employee structure and diversity can be found on pages 114 ff.

- **Creating safe working conditions**
  We are committed to ensuring that the necessary safety measures are taken and that working conditions are fair and safe for all our employees. We want to provide a healthy and productive place to work for our employees. We report in detail on occupational health and safety on pages 121 ff.

- **Respecting the right of freedom of association and collective bargaining**
  Fresenius respects the freedom of association and the right to collective bargaining. Our employees can join labor unions, seek representation, and engage in collective bargaining in accordance with local laws. We foster open and direct communication within our workforce and strictly oppose any discrimination, as stated in our Code of Conduct. No one shall be discriminated against at the workplace due to membership of unions or works councils. You will find further information on employee participation and collective bargaining on page 120 f.

- **Protecting personal data**
  We respect the privacy of every person and feel accountable for the personal data of our patients, employees, customer groups, and suppliers. At the same time, our patients expect adequate protection of their data. We are

aware of our responsibility within this special relationship of trust. This guides our procedures in handling patient data. All business segments and Fresenius SE & Co. KGaA have implemented comprehensive Data Protection Management Systems, which ensure responsible handling of the data we receive. Details on this are described in the section on Data Protection Management Systems on pages 106 ff.

- **Considering the influence on our environment**
  It is also part of our joint responsibility to protect nature as the basis of life, to preserve resources, and to reduce our impact on the environment. It is our mutual duty to protect resources for future generations. We aim to comply with applicable legal requirements. In addition, we are constantly developing our environmental protection measures. You will find additional information on pages 125 ff.

- **Taking responsibility in our supply chain**
  We expect our suppliers and business partners to commit to ethical standards of conduct in daily business, towards employees, society, and the environment. This also includes the described areas in relation to respecting human rights. You can find more information on how we take responsibility in our supply chain on page 133.

The human rights statement is a self-commitment, which is valid for all business segments and Fresenius SE & Co. KGaA. It complements the commitments and principles regarding respecting human rights, which all business segments have included in their Codes of Conduct.

The safety of our patients is our priority. Worldwide, millions of them rely on the quality of our care. Therefore, the following applies for all business segments: when we recognize indications of deficiencies and limitations in our products, therapies, or processes, we make them transparent and take necessary actions. When conducting clinical studies, too, our first priority is the safety of our patients. We observe ethical, medical, and legal requirements. When we recognize any indications of deviations, we respond. We keep awareness of our values and principles of conduct up to date through regular classroom or online training on the respective Code of Conduct for our employees and managers.

Operational implementation and assessment of our activities are the responsibility of the respective functions within the business segments. Measures such as training on the Codes of Conduct or reporting mechanisms are supported by the Compliance Management Systems. You will find details on this on pages 111 ff. In addition, checks are also conducted as part of internal audits.

Employees of all business segments and Fresenius SE & Co. KGaA, as well as external partners, can report potential violations, also related to human rights aspects, via whistleblower hotlines or e-mail addresses. In addition, employees can report their concerns directly to their superiors. Additional information on reporting possibilities is described in the chapter on the Compliance Management Systems on page 114. If we have information on potential violations, we take necessary measures.

We take the results of internal reviews and reports as an opportunity to review our company processes for improvements of our internal processes and implement corrective or improvement measures.

No events with a material adverse impact that conflict with our goal of respecting human rights were recorded in the fiscal year.

RESPONSIBILITY IN THE SUPPLY CHAIN

Our business segments cover a large part of their value chain themselves, and thereby ensure the highest quality standards. Beyond that, we work with suppliers and other business partners worldwide to care for our patients.

We expect our suppliers and business partners to commit to **ethical standards of conduct** in their daily business with employees, society, and the environment. This also includes areas described in our human rights statement.

We specify and communicate our expectations toward suppliers, service providers, and other partners. Fresenius Medical Care has enshrined its expectations in **Sustainability Principles**[1], which are part of Fresenius Medical Care's standard operating procedures of the GMQS procurement function and in the strategic procurement departments in EMEA, Latin America, and Asia-Pacific. At Fresenius Kabi[2], Fresenius Vamed, and Fresenius SE & Co. KGaA, these expectations are set out in the respective Codes of Conduct for business partners and suppliers. Fresenius Helios defines its expectations for suppliers in their respective contracts. In the business segments, both the Sustainability Principles and the Suppliers' Codes of Conduct are used in procurement contracts, included as attachments, or included as a link to the website. In this way, we want to ensure that our partners commit to our standards of conduct. Responsibility for selecting and contracting suppliers lies with the functions in the business segments, such as procurement. They are supported in this by measures of the Compliance Management Systems, such as Business Partner Due Diligence or reporting mechanisms for possible misconduct.

We expect our partners in the supply chain to implement adequate processes that are suitable for ensuring compliance with relevant standards. If we suspect potential misconduct, we react accordingly, depending on the severity of the misconduct, e.g., with additional control measures.

In addition, Fresenius Kabi has identified strategic suppliers, which are under special supervision due to their business significance; this is managed by the global strategic procurement organization. Based on defined processes, a risk-based classification of strategic suppliers is carried out first, followed by regular evaluation, which includes quality, occupational health and safety, and environmental aspects, as well as compliance. This process also includes **auditing** suppliers. Strategic active pharmaceutical ingredient (API) suppliers undergo an additional assessment to identify possible environmental risks and, if necessary, request the supplier to implement environmental protection measures. In addition, Fresenius Kabi has contracted an external service provider offering sustainability ratings for global supply chains to support the evaluation of suppliers. The first suppliers were invited for evaluation and rated in the categories environment, labor and human rights, ethics, and sustainable purchasing in 2019.

To further strengthen and harmonize its commitment to sustainable procurement practices, Fresenius Medical Care has launched a project to promote sustainable supply as part of a global sustainability program. The global, cross-functional working group set up in this context will focus on supplier relationship management, risk management within our supply chain, and a sustainable supply strategy.

[1] https://www.freseniusmedicalcare.com/en/about-us/sustainability/sustainability-overview/
[2] https://www.fresenius-kabi.com/responsibilities/business-partner-code-of-conduct; https://www.fresenius-kabi.com/responsibilities/suppliers-code-of-conduct

LIMITED ASSURANCE REPORT OF THE INDEPENDENT AUDITOR REGARDING THE SEPARATE NON-FINANCIAL GROUP REPORT [1]

To the Supervisory Board of Fresenius SE & Co. KGaA,
Bad Homburg v. d. Höhe

We have performed an independent limited assurance engagement on the separate non-financial group report as well as the by reference qualified part of the group management report "Group's business model", (further "non-financial group report"), of Fresenius SE & Co. KGaA, Bad Homburg v. d. Höhe (further "Fresenius"or "Company") according to § 315b, 315c in connection with 289c to 289e of the German Commercial Code (HGB) for the period from January 1 to December 31, 2019.

MANAGEMENT'S RESPONSIBILITY

The legal representatives of Fresenius are responsible for the preparation of the non-financial group report in accordance with §§ 315b, 315c in connection with 289c to 289e HGB.

This responsibility of the legal representatives includes the selection and application of appropriate methods to prepare the non-financial group 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 non-financial group report in a way that is free of – intended or unintended – material misstatements.

INDEPENDENCE AND QUALITY ASSURANCE ON THE PART OF THE AUDITING FIRM

We are independent from the company 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 legal 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 non-financial group report based on our work performed within a 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 non-financial group report, 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, issue 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.

[1] Our engagement applied to the German version of the separate non-financial group report. This text is a translation of the Independent Assurance Report issued in German, whereas the German text is authoritative.

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

- Inquiries of personnel of the CSR core team who are responsible for the materiality analysis to get an understanding of the process for identifying material topics and respective report boundaries for Fresenius
- A risk analysis, including a media research, to identify relevant information on Fresenius' sustainability performance in the reporting period
- Evaluation of the design and implementation of the systems and processes for the collection, processing, and control of disclosure on environmental, employee, and social matters, respect for human rights as well as anti-corruption and bribery matters, including the collection and consolidation of quantitative data
- Inquiries of personnel who are responsible for determining disclosures and for compiling the disclosures on concepts, due diligence processes, results, and risks, the conduction of internal controls, and consolidation of the disclosures
- Evaluation of selected internal and external documents
- Analytical evaluation of data and trends of quantitative disclosures which are reported by all sites on group level
- Assessment of local data collection and reporting processes and reliability of reported data via a sampling survey at the Clinica La Luz SL, Madrid, of Helios Healthcare Spain, S.L.U. and the Fresenius Medical Care site in Ogden, UT, of Fresenius USA Manufacturing Inc. (United States of America)
- 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 non-financial group report of Fresenius SE & Co. KGaA for the period 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 Fresenius SE & Co. KGaA, Bad Homburg v. d. Höhe, only. We assume no responsibility with regard to any third parties.

Our assignment for the Supervisory Board of Fresenius SE & Co. KGaA, Bad Homburg v. d. Höhe, 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 report, each recipient confirms notice of provisions of the General Engagement Terms (including the limitation of our liability for negligence to €4 million as stipulated in No. 9) and accepts the validity of the General Engagement Terms with respect to us.

Frankfurt am Main, February 19, 2020

KPMG AG
Wirtschaftsprüfungsgesellschaft

[Original German version signed by:]

Glöckner	Brokof
Wirtschaftsprüfer	Wirtschaftsprüferin
[German Public Auditor]	[German Public Auditor]

CORPORATE GOVERNANCE

4

CORPORATE GOVERNANCE DECLARATION AND REPORT.

The Supervisory Board and the Management Board are committed to responsible management that is focused on achieving a sustainable increase in the value of the Company. Long-term corporate strategies, solid financial management, strict adherence to legal and ethical business standards, and transparency in corporate communication are key factors.

In this Corporate Governance Declaration, the Supervisory Board of Fresenius SE & Co. KGaA and the Management Board of the general partner of Fresenius SE & Co. KGaA, Fresenius Management SE (Management Board), report on corporate management pursuant to Sections 289 f and 315 d of the German Commercial Code (HGB) and on the corporate governance of the Company pursuant to the German Corporate Governance Code (Corporate Governance Report). The Corporate Governance Declaration and the Corporate Governance Report are published on our website, see www.fresenius.com/corporate-governance.

CORPORATE GOVERNANCE DECLARATION

GROUP MANAGEMENT AND SUPERVISION STRUCTURE AND CORPORATE BODIES

GROUP MANAGEMENT AND SUPERVISION STRUCTURE

The Company has the legal form of a KGaA (Kommanditgesellschaft auf Aktien – partnership limited by shares). The **Annual General Meeting**, the **Supervisory Board**, and the **general partner** Fresenius Management SE are the legal corporate bodies. There have been no changes in the Group management and the supervision structure in the reporting period. The chart on the following page provides an overview of the Group structure.

The articles of association of Fresenius SE & Co. KGaA, which, in addition to legal provisions, further define the responsibilities of the individual corporate bodies, can be downloaded from our website, see www.fresenius.com/corporate-governance.

SHAREHOLDERS

The shareholders uphold their rights at the Annual General Meeting, where they exercise their **voting rights**. Every ordinary share of Fresenius SE & Co. KGaA confers one vote. None of the shares carry multiple or preferential voting rights.

We report in detail on our investor relations activities on page 149 and in the section "Fresenius share" on page 30.

ANNUAL GENERAL MEETING

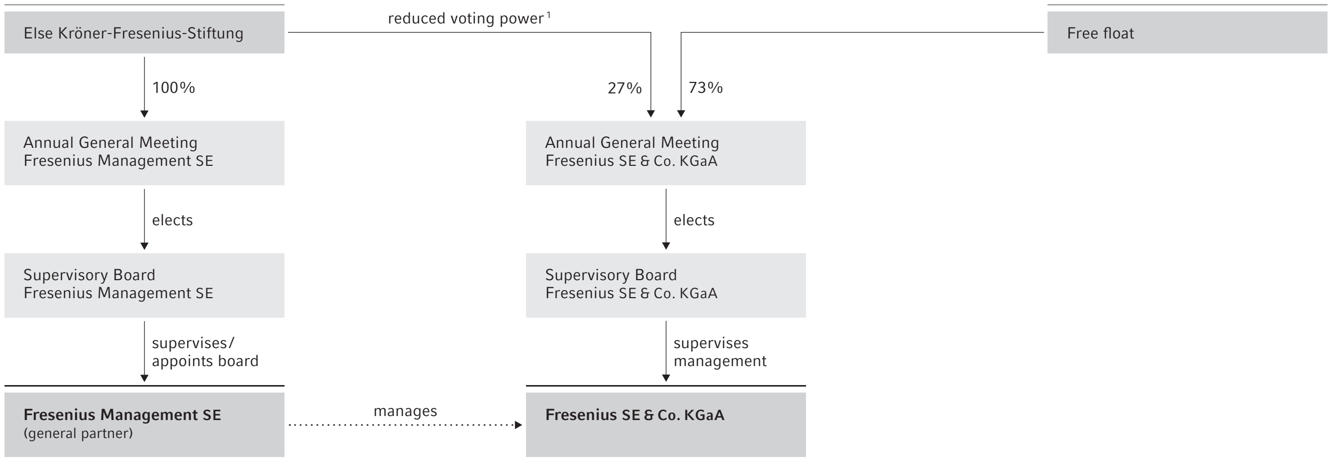
Our Annual General Meeting (AGM) was held on May 17, 2019, in Frankfurt / Main. Approximately 72% of the share capital was represented.

During the AGM, the shareholders approved the proposal made by the general partner and the Supervisory Board to increase the 2018 dividend by 7% to €0.80 per ordinary share with a majority of more than 90% of the votes cast. Shareholder majorities of around 98% and 88%, respectively, approved the actions of the general partner and the Supervisory Board in 2018.

With regard to certain subject matters, legally required voting right exclusions exist for the general partner and in some instances for its sole shareholder, the Else Kröner-Fresenius-Stiftung. These pertain, for example, to the appointment of the Supervisory Board of Fresenius SE & Co. KGaA, the approval of the actions of the general partner and the members of the Supervisory Board, and the selection of the auditor. This guarantees that the remaining shareholders retain the sole authority to decide on these matters, especially those that pertain to the supervision of management.

Documents and information on the Annual General Meeting, as well as the voting results, are available on our website at www.fresenius.com/annual-general-meeting.

STRUCTURE OF FRESENIUS SE & CO. KGAA



[1] For selected items no voting power, e.g., election of Supervisory Board of Fresenius SE & Co. KGaA, discharge of general partner and Supervisory Board of Fresenius SE & Co. KGaA, election of the auditor

MANAGEMENT BOARD AND SUPERVISORY BOARD PROCEDURES

The **responsibilities** are distributed as follows in Fresenius SE & Co. KGaA: the Management Board of the general partner is responsible for conducting the business of Fresenius SE & Co. KGaA. The Supervisory Board of Fresenius SE & Co. KGaA supervises the management of the Company's business by the general partner.

General partner – Management and Supervisory Boards

The general partner, Fresenius Management SE, represented by its Management Board, manages Fresenius SE & Co. KGaA at its own responsibility and conducts its business. The Management Board formulates the Company's strategy, discusses it with the Supervisory Boards of Fresenius Management SE and Fresenius SE & Co. KGaA, and oversees its implementation. Its actions and decisions are aligned with the best interests of Fresenius SE & Co. KGaA. The Management Board is committed to increasing the value of the Company on a sustainable basis. The rules of procedure for the Management Board were established by the Supervisory Board of Fresenius Management SE. They define the activities within the board more specifically, especially with regard to the individual duties and responsibilities of the members, matters reserved for the full Management Board, and resolutions to be passed by the full Management Board.

The Management Board consists of seven members: the Chairman, the Chief Financial Officer, the Chief Legal and Compliance Officer and Labor Relations Director, and the chief executive officers of the four business segments. This ensures that the full Management Board is kept constantly informed about important events, plans, developments, and measures within the business segments. According to the rules of procedure, the CEO is responsible for coordinating the business segments, the general corporate policy, and the investment policy. The subject of Group sustainability is also directly reported to the CEO. Further information on sustainability matters can be found in the Group Non-financial Report on pages 90 ff.

The Group departments Finance, Group Controlling, Internal Audit, and Tax report to the Chief Financial Officer directly. Further, the Chief Financial Officer coordinates cybersecurity activities at Fresenius.

Members of the Management Board also lead internal working groups or committees, for example the Compliance Steering Committee. Further information is included on page 110 of the Group Non-financial Report.

There are no Management Board committees owing to Fresenius SE & Co. KGaA's role as an operating holding company. The Management Board is listed on page 269 of the Annual Report.

Members of the Management Board are appointed for a maximum period of five years. Following the recommendation of the Code, first-time appointments are for a three-year period.

The **meetings of the Management Board** are convened as required, but at least once a month, and are chaired by the Chairman of the Management Board or, if he is incapacitated, by the Chief Financial Officer or, if she is also incapacitated, by the Management Board member present who is most senior in age. However, Management Board meetings are usually held twice a month. The person chairing the meeting decides the order in which the items on the agenda are dealt with and the form in which the voting is conducted. The Management Board passes its resolutions by a simple majority of the votes cast or, outside its meetings, by a simple majority of its members, except in cases where mandatory provisions of law impose stricter requirements. The Chairman of the Management Board has the casting vote if a vote is tied. If the Chairman is incapacitated or absent, the motion is deemed rejected if a vote is tied. The rules of procedure for the Management Board also govern the relations between the Management Board and the Supervisory Board of the general partner, as well as between the general partner and the Supervisory Board of Fresenius SE & Co. KGaA, and also matters that require approval of the general partner's Supervisory Board.

As a European company (SE – Societas Europaea), Fresenius Management SE has its own **Supervisory Board**. It consists of six members, and its Chairman is Dr. Gerd Krick. The Supervisory Board appoints the members of the Management Board of Fresenius Management SE and supervises and advises the Management Board in conducting business. If necessary, e.g., in order to discuss or decide on matters concerning the Management Board, the Supervisory Board meets without the Management Board. It has established its own rules of procedure.

The Supervisory Board members of Fresenius Management SE can be found on page 270 of the Annual Report. Dr. Karl Schneider resigned from the Supervisory Board of Fresenius Management SE effective December 31, 2019. His successor as of January 1, 2020, is Mr. Wolfgang Kirsch.

The Supervisory Board of Fresenius SE & Co. KGaA

The Supervisory Board of Fresenius SE & Co. KGaA supervises the management of the Company's business by the general partner Fresenius Management SE. It supervises business operations to ensure that corporate decisions are compliant, suitable, and financially sound. In addition, the Supervisory Board reviews the Group's annual financial statements, taking into account the auditor's reports. Another important part of the Supervisory Board's activities is the work conducted within the committees formed in accordance with the requirements of the German Stock Corporation Act and the recommendations of the Code.

The Management Board of the general partner – Fresenius Management SE – continuously informs the Supervisory Board of the corporate development, planning, and strategy. The Supervisory Board of Fresenius Management SE appoints the members of the Management Board of the general partner and also ensures long-term succession planning. This is based on discussions with members of the Management Board and impressions of other managers gained at the meetings of the Supervisory Boards of Fresenius Management SE and Fresenius SE & Co. KGaA. In this way, the Supervisory Board can form an opinion on potential successors from within the Company.

The Supervisory Board of Fresenius SE & Co. KGaA consists of 12 members. The Supervisory Board members can be found on page 267 f. of the Annual Report. Half of its members are elected by the AGM. The proposals for the members of the Supervisory Board primarily take account of the knowledge, ability, and expert experience required to perform the tasks. The election proposals provided by the Supervisory Board will reflect its designated **objectives** as well as its **profile of expertise and skills**. A Nomination Committee has been instituted for election proposals for the **shareholder representatives**. Its activities are aligned with the provisions of law and the Code. The European Works Council elects the **employee representatives** to the Supervisory Board of Fresenius SE & Co. KGaA. If an employee representative retires within their term of office, the substitute member will become a member of the Supervisory Board.

For the Supervisory Board of Fresenius SE & Co. KGaA, the law requires a quota of at least 30% women and 30% men. These mandatory quotas were met by the Supervisory Board in fiscal year 2019 and are still met. The average age within the Supervisory Board was around 62 at the end of 2019. All members have served an average of more than six years on the board. As it is in the Company's interest not to limit the selection of qualified candidates in a general way, the Supervisory Board confines itself to a general declaration of intent and particularly refrains from an age limit, as well as a regular limit on length of membership. The statutorily required declaration of conformity concerning the Code accordingly includes a justified limitation.

The competencies and the expert knowledge of all members support the discussion and the information exchange within the board. In 2019, the objectives for the composition and profile of skills and expertise of the Board were met. Further information can be found on pages 142 ff. of the Annual Report.

The Supervisory Board of Fresenius SE & Co. KGaA conducts its business in accordance with the provisions of law, the articles of association of Fresenius SE & Co. KGaA, and its rules of procedure. The Chairman is responsible for coordinating the activities of the Supervisory Board, chairing the **meetings**, and representing its interests externally. The Supervisory Board should convene once each calendar quarter, and must convene twice each calendar half-year. The meetings are convened and chaired by the Chairman or, if he is incapacitated, by a chairperson named by the Chairman. The person chairing the meeting decides the order in which the items on the agenda are dealt with and the form in which the voting is conducted. Unless other majorities are mandatory by law, the Supervisory Board passes its resolutions by a simple majority of the votes submitted in the voting. If a vote is tied, the Chairman has the casting vote or, if he does not take part in the voting, the matter is decided by the vote of the Deputy Chairman, who is a shareholder representative. The shareholder representatives and the employee representatives within the Supervisory Board conduct separate meetings on a regular basis.

The **articles of association** of Fresenius SE & Co. KGaA and the rules of procedure of the Supervisory Board of Fresenius SE & Co. KGaA regulate the details with regard to the Supervisory Board's election, constitution, term of office, meetings and resolutions, and rights and duties. They are published on our website, see www.fresenius.com/corporate-governance.

Independence and conflicts of interest

The Supervisory Board is of the opinion that all its members are independent. The Supervisory Board shall include what it deems to be an appropriate number of **independent members** who do not have any business or personal relationship with the Company, its corporate bodies, a controlling shareholder, or a party related to the latter that may give grounds for a material and not merely temporary conflict of interest. This also applies to Dr. Gerd Krick, who has been a member of the Supervisory Board for more than 12 years. His performance in office demonstrates the necessary critical distance to properly advise and monitor the general partner and its Management Board in every respect.

The general partner and the Supervisory Board of Fresenius SE & Co. KGaA are committed to the interests of the Company. The members of these bodies neither pursue personal interests in the performance of their duties nor grant unjustified advantages to other persons. Any sideline activities or transactions of the members of the executive bodies with the Company must be disclosed to the Supervisory Board without delay and approved by the Supervisory Board. The Supervisory Board of Fresenius SE & Co. KGaA reports to the AGM on any **conflicts of interest** and their treatment. There were no conflicts of interest of Supervisory Board members in the past fiscal year.

Fresenius publishes information on related parties on page 256 of the Annual Report.

Supervisory Board training and further education measures

The members of the Supervisory Board independently take on necessary training and further education measures required for their tasks. They keep themselves regularly informed, through internal and external sources, about the latest requirements with regard to their supervisory activities. The Supervisory Board at all times ensures that its members are suitably qualified, keep their professional knowledge up to date, and further develop their judgment and expertise. They are supported appropriately by the Company in accordance with the Code. External experts as well as experts from the Company provide information about important developments, for example about relevant new laws and precedents, or changes in the IFRS accounting and auditing standards. In addition, the Company holds an onboarding event for new members of the Supervisory Board.

The members of the Supervisory Board of Fresenius SE & Co. KGaA can be found on pages 267 to 268 of the Annual Report. On pages 18 to 21 of the Annual Report, the Supervisory Board reports on the main focuses of its activities and those of its committees in 2019.

Supervisory Board efficiency evaluation/self-assessment

The Supervisory Board of Fresenius SE & Co. KGaA carries out an efficiency evaluation, or an assessment of how effectively it as a whole and its committees perform their duties, at least once a year, most recently in March 2019.

The review is carried out through an open discussion within the full Supervisory Board. A **company-specific questionnaire** covering the salient points for a self-evaluation serves as the basis for the discussion. Among other things, this includes the organization and structuring of the meetings, the amount of information, and how this information was provided. The most recent review showed that the Supervisory Board, including its committees, assesses its organization as well as its work as efficient and that it performs its tasks effectively.

Cooperation between the general partner and Supervisory Board of Fresenius SE & Co. KGaA

Good corporate governance requires **trusting and efficient cooperation** between the Management and the Supervisory Board. The Management Board of the general partner and the Supervisory Board of Fresenius SE & Co. KGaA closely cooperate for the benefit of the Company. Open communication is essential. The common goal is to sustainably increase the company value in line with the corporate governance and compliance principles. The Management Board of the general partner and the Supervisory Board of Fresenius SE & Co. KGaA coordinate with each other, especially with regard to the Company's strategic focus. As the monitoring body, the Supervisory Board of Fresenius SE & Co. KGaA also needs to be fully informed about operating performance and corporate planning, as well as the risk situation, risk management, and compliance. The Management Board of the general partner provided this information in full and in compliance with its duties.

The representatives of the shareholders and of the employees may prepare the Supervisory Board meetings separately, and, if applicable, with members of the Management Board. Pre-meetings of the employee representatives as well as consultations of the shareholder representatives take place on a regular basis. If necessary, the Supervisory Board meets without the Management Board.

COMPOSITION AND PROCEDURES OF THE SUPERVISORY BOARD COMMITTEES

The Supervisory Board of Fresenius SE & Co. KGaA forms two **permanent committees** from among its members: the Audit Committee, consisting of five members, and the Nomination Committee, consisting of three members. The committee members were elected for the duration of their term as a member of the Supervisory Board of Fresenius SE & Co. KGaA. In accordance with the articles of association of Fresenius SE & Co. KGaA, only members of the Audit Committee receive additional compensation (Section 13 (5)). There is no Personnel Committee in the KGaA because the Supervisory Board of Fresenius SE & Co. KGaA is not responsible for appointing members of the Management Board of the general partner or for their contracts. Responsibility for these personnel matters lies with the Supervisory Board of the general partner.

The provisions for the Supervisory Board of Fresenius SE & Co. KGaA apply analogously to the committees. The committees hold meetings as required. The meetings are convened by the committee chairmen. They report during the following Supervisory Board meeting about the work of the respective committee. The rules of procedure for the committees are regulated in the rules of procedure of the Supervisory Board of Fresenius SE & Co. KGaA. The committees do not have their own rules of procedure.

The members of the Supervisory Board's committees are listed on page 268 of the Annual Report.

Audit Committee

The Audit Committee's function is, among other things, to prepare the Supervisory Board's approval of the financial statements – and the consolidated financial statements – and the Supervisory Board's proposal to the AGM on the appointment of the auditor for the financial statements, and to make a preliminary review of the proposal on the allocation of distributable profits. It also reviews the quarterly reports before they are published and – following discussions with the Management Board – engages the auditor for the financial statements (and concludes the agreement on the auditor's fees), determines the main focuses of the audit, and defines the auditor's reporting duties in relation to the Supervisory Board of Fresenius SE & Co. KGaA. Other matters within its remit are to review the effectiveness of the internal controls system, of the risk management system, of the internal audit system, and of the compliance.

The Audit Committee consists of Klaus-Peter Müller (Chairman), Konrad Kölbl, Dr. Gerd Krick, Hauke Stars, and Niko Stumpfögger. Klaus-Peter Müller is independent and has the required expertise in the fields stated in Section 100 (5) of the German Stock Corporation Act (AktG), as well as specialist knowledge and experience in the application of accounting principles and internal control processes.

The Audit Committee also examined in detail the non-audit services rendered additionally by the auditor KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, as well as the audit firm rotation in 2020.

Nomination Committee

The Nomination Committee proposes suitable candidates to the Supervisory Board for the nominations it makes to the AGM for the election of Supervisory Board members on the shareholders' side. It consists solely of shareholder representatives. In making its proposals, the Nomination Committee is guided by the requirements of the Code.

The Nomination Committee consists of Dr. Gerd Krick (Chairman), Michael Diekmann, and Klaus-Peter Müller.

Mediation Committee

Fresenius SE & Co. KGaA does not have a Mediation Committee because the provisions of the German Co-Determination Act that require such a committee do not apply to a partnership limited by shares and because the Code does not require such a committee either.

Joint Committee

For some matters, which are defined in further detail in Section 13c (1) of the articles of association of Fresenius SE & Co. KGaA, the general partner requires the approval of the Joint Committee if 40% of the consolidated sales, the consolidated balance sheet total, and the consolidated profit are affected by the matter. These include, for example, the divestiture and acquisition of large investments and business units or the divestiture of large business units from the assets of Fresenius SE & Co. KGaA or a wholly owned company. The approval of the Joint Committee is also required for certain legal transactions between Fresenius SE & Co. KGaA or its affiliates and the Else Kröner-Fresenius-Stiftung.

Dr. Gerd Krick and Michael Diekmann are members of the Joint Committee. The other members are Dr. Dieter Schenk (Chairman) and Dr. Karl Schneider (until December 31, 2019), who were appointed by the general partner. Mr. Klaus-Peter Müller has since replaced Dr. Karl Schneider on the Joint Committee. The Joint Committee did not meet in 2019.

Information on positions held by committee members on statutorily required supervisory boards and comparable domestic and foreign control bodies of other business enterprises can be found on pages 267 to 270 of the Annual Report.

OBJECTIVES FOR THE COMPOSITION, PROFILE OF SKILLS AND EXPERTISE, AND DIVERSITY CONCEPT

The Supervisory Board of Fresenius SE & Co. KGaA determined, in accordance with number 5.4.1 of the German Corporate Governance Code, concrete objectives for its composition and prepared a profile of skills and expertise for the entire board. Furthermore, it resolved on a diversity concept for the Management Board of Fresenius Management SE and the Supervisory Board of Fresenius SE & Co. KGaA.

OBJECTIVES FOR THE COMPOSITION OF THE SUPERVISORY BOARD AND PROFILE OF SKILLS AND EXPERTISE FOR THE ENTIRE BOARD

The Supervisory Board of Fresenius SE & Co. KGaA is to be composed in such a way that its members in entirety have the required knowledge, skills, and professional experiences for duly observing the tasks. Thereby, it is necessary to differentiate between the requirements for the individual Supervisory Board members and the requirements for the composition of the entire Board.

Requirements for the individual Supervisory Board members

The Supervisory Board members have to be professionally as well as personally qualified to advise and supervise the Management Board of a globally active health care Group.

Good corporate governance

Each Supervisory Board member is to have the knowledge of good corporate governance of a capital-market-oriented company required for duly observing its tasks. This includes knowledge of the main features of accounting, risk management, internal control mechanisms, and of compliance matters.

Sector experience and internationality

Each Supervisory Board member is to have general knowledge of the health care sector, as well as a basic understanding of the global activities of Fresenius.

Independence

A minimum of half of the Supervisory Board members and a minimum of the half of the shareholder representatives in the Supervisory Board are to be independent within the meaning of the German Corporate Governance Code. Independent in this meaning is someone who does not have a personal or business relationship with the Company, its governing bodies, a controlling shareholder, or a company affiliated with such that may cause a substantial and not merely temporary conflict of interest. The shareholder structure may be appropriately taken into account.

When assessing independence, in the view of the Supervisory Board, neither an appointment to the Management Board lapsed for more than two years nor the duration of the membership to the Supervisory Board exclude the classification as independent per se.

With regard to the employee representatives, the independence is not contested by the fact of representing employees nor by the employment relationship.

Individuals exercising an office in a body of a significant competitor of Fresenius or who hold, directly or indirectly, more than 3% of the voting capital in such are not to be a member of the Supervisory Board.

In cases where a Supervisory Board member is active for another company having business relationships with Fresenius, this activity is described in the section "Legal relationships with members of the corporate bodies" of the Annual Report.

Time availability and limit to the numbers of offices held

Each Supervisory Board member is to have sufficient time available for duly observing the office as Supervisory Board member and to comply with the limit to the offices held as recommended by the German Corporate Governance Code. Under the assumption of four meetings annually, the expected time expenditure of new members generally amounts to approximately 12 to 24 days a year. This includes the preparation and follow-up of the Supervisory Board's meetings, the review of reports to the Supervisory Board, the participation in the Annual General Meeting, and regular training. Thereby, it is to be considered that the time expenditure also depends on the membership of one or several Supervisory Board committees.

Age limit and duration limit on the term of membership

In order to not unduly limit the selection of qualified candidates, the Supervisory Board refrains from an age limit and a duration limit on the term of membership. The statutorily required declaration on the German Corporate Governance Code therefore includes a reasoned exception. The Supervisory Board is rather to include members with long-term experience and therefore generally older members. A balanced ratio of Supervisory Board members of various ages and various durations of term of membership is essential.

Requirements for the entire Board

Sector experience

The Supervisory Board in its entirety needs to be familiar with the health care sector. An appropriate number of Supervisory Board members are to have in-depth knowledge and/or experience in the important sectors of the Company's operations:

- dialysis products, dialysis services, and Care Coordination
- essential medicines, medical products, and services for the critically and chronically ill
- operation of hospitals
- planning, construction, and management of health care institutions

The Supervisory Board is to include an appropriate number of members with management experience in the health care sector.

Financial knowledge
The Supervisory Board in its entirety needs to have financial knowledge, in particular in the fields of accounting, reporting, and auditing. At least one member needs to have expert knowledge in the fields of accounting or annual auditing.

Knowledge of relevant legal issues as well as relevant regulatory and compliance matters
The Supervisory Board in its entirety is to be familiar with the relevant legal issues, as well as relevant regulatory and compliance matters.

Experience in the field of digitalization
The Supervisory Board in its entirety is to have the required understanding of the requirements of digitalization.

Internationality
Fresenius is present in more than 100 countries. Therefore, the Supervisory Board in its entirety is to have knowledge and experience in the regions important for Fresenius. The Supervisory Board is to include an appropriate number of members with, due to their origin or business experience, a particular relation to the international markets relevant for Fresenius.

Management experience
The Supervisory Board is to include an appropriate number of members with experience in managing or supervising a medium-sized or large company.

Diversity and appropriate representation of women
The Supervisory Board is to rely on as different as possible expert knowledge, skills, and experiences. Therefore, diversity is to be appropriately considered for its composition, and when making election proposals, in the Company's interest, attention should be paid to ensuring that the candidates' profiles reasonably complement each other.

At least 30% of the Supervisory Board are women and at least 30% are men. In general, the participation of women is a joint responsibility of the shareholder and employee sides. For nominations, both the shareholder and employee sides will consider, to the extent possible, whether the proportion of women can be increased with qualified female candidates. Please note that the responsibility for electing employee representatives is with the European Works Council. Therefore, the Supervisory Board cannot provide a recommendation.

In fiscal year 2019, there were no changes with regard to the objectives for the composition and profile of skills and expertise of the Board. The current composition of the Supervisory Board of Fresenius SE & Co. KGaA still fulfills the designated objectives. Furthermore, the current composition complies with the profile of competence. The Supervisory Board is of the opinion that all of its members are currently independent.

DIVERSITY CONCEPT

A diversity concept applies for the Management Board of Fresenius Management SE and the Supervisory Board of Fresenius SE & Co. KGaA. The concept is outlined below. The objectives of the diversity concept, the way in which they are implemented, and the results achieved in the fiscal year are also explained. Diversity enables us to look at matters from different perspectives and against the background of different experiences. Fresenius seeks diversity in the Management Board of Fresenius Management SE as well as in the Supervisory Board of Fresenius SE & Co. KGaA in terms of age, gender, education, professional background, and international experience.

Age

Finding a balance between expertise and novel approaches is important for the Management Board of Fresenius Management SE and the Supervisory Board of Fresenius SE & Co. KGaA. Therefore, both the Management Board of Fresenius Management SE and the Supervisory Board of Fresenius SE & Co. KGaA should have a balanced mix of experienced and new members, ensuring that different perspectives are taken into consideration in the decision-making processes and a continuous transfer of knowledge is fostered. Therefore, there is no age limit for members of the Management Board and Supervisory Board and also no duration limit for the term of membership of those serving on the Supervisory Board.

Gender

Fresenius believes that a mix of women and men on both the Management Board of Fresenius Management SE and the Supervisory Board of Fresenius SE & Co. KGaA is desirable. At least 30% of the Supervisory Board are women and at least 30% are men. In general, the participation of women is a joint responsibility of the shareholder and employee sides. For nominations, both the shareholder and employee sides will consider, to the extent possible, whether the proportion of women can be increased with qualified female candidates. Please note that the responsibility for electing employee representatives is with the European Works Council. Therefore, the Supervisory Board cannot provide a recommendation. Besides, qualification is the decisive criterion for filling board positions.

Professional background

For each one of the Company's key business areas, one member of the Management Board of Fresenius Management SE shall have longstanding experience:

- dialysis products, dialysis services, and Care Coordination
- essential medicines, medical devices, and services for the critically and chronically ill
- operation of hospitals
- planning, construction, and management of health care institutions

In addition, one of the members shall have long-standing experience and expertise in finance and one in corporate governance, law, and compliance. This takes into account the special requirements of a capital-market-oriented company.

The Supervisory Board of Fresenius SE & Co. KGaA shall have a reasonable number of members experienced in the management or supervision of a medium-sized or large company. A reasonable number of Supervisory Board members should have leadership experience in the health care industry. At least one member of the Supervisory Board shall have expertise in accounting or auditing.

International experience

Fresenius is present in more than 100 countries. Against this background, the majority of the members of the Management Board of Fresenius Management SE are expected to have international experience in at least one of the markets relevant to Fresenius, based on their background, professional training, or career.

An appropriate number of members of the Supervisory Board of Fresenius SE & Co. KGaA should also have a special connection to international markets relevant to Fresenius as a result of their origin or business experience.

Implementation of objectives

The implementation of the objectives of the Diversity Concept with regard to the composition of the Management Board of Fresenius Management SE will be reflected by future personnel decisions of the Supervisory Board of Fresenius Management SE. The Diversity Concept will be reflected in the proposals of candidates by the Supervisory Board of Fresenius SE & Co. KGaA to the AGM of the Company. As far as possible, this should be taken into account by the European Works Council in the election of employee representatives to the Supervisory Board of Fresenius SE & Co. KGaA.

In the past fiscal year, the Supervisory Board of Fresenius SE & Co. KGaA and the Management Board of Fresenius Management SE have remained unchanged. Overall, the objectives of the diversity concept continue to be fulfilled.

RELEVANT DISCLOSURES ON CORPORATE GOVERNANCE PRACTICES

The general partner, represented by its Management Board, manages the Company's business with the due care and diligence of a prudent and conscientious company director in compliance with the provisions of the law, the articles of association, the rules of procedure for the Management Board, the resolutions passed by the full Management Board, and the Supervisory Board of the general partner. The basic rules of corporate conduct, partly extending beyond the requirements of law, are defined in the **Fresenius Code of Conduct**. It defines the framework of our rules and specifies the key principles for our conduct within the Company and in our relations with external partners and the public. We have published the Fresenius Code of Conduct on our website at www.fresenius.com/compliance. In addition, all Fresenius business segments have implemented their own Codes of Conduct. They cover the specifics of their businesses and reflect the values of the Fresenius Code of Conduct.

COMPLIANCE MANAGEMENT SYSTEMS

For us, compliance means more than acting in accordance with laws and regulations. Compliance means doing the right thing. This means: we adhere to all rules, including legal requirements, internal guidelines, our commitments, and ethical principles. Compliance is an integral part of our corporate culture and our daily work.

Each of our business segments has appointed **Chief Compliance Officers,** dedicated members of the management board or a committee for compliance or a Compliance Committee, responsible for overseeing the development, implementation, and monitoring of the Compliance Management System (CMS) of the business segment. Furthermore, in line with the business structure and organization, the business segments have established compliance responsibilities at the respective organizational levels. The compliance organization supports management and employees in all compliance-related questions.

Our **Compliance Management Systems** are designed to achieve the implementation of our rules within the Company. We have implemented risk-based Compliance Management Systems in all our business segments and at Fresenius SE & Co. KGaA's corporate level. They comprise three pillars: Prevent, Detect, and Respond. Emphasis is placed on preventing any acts of non-compliance before they occur. Such systems consider the markets Fresenius is operating in. They are tailored to the specific requirements of each business segment.

Essential **measures for prevention** include comprehensive risk recording and risk assessment, adequate and effective policies and procedures, regular training, and continuous advice. Through objective indicators, we try to detect potential compliance risks early on. To this end, we have implemented tools for early risk detection and internal control structures, e.g., for cash and bank transactions, and monitor these measures regularly in workshops and internal audits.

We take even possible misconduct seriously. This is why Fresenius employees who are aware of potential misconduct, e.g., non-compliance with laws, regulations, or internal policies, can contact their superior or the responsible compliance function or report a potential compliance case anonymously through whistleblowing systems or dedicated e-mail addresses. Most whistleblowing systems are open not only to employees, but also to third parties, such as customers, suppliers, and other partners, via the corporate website in local languages.

Any illegal actions or violations of the rules may harm the individual and Fresenius. We do not tolerate non-compliance. If a violation of applicable regulations is detected, we will take the necessary actions to remediate the violation and prevent any recurrence. We also take all reports as an opportunity to review our company processes for possible improvements.

Further information on compliance and the Compliance Management Systems can be found on pages 110 ff. of our Group Non-financial Report.

RISK MANAGEMENT AND CONTROL SYSTEM

In our view, responsible risk management is a crucial element of good corporate governance. Fresenius has a systematic risk management and control system that allows the Management Board to identify risks and market trends at an early stage and to react promptly to relevant changes in our risk profile. It consists of the following elements:

- early warning system for risks,
- steering of financial, operational, and strategic risks,
- quality management systems,
- Compliance Management Systems,
- reporting on legal risks, and
- risk assessment in investment and acquisition processes.

The well-being of our patients is important to us. Our risk management and control system, as well as efficiently designed processes, help to enhance the Company's performance. Our risk management is reviewed as part of the annual audit of the financial statements. Both the risk management and control systems are regularly reviewed by the Management Board and the Internal Audit department. The Audit Committee of the Supervisory Board supervises the quality and effectiveness of the risk management system. Further information can be found in the Report of the Supervisory Board on pages 18 to 21 in the Annual Report 2019 and on pages 76 to 77 of the Management Report.

The Internal Audit department supports the Management Board as an independent function outside the Company's day-to-day operations. The department assesses internal processes from an objective viewpoint and with the necessary distance. Our goal is to create added value for Fresenius, and thus to help achieve organizational goals through improved internal controls, optimized business processes, cost reduction, and efficiency increases. Results from internal audits are evaluated both by the business segments and by the compliance organization to continuously improve preventive measures, for example to prevent corruption.

Fresenius Medical Care AG & Co. KGaA has its own internal risk management and control system.

GERMAN CORPORATE GOVERNANCE AND DECLARATION OF CONFORMITY

The German Corporate Governance Code aims to provide more transparency for investors with regard to existing regulations covering the management and monitoring of companies. Our value-enhancing strategies, as well as the majority of the guidelines, recommendations, and suggestions for **responsible management** contained in the Code, have been basic components of our activities for many years. Extensive information on Corporate Governance can be found on our website at www.fresenius.com/corporate-governance.

The Management Board of the general partner of Fresenius SE & Co. KGaA, Fresenius Management SE, and the Supervisory Board of Fresenius SE & Co. KGaA have issued the required **Declaration of Conformity** pursuant to Section 161 of the German Stock Corporation Act (AktG) and have made it available to shareholders on the website of the Company:

"Declaration by the Management Board of the General Partner of Fresenius SE & Co. KGaA, Fresenius Management SE, and the Supervisory Board of Fresenius SE & Co. KGaA on the German Corporate Governance Code pursuant to Section 161 German Stock Corporation Act (Aktiengesetz)

The Management Board of the General Partner of Fresenius SE & Co. KGaA, Fresenius Management SE (hereafter the Management Board), and the Supervisory Board of Fresenius SE & Co. KGaA declare that since the issuance of the previous Declaration of Conformity in October 2019, the recommendations of the "Government Commission on the German Corporate Governance Code" published by the Federal Ministry of Justice and Consumer Protection (Bundesministerium der Justiz und für Verbraucherschutz) in the official section of the Federal Gazette (Bundesanzeiger) (hereafter the Code) in the version of February 7, 2017, have been met and will also be met in the future. Only the following recommendations of the Code in the version of February 7, 2017, have not and will not be met as explained in the following:

▶ **Code number 5.1.2 paragraph 2 sentence 3: Age limit of Management Board members**
Pursuant to Code number 5.1.2 paragraph 2 sentence 3, an age limit shall be specified for the members of the Management Board. As in the past, Fresenius will continue to refrain from specifying an age limit for members of the Management Board. Complying with this recommendation would unduly limit the selection of qualified candidates.

▶ **Code number 5.4.1 paragraph 2 and paragraph 4: Specification of concrete objectives regarding the composition of the Supervisory Board, preparation of a competency profile and consideration when making election proposals**
Pursuant to Code number 5.4.1 paragraph 2 and paragraph 4, the Supervisory Board shall specify specific goals for its composition and prepare a competency profile for the entire Board. The targets shall be considered when making election proposals to the Annual General Meeting and at the same time aim to fulfill the competency profile for the entire Board. The status of the implementation shall be published in the Corporate Governance Report.

The Supervisory Board has specified concrete goals for its composition and has prepared a competency profile for the entire Board. In the interest of the company and to avoid unduly limiting the selection of qualified candidates, it has refrained from specifying an age limit and a regular limit for a member's tenure. The Supervisory Board shall instead also consist of members with long-term experience and thus individuals who are generally older. The balanced ratio of Supervisory Board members of various ages and with varying tenures is crucial. With this exception, the recommendations pursuant to Code number 5.4.1 paragraph 2 and paragraph 4 are met.

▶ **Precautionary statement of non-compliance with regards to the Management Board compensation of Mr. Rice Powell**
Management Board member Rice Powell receives his compensation exclusively from Fresenius Medical Care Management AG. At Fresenius Medical Care Management AG there are no compensation caps by specific amount for all compensation components and thus for overall compensation. A compensation cap by specific amount is therefore also not included in the corresponding model table of the compensation report. In addition, there is no Code-complying severance payment cap. With reference to Mr. Powell, a precautionary statement of non-compliance with Code numbers 4.2.3 paragraph 2 sentence 6, 4.2.3 paragraph 4, and 4.2.5 paragraph 3 is therefore made. Given the detailed explanations of the reasons for the non-compliance of Fresenius Medical Care AG & Co. KGaA, a reference is made to that company's Declaration of Conformity.

Bad Homburg v. d. H., December 2019
Management Board of the General Partner of
Fresenius SE & Co. KGaA, of Fresenius Management SE,
and Supervisory Board of Fresenius SE & Co. KGaA"

This declaration and all past declarations are published on our website, see www.fresenius.com/corporate-governance.

FURTHER INFORMATION ON CORPORATE GOVERNANCE

DIVERSITY

The Management Board takes diversity into account when filling executive positions. At Fresenius, the individual's qualifications are the paramount consideration in all hiring and promotion decisions. This means that women and men with comparable qualifications and suitability have the same career opportunities. Fresenius will continue to consistently act upon this principle, and will of course comply with the law on the equal participation of women and men in executive positions in private companies and the public service:

For the Supervisory Board of Fresenius SE & Co. KGaA, the law requires a quota of at least 30% women and 30% men. These mandatory quotas were met by the Supervisory Board elections in 2016.

The legally stipulated targets for the Management Board do not apply to Fresenius Management SE or to Fresenius SE & Co. KGaA. Due to its legal form, Fresenius SE & Co. KGaA does not have a Management Board. Fresenius Management SE is not listed on the stock exchange and is also not subject to codetermination.

In accordance with the legal requirements, the Management Board specifies composition of the two management levels directly below the Management Board as follows:

The first management level includes all Senior Vice Presidents and Vice Presidents who have an employment contract with Fresenius SE & Co. KGaA and who report directly to a Member of the Management Board. Through a decision effective January 1, 2016, the Management Board has set a target, which has to be met by December 31, 2020, and calls for a proportion of women of 33.3% at the first management level. This target corresponds with the proportion as of December 31, 2015.

The second management level includes all Vice Presidents who have an employment contract with Fresenius SE & Co. KGaA and who report directly to a member of the first management level. Through the decision effective January 1, 2016, the Management Board has set a target, which has to be met by December 31, 2020, and calls for a proportion of women of 37.5% at the second management level. This target corresponds with the proportion as of December 31, 2015.

The Management Board believes that inclusion in the company-wide long-term incentive programs is a strong indicator that an individual holds a leading executive position. The proportion of women in this group of our top 1,500 executives was 31.6% as of December 31, 2019.

Further information on diversity, as well as personnel development and personnel management, is included in the Group Management Report on page 43 f. and in the Group Non-financial Report on pages 114 ff.

DISCLOSURES ON DIRECTORS' DEALINGS / MANAGERS' TRANSACTIONS AND SHAREHOLDINGS IN 2019

According to the provisions of Art. 19 Market Abuse Regulation (MAR) regarding managers' transactions, persons discharging managerial responsibilities, as well as persons closely associated with them, shall notify the Company of transactions conducted on their own account relating to the shares or debt instruments of Fresenius SE & Co. KGaA or to derivatives or other financial instruments linked thereto. Managers' transactions in 2019 are disclosed on our website at www.fresenius.com/corporate-governance.

None of the Management or Supervisory Board members of the general partner or of the Supervisory Board of Fresenius SE & Co. KGaA directly or indirectly holds more than 1% of the shares issued by Fresenius or any related financial instruments.

The members of the Management and Supervisory Boards of Fresenius Management SE and the members of the Supervisory Board of Fresenius SE & Co. KGaA together hold 0.29% of the shares of Fresenius SE & Co. KGaA outstanding as of December 31, 2019, in the form of shares or related financial instruments and stock options under the Fresenius SE & Co. KGaA stock option plans. 0.27% are held by members of the Management Board of Fresenius Management SE, 0.02% by members of the Supervisory Board of Fresenius Management SE, and 0.01% by members of the Supervisory

Board of Fresenius SE & Co. KGaA. Due to the fact that some persons are members of both Supervisory Boards, the amount of shares or related financial instruments and stock options held by the Boards of Fresenius SE & Co. KGaA and Fresenius Management SE in total can be smaller than the cumulative holdings of the three Boards as reported herein.

There were no notifications that the shareholdings of members of the Management and Supervisory Boards had reached, exceeded, or fallen below the reporting thresholds stipulated in the German Securities Trading Act.

TRANSPARENCY AND COMMUNICATION

Fresenius adheres to all recommendations of the Code. Transparency is guaranteed by continuous communication with the public. In that way, we are able to validate and deepen the trust given to us. Of particular importance to us is the **equal treatment** of all recipients. To ensure that all market participants receive the same information at the same time, we post all important publications on our website at www.fresenius.com. We report in detail on investor relations activities on page 30 of the Annual Report.

FINANCIAL ACCOUNTING AND REPORTING

Fresenius, as a publicly traded company based in a member country of the European Union, has to prepare and publish its consolidated financial statements, as required, in accordance with International Financial Reporting Standards (IFRS) pursuant to Section 315e of the German Commercial Code (HGB).

The leading auditor Thomas Rodemer, KPMG AG Wirtschaftsprüfungsgesellschaft, has been responsible for the audit of the consolidated financial statements since 2018.

The Audit Regulation (EU) No. 537/2014 introduced the obligation for regular external rotation of the auditor and the Group auditor. For Fresenius SE & Co. KGaA, such external rotation is intended for fiscal year 2020. Accordingly, the election of the envisaged future auditor and Group auditor, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, shall be proposed to the Annual General Meeting 2020.

COMPENSATION REPORT

The compensation report summarizes the main elements of the compensation system for the members of the Management Board of Fresenius Management SE as the general partner of Fresenius SE & Co. KGaA, and in this regard notably explains the amounts and structure of the compensation paid to the Management Board as well as the principles for determining the compensation of the Supervisory Board and the amounts of the compensation. The compensation report is part of the Management Report of the annual financial statements and the annual consolidated financial statements of Fresenius SE & Co. KGaA. The compensation report is prepared on the basis of the recommendations of the German Corporate Governance Code dated February 7, 2017, as well as under consideration of the declaration of conformity of Fresenius SE & Co. KGaA of December 2019, and also includes the disclosures as required pursuant to the applicable statutory regulations, notably in accordance with the German Commercial Code.

COMPENSATION OF THE MANAGEMENT BOARD

The Supervisory Board of Fresenius Management SE is responsible for determining the compensation of the Management Board. The Supervisory Board is assisted in this task by a personnel committee which is also responsible for the tasks of a compensation committee. The personnel committee of Fresenius Management SE was composed of Dr. Gerd Krick, Dr. Dieter Schenk, and Dr. Karl Schneider.

The Annual General Meeting of Fresenius SE & Co. KGaA approved the compensation system for the members of the Management Board of the general partner on May 18, 2018, with an approval rate of approximately 63%. The next Annual General Meeting vote on the compensation system is planned for the Annual General Meeting in 2021.

The objective of the compensation system is to enable the members of the Management Board to participate reasonably in the sustainable development of the company's business and to reward them based on their duties and performance as well as their successes in managing the company's economic and financial position, giving due regard to the peer environment.

The compensation of the Management Board is, as a whole, performance-based and geared towards promoting sustainable corporate development. It is composed of three elements:

- Non-performance-based compensation (fixed compensation and fringe benefits)
- Short-term performance-based compensation (one-year variable compensation (bonus))
- Components with long-term incentive effects (multi-year variable compensation comprising performance shares and postponed payments of the one-year variable compensation/of the bonus)

In addition, there are pension commitments for the members of the Management Board.

The design of the individual elements is based on the following criteria:

COMPENSATION ELEMENTS

Non-performance-based compensation	Fixed compensation	
	Fringe benefits	
Performance-based compensation	Short-term	Bonus
	Long-term	Postponed payment of the bonus
		Long Term Incentive Plan 2018

PERFORMANCE-BASED COMPENSATION

Short-term	**Bonus**	▶ Annual cash payment after the end of the fiscal year ▶ Depending on the achievement of certain target parameters based on the net income attributable to Fresenius SE & Co. KGaA or the relevant business segments
Long-term	**Postponed payments of the bonus**	▶ The maturity of the one-year variable compensation can be postponed by two years. ▶ Payment only if (i) no subsequent adjustment is made to the relevant consolidated net income outside a tolerance range and (ii) the consolidated net income in the two relevant years is not significantly lower than the consolidated net income in the respective preceding years.
	LTIP 2018	▶ Performance Share Plan with a vesting period of four years and cash payment ▶ Two performance targets: growth rate of adjusted net income and relative total shareholder return based on the STOXX Europe 600 Health Care Index ▶ Overall target achievement: 0 – 200%

The fixed compensation was generally paid in monthly installments in the fiscal year 2019. Mr. Rice Powell was paid a part of his fixed compensation from Fresenius Medical Care North America in 24 installments. Moreover, the members of the Management Board received fringe benefits. These consisted mainly of insurance premiums, the private use of a company car, special payments such as rent supplements and reimbursement of certain other charges, tuition fees, and costs for the operation of intrusion detection systems, as well as contributions to pension and health insurance.

The performance-based compensation will be granted for the fiscal year 2019 as a short-term cash component (one-year variable compensation) and as compensation components with long-term incentive effects (performance shares and postponed payments of the one-year variable compensation).

In the fiscal year 2019, in accordance with his agreement with the Supervisory Board of Fresenius Management SE, Mr. Stephan Sturm has acquired shares of the company in the value of the net amount of his one-year variable compensation for the fiscal year 2018 and will hold them for at least three years. Thereby, the orientation of his compensation towards sustainable corporate development was enhanced voluntarily.

In order to appropriately take into account the business development of Fresenius Medical Care during the fiscal year 2018, in the fiscal year 2019, Mr. Rice Powell acquired shares in Fresenius Medical Care AG & Co. KGaA for a portion of his bonus for the fiscal year 2018 and will hold them for at least three years, pursuant to his commitment.

The amount of the one-year variable compensation in each case is dependent on certain target parameters oriented on the net income attributable to Fresenius SE & Co. KGaA and / or to the relevant business segments being achieved. In the case of the members of the Management Board with functional responsibility for the entire Group – such members being Mr. Stephan Sturm, Ms. Rachel Empey, and Dr. Jürgen Götz – the amount of the one-year variable compensation is based in its entirety on the respective net income attributable to Fresenius SE & Co. KGaA (after deduction of noncontrolling interest). For Mr. Mats Henriksson and Dr. Francesco De Meo, approximately half of the amount of the one-year variable compensation depends on the development of the net income attributable to Fresenius SE & Co. KGaA and for the remainder on the development of the net income of the business segment (in each case after deduction of noncontrolling interest) for which the respective member of the Management Board is responsible. Approximately half of the amount of the one-year variable compensation of Dr. Ernst Wastler is oriented on the net income attributable to Fresenius SE & Co. KGaA (after deduction of noncontrolling interest), as well as on the net income before tax and extraordinary income / expenditures of the VAMED Group. Mr. Rice Powell receives his compensation exclusively from Fresenius Medical Care.

The service agreements with Fresenius Management SE do not provide for a discretionary bonus.

For the fiscal years 2019 and 2018, the amount of cash payment to the Management Board of the general partner of Fresenius SE & Co. KGaA consisted of the following:

	Non-performance-based compensation				Short-term performance-based compensation		Cash compensation (without long-term incentive components)	
	Fixed compensation		Fringe benefits[2]		Bonus			
€ in thousands	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Stephan Sturm	**1,100**	1,100	**55**	102	**1,866**	1,868[3]	**3,021**	3,070
Dr. Francesco De Meo	**630**	630	**32**	25	**1,403**	1,415	**2,065**	2,070
Rachel Empey	**600**	600	**198**	231	**812**	812	**1,610**	1,643
Dr. Jürgen Götz	**510**	490	**45**	41	**950**	950	**1,505**	1,481
Mats Henriksson	**660**	660	**114**	107	**1,369**	1,356	**2,143**	2,123
Rice Powell[1]	**1,340**	1,270	**256**	195	**1,970**	2,376[4]	**3,566**	3,841
Dr. Ernst Wastler	**550**	525	**76**	75	**932**	932	**1,558**	1,532
Total	**5,390**	5,275	**776**	776	**9,302**	9,709	**15,468**	15,760

[1] Mr. Rice Powell received his compensation only from Fresenius Medical Care, of which Fresenius SE & Co. KGaA held around 31.64% of the total subscribed capital. As a member of the Management Board of Fresenius Management SE, his compensation has to be included in the compensation report of the Fresenius Group.
[2] Includes insurance premiums, private use of a company car, contributions to pension and health insurance, as well as other benefits. As compensation for long-term incentives from her former employer that were forfeited due to her change to Fresenius, Ms. Rachel Empey receives a fixed, additional special payment of €166,667 for each full year of service, limited to three such payments.
[3] In the fiscal year 2019, in accordance with his agreement with the Supervisory Board of Fresenius Management SE, Mr. Stephan Sturm has acquired shares of the company in the value of the net amount of his one-year variable compensation for the fiscal year 2018 and will hold them for at least three years. Thereby, the orientation of his compensation towards sustainable corporate development was enhanced voluntarily.
[4] In order to appropriately take into account the business development of Fresenius Medical Care during the fiscal year 2018, in the fiscal year 2019, Mr. Rice Powell acquired shares in Fresenius Medical Care AG & Co. KGaA for a portion of his bonus for the fiscal year 2018 and will hold them for at least three years, pursuant to his commitment.

In the fiscal year 2019, the one-year variable compensation, excluding the payment to Mr. Rice Powell, amounted to €7,332 thousand. This equals 98% of the total one-year variable compensation. The remaining part in an amount of €172 thousand was converted into a component based on a multi-year assessment and the payment was postponed by two years.

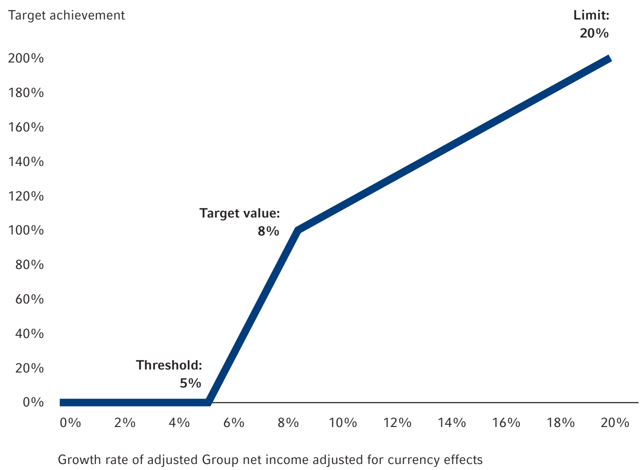
To ensure that the overall system of compensation of the members of the Management Board is oriented towards long-term and sustained corporate development, the compensation system provides that the share of long-term variable compensation components is at least equal in its amount to half of the total variable compensation components granted to the respective member of the Management Board. As a means of ensuring this minimum ratio in favor of the compensation components oriented towards the long term, it is expressly provided that the Supervisory Board may determine that the one-year variable compensation to be paid as a rule annually is converted (pro rata) into a variable compensation component based on a multi-year assessment, in order to also take account of any negative developments within the performance period.

This is done in such a way that the maturity of the yearly one-year variable compensation earned on a variable basis is postponed at the discretion of the Supervisory Board, either on a pro rata basis or in its entirety, by two years. At the same time, it is ensured that any payment is made to the member of the Management Board after expiration of such multi-year period only if (i) no subsequent adjustment of the net income (adjusted for extraordinary effects) attributable to Fresenius SE & Co. KGaA (after deduction of noncontrolling interest) decisive for assessing the one-year variable compensation beyond an amount equal to a tolerance range of 10% is made, and (ii) the amount of net income attributable to Fresenius SE & Co. KGaA (adjusted for extraordinary effects) in the two relevant subsequent years is not substantially less than the net income attributable to Fresenius SE & Co. KGaA (adjusted for extraordinary effects, after deduction of non-controlling interest) of the respective preceding fiscal years. In the event of the aforementioned conditions for payment being missed only to a minor and/or partial extent, the Supervisory Board may resolve on a corresponding pro rata payment of the converted portion of the one-year variable compensation. No interest is payable on the converted one-year variable compensation claim from the time when it first arises until the time of its effective payment. In this way, the one-year variable compensation can be converted pro rata or in its entirety into a genuine variable compensation component on a multi-year assessment basis, which also participates in any negative developments during the relevant performance period.

In the fiscal year 2019, as a further component with long-term incentive effect, the Management Board members were granted performance shares under the Fresenius SE & Co. KGaA Long Term Incentive Plan 2018 (LTIP 2018). Mr. Rice Powell was granted performance shares under the Fresenius Medical Care Management Board Long-Term Incentive Plan 2019 (MB LTIP 2019) of Fresenius Medical Care AG & Co. KGaA. Based on the LTIP 2018, both members of the Management Board and other executives were granted performance shares. In accordance with the division of powers under stock corporation law, grants to members of the Management Board were made by the Supervisory Board of Fresenius Management SE, and grants to other executives were made by the Management Board. The number of performance shares for Management Board members to be granted was determined by the Supervisory Board at the Supervisory Board's own due discretion, provided that generally all Management Board members received the same amount of performance shares, with the exception of the Chairman of the Management Board, who received approximately double the respective amount of performance shares.

The vesting of the performance shares granted under the LTIP 2018 is subject to several conditions, such as the expiration of a four-year performance period, the absence of a compliance violation, the achievement or exceeding of two performance targets, and the continuation of the service or employment relationship. The number of performance shares may change over a period of four years, depending on the level of achievement of the performance targets. This could entail the entire loss of all performance shares or also – at maximum – the doubling of their number.

GROWTH RATE OF
ADJUSTED GROUP NET INCOME
ADJUSTED FOR CURRENCY EFFECTS



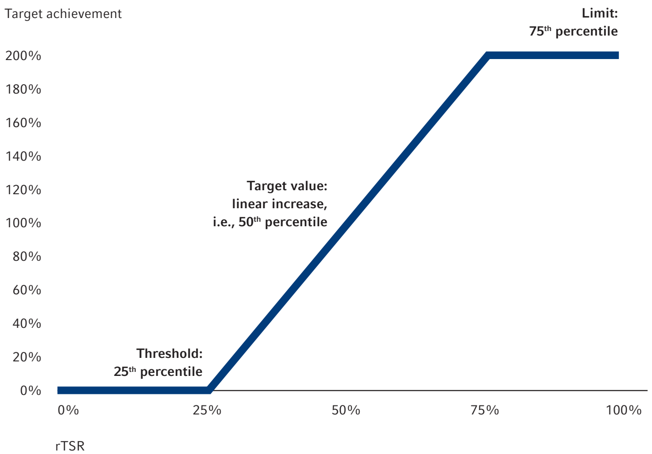
The LTIP 2018 has two equally weighted performance targets: firstly, the growth rate of the adjusted net income (adjusted for currency effects) and, secondly, the relative Total Shareholder Return based on the STOXX Europe 600 Health Care Index. Disbursement entitlement requires that at least one of the two performance targets must be reached or surpassed over the four-year performance period.

For the performance target "Net Income Growth Rate", a level of target achievement of 100% is reached when the same is at least 8% p. a. over the four-year performance period. If the growth rate falls below or corresponds to only 5% p. a., the level of target achievement is 0%. If the growth rate is between 5% p. a. and 8% p. a., the level of target achievement is between 0% and 100%, while, where the growth rate is between 8% p. a. and 20% p. a., the level of target achievement will be between 100% and 200%. Intermediate values are calculated through linear interpolation. The adjacent table shows the degree of target achievement between the threshold of 5% p. a. and the limit of 20% p. a.

For the "Total Shareholder Return" performance target, a target achievement of 100% is met when the Total Shareholder Return of Fresenius SE & Co. KGaA in comparison with the Total Shareholder Return of the other companies of the STOXX Europe 600 Health Care Index achieves an average ranking within the benchmark companies, i.e., exactly in the middle (50th percentile), over the four-year performance period. If the ranking corresponds to the 25th percentile or less, the level of target achievement is 0%. Where the ranking is between the 25th percentile and the 50th percentile, the level of target achievement is between 0% and 100%; and, for a ranking between the 50th percentile and the 75th percentile, between 100% and 200%. Intermediate values will also be calculated through linear interpolation.

The degree of target achievement between the threshold at the 25th percentile and the limit at the 75th percentile is presented in the following table.

RELATIVE TOTAL SHAREHOLDER RETURN
(STOXX EUROPE 600 HEALTH CARE)



Total Shareholder Return denotes the percentage change in the stock market price within the performance period including reinvested dividends and all capital measures, whereby capital measures are to be calculated through rounding down to the fourth decimal place.

To calculate the level of overall target achievement, the level of target achievement of the two performance targets are given equal weighting. The total number of performance shares vested on each plan participant is calculated through multiplying the number of performance shares granted by the overall target achievement. Four years after the grant, the vested performance shares will be paid out in cash. The number of vested performance shares is then multiplied by the average stock exchange price of Fresenius SE & Co. KGaA's share over a period of 60 stock exchange trading days prior to the lapse of this vesting period plus the total of the dividends per share of Fresenius SE & Co. KGaA paid by Fresenius SE & Co. KGaA between the grant date and the vesting date. The possible disbursement entitlement of a Management Board member is limited to a maximum of 250% of the grant value (cap).

In the event of violation of compliance rules, the Supervisory Board, in due exercise of its discretion, is entitled to reduce the number of performance shares vested on a member of the Management Board to zero. Furthermore, Fresenius SE & Co. KGaA is entitled to a complete or partial reimbursement in the event of violation of compliance rules in the period of three years following disbursement.

If a member of the Management Board leaves the company, the performance shares are forfeited as a matter of principle.

Until the end of the fiscal year 2017, benefits under LTIP 2013 of Fresenius SE & Co. KGaA were granted as another component with long-term incentive effect, which resulted in an inflow in the 2019 fiscal year and may result in an inflow in the future. The benefits consisted, on the one hand, of share-based compensation with cash settlement (phantom stocks) and on the other hand of stock options on the basis of the Stock Option Plan 2013 of Fresenius SE & Co. KGaA. Based on the LTIP 2013, both members of the Management Board and other executives were granted stock options and phantom stocks. In accordance with the division of powers under stock corporation law, grants to members of the Management Board were made by the Supervisory Board of Fresenius Management SE, and grants to other executives were made by the Management Board. The number of stock options and phantom stocks for Management Board members to be granted was determined by the Supervisory Board at the Supervisory Board's own due discretion, provided that generally all Management Board members received the same amount of stock options and phantom stocks, with the exception of the Chairman of the Management Board, who received double the respective amount of stock options and phantom stocks. At the time of the grant, the participants in LTIP 2013 had the right to elect whether they wished to receive stock options and phantom stocks in a ratio of 75 : 25, or in a ratio of 50 : 50.

Exercise of the stock options and the phantom stocks granted under LTIP 2013 of Fresenius SE & Co. KGaA is subject to several conditions, such as expiry of a four-year waiting period, observance of blackout periods, achievement of the specified performance target, and continuance of the service or employment relationship. The vested stock options can be exercised within a period of four years. The vested phantom stocks are settled on March 1 of the year following the end of the waiting period.

The amount of the cash settlement pursuant to the Phantom Stock Plan 2013 is based on the volume-weighted average market price of the share of Fresenius SE & Co. KGaA during the three months preceding the exercise date.

The respective performance target has been reached if the adjusted consolidated net income of the company (net income attributable to the shareholders of the company) has increased by a minimum of 8% per year in comparison to the previous year within the waiting period, after adjustment for foreign currency effects. The performance target has also been achieved if the average annual growth rate of the adjusted consolidated net income of the company during the four-year waiting period is at least 8%, adjusted for foreign currency effects. If, with respect to one or more of the four reference periods within the waiting period, neither the adjusted consolidated net income of the company has increased by a minimum of 8% per year in comparison to the previous year, after adjustment for foreign currency effects, nor the average annual growth rate of the adjusted consolidated net income of the company during the four-year waiting period is at least 8%, adjusted for foreign currency effects, the respective granted stock options and phantom stocks are forfeited on a pro-rata basis according to the proportion of the performance target that has not been achieved within the waiting period, i.e., by one fourth, by two fourths, by three fourths, or completely. If a member of the Management Board leaves the company, the stock options and phantom stocks are forfeited as a matter of principle.

The principles of the LTIP 2018 and the LTIP 2013 of Fresenius SE & Co. KGaA and of the MB LTIP 2019 of Fresenius Medical Care AG & Co. KGaA are described in more detail in note 35 of the notes of the Fresenius Group, Share-based compensation plans.

Furthermore, through fiscal year 2017, the members of the Management Board, with the exception of Ms. Rachel Empey and Mr. Rice Powell, were granted an entitlement to further share-based compensation with cash settlement (further phantom stocks) in the equivalent value of €100 thousand per Management Board member. With regard to the performance target and waiting period, the same conditions that pertain to the phantom stocks granted under LTIP 2013 apply to them.

For the fiscal years 2019 and 2018, the value of performance shares issued and the value of the postponed performance-based compensation, is shown in the following table.

The stated values for the year 2019 correspond to the fair value of the performance shares at the time of grant, namely a value of €45.36 per performance share of Fresenius SE & Co. KGaA and a value of US$ 69.71 per performance share of Fresenius Medical Care AG & Co. KGaA (2018: €67.45 per performance share of Fresenius SE & Co. KGaA and US$94.11 per performance share of Fresenius Medical Care AG & Co. KGaA).

At the end of the fiscal year 2019, the members of the Management Board held a total of 331,849 performance shares (2018: 133,434) and 138,385 phantom stocks (2018: 211,302) of Fresenius SE & Co. KGaA and 92,700 performance shares (2018: 55,463) and 10,596 phantom stocks (2018: 15,586) of Fresenius Medical Care AG & Co. KGaA. Furthermore, they held a total of 1,434,375 stock options (2018: 1,519,515) of Fresenius SE & Co. KGaA as well as 256,781 stock options (2018: 256,781) of Fresenius Medical Care AG & Co. KGaA.

LONG-TERM INCENTIVE COMPONENTS

	Performance shares [1]		Postponed payment of the one-year variable compensation		Total	
	Value, € in thousands		Value, € in thousands		Value, € in thousands	
	2019	2018	**2019**	2018	**2019**	2018
Stephan Sturm	**2,500**	2,500	**0**	0	**2,500**	2,500
Dr. Francesco De Meo	**1,300**	1,300	**103**	115	**1,403**	1,415
Rachel Empey	**1,300**	1,300	**0**	0	**1,300**	1,300
Dr. Jürgen Götz	**1,300**	1,300	**0**	0	**1,300**	1,300
Mats Henriksson	**1,300**	1,300	**69**	56	**1,369**	1,356
Rice Powell	**2,232**	2,391	**0**	0	**2,232**	2,391
Dr. Ernst Wastler	**1,300**	1,300	**0**	0	**1,300**	1,300
Total	**11,232**	11,391	**172**	171	**11,404**	11,562

[1] The amounts comprise all performance shares including performance shares and share based awards of Fresenius Medical Care AG & Co. KGaA that were granted in 2019 and 2018.

The development and the status of the stock options of the Management Board in the fiscal year 2019 are shown in the following table:

	Stephan Sturm	Dr. Francesco De Meo	Rachel Empey	Dr. Jürgen Götz	Mats Henriksson	Rice Powell [1]	Dr. Ernst Wastler	**Total [2]**
Options outstanding on January 1, 2019								
Number	456,390	247,500	28,125	270,000	247,500	256,781	270,000	**1,519,515**
Average exercise price in €	54.52	61.65	64.69	56.97	56.15	66.06	56.97	**57.01**
Options exercised during the fiscal year								
Number	85,140	0	0	0	0	0	0	**85,140**
Average exercise price in €	26.11							**26.11**
Average stock price in €	48.07							**48.07**
Options outstanding on December 31, 2019								
Number	371,250	247,500	28,125	270,000	247,500	256,781	270,000	**1,434,375**
Average exercise price in €	61.03	61.65	64.69	56.97	56.15	66.06	56.97	**58.84**
Average remaining life in years	4.3	4.2	5.9	3.9	3.8	3.0	3.9	**4.1**
Range of exercise prices in €	33.10 to 74.77	36.92 to 74.77	64.69	33.10 to 74.77	33.10 to 74.77	49.76 to 76.99	33.10 to 74.77	**33.10 to 74.77**
Exercisable options on December 31, 2019								
Number	135,000	112,500	0	135,000	135,000	256,781	135,000	**652,500**
Average exercise price in €	43.55	51.15		43.55	43.55	66.06	43.55	**44.86**

[1] Mr. Rice Powell holds stock options under the Fresenius Medical Care Stock Option Plan 2011.
[2] Only stock options of Fresenius SE & Co. KGaA, excluding stock options of Mr. Rice Powell

The following table shows the total compensation of the Management Board of the general partner of Fresenius SE & Co. KGaA for the years 2019 and 2018:

	Cash compensation (without long-term incentive components)		Long-term incentive components		Total compensation (including long-term incentive components)	
€ in thousands	**2019**	2018	**2019**	2018	**2019**	2018
Stephan Sturm	**3,021**	3,070	**2,500**	2,500	**5,521**	5,570
Dr. Francesco De Meo	**2,065**	2,070	**1,403**	1,415	**3,468**	3,485
Rachel Empey	**1,610**	1,643	**1,300**	1,300	**2,910**	2,943
Dr. Jürgen Götz	**1,505**	1,481	**1,300**	1,300	**2,805**	2,781
Mats Henriksson	**2,143**	2,123	**1,369**	1,356	**3,512**	3,479
Rice Powell	**3,566**	3,841	**2,232**	2,391	**5,798**	6,232
Dr. Ernst Wastler	**1,558**	1,532	**1,300**	1,300	**2,858**	2,832
Total	**15,468**	15,760	**11,404**	11,562	**26,872**	27,322

The entitlement to cash payment of a share-based compensation (performance shares and phantom stocks) only arises after the expiry of a four-year vesting period, just as stock options can only be exercised after a vesting period of four years. Their value is recognized over the vesting period as expense in the respective fiscal year. The expenses attributable to the fiscal years 2019 and 2018 are stated in the following table.

EXPENSES FOR LONG-TERM INCENTIVE COMPONENTS

€ in thousands	Performance shares/ Phantom stocks 2019	Performance shares/ Phantom stocks 2018	Stock options 2019	Stock options 2018	Total expenses for share-based compensation 2019	Total expenses for share-based compensation 2018
Stephan Sturm	**913**	-46	**909**	1,033	**1,822**	987
Dr. Francesco De Meo	**569**	-101	**616**	774	**1,185**	673
Rachel Empey	**223**	52	**75**	75	**298**	127
Dr. Jürgen Götz	**650**	-117	**568**	691	**1,218**	574
Mats Henriksson	**713**	-134	**482**	605	**1,195**	471
Rice Powell	**2,588**[1]	391[1]	**327**	659	**2,915**	1,050
Dr. Ernst Wastler	**650**	-117	**568**	691	**1,218**	574
Total	**6,306**	-72	**3,545**	4,528	**9,851**	4,456

[1] Includes expenses for performance shares and share based awards of Fresenius Medical Care AG & Co. KGaA

The short-term performance-based compensation is limited in its amount. As regards stock options and phantom stocks, there are contractually agreed limitation possibilities. This makes it possible to adequately take account in particular of those extraordinary developments that are not in any relevant proportion to the performance of the Management Board.

With regard to the compensation granted to the members of the Management Board starting fiscal year 2018, the service agreements with Fresenius Management SE provide for a cap regarding both every single variable compensation amount and overall compensation. Furthermore, they include an allocation cap in the amount of €6,000 thousand for Ms. Rachel Empey, Dr. Francesco De Meo, Dr. Jürgen Götz, Mr. Mats Henriksson, and Dr. Ernst Wastler and €9,000 thousand for Mr. Stephan Sturm.

Under the compensation system, the amount of the fixed and the total compensation of the members of the Management Board was, and will be, assessed giving particular regard to the relevant comparison values of other DAX companies and similar companies of comparable size and performance from the relevant industrial sector.

COMMITMENTS TO MEMBERS OF THE MANAGEMENT BOARD IN THE EVENT OF THE TERMINATION OF THEIR APPOINTMENT

There are individual contractual pension commitments for the Management Board members Mr. Stephan Sturm, Dr. Francesco De Meo, and Dr. Jürgen Götz based on their service agreements with the general partner of Fresenius SE & Co. KGaA. The Management Board member Dr. Ernst Wastler has a pension commitment from VAMED AG, Vienna; Fresenius SE & Co. KGaA has issued a guarantee for the commitments thereunder. The Management Board member Mr. Mats Henriksson has an individual contractual pension commitment from Fresenius Kabi AG. The Management Board member Mr. Rice Powell has received an individual contractual pension commitment from Fresenius Medical Care Management AG. Furthermore, he has acquired non-forfeitable entitlements from participating in pension plans for employees of Fresenius Medical Care North America, and during the fiscal year 2019, he participated in the U.S.-based 401(k) Savings Plan. This plan generally enables employees in the United States to invest part of their gross income into retirement plans. The Management Board member Ms. Rachel Empey does not have a pension commitment. With regard to the pension commitments for acting Management Board members as of December 31, the Fresenius Group had pension obligations of €46,870 thousand as of December 31, 2019 (2018: €36,882 thousand). The additions to pension liability in the fiscal year 2019 amounted to €9,988 thousand (2018: €4,940 thousand).

The pension commitments are as follows:

€ in thousands	As of January 1, 2019	Additions	**As of December 31, 2019**
Stephan Sturm	6,518	1,741	**8,259**
Dr. Francesco De Meo	3,713	1,103	**4,816**
Rachel Empey	0	0	**0**
Dr. Jürgen Götz	3,258	918	**4,176**
Mats Henriksson	5,416	1,317	**6,733**
Rice Powell	12,940	3,309	**16,249**
Dr. Ernst Wastler	5,037	1,600	**6,637**
Total	36,882	9,988	**46,870**

Each of the pension commitments provides for a pension and survivor benefit, depending on the amount of the most recent fixed compensation, from the 63rd year of life (or 65th year for Mr. Rice Powell), or, in the case of termination because of professional or occupational incapacity, from the time of ending active work. In deviation from this, Mr. Rice Powell has this entitlement already upon reaching the age of 63 if he has been a member of the Management Board of Fresenius Medical Care Management AG for at least ten years at the time of his final retirement from active employment; in this case, the benefits are reduced by 0.5% per calendar month that he leaves active employment before reaching the age of 65.

The pension's starting percentage of 30% of the last fixed compensation increases with every full year of service as a Management Board member by 1.5 percentage points, 45% being the attainable maximum.

Current pensions increase according to legal requirements (Section 16 of the German law to improve company pension plans, BetrAVG).

30% of the gross amount of any post-retirement income from an occupation of the Management Board member is offset against the pension for professional or occupational incapacity.

In the event of the death of one of the Management Board members, the widow receives a pension equivalent to 60% of the pension entitlement accruing at the time of death. In addition, biological children of the deceased Management Board member and/or, in individual cases, biological children of the deceased Management Board member's wife who were adopted by the deceased Management Board member as children, receive an orphan's pension equivalent to 20% of the pension entitlement accruing at the time of death until completion of their vocational training, but at the most until the age of 25 years. However, all surviving dependents' pensions are capped at an aggregate 90% of the Management Board member's pension entitlement.

If a Management Board member's service as a member of the Management Board of Fresenius Management SE (or Mr. Rice Powell as a member of the Management Board of Fresenius Medical Care Management AG) ends before the age of 63 years (or 65 years for Mr. Rice Powell) for reasons other than professional or occupational incapacity, the rights to the said pension benefits vest, but the pension payable upon the occurrence of a pensionable event is reduced pro rata according to the actual length of service as a Management Board member compared to the potential length of service until the age of 63 years (or 65 years for Mr. Rice Powell).

The pension commitment for Dr. Ernst Wastler provides for a normal pension, an early retirement pension, a professional incapacity pension, and a widow's and orphan's pension. The normal pension is payable at the earliest at the age of 60 years and the early retirement pension at the earliest at the age of 55 years. The pension benefits are equivalent to 1.2% per year of service based on the last fixed compensation, with a cap of 40%. The widow's pension (60%) and the orphan's pension (20% each) are capped in aggregate at not more than Dr. Ernst Wastler's pension entitlement at the time of death. Pensions, retirement, and other benefits from third parties are set off against the pension benefit if the credited periods of service overlap.

The Management Board member Mr. Mats Henriksson has solely a pension commitment from Fresenius Kabi AG from the period of his previous service. This pension commitment remained unaffected by the service agreement with Fresenius Management SE, beginning on January 1, 2013. It is based on the pension policy of the Fresenius companies, and provides for retirement, incapacity, and survivors' pensions. It does not set forth any deduction of other income or pension benefits. The widow's pension amounts to 60% of the incapacity or retirement pension to be granted at the time of death; the orphan's pension amounts to 10% (half-orphans) or 20% (orphans) of the incapacity or retirement pension to be granted at the time of death. The total entitlements of widows and orphans are limited to 100% of Mr. Mats Henriksson's pension entitlements.

A post-employment non-competition covenant was agreed upon for all Management Board members. If such a covenant becomes applicable, the Management Board members receive a waiting allowance that is generally equivalent to half of the respective annual fixed compensation for each year of respective application of the non-competition covenant, up to a maximum of two years.

The service agreements of the Management Board members do not contain any explicit provision for the event of a change of control.

Payments in the event of premature termination of a member's services for the Management Board, including fringe benefits, are limited to two years' compensation, at maximum no more than the compensation due for the remaining term of the respective service agreement (severance payment cap).

No severance payments will be due in the event of termination of the service agreement for cause on grounds attributable to the relevant member of the Management Board. The calculation of the severance payment cap is based on the total compensation within the meaning of Section 285 (1) No. 9a of the German Commercial Code (HGB) for the past fiscal year as well as the anticipated total compensation for the fiscal year in which the termination occurs (or for Mr. Rice Powell on the non-performance-based compensation components).

MISCELLANEOUS

All members of the Management Board have received individual contractual commitments for the continuation of their compensation in the event of sickness for a maximum period of 12 months, provided that, after 6 months of sickness-related absence, any insurance benefits that may be paid are to be deducted from such continued compensation. In the event of death of a member of the Management Board, the surviving dependents will receive three monthly payments after the month in which the death occurred, at maximum, however, until the expiry of the respective employment agreement.

During the fiscal year 2019, no loans or advance payment on future compensation components were granted to any member of the Management Board of Fresenius Management SE.

Fresenius SE & Co. KGaA undertook to indemnify the Management Board members, to the legally permitted extent, against any claims that may be asserted against them in the course of their service for the Company and its affiliated Group companies to the extent that such claims exceed their liability under German law. To cover such obligations, the Company purchased a directors' & officers' insurance, the deductible complying with the requirements of stock corporation law. The indemnification covers the period during which the respective member of the Management Board holds office, as well as any claim in this regard after termination of the service on the Management Board.

Based on pension commitments to former members of the Management Board, €1,154 thousand were paid in the fiscal year 2019 (2018: €1,101 thousand). The benefit obligation for these persons amounted to €24,863 thousand (2018: €22,319 thousand).

In the fiscal year 2019, €568 thousand (2018: €522 thousand) were paid to Dr. Ben Lipps as a result of a consultancy agreement entered into with Fresenius Medical Care Management AG. In 2019, an amendment to the agreement was made which provides for a one-off payment of €1,129 thousand for the remaining term of the agreement. This payment was also made in the fiscal year. All payments for services to be performed by him under the consulting agreement have thus been made.

TABLES DISPLAYING THE VALUE OF BENEFITS GRANTED AND ALLOCATIONS

The German Corporate Governance Code dated February 7, 2017, stipulates that specific information shall be presented in the compensation report pertaining to the benefits granted for the year under review as well as the allocations and service costs in/for the year under review. The model tables provided in the appendix of the German Corporate Governance Code shall be used to present the information.

The following tables contain disclosures on both the value of the benefits granted and on the allocations. They conform to the structure and to the specification of the model tables. The table displaying allocations additionally shows the allocation for the fiscal year, that is, without multi-year variable compensation/components with long-term incentive effect. This illustrates clearly which allocation is to be attributed to the activity in the respective year under review and which allocation results from the compensation components that were granted in the previous reporting year – or even several years. Through differentiation, the comparability of the respective development in compensation is also increased.

Benefits granted Value € in thousands	Stephan Sturm Chairman of the Management Board (since July 1, 2016) Board member since January 1, 2005				Dr. Francesco De Meo CEO Fresenius Helios Board member since January 1, 2008				Rachel Empey Chief Financial Officer Board member since August 1, 2017				Dr. Jürgen Götz Chief Legal and Compliance Officer, and Labor Relations Director Board member since July 1, 2007			
	2019	2019 min.	2019 max.	2018	**2019**	2019 min.	2019 max.	2018	**2019**	2019 min.	2019 max.	2018	**2019**	2019 min.	2019 max.	2018
Fixed compensation	**1,100**	1,100	1,100	1,100	**630**	630	630	630	**600**	600	600	600	**510**	510	510	490
Fringe benefits	**55**	55	55	102	**32**	32	32	25	**198**	198	198	231	**45**	45	45	41
Total non-performance-based compensation	**1,155**	1,155	1,155	1,202	**662**	662	662	655	**798**	798	798	831	**555**	555	555	531
One-year variable compensation[1]	**1,866**	1,750	2,300	1,868[2]	**1,403**	1,050	1,750	1,415	**812**	760	1,000	812	**950**	700	950	950
Multi-year variable compensation/ components with long-term incentive effect	**2,500**	0	6,250	2,500	**1,403**	0	3,250	1,415	**1,300**	0	3,250	1,300	**1,300**	0	3,250	1,300
Thereof postponed one-year variable compensation	**0**	0	n. a.	0	**103**	0	n. a.	115	**0**	0	n. a.	0	**0**	0	n. a.	0
Thereof performance shares (LTIP 2018) (five-year term)	**2,500**	0	6,250	2,500	**1,300**	0	3,250	1,300	**1,300**	0	3,250	1,300	**1,300**	0	3,250	1,300
Total non-performance-based and performance-based compensation	**5,521**	2,905	9,705	5,570	**3,468**	1,712	5,662	3,485	**2,910**	1,558	5,048	2,943	**2,805**	1,255	4,755	2,781
Service cost	**468**	468	468	455	**336**	336	336	325	**0**	0	0	0	**251**	251	251	234
Value of benefits granted[5]	**5,989**	3,373	10,173	6,025	**3,804**	2,048	5,998	3,810	**2,910**	1,558	5,048	2,943	**3,056**	1,506	5,006	3,015

Benefits granted Value € in thousands	Mats Henriksson CEO Fresenius Kabi Board member since January 1, 2013				Rice Powell CEO Fresenius Medical Care Board member since January 1, 2013				Dr. Ernst Wastler CEO Fresenius Vamed Board member since January 1, 2008			
	2019	2019 min.	2019 max.	2018	**2019**	2019 min.	2019 max.	2018	**2019**	2019 min.	2019 max.	2018
Fixed compensation	**660**	660	660	660	**1,340**	1,340	1,340	1,270	**550**	550	550	525
Fringe benefits	**114**	114	114	107	**256**	256	256	195	**76**	76	76	75
Total non-performance-based compensation	**774**	774	774	767	**1,596**	1,596	1,596	1,465	**626**	626	626	600
One-year variable compensation[1]	**1,369**	1,300	1,800	1,356	**2,211**	201	2,653	2,096[3]	**932**	650	950	932
Multi-year variable compensation/ components with long-term incentive effect	**1,369**	0	3,250	1,356	**2,232[4]**	0	n. a.	2,390[4]	**1,300**	0	3,250	1,300
Thereof postponed one-year variable compensation	**69**	0	n. a.	56					**0**	0	n. a.	0
Thereof performance shares (LTIP 2018) (five-year term)	**1,300**	0	3,250	1,300					**1,300**	0	3,250	1,300
Total non-performance-based and performance-based compensation	**3,512**	2,074	5,824	3,479	**6,039**	1,797	n. a.	5,951	**2,858**	1,276	4,826	2,832
Service cost	**216**	216	216	210	**828**	828	828	674	**153**	153	153	153
Value of benefits granted[5]	**3,728**	2,290	6,040	3,689	**6,867**	2,625	n. a.	6,625	**3,011**	1,429	4,979	2,985

[1] For the one-year variable compensation, there are no target values or comparable values for Board members who receive their compensation from Fresenius Management SE. The one-year variable compensation is calculated on the basis of bonus curves that are valid for several years. For this reason, the allocation from the one-year variable compensation is stated for the years 2019 and 2018.
[2] In the fiscal year 2019, in accordance with his agreement with the Supervisory Board of Fresenius Management SE, Mr. Stephan Sturm has acquired shares of the company in the value of the net amount of his one-year variable compensation for the fiscal year 2018 and will hold them for at least three years. Thereby, the orientation of his compensation towards sustainable corporate development was enhanced voluntarily.
[3] In order to appropriately take into account the business development of Fresenius Medical Care during the fiscal year 2018, in the fiscal year 2019, Mr. Rice Powell acquired shares in Fresenius Medical Care AG & Co. KGaA for a portion of his bonus for the fiscal year 2018 and will hold them for at least three years, pursuant to his commitment.
[4] Mr. Rice Powell was granted share-based payments from the programs of Fresenius Medical Care as follows:
in 2019: €657 thousand from the Share Based Award – New Incentive Bonus Plan 2010 and €1,575 thousand from the Management Board Long-Term Incentive Plan 2019
in 2018: €977 thousand from the Share Based Award – New Incentive Bonus Plan 2010 and €1,413 thousand from the Long Term Incentive Program 2016 – Performance Share Plan 2016,
[5] Furthermore, an allocation cap in the amount of €6,000 thousand for Ms. Rachel Empey, Dr. Francesco De Meo, Dr. Jürgen Götz, Mr. Mats Henriksson, and Dr. Ernst Wastler and €9,000 thousand for Mr. Stephan Sturm applies.

Allocations Value € in thousands	**Stephan Sturm** Chairman of the Management Board (since July 1, 2016) Board member since January 1, 2005		**Dr. Francesco De Meo** CEO Fresenius Helios Board member since January 1, 2008		**Rachel Empey** Chief Financial Officer Board member since August 1, 2017		**Dr. Jürgen Götz** Chief Legal and Compliance Officer, and Labor Relations Director Board member since July 1, 2007		**Mats Henriksson** CEO Fresenius Kabi Board member since January 1, 2013		**Rice Powell** CEO Fresenius Medical Care Board member since January 1, 2013		**Dr. Ernst Wastler** CEO Fresenius Vamed Board member since January 1, 2008	
	2019	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Fixed compensation	**1,100**	1,100	**630**	630	**600**	600	**510**	490	**660**	660	**1,340**	1,270	**550**	525
Fringe benefits	**55**	102	**32**	25	**198**	231	**45**	41	**114**	107	**256**	195	**76**	75
Total non-performance-based compensation	**1,155**	1,202	**662**	655	**798**	831	**555**	531	**774**	767	**1,596**	1,465	**626**	600
One-year variable compensation	**1,866**	1,868	**1,403**	1,415	**812**	812	**950**	950	**1,369**	1,356	**1,970**	2,376	**932**	932
Multi-year variable compensation/components with long-term incentive effect	**2,524**	965	**654**	2,545	**0**	0	**654**	965	**654**	2,979	**494**[1]	2,777[1]	**654**	965
Thereof postponed one-year variable compensation	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0			**0**	0
Thereof Stock Option Plan 2008 (five-year term)														
Issue 2012	**1,870**									2,014				
Thereof Stock Option Plan 2013 (five-year term)														
Issue 2013				1,580										
Thereof Phantom Stock Plan 2013 (five-year term)														
Issue 2013		765		765				765		765				765
Issue 2014	**523**		**523**				**523**		**523**				**523**	
Thereof further phantom stocks														
Issue 2013		200		200				200		200				200
Issue 2014	**131**		**131**				**131**		**131**				**131**	
Other	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0
Total non-performance-based and performance-based compensation	**5,545**	4,035	**2,719**	4,615	**1,610**	1,643	**2,159**	2,446	**2,797**	5,102	**4,060**	6,618	**2,212**	2,497
Service cost	**468**	455	**336**	325	**0**	0	**251**	234	**216**	210	**828**	674	**153**	153
Allocation including multi-year variable compensation/components with long-term incentive effect	**6,013**	4,490	**3,055**	4,940	**1,610**	1,643	**2,410**	2,680	**3,013**	5,312	**4,888**	7,292	**2,365**	2,650
Allocation for the year under review (not including multi-year variable compensation/components with long-term incentive effect)	**3,489**	3,525	**2,401**	2,395	**1,610**	1,643	**1,756**	1,715	**2,359**	2,333	**4,394**	4,515	**1,711**	1,685

[1] Mr. Rice Powell had this allocation from the share-based compensation plans of Fresenius Medical Care:
in 2019: €150 thousand from the Share Based Award – New Incentive Bonus Plan 2010 issue 2015 and €344 thousand from the Long Term Incentive Program 2011 – Phantom Stock Plan 2011 issue 2014
in 2018: €131 thousand from the Share Based Award – New Incentive Bonus Plan 2010 issue 2014, €2,536 thousand from the Long Term Incentive Program 2011 – Stock Option Plan 2011 issue 2011, and €110 thousand from the Long Term Incentive Program 2011 – Phantom Stock Plan 2011 issue 2013.

COMPENSATION OF THE SUPERVISORY BOARD

The compensation of the Supervisory Board is determined by the Annual General Meeting and is subject to the provisions contained in Section 13 of the articles of association of Fresenius SE & Co. KGaA.

Each member of the Supervisory Board shall receive an amount of €150 thousand annually for each full fiscal year as fixed compensation, payable after the end of the fiscal year. In addition, each member of the Supervisory Board shall receive variable success-oriented compensation for each full fiscal year that is oriented on the respective average growth rate of the net income attributable to shareholders of Fresenius SE & Co. KGaA for the compensation year and the two preceding fiscal years (three-year average growth of the net income attributable to shareholders of Fresenius SE & Co. KGaA).

The calculation of the amount of this variable compensation shall be made in accordance with the following formula:

Three-year average growth of net income attributable to shareholders of Fresenius SE & Co. KGaA	Variable compensation
> 0 to 2.5%	€30,000
> 2.5 to 5%	€60,000
> 5 to 7.5%	€90,000
> 7.5 to 10%	€120,000
> 10%	€150,000

A claim to grant variable compensation shall only accrue from the achievement of three-year annual growth of the net income attributable to shareholders of Fresenius SE & Co. KGaA of more than 0%. On the achievement of the five percentage corridors described above, the amounts of variable compensation shall each be provided in full, i.e., no interpolation shall take place within these corridors. The net income attributable to shareholders of Fresenius SE & Co. KGaA disclosed in the consolidated annual financial statements shall be authoritative in each case. This variable compensation is limited to a maximum amount of €150 thousand p. a. The disbursement of variable compensation shall generally be made annually, provided targets have been reached and in each case at the end of the calendar quarter in which the annual financial statements of the Company are approved by the Annual General Meeting. If the Annual General Meeting approves a resolution providing higher compensation, this shall apply.

The Chairman of the Supervisory Board receives three times and his deputies one and a half times the fixed compensation of a member of the Supervisory Board.

A member of the Audit Committee of the Supervisory Board shall for their membership receive additional fixed compensation of €20 thousand and the Chairman of the Audit Committee twice this amount.

If a fiscal year does not encompass a full calendar year or if a member of the Supervisory Board is on the Supervisory Board only for a part of the fiscal year, the compensation shall be paid on a pro rata temporis basis. This applies accordingly to membership of the Audit Committee of the Supervisory Board.

The members of the Supervisory Board shall be refunded expenses incurred when exercising their functions, which also includes applicable value-added tax due for payment.

Fresenius SE & Co. KGaA shall provide members of the Supervisory Board with insurance coverage to an appropriate extent for exercising Supervisory Board activities.

If a member of the Supervisory Board of Fresenius SE & Co. KGaA is at the same time a member of the Supervisory Board of the general partner Fresenius Management SE and receives compensation for his services on the Supervisory Board of Fresenius Management SE, compensation shall be reduced by half. The same applies with respect to the additional part of compensation for the Chairman, provided he is simultaneously the Chairman of the Supervisory Board of Fresenius Management SE; this applies to his deputies accordingly, provided the deputies are at the same time the deputies of the Chairman of the Supervisory Board of Fresenius Management SE. If a deputy of the Chairman of the Supervisory Board of Fresenius SE & Co. KGaA is at the same time the Chairman of the Supervisory Board of Fresenius Management SE, he shall not receive compensation for his service as Deputy Chairman of the Supervisory Board of Fresenius SE & Co. KGaA. According to Section 7 of the articles of association of Fresenius SE & Co. KGaA, the compensation of the Supervisory Board of Fresenius Management SE will be charged to Fresenius SE & Co. KGaA.

Additionally, in his capacity as Chairman of the Supervisory Board of Fresenius Management SE, Dr. Gerd Krick was reimbursed for the costs for the operation of an intrusion detection system in the amount of €1.2 thousand.

For the fiscal years 2019 and 2018, the compensation for the members of the Supervisory Boards of Fresenius SE & Co. KGaA and Fresenius Management SE (excluding expenses and reimbursements), including compensation for committee services, was as follows:

	Fixed compensation				Compensation for committee services				Variable compensation				Total compensation	
	Fresenius SE & Co. KGaA		Fresenius Management SE		Fresenius SE & Co. KGaA		Fresenius Management SE		Fresenius SE & Co. KGaA		Fresenius Management SE			
€ in thousands	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Dr. Gerd Krick	**225**	225	**225**	225	**20**	20	**20**	20	**45**	75	**45**	75	**580**	640
Michael Diekmann	**150**	150	**75**	75	**0**	0	**0**	0	**45**	75	**45**	75	**315**	375
Dr. Dieter Schenk	**0**	0	**225**	225	**0**	0	**10**	10	**0**	0	**90**	150	**325**	385
Niko Stumpfögger	**225**	225	**0**	0	**20**	7	**0**	0	**90**	150	**0**	0	**335**	382
Prof. Dr. med. D. Michael Albrecht	**150**	150	**0**	0	**0**	0	**0**	0	**90**	150	**0**	0	**240**	300
Bernd Behlert (since September 1, 2018)	**150**	50	**0**	0	**0**	0	**0**	0	**90**	50	**0**	0	**240**	100
Dr. Kurt Bock	**0**	0	**150**	150	**0**	0	**0**	0	**0**	0	**90**	150	**240**	300
Konrad Kölbl	**150**	150	**0**	0	**20**	20	**0**	0	**90**	150	**0**	0	**260**	320
Stefanie Balling	**150**	150	**0**	0	**0**	0	**0**	0	**90**	150	**0**	0	**240**	300
Frauke Lehmann	**150**	150	**0**	0	**0**	0	**0**	0	**90**	150	**0**	0	**240**	300
Prof. Dr. med. Iris Löw-Friedrich	**150**	150	**0**	0	**0**	0	**0**	0	**90**	150	**0**	0	**240**	300
Klaus-Peter Müller	**75**	75	**75**	75	**40**	40	**0**	0	**45**	75	**45**	75	**280**	340
Oscar Romero de Paco	**150**	150	**0**	0	**0**	0	**0**	0	**90**	150	**0**	0	**240**	300
Dr. Karl Schneider	**0**	0	**150**	150	**0**	0	**10**	10	**0**	0	**90**	150	**250**	310
Hauke Stars	**150**	150	**0**	0	**20**	20	**0**	0	**90**	150	**0**	0	**260**	320
Rainer Stein (up to August 31, 2018)	**0**	100	**0**	0	**0**	13	**0**	0	**0**	100	**0**	0	**0**	213
Total	**1,875**	1,875	**900**	900	**120**	120	**40**	40	**945**	1,575	**405**	675	**4,285**	5,185

DIRECTORS' & OFFICERS' INSURANCE

Fresenius SE & Co. KGaA has taken out a consequential loss liability insurance policy (D & O insurance), on an excess amount basis, for the members of the Management Board and the Supervisory Board of the general partner of Fresenius SE & Co. KGaA and for the Supervisory Board of Fresenius SE & Co. KGaA, as well as for all representative bodies of affiliates in Germany and elsewhere. The D & O policy applies throughout the world and runs until the end of June 2020. The policy covers the legal defense costs of a member of a representative body when a claim is made and, where relevant, any damages to be paid that are covered by the policy.

TABLE OF CONTENTS CONSOLIDATED FINANCIAL STATEMENTS

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FRESENIUS SE & CO. KGAA
CONSOLIDATED STATEMENT OF INCOME

€ in millions	Note	2019	2018
Sales	4	**35,409**	33,530
Cost of sales		**-25,061**	-23,696
Gross profit		**10,348**	9,834
Selling expenses		**-1,020**	-1,016
General and administrative expenses	8	**-4,386**	-3,877
Other operating income	9	**431**	441
Other operating expenses	9	**-126**	-287
Gain related to divestitures of Care Coordination activities	2, 3	**29**	809
Research and development expenses	7	**-645**	-653
Operating income (EBIT)		**4,631**	5,251
Interest income	10	**162**	355
Interest expenses	10	**-881**	-942
Income before income taxes		**3,912**	4,664
Income taxes	11	**-883**	-950
Net income		**3,029**	3,714
Noncontrolling interest	12	**1,146**	1,687
Net income attributable to shareholders of Fresenius SE & Co. KGaA		**1,883**	2,027
Earnings per share in €	13	**3.38**	3.65
Fully diluted earnings per share in €	13	**3.38**	3.63

The following notes are an integral part of the consolidated financial statements.

FRESENIUS SE & CO. KGAA
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

€ in millions	Note	2019	2018
Net income		**3,029**	3,714
Other comprehensive income (loss)			
Positions which will be reclassified into net income in subsequent years			
Foreign currency translation	28, 31	**398**	268
Cash flow hedges	28, 31	**-13**	15
Income taxes on positions which will be reclassified	28	**4**	-12
Positions which will not be reclassified into net income in subsequent years			
Change of fair value of equity investments	31	**9**	5
Actuarial losses on defined benefit pension plans	25, 28	**-222**	-62
Income taxes on positions which will not be reclassified	28	**55**	15
Other comprehensive income, net		**231**	229
Total comprehensive income		**3,260**	3,943
Comprehensive income attributable to noncontrolling interest		**1,237**	1,848
Comprehensive income attributable to shareholders of Fresenius SE & Co. KGaA		**2,023**	2,095

The following notes are an integral part of the consolidated financial statements.

FRESENIUS SE & CO. KGAA
CONSOLIDATED STATEMENT OF FINANCIAL POSITION

ASSETS

as of December 31, € in millions	Note	2019	2018
Cash and cash equivalents	14	**1,654**	2,709
Trade accounts and other receivables, less allowance for doubtful accounts	15	**7,176**	6,434
Accounts receivable from and loans to related parties		**100**	135
Inventories	16	**3,633**	3,218
Other current assets	17	**2,701**	2,294
I. Total current assets		**15,264**	14,790
Property, plant and equipment	18	**11,307**	10,366
Right-of-use assets	30	**5,959**	0
Goodwill	19	**27,737**	25,713
Other intangible assets	19	**3,869**	3,130
Other non-current assets	17	**2,031**	1,927
Deferred taxes	11	**839**	777
II. Total non-current assets		**51,742**	41,913
Total assets		**67,006**	56,703

LIABILITIES AND SHAREHOLDERS' EQUITY

as of December 31, € in millions	Note	2019	2018
Trade accounts payable		**1,905**	1,823
Short-term accounts payable to related parties		**46**	67
Short-term provisions and other short-term liabilities	20, 21	**6,193**	6,240
Short-term debt	22	**2,475**	2,354
Short-term debt from related parties		**3**	–
Current portion of long-term debt	22	**892**	353
Current portion of long-term lease liabilities	30	**793**	0
Current portion of bonds	23	**945**	1,744
Current portion of convertible bonds	24	**400**	493
Short-term accruals for income taxes		**232**	201
A. Total short-term liabilities		**13,884**	13,275
Long-term debt, less current portion	22	**6,117**	5,944
Long-term lease liabilities, less current portion	30	**5,646**	0
Bonds, less current portion	23	**9,522**	7,246
Convertible bonds, less current portion	24	**465**	850
Long-term provisions and other long-term liabilities	20, 21	**1,612**	1,634
Pension liabilities	25	**1,520**	1,235
Long-term accruals for income taxes		**242**	227
Deferred taxes	11	**1,418**	1,284
B. Total long-term liabilities		**26,542**	18,420
I. Total liabilities		**40,426**	31,695
A. Noncontrolling interest	26	**9,802**	9,597
Subscribed capital	27	**557**	556
Capital reserve	27	**3,989**	3,933
Other reserves	27	**12,422**	11,252
Accumulated other comprehensive loss	28	**-190**	-330
B. Total Fresenius SE & Co. KGaA shareholders' equity		**16,778**	15,411
II. Total shareholders' equity		**26,580**	25,008
Total liabilities and shareholders' equity		**67,006**	56,703

The following notes are an integral part of the consolidated financial statements.

FRESENIUS SE & CO. KGAA
CONSOLIDATED STATEMENT OF CASH FLOWS

January 1 to December 31, € in millions	Note	2019	2018
Operating activities			
Net income		**3,029**	3,714
Adjustments to reconcile net income to cash and cash equivalents provided by operating activities			
Depreciation and amortization	17, 18, 19, 30	**2,452**	1,494
Gain on sale of investments and divestitures	2	**-99**	-807
Change in deferred taxes	11	**71**	100
Gain on sale of fixed assets		**-8**	-4
Changes in assets and liabilities, net of amounts from businesses acquired or disposed of			
Trade accounts and other receivables, net	15	**-612**	-532
Inventories	16	**-315**	-279
Other current and non-current assets	17	**-368**	-345
Accounts receivable from / payable to related parties		**19**	-12
Trade accounts payable, provisions and other short-term and long-term liabilities	20, 21	**67**	223
Accruals for income taxes		**27**	190
Net cash provided by operating activities		**4,263**	3,742
Investing activities			
Purchase of property, plant and equipment	18	**-2,459**	-2,149
Proceeds from sales of property, plant and equipment		**26**	72
Acquisitions and investments, net of cash acquired and net purchases of intangible assets	2, 33	**-2,484**	-1,070
Proceeds from sale of investments and divestitures	2	**61**	1,683
Net cash used in investing activities		**-4,856**	-1,464

FRESENIUS SE & CO. KGAA
CONSOLIDATED STATEMENT OF CASH FLOWS

January 1 to December 31, € in millions	Note	2019	2018
Financing activities			
Proceeds from short-term debt	22	**1,029**	1,189
Repayments of short-term debt	22	**-936**	-427
Proceeds from long-term debt	22	**2,016**	181
Repayments of long-term debt	22	**-1,541**	-832
Repayments of lease liabilities	30	**-837**	0
Proceeds from the issuance of bonds	23	**3,174**	497
Repayments of liabilities from bonds	23	**-1,767**	-742
Repayments of convertible bonds	24	**-500**	0
Payments for the share buy-back program of Fresenius Medical Care	27	**-600**	-37
Proceeds/Payments of the accounts receivable securitization program	22	**381**	-299
Proceeds from the exercise of stock options	35	**49**	92
Dividends paid		**-952**	-904
Change in noncontrolling interest	26	**–**	9
Net cash used in financing activities		**-484**	-1,273
Effect of exchange rate changes on cash and cash equivalents		**22**	68
Net decrease/increase in cash and cash equivalents		**-1,055**	1,073
Cash and cash equivalents at the beginning of the reporting period	14	**2,709**	1,636
Cash and cash equivalents at the end of the reporting period	14	**1,654**	2,709

ADDITIONAL INFORMATION ON PAYMENTS THAT ARE INCLUDED IN NET CASH PROVIDED BY OPERATING ACTIVITIES

January 1 to December 31, € in millions	Note	2019	2018
Received interest		**64**	73
Paid interest		**-733**	-519
Income taxes paid		**-773**	-918

The following notes are an integral part of the consolidated financial statements.

FRESENIUS SE & CO. KGAA
CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

		Subscribed Capital			Reserves	
	Note	Number of ordinary shares in thousand	Amount € in thousands	Amount € in millions	Capital reserve € in millions	Other reserves € in millions
As of December 31, 2017		554,710	554,710	555	3,848	9,656
Adjustment due to the initial application of IFRS 9 and IFRS 15		0	0	0	0	-28
As of January 1, 2018, adjusted		554,710	554,710	555	3,848	9,628
Proceeds from the exercise of stock options	35	1,515	1,515	1	58	
Compensation expense related to stock options	35				27	
Dividends paid	27					-416
Purchase of noncontrolling interest	26					
Noncontrolling interest subject to put provisions	21, 31					13
Comprehensive income (loss)						
Net income						2,027
Other comprehensive income (loss)						
Cash flow hedges	28, 31					
Change of fair value of equity investments						
Foreign currency translation	28, 31					
Actuarial losses on defined benefit pension plans	25, 28					
Comprehensive income (loss)						2,027
As of December 31, 2018		556,225	556,225	556	3,933	11,252
Adjustment due to the initial application of IFRS 16	30	0	0	0	0	-46
As of January 1, 2019, adjusted		556,225	556,225	556	3,933	11,206
Proceeds from the exercise of stock options	35	1,155	1,155	1	36	
Compensation expense related to stock options	35				20	
Dividends paid	27					-445
Purchase of noncontrolling interest	26					
Share buy-back program of Fresenius Medical Care AG & Co. KGaA	27					-190
Noncontrolling interest subject to put provisions	21, 31					-32
Comprehensive income (loss)						
Net income						1,883
Other comprehensive income (loss)						
Cash flow hedges	28, 31					
Change of fair value of equity investments	28, 31					
Foreign currency translation	28, 31					
Actuarial losses on defined benefit pension plans	25, 28					
Comprehensive income (loss)						1,883
As of December 31, 2019		**557,380**	**557,380**	**557**	**3,989**	**12,422**

FRESENIUS SE & CO. KGAA
CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Accumulated other comprehensive income (loss)						
	Foreign currency translation € in millions	Cash flow hedges € in millions	Pensions € in millions	Equity investments € in millions	Total Fresenius SE & Co. KGaA shareholders' equity € in millions	Noncontrolling interest € in millions	Total shareholders' equity € in millions
As of December 31, 2017	-61	-60	-277	0	13,661	8,059	21,720
Adjustment due to the initial application of IFRS 9 and IFRS 15	0	0	0	0	-28	-2	-30
As of January 1, 2018, adjusted	-61	-60	-277	0	13,633	8,057	21,690
Proceeds from the exercise of stock options					59	33	92
Compensation expense related to stock options					27	5	32
Dividends paid					-416	-488	-904
Purchase of noncontrolling interest					0	112	112
Noncontrolling interest subject to put provisions					13	30	43
Comprehensive income (loss)							
Net income					2,027	1,687	3,714
Other comprehensive income (loss)							
Cash flow hedges		-1			-1	12	11
Change of fair value of equity investments				4	4	0	4
Foreign currency translation	99	–	-2		97	163	260
Actuarial losses on defined benefit pension plans			-32		-32	-14	-46
Comprehensive income (loss)	99	-1	-34	4	2,095	1,848	3,943
As of December 31, 2018	38	-61	-311	4	15,411	9,597	25,008
Adjustment due to the initial application of IFRS 16	0	0	0	0	-46	-98	-144
As of January 1, 2019, adjusted	38	-61	-311	4	15,365	9,499	24,864
Proceeds from the exercise of stock options					37	11	48
Compensation expense related to stock options					20	1	21
Dividends paid					-445	-507	-952
Purchase of noncontrolling interest					0	40	40
Share buy-back program of Fresenius Medical Care AG & Co. KGaA					-190	-410	-600
Noncontrolling interest subject to put provisions					-32	-69	-101
Comprehensive income (loss)							
Net income					1,883	1,146	3,029
Other comprehensive income (loss)							
Cash flow hedges		-4			-4	-6	-10
Change of fair value of equity investments				6	6	0	6
Foreign currency translation	256		-2		254	145	399
Actuarial losses on defined benefit pension plans			-116		-116	-48	-164
Comprehensive income (loss)	256	-4	-118	6	2,023	1,237	3,260
As of December 31, 2019	**294**	**-65**	**-429**	**10**	**16,778**	**9,802**	**26,580**

The following notes are an integral part of the consolidated financial statements.

FRESENIUS SE & CO. KGAA
CONSOLIDATED SEGMENT REPORTING

BY BUSINESS SEGMENT

	Fresenius Medical Care					Fresenius Kabi					Fresenius Helios				
€ in millions	**2019[1]**	**adj. for IFRS 16 effect 2019[1]**	2018[2]	Growth	adj. for IFRS 16 effect Growth	**2019[3]**	**adj. for IFRS 16 effect 2019[3]**	2018[3]	Growth	adj. for IFRS 16 effect Growth	**2019**	**adj. for IFRS 16 effect 2019**	2018	Growth	adj. for IFRS 16 effect Growth
Sales	**17,477**	**17,592**	16,547	6%	6%	**6,919**	**6,919**	6,544	6%	6%	**9,234**	**9,234**	8,993	3%	3%
thereof contribution to consolidated sales	**17,434**	**17,549**	16,515	6%	6%	**6,865**	**6,865**	6,489	6%	6%	**9,217**	**9,217**	8,983	3%	3%
thereof intercompany sales	**43**	**43**	32	34%	34%	**54**	**54**	55	-2%	-2%	**17**	**17**	10	70%	70%
contribution to consolidated sales	**49 %**	**50%**	49%			**20%**	**19%**	19%			**26%**	**26%**	27%		
EBITDA	**3,913**	**3,139**	3,095	26%	1%	**1,573**	**1,502**	1,434	10%	5%	**1,439**	**1,370**	1,429	1%	-4%
Depreciation and amortization	**1,557**	**858**	789	97%	9%	**368**	**302**	295	25%	2%	**414**	**355**	377	10%	-6%
EBIT	**2,356**	**2,281**	2,306	2%	-1%	**1,205**	**1,200**	1,139	6%	5%	**1,025**	**1,015**	1,052	-3%	-4%
Net interest	**-429**	**-257**	-301	-43%	14%	**-83**	**-72**	-108	23%	33%	**-176**	**-157**	-167	-5%	6%
Income taxes	**-452**	**-479**	-424	-7%	-13%	**-276**	**-277**	-246	-12%	-13%	**-173**	**-175**	-189	8%	7%
Net income attributable to shareholders of Fresenius SE & Co. KGaA	**1,236**	**1,306**	1,337	-8%	-2%	**797**	**802**	742	7%	8%	**664**	**670**	686	-3%	-2%
Operating cash flow	**2,567**	**1,947**	2,062	24%	-6%	**1,028**	**968**	1,040	-1%	-7%	**733**	**683**	554	32%	23%
Cash flow before acquisitions and dividends	**1,454**	**834**	1,059	37%	-21%	**312**	**252**	487	-36%	-48%	**256**	**206**	120	113%	72%
Total assets	**32,935**	**28,579**	26,242	26%	9%	**13,797**	**13,403**	12,638	9%	6%	**18,164**	**17,253**	16,504	10%	5%
Debt	**13,782**	**9,308**	7,546	83%	23%	**4,375**	**3,958**	3,867	13%	2%	**7,457**	**6,551**	6,219	20%	5%
Other operating liabilities	**5,185**	**5,185**	5,168	0%	0%	**3,207**	**3,207**	3,107	3%	3%	**2,084**	**2,084**	2,051	2%	2%
Capital expenditure, gross	**1,125**	**1,125**	1,057	6%	6%	**726**	**726**	572	27%	27%	**482**	**482**	441	9%	9%
Acquisitions, gross/investments	**2,297**	**2,297**	957	140%	140%	**86**	**86**	43	100%	100%	**211**	**211**	60	--	--
Research and development expenses	**168**	**168**	114	47%	47%	**507**	**507**	534	-5%	-5%	**2**	**2**	–	--	--
Employees (per capita on balance sheet date)	**128,300**	**128,300**	120,328	7%	7%	**39,627**	**39,627**	37,843	5%	5%	**106,377**	**106,377**	100,144	6%	6%
Key figures															
EBITDA margin	**22.4%**	**17.8%**	18.7%			**22.7%**	**21.7%**	21.9%			**15.6%**	**14.8%**	15.9%		
EBIT margin	**13.5%**	**13.0%**	13.9%			**17.4%**	**17.3%**	17.4%			**11.1%**	**11.0%**	11.7%		
Depreciation and amortization in % of sales	**8.9%**	**4.9%**	4.8%			**5.3%**	**4.4%**	4.5%			**4.5%**	**3.8%**	4.2%		
Operating cash flow in % of sales	**14.7%**	**11.1%**	12.5%			**14.9%**	**14.0%**	15.9%			**7.9%**	**7.4%**	6.2%		
ROOA	**7.6%**	**8.5%**	10.0%			**10.5%**	**10.8%**	11.1%			**6.1%**	**6.3%**	6.8%		

[1] Before transaction-related expenses, gain related to divestitures of Care Coordination activities and expenses associated with the cost optimization program
[2] Before gain related to divestitures of Care Coordination activities and impact of FCPA related charge
[3] Before transaction-related expenses and revaluations of biosimilars contingent purchase price liabilities

The consolidated segment reporting by business segment is an integral part of the notes.
The following notes are an integral part of the consolidated financial statements.

FRESENIUS SE & CO. KGAA
CONSOLIDATED SEGMENT REPORTING

BY BUSINESS SEGMENT

	Fresenius Vamed					Corporate/Other					Fresenius Group				
€ in millions	**2019**	**adj. for IFRS 16 effect 2019**	2018	Growth	adj. for IFRS 16 effect Growth	**2019[4]**	**adj. for IFRS 16 effect 2019[4]**	2018[5]	Growth	adj. for IFRS 16 effect Growth	**2019**	**adj. for IFRS 16 effect 2019**	2018	Growth	adj. for IFRS 16 effect Growth
Sales	**2,206**	**2,206**	1,688	31%	31%	**-427**	**-427**	-242	-76%	-76%	**35,409**	**35,524**	33,530	6%	6%
thereof contribution to consolidated sales	**1,892**	**1,892**	1,541	23%	23%	**1**	**1**	2	-50%	-50%	**35,409**	**35,524**	33,530	6%	6%
thereof intercompany sales	**314**	**314**	147	114%	114%	**-428**	**-428**	-244	-75%	-75%	**0**	**0**	0		
contribution to consolidated sales	**5%**	**5%**	5%			**0%**	**0%**	0%			**100%**	**100%**	100%		
EBITDA	**205**	**171**	133	54%	29%	**-47**	**-33**	654	-107%	-105%	**7,083**	**6,149**	6,745	5%	-9%
Depreciation and amortization	**71**	**40**	23	--	74%	**42**	**52**	10	--	--	**2,452**	**1,607**	1,494	64%	8%
EBIT	**134**	**131**	110	22%	19%	**-89**	**-85**	644	-114%	-113%	**4,631**	**4,542**	5,251	-12%	-14%
Net interest	**-21**	**-16**	-9	-133%	-78%	**-10**	**-13**	-2	--	--	**-719**	**-515**	-587	-22%	12%
Income taxes	**-28**	**-28**	-28	0%	0%	**46**	**46**	-63	173%	173%	**-883**	**-913**	-950	7%	4%
Net income attributable to shareholders of Fresenius SE & Co. KGaA	**83**	**85**	72	15%	18%	**-897**	**-944**	-810	-11%	-17%	**1,883**	**1,919**	2,027	-7%	-5%
Operating cash flow	**-17**	**-46**	106	-116%	-143%	**-48**	**-38**	-20	-140%	-90%	**4,263**	**3,514**	3,742	14%	-6%
Cash flow before acquisitions and dividends	**-69**	**-98**	77	-190%	--	**-123**	**-113**	-78	-58%	-45%	**1,830**	**1,081**	1,665	10%	-35%
Total assets	**2,721**	**2,386**	2,160	26%	10%	**-611**	**-384**	-841	27%	54%	**67,006**	**61,237**	56,703	18%	8%
Debt	**908**	**568**	535	70%	6%	**736**	**848**	817	-10%	4%	**27,258**	**21,233**	18,984	44%	12%
Other operating liabilities	**1,034**	**1,034**	912	13%	13%	**240**	**240**	189	27%	27%	**11,750**	**11,750**	11,427	3%	3%
Capital expenditure, gross	**56**	**56**	44	27%	27%	**74**	**74**	49	51%	51%	**2,463**	**2,463**	2,163	14%	14%
Acquisitions, gross/investments	**29**	**29**	496	-94%	-94%	**0**	**0**	-470	100%	100%	**2,623**	**2,623**	1,086	142%	142%
Research and development expenses	**0**	**0**	0			**-32**	**-32**	5	--	--	**645**	**645**	653	-1%	-1%
Employees (per capita on balance sheet date)	**18,592**	**18,592**	17,299	7%	7%	**1,238**	**1,238**	1,136	9%	9%	**294,134**	**294,134**	276,750	6%	6%
Key figures															
EBITDA margin	**9.3%**	**7.8%**	7.9%								**20.1%[6]**	**17.4%[6]**	18.1%[7]		
EBIT margin	**6.1%**	**5.9%**	6.5%								**13.2%[6]**	**12.9%[6]**	13.6%[7]		
Depreciation and amortization in % of sales	**3.2%**	**1.8%**	1.4%								**6.9%**	**4.5%**	4.5%		
Operating cash flow in % of sales	**-0.8%**	**-2.1%**	6.3%								**12.0%**	**9.9%**	11.2%		
ROOA	**7.0%**	**8.3%**	9.1%								**7.6%[8]**	**8.2%[8]**	9.0%[9]		

[4] After transaction-related expenses, revaluations of biosimilars contingent purchase price liabilities, gain related to divestitures of Care Coordination activities and expenses associated with the cost optimization program at FMC
[5] After transaction-related expenses, revaluations of biosimilars contingent purchase price liabilities, gain related to divestitures of Care Coordination activities and impact of FCPA related charge
[6] Before transaction-related expenses, revaluations of biosimilars contingent purchase price liabilities, gain related to divestitures of Care Coordination activities and expenses associated with the cost optimization program at FMC
[7] Before transaction-related expenses, revaluations of biosimilars contingent purchase price liabilities, gain related to divestitures of Care Coordination activities and impact of FCPA related charge
[8] The underlying pro forma EBIT does not include transaction-related expenses, revaluations of biosimilars contingent purchase price liabilities, gain related to divestitures of Care Coordination activities and expenses associated with the cost optimization program at FMC
[9] The underlying pro forma EBIT does not include transaction-related expenses, revaluations of biosimilars contingent purchase price liabilities, gain related to divestitures of Care Coordination activities and the impact of FCPA related charge.

The consolidated segment reporting by business segment is an integral part of the notes.
The following notes are an integral part of the consolidated financial statements.

FRESENIUS SE & CO. KGAA
CONSOLIDATED SEGMENT REPORTING

BY REGION

€ in millions	Europe 2019	Europe 2018	Europe Growth	North America 2019	North America 2018	North America Growth.	Asia-Pacific 2019	Asia-Pacific 2018	Asia-Pacific Growth.
Sales	**15,178**	14,484	5%	**14,543**	13,861	5%	**3,732**	3,366	11%
contribution to consolidated sales	**43%**	43%		**41%**	42%		**11%**	10%	
EBIT	**1,143**	1,029	11%	**2,583**	3,422	-25%	**750**	648	16%
Depreciation and amortization	**939**	789	19%	**1,241**	540	130%	**185**	106	75%
Total assets	**29,451**	25,963	13%	**30,341**	24,806	22%	**5,055**	4,246	19%
Capital expenditure, gross	**1,183**	1,095	8%	**1,027**	852	21%	**165**	138	20%
Acquisitions, gross/investments	**259**	239	8%	**2,112**	772	174%	**43**	30	43%
Employees (per capita on balance sheet date)	**165,862**	158,939	4%	**74,894**	72,672	3%	**27,457**	25,575	7%

€ in millions	Latin America 2019	Latin America 2018	Latin America Growth	Africa 2019	Africa 2018	Africa Growth	Fresenius Group 2019	Fresenius Group 2018	Fresenius Group Growth.
Sales	**1,545**	1,387	11%	**411**	432	-5%	**35,409**	33,530	6%
contribution to consolidated sales	**4%**	4%		**1%**	1%		**100%**	100%	
EBIT	**104**	92	13%	**51**	60	-15%	**4,631**	5,251	-12%
Depreciation and amortization	**74**	52	42%	**13**	7	86%	**2,452**	1,494	64%
Total assets	**1,868**	1,452	29%	**291**	236	23%	**67,006**	56,703	18%
Capital expenditure, gross	**77**	67	15%	**11**	11	0%	**2,463**	2,163	14%
Acquisitions, gross/investments	**209**	45	--	**–**	–	--	**2,623**	1,086	142%
Employees (per capita on balance sheet date)	**23,998**	17,610	36%	**1,923**	1,954	-2%	**294,134**	276,750	6%

The consolidated segment reporting by region is an integral part of the notes.
The following notes are an integral part of the consolidated financial statements.

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GENERAL NOTES

1. PRINCIPLES

I. GROUP STRUCTURE

Fresenius is a global health care group with products and services for dialysis, hospitals and outpatient medical care. In addition, the Fresenius Group focuses on hospital operations and also manages projects and provides services for hospitals and other health care facilities worldwide. Besides the activities of the parent company Fresenius SE & Co. KGaA, Bad Homburg v. d. H., the operating activities were split into the following legally independent business segments in the fiscal year 2019:

- Fresenius Medical Care
- Fresenius Kabi
- Fresenius Helios
- Fresenius Vamed

Fresenius Medical Care offers services and products for patients with chronic kidney failure. As of December 31, 2019, Fresenius Medical Care treated 345,096 patients at 3,994 dialysis clinics. Dialyzers and dialysis machines are among the most important product lines. In addition, Fresenius Medical Care offers dialysis-related services, among others in the field of Care Coordination.

Fresenius Kabi specializes in intravenously administered generic drugs (IV drugs), clinical nutrition, and infusion therapies. The company is also a supplier of medical devices and products of transfusion technology. In addition, Fresenius Kabi develops products with a focus on oncology and autoimmune diseases within its biosimilars segment.

Fresenius Helios is Europe's leading private hospital operator. The company comprises Helios Germany and Helios Spain (Quirónsalud). At the end of 2019, Helios Germany operated a total of 86 hospitals, around 125 outpatient clinics, and 8 prevention centers. In Spain, Quirónsalud operated 47 hospitals, 71 outpatient centers, and around 300 occupational risk prevention centers at the end of 2019. In addition, Quirónsalud is active in Latin America with 4 hospitals and as a provider of medical diagnostics.

Fresenius Vamed manages projects, provides services for hospitals as well as other health care facilities worldwide and is a leading post-acute care provider in Central Europe. The portfolio ranges along the entire value chain – from project development, planning, and turnkey construction, via maintenance and technical management, to total operational management.

Fresenius SE & Co. KGaA owned 31.64% of the subscribed capital of Fresenius Medical Care AG & Co. KGaA (FMC-AG & Co. KGaA) at the end of the fiscal year 2019. Fresenius Medical Care Management AG, the general partner of FMC-AG & Co. KGaA, is a wholly owned subsidiary of Fresenius SE & Co. KGaA. Through this structure, Fresenius SE & Co. KGaA has rights that give Fresenius SE & Co. KGaA the ability to direct the relevant activities and, hence, the earnings of FMC-AG & Co. KGaA. Therefore, FMC-AG & Co. KGaA is fully consolidated in the consolidated financial statements of the Fresenius Group.

Fresenius SE & Co. KGaA continued to hold 100% of the management companies of the business segments Fresenius Kabi (Fresenius Kabi AG) as well as Fresenius Helios and Fresenius Vamed (both held through Fresenius ProServe GmbH) on December 31, 2019. Through Fresenius ProServe GmbH, Fresenius SE & Co. KGaA holds 100% in HELIOS Kliniken GmbH and Helios Healthcare Spain S.L. (Quirónsalud) as well as a 77% stake in VAMED AG. In addition, Fresenius SE & Co. KGaA holds interests in companies with holding functions regarding real estate, financing and insurance, as well as in Fresenius Netcare GmbH which offers intercompany services in the field of information technology.

The reporting currency in the Fresenius Group is the euro. In order to make the presentation clearer, amounts are mostly shown in million euros. Amounts under €1 million after rounding are marked with "–".

II. BASIS OF PRESENTATION

Fresenius SE & Co. KGaA, as a stock exchange listed company with a domicile in a member state of the European Union (EU), fulfills its obligation to prepare and publish the consolidated financial statements in accordance with the International Financial Reporting Standards (IFRS) applying Section 315e of the German Commercial Code (HGB). The consolidated financial statements of Fresenius SE & Co. KGaA at December 31, 2019 have been prepared and are published in accordance with the Standards valid on the date of the statement of financial position issued by the International Accounting Standards Board (IASB) and the mandatory Interpretations of the International Financial Reporting Interpretations Committee (IFRIC), which are binding to be applied in the EU. The financial statements are also in accordance with IFRS as issued by the IASB.

The Fresenius Group has applied IFRS 16, Leases, since January 1, 2019. As a result of the implementation, the Fresenius Group has updated its accounting policies accordingly. Changes in the accounting policies due to the implementation of IFRS 16 are described in note 1. III. cc, Recent pronouncements, applied. For all other issues, the accounting policies applied in the accompanying consolidated financial statements are the same as those applied in the consolidated financial statements as of December 31, 2018.

In order to improve readability, various items are aggregated in the consolidated statement of financial position and in the consolidated statement of income. These items are shown separately in the notes to provide useful information to the readers of the consolidated financial statements.

Moreover, the notes include information required by HGB according to Section 315e (1) HGB. The consolidated financial statements include a management report according to Section 315e HGB in conjunction with Section 315 HGB.

The consolidated statement of financial position contains all information required to be disclosed by International Accounting Standard (IAS) 1, Presentation of Financial Statements, and is classified on the basis of the maturity of assets and liabilities. The consolidated statement of income is classified using the cost-of-sales accounting format.

The general partner of Fresenius SE & Co. KGaA is Fresenius Management SE. Fresenius Management SE prepares its own consolidated financial statements.

At February 19, 2020, the Management Board of Fresenius Management SE authorized the consolidated financial statements for issue and passed it to the Supervisory Board of Fresenius SE & Co. KGaA. The Supervisory Board has to review and approve the consolidated financial statements.

III. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a) Principles of consolidation

The financial statements of consolidated entities have been prepared using uniform accounting methods. The acquisitions of companies are accounted for applying the purchase method.

Capital consolidation is performed by offsetting investments in subsidiaries against the underlying revaluated equity at the date of acquisition. The identifiable assets and liabilities of subsidiaries as well as the noncontrolling interest are recognized at their fair values. Any remaining debit balance between the investments in subsidiaries plus the noncontrolling interest and the revaluated equity is recognized as goodwill and is tested at least once a year for impairment.

All significant intercompany sales, expenses, income, receivables and payables are eliminated. Profits and losses on items of property, plant and equipment and inventory acquired from other Group entities are also eliminated. Deferred tax assets and liabilities are recognized on temporary differences resulting from consolidation procedures.

Noncontrolling interest is comprised of the interest of noncontrolling shareholders in the consolidated equity of Group entities and is recognized at its fair value at date of first consolidation. Profits and losses attributable to the noncontrolling interests are separately disclosed in the consolidated statement of income. As far as the Fresenius Group, as option writer on behalf of existing put options, can be obliged to purchase noncontrolling interests held by third parties, the potential purchase price liability is recorded in long-term provisions and other long-term liabilities as well as short-term provisions and other short-term liabilities at fair value at the date of the consolidated financial statements. According to the present access method, noncontrolling interests are further recorded in equity as noncontrolling interests. The initial recognition of the purchase price liability as well as valuation differences are recorded neutral to profit or loss through equity.

Generally, entities in which Fresenius SE & Co. KGaA, directly or indirectly, holds more than 20% and less than 50% of the voting rights and can exercise a significant influence over their financial and operating policies are associated companies. These companies are consolidated using the equity method. Investments that are not classified as in associated companies are recorded at acquisition costs or at fair value, respectively.

b) Composition of the Group

Besides Fresenius SE & Co. KGaA, the consolidated financial statements include all material subsidiaries according to IFRS 10 and IFRS 11, over which Fresenius SE & Co. KGaA has control or significant influence. Fresenius SE & Co. KGaA controls an entity if it has power over the entity. That is, Fresenius SE & Co. KGaA has existing rights that give Fresenius SE & Co. KGaA the current ability to direct the relevant activities, which are the activities that significantly affect Fresenius SE & Co. KGaA's return. In addition, Fresenius SE & Co. KGaA is exposed to, or has rights to, variable returns from the involvement with the entity and Fresenius SE & Co. KGaA has the ability to use its power over the entity to affect the amount of Fresenius SE & Co. KGaA's return.

Fresenius Vamed participates in project entities which are set up for long-term defined periods of time and for the specific purpose of constructing and operating thermal centers. These project entities are not controlled by Fresenius Vamed and therefore are not consolidated. The project entities generated approximately €129 million in sales in 2019 (2018: €123 million). The project entities finance themselves mainly through debt, profit participation rights and investment grants. Assets and liabilities relating to the project entities are not material. Fresenius Vamed made no payments to the project entities other than contractually stipulated. From today's perspective and due to the contractual situation, Fresenius Vamed is not exposed to any material risk of loss from these project entities.

The consolidated financial statements of 2019 included, in addition to Fresenius SE & Co. KGaA, 2,747 (2018: 2,594) fully consolidated companies and 53 (2018: 49) companies were accounted for under the equity method. In 2019, there were no material changes in the scope of consolidated entities, except for those mentioned in note 2, Acquisitions, divestitures and investments.

The complete list of the investments of Fresenius SE & Co. KGaA, registered office in 61352 Bad Homburg v. d. H., Else-Kröner-Straße 1, registered in the Commercial Register of the local court in Bad Homburg v. d. H. under B11852, will be submitted to the electronic Federal Gazette and the electronic companies register.

For the fiscal year 2019, the following fully consolidated German subsidiaries of the Fresenius Group will apply the exemption provided in Sections 264 (3) and 264b, respectively, of the German Commercial Code (HGB):

Name of the company	Registered office
Corporate/Other	
Fresenius Biotech Beteiligungs GmbH	Bad Homburg v. d. H.
Fresenius Immobilien-Verwaltungs-GmbH & Co. Objekt Friedberg KG	Bad Homburg v. d. H.
Fresenius Immobilien-Verwaltungs-GmbH & Co. Objekt St. Wendel KG	Bad Homburg v. d. H.
Fresenius Immobilien-Verwaltungs-GmbH & Co. Objekt Schweinfurt KG	Bad Homburg v. d. H.
Fresenius Netcare GmbH	Bad Homburg v. d. H.
Fresenius ProServe GmbH	Bad Homburg v. d. H.
FPS Immobilien Verwaltungs GmbH & Co. Reichenbach KG	Bad Homburg v. d. H.
ProServe Krankenhaus Beteiligungsgesellschaft mbH & Co. KG	München
Fresenius Kabi	
Fresenius HemoCare GmbH	Bad Homburg v. d. H.
Fresenius HemoCare Beteiligungs GmbH	Bad Homburg v. d. H.
Fresenius Kabi AG	Bad Homburg v. d. H.
Fresenius Kabi Deutschland GmbH	Bad Homburg v. d. H.
Fresenius Kabi Logistik GmbH	Friedberg
MC Medizintechnik GmbH	Alzenau
medi1one medical gmbh	Waiblingen

Name of the company	Registered office
Fresenius Helios	
Gesundheitsmanagement Elbe-Fläming GmbH	Burg
Helios Agnes-Karll Krankenhaus GmbH	Bad Schwartau
Helios Aukamm-Klinik Wiesbaden GmbH	Wiesbaden
Helios Bördeklinik GmbH	Oschersleben
Helios Fachklinik Schleswig GmbH	Schleswig
Helios Fachklinik Vogelsang-Gommern GmbH	Gommern
Helios Fachkliniken Hildburghausen GmbH	Hildburghausen
Helios Frankenwaldklinik Kronach GmbH	Kronach
Helios Hanseklinikum Stralsund GmbH	Stralsund
Helios Health GmbH	Berlin
Helios Klinik Blankenhain GmbH	Blankenhain
Helios Klinik Bleicherode GmbH	Bleicherode
Helios Klinik für Herzchirurgie Karlsruhe GmbH	Karlsruhe
Helios Klinik Jerichower Land GmbH	Burg
Helios Klinik Leezen GmbH	Leezen
Helios Klinik Leisnig GmbH	Leisnig
Helios Klinik Lengerich GmbH	Lengerich
Helios Klinik Rottweil GmbH	Rottweil
Helios Klinik Schkeuditz GmbH	Schkeuditz
Helios Klinik Schleswig GmbH	Schleswig
Helios Klinik Volkach GmbH	Volkach
Helios Klinik Wipperfürth GmbH	Wipperfürth
Helios Klinik Zerbst/Anhalt GmbH	Zerbst
Helios Kliniken GmbH	Berlin
Helios Kliniken Breisgau Hochschwarzwald GmbH	Müllheim

Name of the company	Registered office
Fresenius Helios	
Helios Kliniken Mansfeld-Südharz GmbH	Sangerhausen
Helios Kliniken Mittelweser GmbH	Nienburg
Helios Kliniken Taunus GmbH	Bad Schwalbach
Helios Klinikum Aue GmbH	Aue
Helios Klinikum Bad Saarow GmbH	Bad Saarow
Helios Klinikum Berlin-Buch GmbH	Berlin
Helios Klinikum Erfurt GmbH	Erfurt
Helios Klinikum Gifhorn GmbH	Gifhorn
Helios Klinikum Gotha GmbH	Gotha
Helios Klinikum Hildesheim GmbH	Hildesheim
Helios Klinikum Meiningen GmbH	Meiningen
Helios Klinikum Pirna GmbH	Pirna
Helios Klinikum Schwelm GmbH	Schwelm
Helios Klinikum Siegburg GmbH	Siegburg
Helios Klinikum Uelzen GmbH	Uelzen
Helios Klinikum Wuppertal GmbH	Wuppertal
Helios Park-Klinikum Leipzig GmbH	Leipzig
Helios Privatkliniken GmbH	Bad Homburg v. d. H.
Helios Reinigung GmbH	Berlin
Helios Spital Überlingen GmbH	Überlingen
Helios St. Elisabeth Klinik Oberhausen GmbH	Oberhausen
Helios St. Josefs-Hospital GmbH	Bochum
Helios St. Marienberg Klinik Helmstedt GmbH	Helmstedt
Helios Versorgungszentren GmbH	Berlin
Helios Vogtland-Klinikum Plauen GmbH	Plauen
Helios Weißeritztal-Kliniken GmbH	Freital
Herzzentrum Leipzig GmbH	Leipzig
Kliniken Miltenberg-Erlenbach GmbH	Erlenbach
Medizinisches Versorgungszentrum am Helios Klinikum Bad Saarow GmbH	Bad Saarow
MVZ Campus Gifhorn GmbH	Gifhorn
Poliklinik am Helios Klinikum Buch GmbH	Berlin

c) Classifications

Certain items in the consolidated financial statements of 2018 have been reclassified to conform with the presentation in 2019.

As of December 31, 2018, property, plant and equipment included leased fixed assets of €142 million recognized in accordance with IAS 17. These were transferred to the line item right-of-use assets as of the beginning of fiscal year 2019.

As of December 31, 2018, the item of the statement of financial position current portion of long-term debt included short-term liabilities from capital leases in accordance with IAS 17 of €22 million. From fiscal year 2019, these are included in current portion of long-term lease liabilities.

As of December 31, 2018, the statement of financial position item long-term debt, less current portion included long-term liabilities from capital leases in accordance with IAS 17 of €197 million. From fiscal year 2019, these are included in long-term lease liabilities, less current portion.

In the consolidated statement of cash flows, in the comparative information for the fiscal year 2018, the line item repayments of long-term debt (in prior year designated as: repayments of long-term debt and capital lease obligations) included repayments of liabilities from capital leases in accordance with IAS 17 of €33 million. From fiscal year 2019, these repayments are included in the line item repayments of lease liabilities in accordance with IFRS 16.

In the business segment Fresenius Medical Care, in the consolidated statements of income, research and development expenses in the amount of €20 million for the fiscal year ended December 31, 2018 have been reclassified to general and administrative expenses to conform to the current year's presentation.

In the business segment Fresenius Medical Care, in the consolidated statement of financial position, receivables from End-Stage Renal Disease Seamless Care Organizations in the amount of €106 million as of December 31, 2018 have been reclassified from trade accounts and other receivables to accounts receivable from and loans to related parties to conform to the current year's presentation. Additionally, the corresponding receivables have been reclassified within the consolidated statement of cash flows from trade accounts and other receivables to accounts receivable from/payable to related parties in the amount of €24 million for the period ended December 31, 2018, to conform to the current year's presentation.

In the business segment Fresenius Medical Care, in the consolidated statement of cash flows, impairment losses in the amount of €64 million have been reclassified in the comparative information for the fiscal year 2018 from other current and non-current assets to depreciation and amortization to conform to the current year's presentation.

Certain other items in the prior year's comparative consolidated financial statements have been adjusted to conform to the current year's presentation.

d) Hyperinflationary accounting

Starting on July 1, 2018, the Fresenius Group's subsidiaries operating in Argentina applied IAS 29, Financial Reporting in Hyperinflationary Economies, due to the inflationary development in Argentina. For the fiscal year 2019, the adoption of IAS 29 resulted in an effect on net income attributable to shareholders of Fresenius SE & Co. KGaA of -€12 million (2018: -€12 million).

e) Sales recognition policy

Revenue is recognized in accordance with IFRS 15, Revenue from Contracts with Customers.

Revenues from services and products are billed according to the usual contract arrangements with customers, patients and related third parties. For services performed for patients, the transaction price is estimated based on either Fresenius Group's standard rates, rates determined under reimbursement arrangements or by government regulations. These arrangements are generally with third party payors, such as U.S. Medicare, U.S. Medicaid, German health insurance funds or commercial insurers. Deductions from rebates and discounts that are contractually agreed are taken into account to determine the expected recoverable amount which is calculated on the basis of historical data.

If the collection of the billed amount or a portion of the billed amount for services performed for patients is considered to be uncertain at the time services are performed, the Fresenius Group concludes that the consideration is variable (implicit price concession) and records the difference between the billed amount and the amount estimated to be collectible as a reduction to health care services revenue. Implicit price concessions include such items as amounts due from patients without adequate insurance coverage and patient co-payment and deductible amounts due from patients with health care coverage. The Fresenius Group determines implicit price concessions primarily upon past collection history.

Revenue from services is generally recognized on the date the service is performed. At this point of time the payor is obliged to pay for the performed services.

Revenue from product sales is recognized when the customer obtains control of the product, either after possession is transferred or upon installation and provision of the necessary technical instructions or at another point in time that better defines transfer of control.

A portion of revenues is generated from contracts which on the one hand give the customer the right to use dialysis machines and on the other hand provide the customer with disposables and services. In this case, the transaction price is allocated in accordance with IFRS 15, and revenue is recognized separately for the lease and the non-lease components of the contract in accordance with IFRS 16 and IFRS 15, respectively.

Fresenius Vamed has performance obligations from long-term production contracts that are satisfied over time. Revenue is recognized according to progress towards completion. This progress towards completion of the performance obligation is measured based on the costs incurred in relation to expected total costs of fulfilling the contract, contractually defined milestones or performance completed to date whichever better reflects the progress towards completion of the performance obligation.

IFRS 15 does not apply to lease and insurance contracts. Revenue from leasing components and insurance contracts is determined according to IFRS 16 and IFRS 4, respectively.

Sales are reported net of sales tax.

f) Government grants

The Fresenius Group primarily receives governmental funding for hospitals in Germany to finance buildings and medical equipment. Public sector grants are not recognized until there is reasonable assurance that the respective conditions are met and the grants will be received. Initially, the grant is recorded as a liability and as soon as the asset is acquired, the grant is offset against the acquisition costs. Expense-related grants are recognized as income in the periods in which related costs occur.

g) Research and development expenses

Research is the independent and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding. Development is the technical and commercial implementation of research results and occurs before the start of the commercial production or use. The research and development phase of pharmaceutical products normally ends with the regulatory approval by the relevant authorities on the market of the particular country. Generally, a new pharmaceutical product is primarily approved on an established market, as such are considered Europe, the United States, China and Japan.

Research expenses are expensed as incurred. Development expenses that fully meet the criteria for the recognition of an intangible asset are capitalized as intangible asset.

h) Impairment

The Fresenius Group reviews the carrying amounts of its property, plant and equipment, intangible assets and right-of-use assets as well as other non-current assets for impairment whenever events or changes in circumstances indicate that the carrying amount is higher than the asset's recoverable amount. The recoverable amount is the higher of the net realizable value and its value in use. The net realizable value of an asset is defined as its fair value less costs to sell. The value in use is the present value of future cash flows expected to be derived from the relevant asset. If it is not possible to estimate the future cash flows from the individual assets, impairment is tested on the basis of the future cash flows of the corresponding cash generating units.

Impairment losses, except impairment losses recognized on goodwill, are reversed as soon as the reasons for impairment no longer exist. This reversal shall not exceed the carrying amount that would have been determined had no impairment loss been recognized before.

Assets held for sale are reported at the lower of their carrying amount and fair value less costs to sell. As long as the company intends to sell the asset, it is not depreciated.

i) Capitalized interest

The Fresenius Group includes capitalized interest as part of the cost of the asset if it is directly attributable to the acquisition, construction or manufacture of qualifying assets. For the fiscal years 2019 and 2018, interest of €12 million and €8 million, based on an average interest rate of 3.08% and 3.51%, respectively, was recognized as a component of the cost of assets.

j) Income taxes

Current taxes are calculated based on the earnings of the fiscal year and in accordance with local tax rules of the respective tax jurisdictions. Expected and executed additional tax payments and tax refunds for prior years are also taken into account.

Deferred tax assets and liabilities are recognized for the future consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Furthermore, deferred taxes are recognized on certain consolidation procedures affecting net income attributable to shareholders of Fresenius SE & Co. KGaA. Deferred tax assets also include claims to future tax reductions which arise from the probably expected usage of existing tax losses available for carryforward. The recognition of deferred tax assets from net operating losses and their utilization is based on the budget planning of the Fresenius Group and implemented tax strategies.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates that have been enacted or substantially enacted by the end of the reporting period. A change in tax rate for the calculation of deferred tax assets and liabilities is recognized in the period the new laws are enacted or substantively enacted. The effects of the adjustment are generally recognized in the income statement. The effects of the adjustment are recognized in equity, if the temporary differences are related to items directly recognized in equity.

The realizability of the carrying amount of a deferred tax asset is reviewed at each date of the statement of financial position. In assessing the realizability of deferred tax assets, the Management considers to which extent it is probable that the deferred tax asset will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences and tax loss carryforwards become deductible. The Management considers the expected reversal of deferred tax liabilities and projected future taxable income in making this assessment.

If it is probable that sufficient taxable income will be available for the utilization of parts or of the entire deferred tax asset, the deferred tax asset is recognized to this certain extent.

The Fresenius Group recognizes assets and liabilities for uncertain tax treatments to the extent it is probable the tax will be recovered or that the tax will be payable, respectively. The Fresenius Group recognizes interest related to its income tax positions as interest expense and penalties as general and administrative expenses.

The Fresenius Group is subject to ongoing and future tax audits in the United States, Germany and other jurisdictions. Different interpretations of tax laws may lead to potential additional tax payments or tax refunds for prior years. To consider income tax accruals or income tax receivables of uncertain tax assessments, management's estimations are based on local tax rules of the respective tax jurisdiction and the interpretation of such. Estimates are adjusted in the period in which there is sufficient evidence which legitimates the adjustment of the assumption.

k) Earnings per share

Basic earnings per share are computed by dividing net income attributable to shareholders of Fresenius SE & Co. KGaA by the weighted-average number of ordinary shares outstanding during the year. Diluted earnings per share include the effect of all potentially dilutive instruments on ordinary shares that would have been outstanding during the fiscal year. The equity-settled awards granted under Fresenius' and Fresenius Medical Care's stock option plans can result in a dilutive effect.

l) Inventories

Inventories are comprised of all assets which are held for sale in the ordinary course of business (finished goods), in the process of production for such sale (work in process) or consumed in the production process or in the rendering of services (raw materials and purchased components).

Inventories are measured at the lower of acquisition and manufacturing cost (determined by using the average or first-in, first-out method) or net realizable value. Manufacturing costs are comprised of direct costs, production and material overhead, including depreciation charges.

m) Property, plant and equipment

Property, plant and equipment are stated at acquisition and manufacturing cost less accumulated depreciation. Repairs and maintenance costs are recognized in profit and loss as incurred. The costs for the replacement of components or the general overhaul of property, plant and equipment are recognized, if it is probable that future economic benefits will flow to the Fresenius Group and these costs can be measured reliably. Depreciation on property, plant and equipment is calculated using the straight-line method over the estimated useful lives of the assets ranging from 3 to 50 years for buildings and improvements (with a weighted-average life of 16 years) and 2 to 15 years for machinery and equipment (with a weighted-average life of 11 years).

n) Intangible assets with finite useful lives

Intangible assets with finite useful lives, such as patents, product and distribution rights, non-compete agreements, technology as well as licenses to manufacture, distribute and sell pharmaceutical drugs are recognized and reported apart from goodwill and are amortized using the straight-line method over their respective useful lives to their residual values and reviewed for impairment (see note 1. III. h, Impairment). Patient relationships however are not reported as separate intangible assets due to the missing contractual basis but are part of goodwill. The useful lives of patents, product and distribution rights range from 5 to 20 years, the average useful life is 13 years. The useful lives of customer relationships vary from 6 to 15 years, the average useful life is 10 years. Non-compete agreements with finite useful lives have useful lives ranging from 2 to 25 years with an average useful life of 6 years. Technology has a finite useful live of 15 years. Licenses to manufacture, distribute and sell pharmaceutical drugs are amortized over the contractual license period. All other intangible assets are amortized over their individual estimated useful lives between 3 and 15 years.

Losses in value of a lasting nature are recorded as an impairment and are reversed when the reasons for impairment no longer exist. This reversal shall not exceed the carrying amount that would have been determined had no impairment loss been recognized before.

Development costs are capitalized as manufacturing costs when the recognition criteria are met.

For development costs of dialysis machines manufactured by Fresenius Medical Care, the timing of the recognition as assets is based on the technical utilizability of the machines. The useful lives of capitalized development costs vary from 5 to 20 years, the average useful life is 8 years.

Fresenius Kabi capitalizes development costs as soon as the registration of a new product is very likely. This mainly applies if a product is already approved on an established market. Costs are depreciated on a straight-line basis over the expected useful lives. In 2019, reversals of write-downs and impairments were recorded for in-process R & D of product approval projects, which were acquired through the acquisition of Fresenius Kabi USA, Inc. (see note 7, Research and development expenses).

o) Goodwill and other intangible assets with indefinite useful lives

The Fresenius Group identified intangible assets with indefinite useful lives because, based on an analysis of all of the relevant factors, there is no foreseeable limit to the period over which those assets are expected to generate net cash inflows for the Group. The identified intangible assets with indefinite useful lives such as tradenames acquired in a purchase method business combination are recognized and reported apart from goodwill. They are recorded at acquisition costs.

Any excess of the net fair value of identifiable assets and liabilities over cost (badwill) still existing after reassessing the purchase price allocation is recognized immediately in profit or loss.

Goodwill and intangible assets with indefinite useful lives are not amortized but tested for impairment annually or when an event becomes known that could trigger an impairment (impairment test).

To perform the annual impairment test of goodwill, the Fresenius Group identified several cash generating units (CGUs) and determined the carrying amount of each CGU by assigning the assets and liabilities, including the existing goodwill and intangible assets, to those CGUs. A CGU is usually defined one level below the segment level based on regions or the nature of the business activity. Four CGUs were identified in the segments Fresenius Medical Care and Fresenius Kabi, respectively (Europe, Latin America, Asia-Pacific and North America). According to the regional organizational structure, the segment Fresenius Helios consists of two CGUs, Germany and Spain. The segment Fresenius Vamed consists of two CGUs (Project business and Service business). At least once a year, the Fresenius Group compares the recoverable amount of each CGU to the CGU's carrying amount. The recoverable amount as its value in use of a CGU is determined using a discounted cash flow approach based upon the cash flow expected to be generated by the CGU. In case that the value in use of the CGU is less than its carrying amount, the difference is at first recorded as an impairment of the carrying amount of the goodwill.

To evaluate the recoverability of separable intangible assets with indefinite useful lives, the Fresenius Group compares the recoverable amounts of these intangible assets with their carrying amounts. An intangible asset's recoverable amount is determined using a discounted cash flow approach or other methods, if appropriate.

The recoverability of goodwill and other separable intangible assets with indefinite useful lives recorded in the Group's consolidated statement of financial position was verified. As a result, the Fresenius Group did not record any impairment losses in 2019 and 2018.

p) Leases

A lease is a contract that conveys the right to use an underlying asset for a period of time in exchange for consideration.

The Fresenius Group decided not to apply the guidance within IFRS 16 to leases with a total maximum term of twelve months (short-term leases) and leases for underlying assets of low-value. These leases are exempt from balance sheet recognition and lease payments will be recognized as expenses over the lease term.

IFRS 16 is not applied to leases of intangible assets.

Lease liabilities

Lease liabilities are recognized at the present value of the following payments:

- fixed lease payments (including in-substance fixed payments), less any lease incentives receivable,
- variable lease payments, that are linked to an index or interest rate,
- expected payments under residual value guarantees,
- the exercise price of purchase options, where exercise is reasonably certain,
- lease payments in optional renewal periods, where exercise of extension options is reasonably certain, and
- penalty payments for the termination of a lease, if the lease term reflects the exercise of the respective termination option.

Lease payments are discounted using the implicit interest rate underlying the lease if this rate can be readily determined. Otherwise, the incremental borrowing rate is used as the discount rate.

Lease liabilities are subsequently measured at amortised cost using the effective interest method. Furthermore, lease liabilities may be remeasured due to lease modifications or reassessments of the lease.

For lease contracts that include both lease and non-lease components that are not separable from lease components, no allocation is performed. Each lease component and any associated non-lease components are accounted for as a single lease.

Right-of-use assets
Right-of-use asset are stated at cost, which comprises of:

- lease liability amount,
- initial direct costs incurred when entering into the lease,
- (lease) payments before commencement date of the respective lease, and
- an estimate of costs to dismantle and remove the underlying asset,
- less any lease incentives received.

Right-of-use assets are depreciated over the shorter of the lease term or the useful life of the underlying asset using the straight-line method. Where a lease agreement includes a transfer of ownership at the end of the lease term or the exercise of a purchase option is deemed reasonably certain, right-of-use assets are depreciated over the useful life of the underlying asset using the straight-line method. In addition, right-of-use assets are reduced by impairment losses, if any, and adjusted for certain remeasurements.

Right-of-use assets from lease contracts are classified in accordance with the Fresenius Group's classification of property plant and equipment:

- Right-of-use assets: land
- Right-of-use assets: buildings and improvements
- Right-of-use assets: machinery and equipment

In addition to the right-of-use asset categories above, prepayments on right-of-use assets are presented separately. Right-of-use assets from lease contracts and lease liabilities are presented separately from property, plant and equipment and other financial debt in the consolidated statement of financial position.

q) Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Purchases and sales of financial assets are accounted for on the trading day. Furthermore, the Fresenius Group does not make use of the fair value option, which allows financial liabilities to be classified at fair value through profit or loss upon initial recognition. The Fresenius Group elects to represent changes in the fair value of selected equity investments that are not held for trading in other comprehensive income (loss).

Financial instruments are allocated to categories following the analysis of the business model and cash flow characteristics as required by IFRS 9, Financial Instruments. The following categories are relevant for the Fresenius Group: financial assets and liabilities measured at amortized cost, financial assets and liabilities measured at fair value through profit and loss and financial assets measured at fair value through other comprehensive income (loss). The reconciliation of the categories to the positions in the consolidated statement of financial position is shown in tabular form in note 31, Financial instruments.

Cash and cash equivalents
Cash and cash equivalents comprise cash funds and all short-term investments with maturities of up to three months. Short-term investments are highly liquid and readily convertible into known amounts of cash. The risk of changes in value is insignificant.

Trade accounts and other receivables
Trade accounts and other receivables are stated at their nominal value less lifetime expected credit losses.

Impairments
According to IFRS 9, impairments are recognized on the basis of expected credit losses (expected credit loss model). The Fresenius Group recognizes a loss allowance for expected credit losses on financial assets measured at amortized cost, contract assets and lease receivables as well as for investments in debt instruments measured at fair value through other comprehensive income.

The Fresenius Group recognizes loss allowances for expected credit losses (allowance for doubtful accounts) mainly for trade accounts receivable and cash and cash equivalents. The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective instrument.

For trade accounts receivable, the Fresenius Group uses the simplified method which requires recognizing lifetime expected credit losses.

Expected credit losses on cash and cash equivalents are measured according to the general method which is based on 12-month expected credit losses. Due to the short maturity term of the financial instruments, this corresponds with the lifetime expected loss. A significant increase in credit risk is calculated on the basis of available quantitative and qualitative information. Based on external credit ratings of the counterparties, the Fresenius Group considers that its cash and cash equivalents have a low credit risk.

The Fresenius Group does not expect any material credit losses from financial instruments that are measured according to the general approach.

The allowances are estimates comprised of customer and financial asset specific evaluations regarding payment history, current financial stability, and applicable future economic conditions.

Financial assets whose expected credit loss is not assessed individually are allocated to geographical regions. The impairment is generally assessed on the basis of regional macroeconomic indicators such as credit default swaps or scoring models.

In case of objective evidence of a detrimental impact on the estimated future cash flows of a financial asset, the asset is considered to be credit impaired. This is generally the case after more than 360 days overdue, at the latest.

When a counterpart defaults, all financial assets against this counterpart are considered impaired. The definition of default is mainly based on payment practices specific to individual regions and businesses.

Noncontrolling interest subject to put provisions

The Fresenius Group, as option writer on behalf of existing put options, can be obliged to purchase noncontrolling interests held by third parties. If these put provisions were exercised, the Fresenius Group would be required to purchase all or part of the third-party owners' noncontrolling interests at the appraised fair value at the time of exercise.

To estimate the fair values of the noncontrolling interest subject to put provisions, the Fresenius Group recognizes the higher of net book value or a multiple of earnings, based on historical earnings, the development stage of the underlying business and other factors. From time to time the Fresenius Group engages external valuation firms for the valuation of the put provisions. The external valuation estimates the fair values using a combination of discounted cash flows and a multiple of earnings and/or revenue. When applicable, the obligations are discounted at a pre-tax discount rate which reflects the market valuation of the interest effect and the specific risk of the obligation. Depending on the market conditions, the estimated fair values of the noncontrolling interest subject to these put provisions can also fluctuate, the discounted cash flows and the implicit multiple of earnings and/or revenue at which the noncontrolling interest subject to put provisions may ultimately be settled could vary significantly from Fresenius Group's current estimates.

Derivative financial instruments

Derivative financial instruments, which primarily include foreign currency forward contracts and interest rate swaps, are recognized at fair value as assets or liabilities in the consolidated statement of financial position. The effective portion of changes in fair value of cash flow hedges is recognized in accumulated other comprehensive income (loss) in shareholders' equity until the secured underlying transaction is realized (see note 31, Financial instruments). The ineffective portion of cash flow hedges is recognized in current earnings. Changes in the fair value of derivatives that are not designated as hedging instruments are recognized periodically in earnings.

Derivatives embedded in host contracts with a financial liability as host contract are accounted for as separate derivatives if their economic characteristics and risks are not closely related to those of the host contracts. These embedded derivatives are measured at fair value with changes in fair value recognized in the income statement.

r) Liabilities

At the date of the statement of financial position, liabilities are generally stated at amortized cost, which normally corresponds to the settlement amount.

s) Legal contingencies

In the ordinary course of Fresenius Group's operations, the Fresenius Group is party to litigation and arbitration and is subject to investigations relating to various aspects of its business. The Fresenius Group regularly analyzes current information about such claims for probable losses and provides accruals for such matters, including the estimated legal expenses and consulting services in connection with these matters, as appropriate. The Fresenius Group utilizes its internal legal department as well as external resources for these assessments. In making the decision regarding the need for a loss accrual, the Fresenius Group considers the degree of probability of an unfavorable outcome and its ability to make a reasonable estimate of the amount of loss.

The filing of a suit or formal assertion of a claim or assessment, or the disclosure of any such suit or assertion, does not necessarily indicate that accrual of a loss is appropriate.

t) Provisions

Accruals for taxes and other obligations are recognized when there is a present obligation to a third party arising from past events, it is probable that the obligation will be settled in the future and the amount can be reliably estimated.

Provisions for warranties and complaints are estimated based on historical experience.

Tax accruals include obligations for the current year and for prior years.

Non-current provisions with a remaining period of more than one year are discounted to the present value of the expenditures expected to settle the obligation.

u) Pension liabilities and similar obligations

Pension obligations for post-employment benefits are measured in accordance with IAS 19 (revised 2011), Employee Benefits, using the projected unit credit method, taking into account future salary and trends for pension increase.

The Fresenius Group uses December 31 as the measurement date when measuring the deficit or surplus of all plans.

Net interest costs are calculated by multiplying the pension liability at the beginning of the year with the discount rate utilized in determining the benefit obligation. The pension liability results from the benefit obligation less the fair value of plan assets.

Remeasurements include actuarial gains and losses resulting from the evaluation of the defined benefit obligation as well as from the difference between actual return on plan assets and the expected return on plan assets at the beginning of the year used to calculate the net interest costs. In the event of a surplus for a defined benefit pension plan, remeasurements can also contain the effect from Asset Ceiling, as far as this effect is not included in net interest costs.

Remeasurements are recognized in accumulated other comprehensive income (loss) completely. It is not allowed to reclassify the remeasurements in subsequent periods. Components of net periodic benefit cost are recognized in profit and loss of the period.

v) Debt issuance costs

Debt issuance costs related to a recognized debt liability are presented in the consolidated statement of financial position as a direct deduction from the carrying amount of that debt liability. These costs are amortized over the term of the related obligation.

w) Share-based compensation plans

The Fresenius Group measures its share-based compensation plans in accordance with IFRS 2, Share-based Payments.

The total cost of stock options granted to members of the Management Board and executive employees of the Fresenius Group at the grant date were measured using an option pricing model and are recognized as expense over the vesting period of the stock option plans.

The measurement date fair value of cash-settled phantom stocks granted to members of the Management Board and executive employees of the Fresenius Group (except for Fresenius Medical Care) and of cash-settled performance shares granted to members of the Management Board and executive employees of the Fresenius Group is calculated using the Monte Carlo simulation. The corresponding liability based on the measurement date fair value is accrued over the vesting period of the phantom stock and performance share plans.

The measurement date fair value of cash-settled phantom stocks granted to members of the Management Board and executive employees of Fresenius Medical Care is calculated using a binomial model. The corresponding liability based on the measurement date fair value is accrued over the vesting period of the phantom stock plans.

x) Self-insurance programs

Under the insurance programs for professional, product and general liability, auto liability, worker's compensation claims and medical malpractice claims, the largest subsidiary of Fresenius Medical Care AG & Co. KGaA (FMC-AG & Co. KGaA), located in the United States, is partially self-insured for professional liability claims. For all other coverage, FMC-AG & Co. KGaA assumes responsibility for incurred claims up to predetermined amounts, above which third party insurance applies. Reported liabilities for the year represent estimated future payments of the anticipated expense for claims incurred (both reported and incurred but not reported) based on historical experience and existing claim activity. This experience includes both the rate of claims incidence (number) and claim severity (cost) and is combined with individual claim expectations to estimate the reported amounts.

y) Foreign currency translation

The reporting currency is the euro. Substantially all assets and liabilities of the foreign subsidiaries that use a functional currency other than the euro are translated at year-end exchange rates, while income and expense are translated at annual average exchange rates of the fiscal year. Adjustments due to foreign currency translation fluctuations are excluded from net earnings and are reported in accumulated other comprehensive income (loss). In addition, the translation adjustments of certain intercompany borrowings, which are of a long-term nature, are also reported in accumulated other comprehensive income (loss).

Gains and losses arising from the translation of foreign currency positions as well as those arising from the elimination of foreign currency intercompany loans are recorded as other operating income or expenses, as far as they are not considered foreign equity instruments. In the fiscal year 2019, only immaterial losses resulted out of this translation.

The exchange rates of the main currencies affecting foreign currency translation developed as follows:

	Year-end exchange rate		Average exchange rate	
	Dec. 31, 2019	Dec. 31, 2018	**2019**	2018
U.S. dollar per €	**1.123**	1.145	**1.119**	1.181
Chinese renminbi per €	**7.821**	7.875	**7.735**	7.808
Argentinean peso per €	**67.212**	43.039	**53.948**	32.984
Australian dollar per €	**1.600**	1.622	**1.611**	1.580
Brazilian real per €	**4.516**	4.444	**4.413**	4.308
Japanese yen per €	**121.940**	125.850	**122.006**	130.396
Korean won per €	**1,296.280**	1,277.930	**1,305.317**	1,299.071
Pound sterling per €	**0.851**	0.895	**0.878**	0.885
Russian ruble per €	**69.956**	79.715	**72.455**	74.026
Swedish krona per €	**10.447**	10.255	**10.589**	10.258

z) Fair value hierarchy

The three-tier fair value hierarchy as defined in IFRS 13, Fair Value Measurement, classifies financial assets and liabilities recognized at fair value based on the inputs used in estimating the fair value. Level 1 is defined as observable inputs, such as quoted prices in active markets. Level 2 is defined as inputs other than quoted prices in active markets that are directly or indirectly observable. Level 3 is defined as unobservable inputs for which little or no market data exists, therefore requiring the company to develop its own assumptions. The three-tier fair value hierarchy is used in note 31, Financial instruments.

aa) Use of estimates

The preparation of consolidated financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of income and expenses during the reporting period. Actual results could differ from those estimates. Estimates and discretionary decisions are required in particular for the positions trade accounts receivable, deferred tax assets and pension liabilities as well as when examining the recoverability of goodwill.

bb) Receivables management

The entities of the Fresenius Group perform ongoing evaluations of the financial situation of their customers and generally do not require a collateral from the customers for the supply of products and provision of services. Approximately 16% of Fresenius Group's sales were earned and subject to the regulations under governmental health care programs, Medicare and Medicaid, administered by the United States government in 2019 and 2018, respectively.

cc) Recent pronouncements, applied

The Fresenius Group has prepared its consolidated financial statements at December 31, 2019 in conformity with IFRS that have to be applied for fiscal years beginning on January 1, 2019.

In 2019, the Fresenius Group applied the following new standard relevant for its business for the first time:

IFRS 16

In January 2016, the IASB issued **IFRS 16, Leases**, which supersedes the current standard on lease accounting, IAS 17, as well as the interpretations IFRIC 4, SIC-15 and SIC-27. IFRS 16 significantly changes lessee accounting. For almost all leases, a lessee is required to recognize a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments. Only leases with a total maximum term of 12 months (short-term leases) and leases for underlying assets of low value may optionally be exempted from balance sheet recognition by applying an accounting policy choice. Depreciation of the right-of-use asset and interest on the lease liability must be recognized in the consolidated statement of income for every lease contract recognized in the balance sheet. Therefore, straight-line rental expenses will no longer be shown for the vast majority of the leases. The lessor accounting requirements in IAS 17 are substantially carried forward.

The Fresenius Group applies the modified retrospective method in accordance with IFRS 16 as the transition method. Accordingly, the cumulative effect from first-time application was recognized in the opening balance of retained earnings as of January 1, 2019 without adjustments to the comparative information of the previous period.

In the application of the modified retrospective method, the carrying amount of the lease liability at the date of the initial application is determined by discounting the remaining lease payments of lease agreements that were classified as operating leases under IAS 17 using the term-, country- and currency-specific incremental borrowing rate at date of initial application. Furthermore, right-of-use assets are to be recognized. In the application of the modified retrospective method, the carrying amount of the right-of-use asset equals the carrying amount of the lease liability, adjusted for any prepaid or accrued lease payments. For a part of the existing contracts, the Fresenius Group recognizes the right-of-use asset with its carrying amount assuming the new standard had been applied since the commencement date of the lease discounted using its term-, country- and currency-specific incremental borrowing rate at the date of initial application.

Regarding the options and exemptions available upon the initial application of IFRS 16, the Fresenius Group adopted the following approach:

- IFRS 16 is only applied to contracts that were previously identified as leases under IAS 17 and IFRIC 4.
- Recognition, valuation and disclosure principles of IFRS 16 are not applied to lease contracts with a lease term ending in less than 12 months from the date of the initial application. The respective lease contracts are accounted for as if they were short-term leases and recognized as an expense accordingly.
- Material initial direct costs are included in the measurement of a right-of-use asset with the carrying amount assuming the new standard was applied since the commencement date of the lease.
- Upon initial recognition, no impairment review was performed. The right-of-use assets were adjusted for onerous contract provisions, recognized on the consolidated statement of financial position immediately before the date of initial application.

For the impacts of IFRS 16, please see note 30, Leases.

dd) Recent pronouncements, not yet applied

The International Accounting Standards Board (IASB) issued the following new standard, which is relevant for the Fresenius Group and mandatory for fiscal years commencing on or after January 1, 2020:

IFRS 17

In May 2017, the IASB issued **IFRS 17, Insurance Contracts**. IFRS 17 establishes principles for the recognition, measurement, presentation and disclosure related to the issuance of insurance contracts. IFRS 17 replaces IFRS 4, Insurance Contracts, which was brought in as an interim standard in 2004. IFRS 4 permitted the use of national accounting standards for the accounting of insurance contracts under IFRS. As a result of the varied application for insurance contracts, there was a lack of comparability among peer groups. IFRS 17 eliminates this diversity in practice by requiring all insurance contracts to be accounted for using current values. The frequent updates to the insurance values are expected to provide more useful information to users of financial statements. IFRS 17 is effective for fiscal years beginning on or after January 1, 2021. Earlier adoption is permitted for entities that have also adopted IFRS 9, Financial Instruments, and IFRS 15, Revenue from Contracts with Customers. The Fresenius Group is currently evaluating the impact of IFRS 17 on the consolidated financial statements.

The EU Commission's endorsement of IFRS 17 is still outstanding.

In the Fresenius Group's view, all other pronouncements issued by the IASB do not have a material impact on the consolidated financial statements, as expected.

IV. CRITICAL ACCOUNTING POLICIES

In the opinion of the Management of the Fresenius Group, the following accounting policies and topics are critical for the consolidated financial statements in the present economic environment. The influences and judgments as well as the uncertainties which affect them are also important factors to be considered when looking at present and future operating earnings of the Fresenius Group.

a) Recoverability of goodwill and intangible assets with indefinite useful lives

The amount of goodwill and other non-amortizable intangible assets with indefinite useful lives represents a considerable part of the total assets of the Fresenius Group. At December 31, 2019 and December 31, 2018, the carrying amount of these was €27,983 million and €25,915 million, respectively. This represented 42% and 46%, respectively, of total assets.

An impairment test of goodwill and non-amortizable intangible assets with indefinite useful lives is performed at least once a year, or if events occur or circumstances change that would indicate the carrying amount may not be recoverable.

To determine possible impairments of these assets, the recoverable amount as its value in use of the cash generating units (CGUs) is compared to their carrying amount. The value in use of each CGU is determined using estimated future cash flows for the unit discounted by a weighted-average cost of capital (WACC) specific to that CGU. Estimating the discounted future cash flows involves significant assumptions, especially regarding future reimbursement rates and sales prices, number of treatments, sales volumes and costs. In determining discounted cash flows, the Fresenius Group utilizes for every CGU its approved three-year budget, projections for years 4 to 10 and a corresponding growth rate for all remaining years. Projections for up to 10 years are possible due to historical experience and the stability of Fresenius Group's business, which is largely independent from the economic cycle. Except for the CGUs in Asia-Pacific, the CGUs' average revenue growth for the 10-year planning period is between 3% and 7%. In Asia-Pacific, the average growth is in the upper single-digit range for Fresenius Medical Care and in the low double-digit range for Fresenius Kabi. A significant part of goodwill is assigned to the CGUs of Fresenius Medical Care and Fresenius Kabi in North America (carrying amounts of goodwill as of December 31, 2019: €11,763 million and €4,240 million, respectively) as well as the CGUs of Fresenius Helios in Germany and Spain (carrying amounts of goodwill as of December 31, 2019: €4,481 million and €3,507 million, respectively). A significant part of the operating income is also achieved in these CGUs. For the 10-year planning period, the average growth of the operating income is in the low to mid single-digit range for these CGUs. For the period after 10 years, the growth rates are 1% to 4% for Fresenius Medical Care, 3% for Fresenius Kabi, 1% for Fresenius Helios (Germany), 1.5% for Fresenius Helios (Spain) and 1% for Fresenius Vamed. The growth rates of the main CGUs of Fresenius Medical Care and Fresenius Kabi in North America were 1% and 3%, respectively. The discount factor is determined by the WACC of the respective CGU. Fresenius Medical Care's WACC consisted of a basic rate of 5.59% and the WACC in the business segment Fresenius Kabi consisted of a basic rate of 5.46% for 2019, respectively. This basic rate is then adjusted by a country-specific risk premium and, if appropriate, by a factor to reflect higher risks associated with the cash flows from recent material acquisitions, until they are appropriately integrated, within each CGU. In 2019, WACCs (after tax) for the CGUs of Fresenius Medical Care ranged from 6.00% to 17.63% and WACCs (after tax) for the CGUs of Fresenius Kabi ranged from 5.99% to 11.32%. In the CGU Fresenius Helios (Germany) and the business segment Fresenius Vamed, the WACC (after tax) was 5.46%, country-specific adjustments did not occur. In the CGU Fresenius Helios (Spain), the WACC (after tax) was 6.62%. The WACCs (after tax) of the main CGUs of Fresenius Medical Care and Fresenius Kabi in North America were 6.00% and 6.37%, respectively.

If the value in use of the CGU is less than its carrying amount, the difference is recorded as an impairment of the fair value of the goodwill at first. An increase of the WACC (after tax) by 0.5 percentage points would not have resulted in the recognition of an impairment loss in 2019. Additional sensitivity analyses were carried out for the CGUs in Latin America. An increase of the WACC of the CGU Fresenius Medical Care Latin America (carrying amount of goodwill as of December 31, 2019: €195 million) by 1.87 percentage points would have led to the fair value being equal to the carrying amount. An increase of the WACC of the CGU Fresenius Kabi Latin America (carrying amount of goodwill as of December 31, 2019: €145 million) by 1 percentage point would not have led to the recognition of an impairment loss. An increase of the WACC by 1.75 percentage points would have led to the fair value being equal to the carrying amount.

A prolonged downturn in the health care industry with lower than expected increases in reimbursement rates and prices and/or higher than expected costs for providing health care services and the manufacture of products could adversely affect the estimated future cash flows of certain countries or segments. Future adverse changes in a reporting unit's economic environment could affect the discount rate. A decrease in the estimated future cash flows and/or a decline in the reporting unit's economic environment could result in impairment charges to goodwill and other intangible assets with indefinite useful lives which could materially and adversely affect Fresenius Group's future operating results.

b) Legal contingencies

The Fresenius Group is involved in several legal matters arising from the ordinary course of its business. The outcome of these matters may have a material effect on the financial position, results of operations or cash flows of the Fresenius Group. For details, please see note 29, Commitments and contingencies.

The Fresenius Group regularly analyzes current information about such claims for probable losses and provides accruals for such matters, including the estimated legal expenses and consulting services in connection with these matters, as appropriate. The Fresenius Group utilizes its internal legal department as well as external resources for these assessments. In making the decision regarding the need for a provision for legal matters, the Fresenius Group considers the degree of probability of an unfavorable outcome and its ability to make a reasonable estimate of the amount of loss.

The filing of a suit or formal assertion of a claim or assessment, or the disclosure of any such suit or assertion, does not necessarily indicate that a provision for a loss is appropriate.

c) Allowance for doubtful accounts

Trade accounts receivable are a significant asset and the allowance for doubtful accounts is a significant estimate made by the Management. Trade accounts receivable were €7,176 million and €6,434 million in 2019 and 2018, respectively, net of allowance. Approximately 48% of receivables derive from the business segment Fresenius Medical Care and mainly relate to the dialysis care business in North America.

The major debtors or debtor groups of trade accounts receivable were U.S. Medicare and Medicaid health care programs with 14%, private insurers in the United States with 7% as well as the public health authority of the region of Madrid with 14%, at December 31, 2019. Other than that, the Fresenius Group has no significant risk concentration, due to its international and heterogeneous customer structure.

The allowance for doubtful accounts was €351 million and €323 million as of December 31, 2019 and December 31, 2018, respectively.

A valuation allowance is calculated if specific circumstances indicate that amounts will not be collectible. When all efforts to collect a receivable, including the use of outside sources where required and allowed, have been exhausted, and after appropriate management review, a receivable deemed to be uncollectible is considered a bad debt and written off.

Deterioration in the aging of receivables and collection difficulties could require that the Fresenius Group increases the estimates of allowances for doubtful accounts. Additional expenses for uncollectible receivables could have a significant negative impact on future operating results.

d) Self-insurance programs

Under the insurance programs for professional, product and general liability, auto liability, worker's compensation claims and medical malpractice claims, the largest subsidiary of Fresenius Medical Care AG & Co. KGaA, located in the United States, is partially self-insured for professional liability claims. For further details regarding the accounting policies for self-insurance programs, please see note 1. III. x, Self-insurance programs.

2. ACQUISITIONS, DIVESTITURES AND INVESTMENTS

ACQUISITIONS, DIVESTITURES AND INVESTMENTS

The Fresenius Group made acquisitions, investments and purchases of intangible assets of €2,623 million and €1,086 million in 2019 and 2018, respectively. In 2019, of this amount, €2,484 million was paid in cash and €139 million was assumed obligations.

Fresenius Medical Care

In 2019, Fresenius Medical Care spent €2,297 million on acquisitions, mainly on the purchase of NxStage Medical, Inc. (NxStage).

Acquisition of NxStage Medical, Inc., United Stats

On February 21, 2019, Fresenius Medical Care acquired all of the outstanding shares of NxStage for US$30.00 per common share. The total acquisition value of this business combination, net of cash acquired, is US$1,976 million (€1,741 million at date of closing). NxStage is a leading medical technology company that develops, produces and markets an innovative product portfolio of medical devices for use in home dialysis and in the critical care setting. NxStage has been consolidated as of February 21, 2019.

The transaction was accounted for as a business combination. The following table summarizes the fair values of assets acquired and liabilities assumed at the date of the acquisition. This allocation of the purchase price is based upon information available as of December 31, 2019.

US$ in millions	
Cash and cash equivalents	47
Trade accounts and other receivables	34
Inventories	63
Other current assets	16
Property, plant and equipment	104
Right-of-use assets	22
Intangible assets and other assets	762
Goodwill	1,202
Accounts payable, current provisions and other current liabilities	-72
Income tax payable and deferred taxes	-101
Lease liabilities	-22
Other liabilities	-28
Noncontrolling interest	-4
Total acquisition cost	**2,023**
less cash acquired	-47
Net cash paid	**1,976**

As of the acquisition date, amortizable intangible assets (primarily technology) acquired in this acquisition have weighted-average useful lives of 13 years.

Goodwill in the amount of US$1,202 million was acquired as part of the NxStage acquisition.

NxStage's results have been included in the Fresenius Group's consolidated statement of income since February 21, 2019. Specifically, NxStage has contributed US$294 million (€263 million) to sales and -US$31 million (-€28 million) to the operating income (EBIT) of the Fresenius Group for the fiscal year 2019. This operating loss amount does not include synergies which may have resulted at consolidated entities outside NxStage since the acquisition closed.

In 2018, Fresenius Medical Care spent €957 million on acquisitions, mainly on investments in financial assets, the purchase of dialysis clinics as well as an equity investment in Humacyte, Inc., a medical research, discovery and development company, to gain a 19% ownership stake as well as a related exclusive global distribution right to Humacyte's bioengineered human acellular vessels.

Divestment of Sound Inpatient Physicians Holdings, LLC, United States

On June 28, 2018, Fresenius Medical Care completed the divestment of its controlling interest in Sound Inpatient Physicians Holdings, LLC to an investment consortium led by Summit Partners, L.P. The total transaction proceeds were US$1,771 million (€1,531 million), net of related tax payments. The pre-tax gain related to divestitures for care coordination activities was €809 million, which primarily related to this divestiture, the effect of the six month impact from the increase in valuation of Sound's share based payment program, incentive compensation expense and other costs caused by the divestment of Sound.

Fresenius Kabi

In 2019, Fresenius Kabi spent €86 million on acquisitions, mainly for already planned acquisition related milestone payments relating to the acquisition of the biosimilars business.

Termination of the merger agreement with Akorn, Inc.

On April 24, 2017, Fresenius announced that Fresenius Kabi has agreed to acquire Akorn, Inc. (Akorn), a U.S.-based manufacturer and marketer of prescription and over-the-counter pharmaceutical products, for approximately US$4.3 billion, or US$34 per share, plus the prevailing net debt at closing of the transaction.

Fresenius conducted an independent investigation, using external experts, into alleged breaches of FDA data integrity requirements relating to product development at Akorn.

Fresenius decided on April 22, 2018 to terminate the merger agreement with Akorn, due to Akorn's failure to fulfill several closing conditions. Fresenius' decision was based on, among other factors, material breaches of FDA data integrity requirements relating to Akorn's operations found during Fresenius' independent investigation. Fresenius offered to delay its decision in order to allow Akorn additional opportunity to complete its own investigation and present any information it wished Fresenius to consider, but Akorn declined that offer.

Akorn disagreed with Fresenius' position and filed a lawsuit on April 23, 2018 purporting to enforce the merger agreement.

Fresenius filed a counterclaim on April 30, 2018. The trial of the lawsuit took place in the Delaware Court of Chancery from July 9 to 13 and on August 23, 2018.

On October 1, 2018, the Court of Chancery in the U.S. state of Delaware ruled in favor of Fresenius in the lawsuit by Akorn, Inc. against Fresenius for the consummation of the April 2017 merger agreement.

Akorn appealed on October 18, 2018 against this ruling to the Delaware Supreme Court. On December 7, 2018, the Delaware Supreme Court, being the highest court and final instance in Delaware, affirmed the ruling of the Court of Chancery in favor of Fresenius. Fresenius has sued Akorn for damages suffered as a result of lost acquisition expenses. The lawsuit is pending before the Delaware Court of Chancery in the United States and is currently being heard.

In 2018, Fresenius Kabi spent €43 million on acquisitions, mainly for already planned acquisition related milestone payments relating to the acquisition of the biosimilars business as well as one acquisition in the areas of medical technology and IV drugs, respectively.

Fresenius Helios

In 2019, Fresenius Helios spent €211 million on acquisitions, mainly for the purchase of two hospitals (Clínica Las Vegas, S.A., Clínica Medellín, S.A.) and CediMed, one medical diagnostics provider in Colombia, as well as Mitteldeutsches Institut für Arbeitsmedizin GmbH and outpatient clinics in Germany.

In 2018, Fresenius Helios spent €60 million on acquisitions, mainly for the purchase of outpatient clinics in Germany and an acute care hospital in Spain.

On July 1, 2018, Fresenius Helios transferred 38 health care facilities and 13 service companies in Germany specializing in inpatient post-acute and nursing care to Fresenius Vamed.

Fresenius Vamed

In 2019, Fresenius Vamed spent €29 million on acquisitions, mainly for the purchase of a sterilization services provider in Great Britain and the increased shareholding in a post-acute clinic in Austria.

In 2018, Fresenius Vamed spent €496 million on acquisitions, mainly for 38 health care facilities and 13 service companies in Germany specializing in inpatient post-acute and nursing care which Fresenius Helios transferred to Fresenius Vamed on July 1, 2018. The transaction had a total volume of €468 million. It was financed within the Group.

IMPACTS ON FRESENIUS GROUP'S CONSOLIDATED FINANCIAL STATEMENTS RESULTING FROM ACQUISITIONS

In the fiscal year 2019, all acquisitions have been accounted for applying the purchase method and accordingly have been consolidated starting with the date of acquisition. The excess of the total acquisition costs over the fair value of the net assets acquired was €2,704 million and €777 million in 2019 and 2018, respectively.

The purchase price allocations are not yet finalized for all acquisitions of the current year. Based on preliminary purchase price allocations, the recognized goodwill was €1,732 million and the other intangible assets were €972 million. Of this goodwill, €1,589 million is attributable to the acquisitions of Fresenius Medical Care, €134 million to the acquisitions of Fresenius Helios and €9 million to the acquisitions of Fresenius Vamed.

Goodwill is an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized. Goodwill arises principally due to the fair value placed on an established stream of future cash flows versus building a similar business.

The acquisitions completed in 2019 or included in the consolidated financial statements for the first time for a full year contributed the following amounts to the development of sales and earnings:

€ in millions	2019
Sales	440
EBITDA	75
EBIT	-5
Net interest	-77
Net income attributable to shareholders of Fresenius SE & Co. KGaA	-18

The acquisitions increased the total assets of the Fresenius Group by €3,016 million.

NOTES ON THE CONSOLIDATED STATEMENT OF INCOME

3. SPECIAL ITEMS

Net income attributable to shareholders of Fresenius SE & Co. KGaA for the year 2019 in the amount of €1,883 million includes special items relating to the acquisition of NxStage and the cost optimization program of Fresenius Medical Care. Furthermore, special items due to divestitures of Care Coordination activities, the revaluation of biosimilars contingent purchase price liabilities as well as the terminated merger agreement with Akorn, Inc. are included in net income attributable to shareholders of Fresenius SE & Co. KGaA.

The special items had the following impact on the consolidated statement of income of 2019:

€ in millions	EBIT	Interest expenses	Net income attributable to shareholders of Fresenius SE & Co. KGaA
Earnings 2019, before special items	4,688	-714	1,879
Transaction-related effects of NxStage	-24	0	-6
Cost optimization program Fresenius Medical Care	-91	0	-21
Gain related to divestitures of Care Coordination activities	29	0	15
Revaluations of biosimilars contingent purchase price liabilities	32	-5	19
Transaction-related effects of Akorn	-3	0	-3
Earnings 2019 according to IFRS	**4,631**	**-719**	**1,883**

Net income attributable to shareholders of Fresenius SE & Co. KGaA for the year 2018 in the amount of €2,027 million includes special items relating to divestitures of Care Coordination activities (mainly Sound Inpatient Physicians) and the terminated merger agreement with Akorn, Inc. With regard to the latter, these mainly comprise transaction costs in the form of legal and consulting expenses as well as financing commitment expenses for the Akorn transaction. Furthermore, special items due to FCPA (Foreign Corrupt Practices Act) investigations and revaluations of biosimilars contingent purchase price liabilities are included in net income attributable to shareholders of Fresenius SE & Co. KGaA.

The special items had the following impact on the consolidated statement of income of 2018:

€ in millions	EBIT	Interest expenses	Net income attributable to shareholders of Fresenius SE & Co. KGaA
Earnings 2018, before special items	4,561	-570	1,871
Gain related to divestitures of Care Coordination activities	809	0	207
Transaction-related effects of Akorn	-35	-17	-37
FCPA related expenses	-77	0	-9
Revaluations of biosimilars contingent purchase price liabilities	-7	0	-5
Earnings 2018 according to IFRS	**5,251**	**-587**	**2,027**

4. SALES

Sales by activity were as follows:

€ in millions	2019	2018
Sales from contracts with customers	**35,011**	33,206
thereof sales of services	**24,015**	22,898
thereof sales of products and related services	**10,217**	9,590
thereof sales from long-term production contracts	**761**	710
thereof further sales from contracts with customers	**18**	8
Other sales	**398**	324
Sales	**35,409**	**33,530**

Other sales include sales from insurance and lease contracts.

As of December 31, 2019 the Group had performance obligations that are unsatisfied or partially unsatisfied and that are expected to be satisfied and recorded in sales in the following years.

€ in millions	2020	2021	2022	2023	2024	thereafter	Total
Transaction price of the unsatisfied or partially unsatisfied performance obligations	1,141	967	801	737	432	546	**4,624**

A sales analysis by business segment and region is shown in the segment information on pages 172 to 174.

5. COST OF MATERIALS

Cost of materials included in cost of sales was comprised of cost of raw materials, supplies and purchased components and cost of purchased services:

€ in millions	2019	2018
Cost of raw materials, supplies and purchased components	**7,545**	6,895
Cost of purchased services	**1,528**	1,240
Cost of materials	**9,073**	8,135

6. PERSONNEL EXPENSES

Cost of sales, selling expenses, general and administrative expenses and research and development expenses included personnel expenses of €14,355 million and €13,426 million in 2019 and 2018, respectively.

Personnel expenses were comprised of the following:

€ in millions	2019	2018
Wages and salaries	**11,651**	10,753
Social security contributions, cost of retirement pensions and social assistance	**2,704**	2,673
thereof retirement pensions	**366**	338
Personnel expenses	**14,355**	13,426

Fresenius Group's annual average number of employees by function is shown below:

	2019	2018
Production	**42,207**	40,825
Service	**204,981**	194,691
Administration	**27,665**	25,973
Sales and marketing	**12,000**	11,587
Research and development	**3,283**	2,927
Total employees (per capita)	**290,136**	276,003

7. RESEARCH AND DEVELOPMENT EXPENSES

Research and development expenses of €645 million (2018: €653 million) included expenditures for research and non-capitalizable development costs as well as regular depreciation and amortization expenses relating to capitalized development costs of €17 million (2018: €16 million). Furthermore, in 2019, research and development expenses included reversals of write-downs on capitalized development expenses of €20 million and impairments of €5 million (2018: impairments of €7 million). These related to in-process R & D of product approval projects, which were acquired through the acquisition of Fresenius Kabi USA, Inc. The expenses for the further development of the biosimilars business included in the research and development expenses amounted to €91 million (2018: €153 million).

8. GENERAL AND ADMINISTRATIVE EXPENSES

General and administrative expenses amounted to €4,386 million (2018: €3,877 million) and were related to expenditures for administrative functions not attributable to research and development, production or selling.

In 2018, general and administrative expenses included expenses of €77 million in regards to Foreign Corrupt Practices Act (FCPA) investigations.

9. OTHER OPERATING INCOME AND EXPENSES

Other operating income and expenses mainly included foreign exchange gains and losses, income from at equity valuations and valuations of equity investments that are measured at fair value through profit and loss as well as the release of provisions.

10. NET INTEREST

Net interest of -€719 million included interest expenses of €881 million and interest income of €162 million. The main portion of the interest expenses resulted from Fresenius Group's financial liabilities, which are recognized at amortized cost (see note 31, Financial instruments). Thereof, €217 million related to lease liabilities. The main portion of interest income resulted from the valuation of the derivatives embedded in the convertible bonds of Fresenius SE & Co. KGaA and of Fresenius Medical Care AG & Co. KGaA as well as call options of Fresenius SE & Co. KGaA (see note 24, Convertible bonds).

11. TAXES

INCOME TAXES

Income before income taxes was attributable to the following geographic regions:

€ in millions	2019	2018
Germany	494	476
International	3,418	4,188
Total	**3,912**	4,664

Income tax expenses (benefits) for 2019 and 2018 consisted of the following:

€ in millions	Current taxes	Deferred taxes	Income taxes
2019			
Germany	**32**	**76**	**108**
International	**782**	**-7**	**775**
Total	**814**	**69**	**883**
2018			
Germany	153	-65	88
International	697	165	862
Total	850	100	950

A reconciliation between the expected and actual income tax expense is shown in the following table. The expected corporate income tax expense is computed by applying the German corporation tax rate (including the solidarity surcharge) and the effective trade tax rate on income before income taxes. The respective combined tax rate was 30.6% for the fiscal years 2019 and 2018, respectively.

€ in millions	2019	2018
Computed "expected" income tax expense	1,197	1,427
Increase (reduction) in income taxes resulting from:		
Items not recognized for tax purposes	77	80
Tax rate differential	-275	-396
Tax rate changes	7	-2
Tax-free income	-89	-51
Taxes for prior years	20	-88
Noncontrolling interests	-61	-62
Other	7	42
Income tax	**883**	950
Effective tax rate	**22.6%**	20.4%

DEFERRED TAXES

The tax effects of the temporary differences and losses carried forward from prior years that gave rise to deferred tax assets and liabilities at December 31 are presented below:

€ in millions	2019	2018
Deferred tax assets		
Accounts receivable	56	50
Inventories	173	170
Other current assets	121	102
Other non-current assets	127	134
Lease liabilities	1,556	0
Provisions and other liabilities	228	262
Benefit obligations	296	204
Losses carried forward from prior years	263	177
Deferred tax assets	**2,820**	1,099
Deferred tax liabilities		
Accounts receivable	35	35
Inventories	21	28
Other current assets	149	163
Other non-current assets	1,134	857
Right-of-use assets	1,453	0
Provisions and other liabilities	607	523
Deferred tax liabilities	**3,399**	1,606
Net deferred taxes	**-579**	-507

In the consolidated statement of financial position, the net amounts of deferred tax assets and liabilities are included as follows:

€ in millions	2019	2018
Deferred tax assets	839	777
Deferred tax liabilities	1,418	1,284
Net deferred taxes	**-579**	-507

As of December 31, 2019, Fresenius Medical Care has not recognized a deferred tax liability on approximately €9 billion of undistributed earnings of its foreign subsidiaries, because those earnings are considered indefinitely reinvested.

NET OPERATING LOSSES

The expiration of net operating losses is as follows:

for the fiscal years	€ in millions
2020	40
2021	31
2022	37
2023	33
2024	75
2025	21
2026	90
2027	49
2028	30
2029 and thereafter	180
Total	**586**

The total remaining operating losses of €1,198 million can mainly be carried forward for an unlimited period. The total amount of the existing operating losses as of December 31, 2019 includes an amount of €1,023 million (2018: €860 million) that will probably not be realizable. For these operating losses, deferred tax assets were not recognized.

Based upon the level of historical taxable income and projections for future taxable income, the Management of the Fresenius Group believes it is more likely than not that the Fresenius Group will realize the benefits of these deductible differences, net of the existing valuation allowances, at December 31, 2019.

12. NONCONTROLLING INTEREST

As of December 31, noncontrolling interest in net income in the Fresenius Group was as follows:

€ in millions	2019	2018
Noncontrolling interest in Fresenius Medical Care	826	1,372
Noncontrolling interest in Fresenius Vamed	19	17
Noncontrolling interest in the business segments		
Fresenius Medical Care	239	244
Fresenius Kabi	49	43
Fresenius Helios	11	10
Fresenius Vamed	2	1
Total noncontrolling interest	**1,146**	1,687

In the fiscal year 2019, Fresenius Medical Care AG & Co. KGaA paid dividends to noncontrolling interests in the amount of €244 million (2018: €225 million).

13. EARNINGS PER SHARE

The following table shows the earnings per share including and excluding the dilutive effect from stock options issued:

	2019	2018
Numerators, € in millions		
Net income attributable to shareholders of Fresenius SE & Co. KGaA	1,883	2,027
less effect from dilution due to Fresenius Medical Care shares	–	2
Income available to all ordinary shares	1,883	2,025
Denominators in number of shares		
Weighted-average number of ordinary shares outstanding	556,820,762	555,543,954
Potentially dilutive ordinary shares	596,552	1,760,548
Weighted-average number of ordinary shares outstanding assuming dilution	557,417,314	557,304,502
Basic earnings per share in €	**3.38**	3.65
Fully diluted earnings per share in €	**3.38**	3.63

NOTES ON THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

14. CASH AND CASH EQUIVALENTS

As of December 31, cash and cash equivalents were as follows:

€ in millions	2019	2018
Cash	1,158	1,273
Time deposits and securities (with a maturity of up to 90 days)	496	1,436
Total cash and cash equivalents	**1,654**	2,709

As of December 31, 2019 and December 31, 2018, earmarked funds of €111 million and €123 million, respectively, were included in cash and cash equivalents.

The Fresenius Group operates a multi-currency notional pooling cash management system. The Fresenius Group met the conditions to offset balances within this cash pool for reporting purposes. At December 31, 2019, €177 million (December 31, 2018: €134 million) of the cash balances and the equivalent amount of the overdraft balances were offset. Thereof €153 million related to Fresenius Medical Care.

15. TRADE ACCOUNTS AND OTHER RECEIVABLES

As of December 31, trade accounts and other receivables were as follows:

€ in millions	2019	2018
Trade accounts and other receivables	7,527	6,757
less allowance for doubtful accounts	351	323
Trade accounts and other receivables, net	**7,176**	6,434

Within trade accounts and other receivables, net, as of December 31, 2019, €7,425million relate to revenue from contracts with customers as defined by IFRS 15. This amount includes €350 million of allowance for doubtful accounts. Further trade accounts and other receivables, net, relate to other sales.

All trade accounts and other receivables are due within one year. Trade accounts and other receivables with a term of more than one year in the amount of €25 million (2018: €18 million) are included in other non-current assets.

The following table shows the development of the allowance for doubtful accounts during the fiscal year:

€ in millions	2019	2018
Allowance for doubtful accounts at the beginning of the year	**323**	312
Change in valuation allowances as recorded in the consolidated statement of income	52	33
Write-offs and recoveries of amounts previously written-off	-24	-21
Foreign currency translation	–	-1
Allowance for doubtful accounts at the end of the year	**351**	323

Further allowances for expected credit losses are included in other current and non-current assets (see note 17, Other current and non-current assets). As of December 31, 2019, the Fresenius Group had total allowances for expected credit losses of €374 million (2018: €372 million).

The following table shows the credit risk rating grades of trade accounts receivable and their allowance for doubtful accounts:

	December 31, 2019			December 31, 2018		
€ in millions	Total	thereof overdue	thereof credit impaired	Total	thereof overdue	thereof credit impaired
Trade accounts and other receivables	7,527	3,044	710	6,757	2,426	671
less allowance for doubtful accounts	351	314	274	323	284	253
Trade accounts and other receivables, net	**7,176**	**2,730**	**436**	6,434	2,142	418

16. INVENTORIES

As of December 31, inventories consisted of the following:

€ in millions	2019	2018
Raw materials and purchased components	**835**	761
Work in process	**370**	326
Finished goods	**2,559**	2,245
less reserves	**131**	114
Inventories, net	**3,633**	3,218

In 2019 and in 2018, immaterial reversals of write-downs of inventory were made.

The companies of the Fresenius Group are obliged to purchase approximately €886 million of raw materials and purchased components under fixed terms, of which €513 million was committed at December 31, 2019 for 2020. The terms of these agreements run 1 to 10 years. Advance payments from customers of €741 million (2018: €682 million) have been offset against inventories. These exclusively related to long-term construction contracts.

17. OTHER CURRENT AND NON-CURRENT ASSETS

As of December 31, other current and non-current assets were comprised of the following:

€ in millions	2019	2019 thereof short-term	2018	2018 thereof short-term
Contract assets	**704**	**704**	535	535
At equity investments	**697**	**0**	650	0
Tax receivables	**666**	**638**	615	586
Advances made	**173**	**169**	102	88
Accounts receivable resulting from German hospital law	**112**	**112**	150	137
Prepaid expenses	**79**	**53**	76	43
Prepaid rent and insurance	**51**	**51**	86	86
Other assets	**560**	**417**	517	381
Other non-financial assets, net	**3,042**	**2,144**	2,731	1,856
Debt instruments	**370**	**133**	334	100
Equity investments	**369**	**0**	245	0
Compensation receivable resulting from German hospital law	**219**	**211**	154	147
Leasing receivables	**112**	**0**	108	0
Long-term loans	**103**	**31**	92	18
Deposits	**97**	**35**	87	31
Derivative financial instruments	**14**	**11**	77	45
Discounts	**51**	**51**	68	68
Other assets	**355**	**85**	325	29
Other financial assets, net	**1,690**	**557**	1,490	438
Other assets, net	**4,732**	**2,701**	4,221	2,294
Allowances	**23**	**19**	49	45
Other assets, gross	**4,755**	**2,720**	4,270	2,339

At equity investments mainly related to the joint venture named Vifor Fresenius Medical Care Renal Pharma Ltd. between Fresenius Medical Care and Galenica Ltd. In 2019, income of €74 million (2018: €73 million) resulting from this valuation was included in other operating income in the consolidated statement of income.

The accounts receivable resulting from German hospital law contain approved but not yet received earmarked subsidies of the Fresenius Helios operations. The approval is evidenced in a letter written by the granting authorities that Fresenius Helios has already received.

Contract assets mainly related to long-term production contracts for which revenue is recognized over time. As of December 31, 2019, they included €0.2 million (2018: €0.1 million) of allowance for doubtful accounts. Moreover, in the fiscal year 2019, depreciation of €1 million and in the fiscal year 2018 depreciation in an immaterial amount was recognized on other non-current assets.

18. PROPERTY, PLANT AND EQUIPMENT

As of December 31, the acquisition and manufacturing costs as well as accumulated depreciation of property, plant and equipment consisted of the following:

ACQUISITION AND MANUFACTURING COSTS

€ in millions	As of Jan. 1, 2019	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Disposals	**As of Dec. 31, 2019**
Land	821	2	22	10	-3	4	**848**
Buildings and improvements	7,677	71	49	146	496	103	**8,336**
Machinery and equipment	8,559	66	94	795	374	295	**9,593**
Machinery, equipment and rental equipment under capital leases	255	0	0	0	-255	0	**0**
Construction in progress	1,569	11	-1	1,150	-827	16	**1,886**
Property, plant and equipment	18,881	150	164	2,101	-215	418	**20,663**

DEPRECIATION

€ in millions	As of Jan. 1, 2019	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Disposals	**As of Dec. 31, 2019**
Land	14	–	0	1	–	–	**15**
Buildings and improvements	3,196	33	-8	400	9	68	**3,562**
Machinery and equipment	5,184	32	-7	829	27	291	**5,774**
Machinery, equipment and rental equipment under capital leases	113	0	0	0	-113	0	**0**
Construction in progress	8	-1	0	0	0	2	**5**
Property, plant and equipment	8,515	64	-15	1,230	-77	361	**9,356**

ACQUISITION AND MANUFACTURING COSTS

€ in millions	As of Jan. 1, 2018	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Disposals	**As of Dec. 31, 2018**
Land	814	3	–	4	10	10	**821**
Buildings and improvements	7,129	106	29	168	335	90	**7,677**
Machinery and equipment	7,844	75	-31	712	247	288	**8,559**
Machinery, equipment and rental equipment under capital leases	187	4	–	7	60	3	**255**
Construction in progress	1,198	19	6	1,065	-710	9	**1,569**
Property, plant and equipment	17,172	207	4	1,956	-58	400	**18,881**

DEPRECIATION

€ in millions	As of Jan. 1, 2018	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Disposals	As of Dec. 31, 2018
Land	14	–	–	1	–	1	**14**
Buildings and improvements	2,819	64	9	366	-5	57	**3,196**
Machinery and equipment	4,685	42	-22	744	-20	245	**5,184**
Machinery, equipment and rental equipment under capital leases	93	3	–	19	1	3	**113**
Construction in progress	6	–	0	3	–	1	**8**
Property, plant and equipment	7,617	109	-13	1,133	-24	307	**8,515**

CARRYING AMOUNTS

€ in millions	Dec. 31, 2019	Dec. 31, 2018
Land	**833**	807
Buildings and improvements	**4,774**	4,481
Machinery and equipment	**3,819**	3,375
Machinery, equipment and rental equipment under capital leases	**0**	142
Construction in progress	**1,881**	1,561
Property, plant and equipment	**11,307**	10,366

Depreciation on property, plant and equipment for the years 2019 and 2018 was €1,230 million and €1,133 million, respectively. It is allocated within cost of sales, selling expenses, general and administrative expenses and research and development expenses, depending upon the use of the asset.

LEASING

Machinery and equipment as of December 31, 2019 and 2018 included medical devices which Fresenius Medical Care and Fresenius Kabi lease to hospitals, patients and physicians under operating leases in an amount of €911 million and €868 million, respectively.

For information on the development of the right-of-use assets, see note 30, Leases.

19. GOODWILL AND OTHER INTANGIBLE ASSETS

As of December 31, the acquisition cost and accumulated amortization of intangible assets consisted of the following:

ACQUISITION COST

€ in millions	As of Jan. 1, 2019	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Disposals	**As of Dec. 31, 2019**
Goodwill	25,713	295	1,718	14	0	3	**27,737**
Customer relationships	717	3	48	0	-3	0	**765**
Tradenames with finite useful lives	699	1	-7	1	1	2	**693**
Capitalized development costs	895	6	0	51	-28	1	**923**
Patents, product and distribution rights	759	13	-38	6	5	–	**745**
Software	821	5	1	227	64	9	**1,109**
Technology	428	3	590	0	1	0	**1,022**
Tradenames with indefinite useful lives	199	3	41	–	–	0	**243**
Non-compete agreements	329	6	5	–	–	3	**337**
Management contracts	3	0	0	0	0	0	**3**
Other	418	6	48	50	-23	8	**491**
Goodwill and other intangible assets	30,981	341	2,406	349	17	26	**34,068**

AMORTIZATION

€ in millions	As of Jan. 1, 2019	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Disposals	**As of Dec. 31, 2019**
Goodwill	0	0	0	0	0	0	**0**
Customer relationships	122	1	0	44	0	0	**167**
Tradenames with finite useful lives	90	–	-3	42	0	–	**129**
Capitalized development costs	255	2	0	2	0	1	**258**
Patents, product and distribution rights	432	7	0	36	–	5	**470**
Software	433	3	–	104	-4	8	**528**
Technology	235	3	0	69	–	0	**307**
Tradenames with indefinite useful lives	0	0	0	0	0	0	**0**
Non-compete agreements	282	5	–	12	–	3	**296**
Management contracts	0	0	0	0	0	0	**0**
Other	289	6	0	18	2	8	**307**
Goodwill and other intangible assets	2,138	27	-3	327	-2	25	**2,462**

ACQUISITION COST

€ in millions	As of Jan. 1, 2018	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Disposals	**As of Dec. 31, 2018**
Goodwill	25,285	598	-200	31	0	1	**25,713**
Customer relationships	840	5	-125	0	-3	0	**717**
Tradenames with finite useful lives	699	2	-7	–	5	0	**699**
Capitalized development costs	828	12	3	53	2	3	**895**
Patents, product and distribution rights	674	28	0	62	–	5	**759**
Software	599	8	-11	175	60	10	**821**
Technology	415	13	0	0	0	0	**428**
Tradenames with indefinite useful lives	192	7	0	–	0	0	**199**
Non-compete agreements	314	13	6	1	–	5	**329**
Management contracts	3	–	0	0	0	0	**3**
Other	418	4	6	35	-24	21	**418**
Goodwill and other intangible assets	30,267	690	-328	357	40	45	**30,981**

AMORTIZATION

€ in millions	As of Jan. 1, 2018	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Disposals	**As of Dec. 31, 2018**
Goodwill	0	0	0	0	0	0	**0**
Customer relationships	123	2	-53	50	–	–	**122**
Tradenames with finite useful lives	48	–	-6	42	6	0	**90**
Capitalized development costs	229	6	0	23	–	3	**255**
Patents, product and distribution rights	386	15	0	34	–	3	**432**
Software	337	6	-4	88	15	9	**433**
Technology	154	6	–	75	0	0	**235**
Tradenames with indefinite useful lives	0	0	0	0	0	0	**0**
Non-compete agreements	262	11	-1	15	–	5	**282**
Management contracts	0	0	0	0	0	0	**0**
Other	271	4	-1	35	-1	19	**289**
Goodwill and other intangible assets	1,810	50	-65	362	20	39	**2,138**

CARRYING AMOUNTS

€ in millions	Dec. 31, 2019	Dec. 31, 2018
Goodwill	**27,737**	25,713
Customer relationships	**598**	595
Tradenames with finite useful lives	**564**	609
Capitalized development costs	**665**	640
Patents, product and distribution rights	**275**	327
Software	**581**	388
Technology	**715**	193
Tradenames with indefinite useful lives	**243**	199
Non-compete agreements	**41**	47
Management contracts	**3**	3
Other	**184**	129
Goodwill and other intangible assets	**31,606**	28,843

Amortization and impairments on intangible assets amounted to €327 million and €362 million for the years 2019 and 2018, respectively. It is allocated within cost of sales, selling expenses, general and administrative expenses and research and development expenses, depending upon the use of the asset.

The split of intangible assets into amortizable and non-amortizable intangible assets is shown in the following tables:

AMORTIZABLE INTANGIBLE ASSETS

	Dec. 31, 2019			Dec. 31, 2018		
€ in millions	**Acquisition cost**	**Accumulated amortization**	**Carrying amount**	Acquisition cost	Accumulated amortization	Carrying amount
Customer relationships	**765**	**167**	**598**	717	122	595
Tradenames	**693**	**129**	**564**	699	90	609
Capitalized development costs	**923**	**258**	**665**	895	255	640
Patents, product and distribution rights	**745**	**470**	**275**	759	432	327
Software	**1,109**	**528**	**581**	821	433	388
Technology	**1,022**	**307**	**715**	428	235	193
Non-compete agreements	**337**	**296**	**41**	329	282	47
Other	**491**	**307**	**184**	418	289	129
Total	**6,085**	**2,462**	**3,623**	5,066	2,138	2,928

The increase of the position technology mainly relates to the acquisition of NxStage.

Fresenius Medical Care capitalized development costs in an amount of €37 million for the fiscal year 2019 (2018: €2 million). Capitalized development costs are amortized on a straight-line basis over a useful life of 8 years. The amortization expense for the fiscal year 2019 amounted to €3 million (2018: €0.3 million). In the case of Fresenius Kabi, development costs capitalized amounted to €628 million at December 31, 2019 (December 31, 2018: €638 million). The amortization is recorded on a straight-line basis over a useful life of 5 to 20 years and amounted to €14 million for the fiscal year 2019 (2018: €16 million). Furthermore, in 2019, research and development expenses included reversals of write-downs on capitalized development expenses of €20 million and impairments of €5 million (2018: impairments of €7 million) (see note 7, Research and development expenses). These are included in the preceding amortization tables in the columns additions.

NON-AMORTIZABLE INTANGIBLE ASSETS

€ in millions	**Dec. 31, 2019** Acquisition cost	**Dec. 31, 2019** Accumulated amortization	**Dec. 31, 2019** Carrying amount	Dec. 31, 2018 Acquisition cost	Dec. 31, 2018 Accumulated amortization	Dec. 31, 2018 Carrying amount
Goodwill	**27,737**	**0**	**27,737**	25,713	0	25,713
Tradenames	**243**	**0**	**243**	199	0	199
Management contracts	**3**	**0**	**3**	3	0	3
Total	**27,983**	**0**	**27,983**	25,915	0	25,915

The carrying amount of goodwill has developed as follows:

€ in millions	Fresenius Medical Care	Fresenius Kabi	Fresenius Helios	Fresenius Vamed	Corporate/ Other	**Fresenius Group**
Carrying amount as of January 1, 2018	**12,104**	**5,155**	**7,902**	**118**	**6**	**25,285**
Additions	328	44	102	21	0	495
Disposals	-664	0	-1	–	0	-665
Reclassifications	0	0	-146	146	0	0
Foreign currency translation	442	156	0	0	0	598
Carrying amount as of December 31, 2018	**12,210**	**5,355**	**7,857**	**285**	**6**	**25,713**
Additions	1,589	0	134	9	0	1,732
Disposals	0	0	-3	0	0	-3
Foreign currency translation	218	76	0	1	0	295
Carrying amount as of December 31, 2019	**14,017**	**5,431**	**7,988**	**295**	**6**	**27,737**

The increase of goodwill mainly relates to the acquisition of NxStage and foreign currency translation. As of December 31, 2019 and December 31, 2018, the carrying amounts of the other non-amortizable intangible assets were €230 million and €186 million for Fresenius Medical Care as well as €16 million, respectively, for Fresenius Kabi.

20. PROVISIONS

As of December 31, provisions consisted of the following:

€ in millions	2019	2019 thereof short-term	2018	2018 thereof short-term
Self-insurance programs	**365**	**359**	323	323
Personnel expenses	**336**	**187**	291	127
Warranties and complaints	**265**	**262**	250	247
Litigation and other legal risks	**147**	**111**	140	109
FCPA related expenses	**4**	**4**	224	224
Other provisions	**422**	**236**	428	266
Provisions	**1,539**	**1,159**	1,656	1,296

The following table shows the development of provisions in the fiscal year:

€ in millions	As of Jan. 1, 2019	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Utilized	Reversed	As of Dec. 31, 2019
Self-insurance programs	323	4	0	63	–	-12	-13	**365**
Personnel expenses	291	1	1	136	1	-80	-14	**336**
Warranties and complaints	250	–	–	173	0	-140	-18	**265**
Litigation and other legal risks	140	-2	10	51	1	-31	-22	**147**
FCPA related expenses	224	0	0	4	0	-220	-4	**4**
Other provisions	428	1	11	144	-2	-98	-62	**422**
Total	1,656	4	22	571	–	-581	-133	**1,539**

On March 29, 2019, Fresenius Medical Care entered into a non-prosecution agreement with the United States Department of Justice (DOJ) and a separate agreement with the Securities and Exchange Commission (SEC) intended to resolve fully and finally the government's claims against Fresenius Medical Care arising from the Foreign Corrupt Practices Act (FCPA) investigations. Fresenius Medical Care paid a combined total in penalties and disgorgement of approximately US$232 million to the DOJ and the SEC in connection with these agreements. For further information on these investigations, see note 29, Commitments and contingencies.

Provisions for personnel expenses mainly refer to share-based compensation plans, severance payments and jubilee payments.

For details regarding provisions for self-insurance programs, please see note 1. III. x, Self-insurance programs.

21. OTHER LIABILITIES

As of December 31, other liabilities consisted of the following:

€ in millions	2019	2019 thereof short-term	2018	2018 thereof short-term
Tax liabilities	**282**	**257**	266	251
Personnel liabilities	**109**	**9**	102	10
Contract liabilities	**92**	**92**	108	108
Accounts payable resulting from German hospital law	**90**	**90**	143	142
Accounts receivable credit balance	**82**	**45**	87	36
All other liabilities	**894**	**713**	827	651
Other non-financial liabilities	**1,549**	**1,206**	1,533	1,198
Personnel liabilities	**1,229**	**1,219**	1,208	1,200
Noncontrolling interest subject to put provisions	**952**	**603**	839	495
Invoices outstanding	**881**	**881**	766	766
Accrued contingent payments outstanding for acquisitions	**595**	**75**	731	177
Debtors with credit balances	**507**	**507**	387	387
Bonuses and discounts	**228**	**228**	217	217
Interest liabilities	**183**	**183**	187	187
Leasing liabilities	**–**	**–**	150	150
Derivative financial instruments	**25**	**23**	74	47
Legal matters, advisory and audit fees	**46**	**46**	57	57
Compensation payable resulting from German hospital law	**36**	**33**	33	32
Commissions	**30**	**30**	31	31
All other liabilities	**5**	**0**	5	0
Other financial liabilities	**4,717**	**3,828**	4,685	3,746
Other liabilities	**6,266**	**5,034**	6,218	4,944

The accounts payable resulting from German hospital law contain earmarked subsidies received but not yet spent appropriately by Fresenius Helios. The amount not yet spent appropriately is classified as liability.

Contract liabilities primarily relate to advance payments from customers and to sales of dialysis machines. In these cases, revenue is recognized upon installation and provision of the necessary technical instructions whereas a receivable is recognized once the machine is delivered or billed to the customer.

The Fresenius Group, as option writer on behalf of existing put options, has potential obligations to purchase noncontrolling interests held by third parties in certain of its consolidated subsidiaries. If these put provisions were exercised, the Fresenius Group would be required to purchase all or part of third-party owners' noncontrolling interests at already defined purchase prices or the appraised fair value at the time of exercise.

The accrued contingent payments outstanding for acquisitions include €476 million at December 31, 2019 for the acquisition of the biosimilars business.

22. DEBT

SHORT-TERM DEBT

As of December 31, short-term debt consisted of the following:

€ in millions	Book value 2019	Book value 2018
Fresenius SE & Co. KGaA Commercial Paper	**953**	973
Fresenius Medical Care AG & Co. KGaA Commercial Paper	**1,000**	1,000
Other short-term debt	**522**	381
Short-term debt	**2,475**	2,354

Other short-term debt mainly consists of borrowings by certain entities of the Fresenius Group under lines of credit with commercial banks. The average interest rates on the borrowings at December 31, 2019 and 2018 were 1.15% and 1.62%, respectively.

Fresenius Medical Care Credit Agreement

Fresenius Medical Care AG & Co. KGaA (FMC-AG & Co. KGaA) originally entered into a syndicated credit facility (Fresenius Medical Care 2012 Credit Agreement) of US$3,850 million and a 5-year tenor on October 30, 2012.

In the years 2014 and 2017, various amendments of the Fresenius Medical Care Credit Agreement were made. These related to the amount and structure of the available tranches, among other items. In addition, the terms have been extended.

LONG-TERM DEBT

As of December 31, long-term debt net of debt issuance costs consisted of the following:

€ in millions	Book value 2019	Book value 2018
Fresenius Medical Care Credit Agreement	**1,901**	1,887
Fresenius Credit Agreement	**1,976**	2,116
Schuldschein Loans	**2,180**	1,629
Accounts Receivable Facility of Fresenius Medical Care	**380**	0
Capital lease obligations [1]	**0**	219
Other	**572**	446
Subtotal	**7,009**	6,297
less current portion	**892**	353
Long-term debt, less current portion [2]	**6,117**	5,944

[1] The position included liabilities from capital leases in accordance with IAS 17 as of December 31, 2018. From January 1, 2019, these are transferred to current portion of long-term lease liabilities and long-term lease liabilities, less current portion.
[2] As of December 31, 2018, the item was designated as long-term debt and capital lease obligations, less current portion and included liabilities from capital leases in accordance with IAS 17. From January 1, 2019, these are transferred to long-term lease liabilities, less current portion.

The following tables show the available and outstanding amounts under the Fresenius Medical Care Credit Agreement at December 31:

2019

	Maximum amount available	€ in millions	**Balance outstanding**	**€ in millions**
Revolving Credit Facility (in US$) 2017/2022	US$900 million	801	**US$139 million**	**123**
Revolving Credit Facility (in €) 2017/2022	€600 million	600	**€0 million**	**0**
Term Loan (in US$) 2017/2022	US$1,230 million	1,095	**US$1,230 million**	**1,095**
Term Loan (in €) 2017/2020	€400 million	400	**€400 million**	**400**
Term Loan (in €) 2017/2022	€287 million	287	**€287 million**	**287**
Total		3,183		**1,905**
less financing cost				**4**
Total				**1,901**

2018

	Maximum amount available	€ in millions	**Balance outstanding**	**€ in millions**
Revolving Credit Facility (in US$) 2017/2022	US$900 million	786	**US$0 million**	**0**
Revolving Credit Facility (in €) 2017/2022	€600 million	600	**€0 million**	**0**
Term Loan (in US$) 2017/2022	US$1,350 million	1,179	**US$1,350 million**	**1,179**
Term Loan (in €) 2017/2020	€400 million	400	**€400 million**	**400**
Term Loan (in €) 2017/2022	€315 million	315	**€315 million**	**315**
Total		3,280		**1,894**
less financing cost				**7**
Total				**1,887**

As of December 31, 2019, the Fresenius Medical Care Credit Agreement consisted of:

- Revolving credit facilities of US$900 million and €600 million which will be due on July 31, 2022.
- A term loan of US$1,230 million, also scheduled to mature on July 31, 2022. Quarterly repayments of US$30 million began on October 31, 2017 with the remaining balance outstanding due on the maturity date.
- A term loan of €287 million, also scheduled to mature on July 31, 2022. Quarterly repayments of €7 million began on October 31, 2017 with the remaining balance outstanding due on the maturity date.
- A non-amortizing term loan of €400 million which is scheduled to mature on July 30, 2020.

Interest on the credit facilities is floating at a rate equal to EURIBOR/LIBOR (as applicable) plus an applicable margin. The applicable margin is variable and depends on Fresenius Medical Care's consolidated net leverage ratio which is a ratio of its consolidated funded debt less cash and cash equivalents to consolidated EBITDA (as these terms are defined in the Fresenius Medical Care Credit Agreement). As of December 31, 2019 and 2018, the U.S. dollar denominated tranches outstanding under the Fresenius Medical Care Credit Agreement had a weighted-average interest rate of 3.24% and 3.53%, respectively. As of December 31, 2019 and 2018, the euro denominated tranches had a weighted-average interest rate of 0.93% and 0.81%, respectively.

The Fresenius Medical Care Credit Agreement contains affirmative and negative covenants with respect to FMC-AG & Co. KGaA and its subsidiaries. Under certain circumstances, these covenants limit indebtedness and restrict the creation of liens. Under the Fresenius Medical Care Credit Agreement, FMC-AG & Co. KGaA is required to comply with a maximum leverage ratio (ratio of net debt to EBITDA).

The Term Loan of FMC-AG & Co. KGaA in the amount of €400 million due on July 30, 2020, is shown as current portion of long-term debt in the consolidated statement of financial position at December 31, 2019.

As of December 31, 2019, FMC-AG & Co. KGaA and its subsidiaries were in compliance with all covenants under the Fresenius Medical Care Credit Agreement.

Fresenius Credit Agreement

On December 20, 2012, Fresenius SE & Co. KGaA and various subsidiaries entered into a delayed draw syndicated credit agreement (2013 Credit Agreement) in the original amount of US$1,300 million and €1,250 million. Since the initial funding of the Credit Agreement in June 2013, additional tranches were added. Furthermore, scheduled amortization payments as well as voluntary repayments have been made.

In August 2017, the Credit Agreement was refinanced and replaced by new tranches with a total amount of approximately €3,800 million.

In August 2019, the Revolving Credit Facility of the Credit Agreement was increased by €100 million to expand the financial cushion.

The following tables show the available and outstanding amounts under the Fresenius Credit Agreement at December 31:

	2019			
	Maximum amount available		**Balance outstanding**	
		€ in millions		**€ in millions**
Revolving Credit Facility (in €) 2017/2022	€1,100 million	1,100	**€0 million**	**0**
Revolving Credit Facility (in US$) 2017/2022	US$500 million	446	**US$0 million**	**0**
Term Loan (in €) 2017/2021	€750 million	750	**€750 million**	**750**
Term Loan (in €) 2017/2022	€775 million	775	**€775 million**	**775**
Term Loan (in US$) 2017/2022	US$515 million	458	**US$515 million**	**458**
Total		3,529		**1,983**
less financing cost				**7**
Total				**1,976**

	2018			
	Maximum amount available		**Balance outstanding**	
		€ in millions		**€ in millions**
Revolving Credit Facility (in €) 2017/2022	€1,000 million	1,000	**€0 million**	**0**
Revolving Credit Facility (in US$) 2017/2022	US$500 million	437	**US$0 million**	**0**
Term Loan (in €) 2017/2021	€750 million	750	**€750 million**	**750**
Term Loan (in €) 2017/2022	€875 million	875	**€875 million**	**875**
Term Loan (in US$) 2017/2022	US$575 million	502	**US$575 million**	**502**
Total		3,564		**2,127**
less financing cost				**11**
Total				**2,116**

As of December 31, 2019, the Fresenius Credit Agreement consisted of:

- Revolving credit facilities of US$500 million and €1,100 million which will be due on September 28, 2022.
- A term loan of US$515 million, scheduled to mature on September 28, 2022. Quarterly repayments of US$15 million began on December 28, 2017 with the remaining balance outstanding due on the maturity date.
- A term loan of €775 million, also scheduled to mature on September 28, 2022. Quarterly repayments of €25 million began on December 28, 2017 with the remaining balance outstanding due on the maturity date.
- A non-amortizing term loan of €750 million which is scheduled to mature on September 28, 2021.

Interest on the credit facilities is floating at a rate equal to EURIBOR/LIBOR (as applicable) plus an applicable margin. The applicable margin is variable and depends on the consolidated leverage ratio of Fresenius SE & Co. KGaA and its subsidiaries (as defined in the Fresenius Credit Agreement).

The Fresenius Credit Agreement contains a number of customary affirmative and negative covenants. Under certain conditions, these covenants include limitations on liens and incurrence of debt. The Fresenius Credit Agreement also requires Fresenius SE & Co. KGaA and its subsidiaries to maintain a maximum leverage ratio.

As of December 31, 2019, the Fresenius Group was in compliance with all covenants under the Fresenius Credit Agreement.

Schuldschein Loans

As of December 31, Schuldschein Loans of the Fresenius Group net of debt issuance costs consisted of the following:

				Book value € in millions	
	Notional amount	Maturity	Interest rate fixed/variable	**2019**	2018
Fresenius SE & Co. KGaA 2014/2020	€156 million	April 2, 2020	variable	**0**	156
Fresenius SE & Co. KGaA 2014/2020	€106 million	April 2, 2020	2.67%	**106**	106
Fresenius SE & Co. KGaA 2017/2022	€372 million	Jan. 31, 2022	0.93%/variable	**371**	371
Fresenius SE & Co. KGaA 2015/2022	€21 million	April 7, 2022	1.61%	**21**	21
Fresenius SE & Co. KGaA 2019/2023	€378 million	Sept. 25, 2023	0.55%/variable	**377**	0
Fresenius SE & Co. KGaA 2017/2024	€421 million	Jan. 31, 2024	1.40%/variable	**420**	420
Fresenius SE & Co. KGaA 2019/2026	€238 million	Sept. 23, 2026	0.85%/variable	**238**	0
Fresenius SE & Co. KGaA 2017/2027	€207 million	Jan. 29, 2027	1.96%/variable	**207**	207
Fresenius SE & Co. KGaA 2019/2029	€84 million	Sept. 24, 2029	1.10%	**84**	0
Fresenius US Finance II, Inc. 2016/2021	US$342 million	March 10, 2021	2.66%/variable	**304**	297
Fresenius US Finance II, Inc. 2016/2023	US$58 million	March 10, 2023	3.12%/variable	**52**	51
Schuldschein Loans				**2,180**	1,629

On September 23, 2019, Fresenius SE & Co. KGaA issued €700 million of Schuldschein Loans in tranches of 4, 7 and 10 years with fixed and variable interest rates. The proceeds were used for general corporate purposes including refinancing of the convertible bonds issued by Fresenius SE & Co. KGaA in the amount of €500 million due on September 24, 2019.

In order to optimize the capital structure and to further reduce financing costs, two floating rate tranches of Schuldschein Loans due originally on April 2, 2020 in the amount of €55 million and €101 million have been terminated and prepaid as per April 2, 2019.

As of December 31, 2019, the Schuldschein Loans of Fresenius SE & Co. KGaA with fixed interest rates in the amount of €106 million due on April 2, 2020, are shown as current portion of long-term debt in the consolidated statement of financial position.

The Schuldschein Loans issued by Fresenius SE & Co. KGaA in the amount of €97 million, €72 million and €91 million which were due on April 2, 2018, April 4, 2018 and October 8, 2018 were redeemed at maturity.

The Schuldschein Loans of Fresenius SE & Co. KGaA issued before 2019 are guaranteed under certain conditions by Fresenius Kabi AG and Fresenius ProServe GmbH. The Schuldschein Loans of Fresenius US Finance II, Inc. are guaranteed by Fresenius SE & Co. KGaA, Fresenius Kabi AG and Fresenius ProServe GmbH.

As of December 31, 2019, the Fresenius Group was in compliance with all of its covenants under the Schuldschein Loans.

Accounts Receivable Facility of Fresenius Medical Care

On December 20, 2018, the asset securitization facility (Accounts Receivable Facility) of Fresenius Medical Care was refinanced, increasing the facility to US$900 million (€786 million) and extending it until December 20, 2021.

At December 31, 2019, there were outstanding borrowings under the Accounts Receivable Facility of US$427 million (€380 million) (2018: US$0 million (€0 million)). In the amounts shown, debt issuance costs are not included. Fresenius Medical Care had letters of credit outstanding under the Accounts Receivable Facility in the amount of US$23 million (€21 million) at December 31, 2019 and US$27 million (€23 million) at December 31, 2018. These letters of credit are not included above as part of the balance outstanding at December 31, 2019, however, they reduce available borrowings under the Accounts Receivable Facility.

Under the Accounts Receivable Facility, certain receivables are sold to NMC Funding Corp. (NMC Funding), a wholly owned subsidiary of Fresenius Medical Care. NMC Funding then assigns percentage ownership interests in the accounts receivable to certain bank investors. Under the terms of the Accounts Receivable Facility, NMC Funding retains the right, at any time, to recall all the then outstanding transferred interests in the accounts receivable. Consequently, the receivables remain on the consolidated statement of financial position and the proceeds from the transfer of percentage ownership interests are recorded as long-term debt.

NMC Funding pays interest to the bank investors, calculated based on the commercial paper rates for the particular tranches selected. At December 31, 2019, the interest rate was 1.98%. At December 31, 2018, this facility was not utilized. Refinancing fees, which include legal costs and bank fees, are amortized over the term of the facility.

CREDIT LINES AND OTHER SOURCES OF LIQUIDITY

In addition to the financial liabilities described before, the Fresenius Group maintains additional credit facilities which have not been utilized, or have only been utilized in part, as of the reporting date. At December 31, 2019, the additional financial cushion resulting from unutilized credit facilities was approximately €4.0 billion.

Syndicated credit facilities accounted for €2.8 billion. This portion is comprised of the Fresenius Medical Care Credit Agreement in the amount of €1.3 billion and the Fresenius Credit Agreement in the amount of €1.5 billion. Furthermore, committed and uncommitted bilateral facilities of approximately €1.2 billion were available. They include credit facilities which certain entities of the Fresenius Group have arranged with commercial banks. These credit facilities are used for general corporate purposes and are usually unsecured.

In addition, Fresenius SE & Co. KGaA has a commercial paper program under which up to €1,000 million in short-term notes can be issued. As of December 31, 2019, the commercial paper program of Fresenius SE & Co. KGaA was utilized in the amount of €953 million.

Fresenius Medical Care can also issue short-term notes of up to €1,000 million under a commercial paper program. As of December 31, 2019, the commercial paper program of Fresenius Medical Care AG & Co. KGaA was utilized in the amount of €1,000 million.

Additional financing of up to US$900 million (€786 million) can be provided using the Fresenius Medical Care Accounts Receivable Facility which had been utilized in the amount of US$427 million (€380 million) as of December 31, 2019.

23. BONDS

As of December 31, bonds of the Fresenius Group net of debt issuance costs consisted of the following:

				Book value € in millions	
	Notional amount	Maturity	Interest rate	2019	2018
Fresenius Finance Ireland PLC 2017/2022	€700 million	Jan. 31, 2022	0.875%	**698**	697
Fresenius Finance Ireland PLC 2017/2024	€700 million	Jan. 30, 2024	1.50%	**697**	696
Fresenius Finance Ireland PLC 2017/2027	€700 million	Feb. 1, 2027	2.125%	**693**	692
Fresenius Finance Ireland PLC 2017/2032	€500 million	Jan. 30, 2032	3.00%	**495**	494
Fresenius SE & Co. KGaA 2014/2019	€300 million	Feb. 1, 2019	2.375%	**0**	300
Fresenius SE & Co. KGaA 2012/2019	€500 million	Apr. 15, 2019	4.25%	**0**	500
Fresenius SE & Co. KGaA 2013/2020	€500 million	July 15, 2020	2.875%	**500**	499
Fresenius SE & Co. KGaA 2014/2021	€450 million	Feb. 1, 2021	3.00%	**448**	447
Fresenius SE & Co. KGaA 2014/2024	€450 million	Feb. 1, 2024	4.00%	**449**	450
Fresenius SE & Co. KGaA 2019/2025	€500 million	Feb. 15, 2025	1.875%	**495**	0
Fresenius SE & Co. KGaA 2019/2029	€500 million	Feb. 15, 2029	2.875%	**494**	0
Fresenius US Finance II, Inc. 2014/2021	US$300 million	Feb. 1, 2021	4.25%	**266**	261
Fresenius US Finance II, Inc. 2015/2023	US$300 million	Jan. 15, 2023	4.50%	**266**	260
FMC Finance VII S.A. 2011/2021	€300 million	Feb. 15, 2021	5.25%	**298**	297
FMC Finance VIII S.A. 2012/2019	€250 million	July 31, 2019	5.25%	**0**	246
Fresenius Medical Care AG & Co. KGaA 2019/2023	€650 million	Nov 29, 2023	0.25%	**647**	0
Fresenius Medical Care AG & Co. KGaA 2018/2025	€500 million	July 11, 2025	1.50%	**496**	496
Fresenius Medical Care AG & Co. KGaA 2019/2026	€600 million	Nov 30, 2026	0.625%	**594**	0
Fresenius Medical Care AG & Co. KGaA 2019/2029	€500 million	Nov 29, 2029	1.25%	**497**	0
Fresenius Medical Care US Finance, Inc. 2011/2021	US$650 million	Feb. 15, 2021	5.75%	**577**	565
Fresenius Medical Care US Finance II, Inc. 2012/2019	US$800 million	July 31, 2019	5.625%	**0**	698
Fresenius Medical Care US Finance II, Inc. 2014/2020	US$500 million	Oct. 15, 2020	4.125%	**445**	435
Fresenius Medical Care US Finance II, Inc. 2012/2022	US$700 million	Jan. 31, 2022	5.875%	**622**	610
Fresenius Medical Care US Finance II, Inc. 2014/2024	US$400 million	Oct. 15, 2024	4.75%	**354**	347
Fresenius Medical Care US Finance III, Inc. 2019/2029	US$500 million	June 15, 2029	3.75%	**436**	0
Bonds				**10,467**	8,990

FRESENIUS SE & CO. KGAA

On January 21, 2019, Fresenius SE & Co. KGaA issued bonds with an aggregate volume of €1.0 billion. The bonds consist of 2 tranches with maturities of 6 and 10 years. The coupon of the 6-year tranche of €500 million is 1.875% and was issued at a price of 99.257%. The €500 million tranche with a 10-year maturity has a coupon of 2.875% and was issued at a price of 99.164%. The proceeds were used for general corporate purposes including refinancing of the bonds issued by Fresenius SE & Co. KGaA in the amount of €300 million due on February 1, 2019 and €500 million due on April 15, 2019. These were redeemed at maturity.

As of December 31, 2019, the bonds issued by Fresenius SE & Co. KGaA in the amount of €500 million, due on July 15, 2020, are shown as current portion of bonds in the consolidated statement of financial position.

All bonds of Fresenius US Finance II, Inc. and of Fresenius Finance Ireland PLC are guaranteed by Fresenius SE & Co. KGaA. All bonds of Fresenius US Finance II, Inc., Fresenius Finance Ireland PLC and the bonds issued by Fresenius SE & Co. KGaA before 2019, may be redeemed prior to their maturity at the option of the issuers at a price of 100% plus accrued interest and a premium calculated pursuant to the terms of the indentures under observance of certain notice periods.

The holders of Fresenius bonds have the right to request that the issuers repurchase the bonds at 101% of principal plus accrued interest upon the occurrence of a change of control followed by a decline in the rating of the respective bonds.

Fresenius SE & Co. KGaA has agreed to a number of covenants to provide protection to the holders of bonds issued before 2017, which partly restrict the scope of action of Fresenius SE & Co. KGaA and its subsidiaries (excluding Fresenius Medical Care AG & Co. KGaA (FMC-AG & Co. KGaA) and its subsidiaries). These covenants include restrictions on further debt that can be raised, the mortgaging or sale of assets, the entering into sale and leaseback transactions as well as mergers and consolidations with other companies. Some of these restrictions were suspended automatically as the rating of the respective bonds reached investment grade status. As of December 31, 2019, the Fresenius Group was in compliance with all of its covenants.

On January 15, 2020, Fresenius SE & Co. KGaA issued bonds in the amount of €750 million. The bonds have a maturity of eight years and a coupon of 0.750%. The bonds were issued at a price of 99.514%. The proceeds were used for general corporate purposes, including refinancing of existing financial liabilities.

FRESENIUS MEDICAL CARE AG & CO. KGAA

On November 29, 2019, Fresenius Medical Care AG & Co. KGaA placed bonds with an aggregate volume of €1.75 billion. The bonds consist of 3 tranches with maturities of 4, 7 and 10 years. The coupon of the 4-year tranche of €650 million is 0.250% and was issued at a price of 99.901%. The €600 million tranche with a 7-year maturity has a coupon of 0.625% and was issued at a price of 99.238%. The coupon of the 10-year tranche of €500 million is 1.250% and was issued at a price of 99.832%. The proceeds were used for general corporate purposes, including refinancing of existing financial liabilities.

On June 20, 2019, Fresenius Medical Care US Finance III, Inc. issued bonds with a volume of US$500 million. The bonds have a maturity of 10 years and a coupon of 3.75%. The bonds were issued at a price of 98.461%. The proceeds were used for general corporate purposes and the refinancing of maturing liabilities.

The bonds issued by FMC Finance VIII S.A. in the amount of €250 million and the bonds issued by Fresenius Medical Care US Finance II, Inc. in the amount of US$800 million, which were due on July 31, 2019, were redeemed at maturity.

On July 11, 2018, Fresenius Medical Care AG & Co. KGaA issued bonds with an aggregate principal amount of €500 million. The bonds have a maturity of seven years and an annual coupon of 1.5%. The issue price was 99.704%. The proceeds were used for general corporate purposes, including the refinancing of maturities.

The bonds issued by FMC Finance VIII S.A. in the amount of €400 million and by Fresenius Medical Care US Finance II, Inc. in the amount of US$400 million which were due on September 15, 2018 were redeemed at maturity.

As of December 31, 2019, the bonds issued by Fresenius Medical Care US Finance II, Inc. in the amount of US$500, due on October 15, 2020 are shown as current portion of bonds in the consolidated statement of financial position.

The bonds of Fresenius Medical Care US Finance, Inc., Fresenius Medical Care US Finance II, Inc., Fresenius Medical Care US Finance III, Inc. and FMC Finance VII S.A. (wholly owned subsidiaries of FMC-AG & Co. KGaA) are guaranteed jointly and severally by FMC-AG & Co. KGaA and Fresenius Medical Care Holdings, Inc. The issuers may redeem the bonds issued before 2018 and issued by Fresenius Medical Care US Finance III, Inc. in 2019 at any time at 100% of principal plus accrued interest and a premium calculated pursuant to the terms of the indentures.

The holders of Fresenius Medical Care bonds have the right to request that the respective issuers repurchase the respective bonds at 101% of principal plus accrued interest upon the occurrence of a change of control of FMC-AG & Co. KGaA followed by a decline in the rating of the respective bonds.

FMC-AG & Co. KGaA has agreed to a number of covenants to provide protection to the holders of bonds issued before 2018 which, under certain circumstances, restrict the scope of action of FMC-AG & Co. KGaA and its subsidiaries. These covenants include restrictions on further debt that can be raised, the mortgaging or sale of assets, the entering into sale and leaseback transactions as well as mergers and consolidations with other companies. Some of these restrictions were suspended automatically as the rating of the respective bonds reached investment grade status. As of December 31, 2019, FMC-AG & Co. KGaA and its subsidiaries were in compliance with all of their covenants under the bonds.

24. CONVERTIBLE BONDS

As of December 31, the convertible bonds of the Fresenius Group net of debt issuance costs consisted of the following:

					Book value € in millions	
	Notional amount	Maturity	Coupon	Current conversion price	**2019**	2018
Fresenius SE & Co. KGaA 2014/2019	€500 million	Sept. 24, 2019	0.000%		**0**	493
Fresenius SE & Co. KGaA 2017/2024	€500 million	Jan. 31, 2024	0.000%	€106.4928	**465**	457
Fresenius Medical Care AG & Co. KGaA 2014/2020	€400 million	Jan. 31, 2020	1.125%	€72.7803	**400**	393
Convertible bonds					**865**	1,343

The fair value of the derivative embedded in the convertible bonds of Fresenius SE & Co. KGaA was €2 million at December 31, 2019. Fresenius SE & Co. KGaA purchased stock options (call options) with a corresponding fair value to hedge future fair value fluctuations of this derivative.

Potential conversions would be cash-settled. Any increase of Fresenius' share price above the conversion price would be offset by a corresponding value increase of the call options.

The derivative embedded in the convertible bonds and the call options are recognized in other current and other non-current liabilities/assets in the consolidated statement of financial position.

The convertible bonds issued by Fresenius SE & Co. KGaA in the amount of €500 million which were due on September 24, 2019 were redeemed at maturity. The convertible bonds issued by FMC-AG & Co. KGaA in the amount of €400 million which were due on January 31, 2020, are shown as current portion of convertible bonds in the consolidated statement of financial position. They were redeemed at maturity. There were no conversions.

25. PENSIONS AND SIMILAR OBLIGATIONS

GENERAL

The Fresenius Group recognizes pension costs and related pension liabilities for current and future benefits to qualified current and former employees of the Fresenius Group. Fresenius Group's pension plans are structured in accordance with the differing legal, economic and fiscal circumstances in each country. The Fresenius Group currently has two types of plans, defined benefit and defined contribution plans. In general, plan benefits in defined benefit plans are based on all or a portion of the employees' years of services and final salary. Plan benefits in defined contribution plans are determined by the amount of contribution by the employee and the employer, both of which may be limited by legislation, and the returns earned on the investment of those contributions.

Upon retirement under defined benefit plans, the Fresenius Group is required to pay defined benefits to former employees when the defined benefits become due. Defined benefit plans may be funded or unfunded. The Fresenius Group has funded defined benefit plans in particular in the United States, Norway, the United Kingdom, the Netherlands, Switzerland and Austria. Unfunded defined benefit plans are located in Germany and France.

Actuarial assumptions generally determine benefit obligations under defined benefit plans. The actuarial calculations require the use of estimates. The main factors used in the actuarial calculations affecting the level of the benefit obligations are: assumptions on life expectancy, the discount rate and future salary and benefit levels. Under Fresenius Group's funded plans, assets are set aside to meet future payment obligations. An estimated return on the plan assets is recognized as income in the respective period. Actuarial gains and losses are generated when there are variations in the actuarial assumptions and by differences between the actual and the estimated projected benefit obligations and the return on plan assets for that year. A company's pension liability is impacted by these actuarial gains or losses.

Related to defined benefit plans, the Fresenius Group is exposed to certain risks. Besides general actuarial risks, e. g. the longevity risk and the interest rate risk, the Fresenius Group is exposed to market risk as well as to investment risk.

In the case of Fresenius Group's funded plans, the defined benefit obligation is offset against the fair value of plan assets (deficit or surplus). A pension liability is recognized in the consolidated statement of financial position if the defined benefit obligation exceeds the fair value of plan assets. An asset is recognized and reported under other assets in the consolidated statement of financial position if the fair value of plan assets exceeds the defined benefit obligation and if the Fresenius Group has a right of reimbursement against the fund or a right to reduce future payments to the fund.

Under defined contribution plans, the Fresenius Group pays defined contributions to an independent third party as directed by the employee during the employee's service life which satisfies all obligations of the Fresenius Group to the employee. The employee retains all rights to the contributions made by the employee and to the vested portion of the Fresenius Group paid contributions upon leaving the Fresenius Group. The Fresenius Group has a main defined contribution plan in the United States.

DEFINED BENEFIT PENSION PLANS

At December 31, 2019, the defined benefit obligation (DBO) of the Fresenius Group of €2,132 million (2018: €1,787 million) included €626 million (2018: €565 million) funded by plan assets and €1,506 million (2018: €1,222 million) covered by pension provisions. Furthermore, the pension liability contains benefit obligations offered by other subsidiaries of Fresenius Medical Care in an amount of €39 million (2018: €35 million). The current portion of the pension liability in an amount of €25 million (2018: €22 million) is recognized in the consolidated statement of financial position within short-term provisions and other short-term liabilities. The non-current portion of €1,520 million (2018: €1,235 million) is recorded as pension liability.

The major part of pension liabilities relates to Germany. At December 31, 2018, 83% of the pension liabilities were recognized in Germany and 15% predominantly in the rest of

Europe and North America. 49% of the beneficiaries were located in North America, 35% in Germany and the remainder throughout the rest of Europe and other continents.
76% of the pension liabilities in an amount of €1,545 million relate to the "Versorgungsordnung der Fresenius-Unternehmen" established in 2016 (Pension Plan 2016), which applied for most of the German entities of the Fresenius Group for entries up until December 31, 2019 except Fresenius Helios and Fresenius Vamed. For entries from January 1, 2020 onwards, a new defined contribution plan applies for these entities. The remaining pension liabilities relate to individual plans from Fresenius Helios entities in Germany and non-German Group entities.

Plan benefits are generally based on an employee's years of service and final salary. Consistent with predominant practice in Germany, the benefit obligations of the German entities of the Fresenius Group are unfunded. The German Pension Plan 2016 does not have a separate pension fund.

Fresenius Medical Care Holdings, Inc. (FMCH), a subsidiary of Fresenius Medical Care AG & Co. KGaA, has a defined benefit pension plan for its employees in the United States and supplemental executive retirement plans. During the first quarter of 2002, FMCH curtailed these pension plans. Under the curtailment amendment for substantially all employees eligible to participate in the plan, benefits have been frozen as of the curtailment date and no additional defined benefits for future services will be earned. FMCH has retained all employee benefit obligations as of the curtailment date. Each year, FMCH contributes to the plan covering United States employees at least the minimum amount required by the Employee Retirement Income Security Act of 1974, as amended. In 2019, there was no minimum funding requirement for the defined benefit plan. FMCH voluntarily provided €1 million. Expected funding for 2020 is €1 million.

Benefit plans offered by other subsidiaries of Fresenius Medical Care outside of the United States, Germany and France contain separate benefit obligations. The total pension liability for these other plans was €39 million and €35 million at December 31, 2019 and 2018, respectively. The current pension liability of €4 million (2018: €3 million) is recognized as a current liability in the line item short-term provisions and other short-term liabilities. The non-current pension liability of €35 million (2018: €32 million) for these plans is recorded as pension liability in the consolidated statement of financial position.

Fresenius Group's benefit obligations relating to fully or partly funded pension plans were €776 million. Benefit obligations relating to unfunded pension plans were €1,356 million.

The following table shows the changes in benefit obligations, the changes in plan assets, the deficit or surplus of the pension plans and the pension liability. Benefits paid as shown in the changes in benefit obligations represent payments made from both the funded and unfunded plans while the benefits paid as shown in the changes in plan assets include only benefit payments from Fresenius Group's funded benefit plans.

The pension liability has developed as follows:

€ in millions	2019	2018
Benefit obligations at the beginning of the year	**1,787**	1,671
Changes in entities consolidated	**4**	0
Foreign currency translation	**15**	22
Service cost	**66**	59
Past service cost	**-2**	-5
Settlements	**-4**	0
Net interest cost	**49**	42
Contributions by plan participants	**4**	4
Transfer of plan participants	**6**	7
Remeasurements	**293**	31
Actuarial losses (gains) arising from changes in financial assumptions	**292**	-1
Actuarial losses (gains) arising from changes in demographic assumptions	**-4**	11
Actuarial losses (gains) arising from experience adjustments	**5**	21
Benefits paid	**-86**	-44
Benefit obligations at the end of the year	**2,132**	1,787
thereof vested	**1,772**	1,464
Fair value of plan assets at the beginning of the year	**565**	526
Changes in entities consolidated	**4**	0
Foreign currency translation	**13**	17
Actual return (cost) on plan assets	**89**	-16
Interest income from plan assets	**18**	15
Actuarial gains (losses) arising from experience adjustments	**71**	-31
Contributions by the employer	**15**	55
Contributions by plan participants	**4**	4
Transfer of plan participants	**4**	8
Gains from divestitures	**-1**	-1
Benefits paid	**-67**	-28
Fair value of plan assets at the end of the year	**626**	565
Funded status as of December 31	**1,506**	1,222
Benefit plans offered by other subsidiaries	**39**	35
Pension liability as of December 31	**1,545**	1,257

The plan assets are neither invested in the Fresenius Group nor in related parties of the Fresenius Group.

As of December 31, 2019 and 2018, the fair value of plan assets did not exceed the benefit obligations in any pension plan. Furthermore, for the years 2019 and 2018, there were no effects from asset ceiling.

The discount rates for all plans are based upon yields of portfolios of highly rated debt instruments with maturities that mirror the plan's benefit obligation. Fresenius Group's discount rate is the weighted average of these plans based upon their benefit obligations.

The following weighted-average assumptions were utilized in determining benefit obligations as of December 31:

in %	2019	2018
Discount rate	**1.79**	2.69
Rate of compensation increase	**2.82**	2.75
Rate of pension increase	**1.61**	1.55

Mainly changes in the discount factor, as well as inflation and mortality assumptions used for the actuarial computation resulted in actuarial losses in 2019 which increased the fair value of the defined benefit obligation. Unrecognized actuarial losses were €935 million (2018: €707 million).

Sensitivity analysis

Increases and decreases in principal actuarial assumptions by 0.5 percentage points would affect the pension liability as of December 31, 2019 as follows:

Development of pension liability € in millions	0.5 pp increase	0.5 pp decrease
Discount rate	-187	217
Rate of compensation increase	32	-31
Rate of pension increase	124	-108

The sensitivity analysis was calculated based on the average duration of the pension obligations determined at December 31, 2019. The calculations were performed isolated for each significant actuarial parameter, in order to show the effect on the fair value of the pension liability separately. The sensitivity analysis for compensation increases and for pension increases excludes the U.S. pension plan, because it is frozen and therefore is not affected by changes from these two actuarial assumptions.

Further explanatory notes

Defined benefit pension plans' net periodic benefit costs of €91 million (2018: €81 million) were comprised of the following components:

€ in millions	2019	2018
Service cost	**60**	54
Net interest cost	**31**	27
Net periodic benefit cost	**91**	81

Net periodic benefit cost is allocated as personnel expense within cost of sales, selling expenses, general and administrative expenses as well as research and development expenses. The allocation depends upon the area in which the beneficiary is employed.

The following weighted-average assumptions were used in determining net periodic benefit cost for the year ended December 31:

in %	2019	2018
Discount rate	**2.77**	2.53
Rate of compensation increase	**2.80**	2.80
Rate of pension increase	**1.58**	1.39

The following table shows the expected benefit payments for the next 10 years:

for the fiscal years	€ in millions
2020	56
2021	55
2022	57
2023	61
2024	65
2025 to 2029	379
Total expected benefit payments	**673**

At December 31, 2019 and at December 31, 2018, the weighted-average duration of the defined benefit obligation was 19 years and 18 years, respectively.

The fair values of plan assets by categories were as follows:

€ in millions	December 31, 2019 Quoted prices in active markets for identical assets Level 1	December 31, 2019 Significant observable inputs Level 2	December 31, 2019 Significant unobservable inputs Level 3	December 31, 2019 Total	December 31, 2018 Quoted prices in active markets for identical assets Level 1	December 31, 2018 Significant observable inputs Level 2	December 31, 2018 Total
Categories of plan assets							
Equity investments	95	77	0	172	73	76	149
Index funds [1]	66	77	0	143	43	76	119
Other equity investments	29	0	0	29	30	0	30
Fixed income investments	157	205	7	369	160	190	350
Government securities [2]	6	0	0	6	16	0	16
Corporate bonds [3]	87	203	0	290	69	187	256
Other fixed income investments [4]	64	2	7	73	75	3	78
Other [5]	71	14	0	85	55	11	66
Total	323	296	7	626	288	277	565

[1] This category is mainly comprised of low-cost equity index funds not actively managed that track the S & P 500, S & P 400, Russell 2000, the MSCI Emerging Markets Index and the Morgan Stanley International EAFE Index.
[2] This category is primarily comprised of fixed income investments by the U.S. government and government sponsored entities.
[3] This category primarily represents investment grade bonds of U.S. issuers from diverse industries.
[4] This category is mainly comprised of private placement bonds as well as collateralized mortgage obligations as well as cash and funds that invest in U.S. treasury obligations directly or in U.S. treasury backed obligations.
[5] This category mainly represents cash, money market funds as well as mutual funds comprised of high grade corporate bonds.

The methods and inputs used to measure the fair value of plan assets are as follows:

Index funds are valued based on market quotes.

Other equity investments are valued at their market prices as of the date of the statement of financial position.

Government bonds are valued based on both market prices (Level 1) and market quotes (Level 2).

Corporate bonds and other bonds are valued based on market quotes as of the date of the statement of financial position.

Cash is stated at nominal value which equals the fair value.

U.S. Treasury money market funds as well as other money market and mutual funds are valued at their market prices.

Plan investment policy and strategy in the United States

The Fresenius Group periodically reviews the assumptions for long-term expected return on pension plan assets. As part of the assumptions review, a range of reasonable expected investment returns for the pension plan as a whole was determined based on an analysis of expected future returns for each asset class weighted by the allocation of the assets. The range of returns developed relies both on forecasts, which include the actuarial firm's expected long-term rates of return for each significant asset class or economic indicator, and on broad-market historical benchmarks for expected return, correlation, and volatility for each asset class.

The overall investment strategy for the U.S. pension plan is to achieve a mix of approximately 99% of investments for long-term growth and income and 1% in cash or cash equivalents. Investment income and cash or cash equivalents are used for near-term benefit payments. Investments are governed by the plan investment policy and include well diversified index funds or funds targeting index performance.

The plan investment policy, utilizing a revised target investment allocation in a range around 26% equity and 74% fixed income investments, considers that there will be a time horizon for invested funds of more than five years. The total portfolio will be measured against a custom index that reflects the asset class benchmarks and the target asset allocation. The plan investment policy does not allow investments in securities of Fresenius Medical Care AG & Co. KGaA or other related party securities. The performance benchmarks for the separate asset classes include: S & P 500 Index, S & P 400 Mid-Cap Index, Russell 2000 Index, MSCI EAFE Index, MSCI Emerging Markets Index, Barclays Capital Long-Corporate Bond Index, Bloomberg Barclays U.S. Corporate High Yield Index, and Bloomberg Barclays U.S. High Yield Fallen Angel 3% Capped Index.

The following schedule describes Fresenius Group's allocation for all of its funded plans.

in %	**Allocation 2019**	Allocation 2018	Target allocation
Equity investments	**27.39**	26.39	27.2
Fixed income investments	**59.07**	61.89	60.31
Other incl. real estate	**13.54**	11.72	12.49
Total	**100.00**	100.00	100.00

Contributions to plan assets for the fiscal year 2020 are expected to amount to €16 million.

DEFINED CONTRIBUTION PLANS

Fresenius Group's total expense under defined contribution plans for 2019 was €166 million (2018: €157 million). Of this amount, €94 million related to contributions by the Fresenius Group to several public supplementary pension funds for employees of Fresenius Helios. Further €53 million related to contributions to the U.S. savings plan, which employees of Fresenius Medical Care Holdings, Inc. can join.

Following applicable collective bargaining agreements, the Fresenius Group pays contributions for a given number of employees of Fresenius Helios to the Rheinische Zusatzversorgungskasse (a supplementary pension fund) and to other public supplementary pension funds (together referred to as ZVK ÖD) to complement statutory retirement pensions. Given that employees from multiple participating entities are insured by these ZVK ÖDs, these plans are Multi-Employer plans.

ZVK ÖDs are defined benefit plans according to IAS 19 since employees are entitled to the statutory benefits regardless of the amounts contributed. The plan assets of the fund necessary to evaluate and calculate the funded status of the Group cannot be obtained from the supplementary pension funds. The calculation of a pension liability according to IAS 19 is not possible due to missing information about future payment obligations. Therefore, the obligation is accounted for as defined contribution plan according to IAS 19.34a.

The plan operates on a pay-as-you-earn system based on applying a collection rate to given parts of gross remuneration.

Paid contributions are accounted for as personnel expenses within cost of sales, selling expenses as well as general and administrative expenses and amounted to €94 million in 2019 (2018: €95 million). Thereof, €51 million (2018: €49 million) were payments to Rheinische Zusatzversorgungskasse, to Versorgungsanstalt des Bundes und der Länder and to Zusatzversorgungskasse Wiesbaden (supplementary pension funds). The Group expects to contribute €100 million in 2020.

Under the U.S. savings plan, employees can deposit up to 75% of their pay up to an annual maximum of US$19,500 if under 50 years old (US$25,600 if 50 or over). Fresenius Medical Care will match 50% of the employee deposit up to a maximum company contribution of 3% of the employee's pay. Fresenius Medical Care's total expense under this defined contribution plan for the years ended December 31, 2019 and 2018 was €53 million and €54 million, respectively.

26. NONCONTROLLING INTEREST

As of December 31, noncontrolling interest in the Fresenius Group was as follows:

€ in millions	2019	2018
Noncontrolling interest in Fresenius Medical Care AG & Co. KGaA	**8,174**	8,143
Noncontrolling interest in VAMED AG	**97**	83
Noncontrolling interest in the business segments		
Fresenius Medical Care	**1,269**	1,144
Fresenius Kabi	**121**	102
Fresenius Helios	**127**	113
Fresenius Vamed	**14**	12
Total noncontrolling interest	**9,802**	9,597

For further financial information relating to Fresenius Medical Care see the consolidated segment reporting on pages 172 to 173.

Noncontrolling interest changed as follows:

€ in millions	2019
Noncontrolling interest as of December 31, 2018	**9,597**
Adjustment due to the initial application of IFRS 16	-98
As of January 1, 2019, adjusted	**9,499**
Noncontrolling interest in profit	1,146
Purchase of noncontrolling interest	40
Stock options	12
Share buy-back program of Fresenius Medical Care AG & Co. KGaA	-410
Dividend payments	-507
Currency effects and other changes	22
Noncontrolling interest as of December 31, 2019	**9,802**

27. FRESENIUS SE & CO. KGAA SHAREHOLDERS' EQUITY

SUBSCRIBED CAPITAL

Development of subscribed capital

As of January 1, 2019, the subscribed capital of Fresenius SE & Co. KGaA consisted of 556,225,154 bearer ordinary shares.

During the fiscal year 2019, 1,154,825 stock options were exercised. Consequently, as of December 31, 2019, the subscribed capital of Fresenius SE & Co. KGaA consisted of 557,379,979 bearer ordinary shares. The shares are issued as non-par value shares. The proportionate amount of the subscribed capital is €1.00 per share.

AUTHORIZED CAPITAL

By resolution of the Annual General Meeting on May 18, 2018, the previous Authorized Capital I was revoked and a new Authorized Capital I was created.

Accordingly, the general partner, Fresenius Management SE, is authorized, with the approval of the Supervisory Board, until May 17, 2023, to increase Fresenius SE & Co. KGaA's share capital (subscribed capital) by a total amount of up to €125,000,000 through a single or multiple issues of new bearer ordinary shares against cash contributions and/or contributions in kind (Authorized Capital I).

The number of shares must increase in the same proportion as the subscribed capital. A subscription right must be granted to the shareholders in principle. In defined cases, the general partner is authorized, with the consent of the Supervisory Board, to decide on the exclusion of the shareholders' subscription right (e.g. to eliminate fractional amounts). For cash contributions, the authorization can only be exercised if the issue price is not significantly below the stock exchange price of the already listed shares at the time the issue price is fixed with final effect by the general partner. Furthermore, in case of a capital increase against cash contributions, the proportionate amount of the shares issued with exclusion of subscription rights may not exceed 10% of the subscribed capital. An exclusion of subscription rights in the context of the use of other authorizations concerning the issuance or the sale of the shares of Fresenius SE & Co. KGaA or the issuance of rights which authorize or bind to the subscription of shares of Fresenius SE & Co. KGaA has to be taken into consideration during the duration of the Authorized Capital until its utilization. In the case of a subscription in kind, the subscription right can be excluded only in order to acquire a company, parts of a company or a participation in a company.

The authorizations granted concerning the exclusion of subscription rights can be used by Fresenius Management SE only to such extent that the proportional amount of the total number of shares issued with exclusion of the subscription rights does not exceed 10% of the subscribed capital. An exclusion of subscription rights in the context of the use of other authorizations concerning the issuance or the sale of the shares of Fresenius SE & Co. KGaA or the issuance of rights which authorize or bind to the subscription of shares of Fresenius SE & Co. KGaA has to be taken into consideration during the duration of the Authorized Capital until its utilization.

The changes to the Authorized Capital I became effective upon registration with the commercial register on June 18, 2018.

CONDITIONAL CAPITAL

The following Conditional Capitals exist in order to fulfill the subscription rights under the stock option plans of Fresenius SE & Co. KGaA: Conditional Capital II (Stock Option Plan 2008) and Conditional Capital IV (Stock Option Plan 2013) (see note 35, Share-based compensation plans). Another Conditional Capital III exists for the authorization to issue option bearer bonds and/or convertible bonds.

The following table shows the development of the Conditional Capital:

in €	Ordinary shares
Conditional Capital I Fresenius AG Stock Option Plan 2003	4,735,083
Conditional Capital II Fresenius SE Stock Option Plan 2008	4,296,814
Conditional Capital III option bearer bonds and/or convertible bonds	48,971,202
Conditional Capital IV Fresenius SE & Co. KGaA Stock Option Plan 2013	24,257,969
Total Conditional Capital as of January 1, 2019	**82,261,068**
Fresenius SE Stock Option Plan 2008 – options exercised	-843,877
Fresenius SE & Co. KGaA Stock Option Plan 2013 – options exercised	-310,948
Total Conditional Capital as of December 31, 2019	**81,106,243**

As of December 31, 2019, the Conditional Capital was composed as follows:

in €	Ordinary shares
Conditional Capital I Fresenius AG Stock Option Plan 2003	4,735,083
Conditional Capital II Fresenius SE Stock Option Plan 2008	3,452,937
Conditional Capital III option bearer bonds and/or convertible bonds	48,971,202
Conditional Capital IV Fresenius SE & Co. KGaA Stock Option Plan 2013	23,947,021
Total Conditional Capital as of December 31, 2019	**81,106,243**

CAPITAL RESERVES

Capital reserves are comprised of the premium paid on the issue of shares and the exercise of stock options (additional paid-in capital).

OTHER RESERVES

Other reserves are comprised of earnings generated by Group entities in prior years to the extent that they have not been distributed.

DIVIDENDS

Under the German Stock Corporation Act (AktG), the amount of dividends available for distribution to shareholders is based upon the unconsolidated retained earnings of Fresenius SE & Co. KGaA as reported in its statement of financial position determined in accordance with the German Commercial Code (HGB).

In May 2019, a dividend of €0.80 per bearer ordinary share was approved by Fresenius SE & Co. KGaA's shareholders at the Annual General Meeting and paid afterwards. The total dividend payment was €445 million.

TREASURY STOCK OF FRESENIUS MEDICAL CARE

In 2019, Fresenius Medical Care repurchased 8,878,450 ordinary shares for an amount of €600 million.

28. OTHER COMPREHENSIVE INCOME (LOSS)

Other comprehensive income (loss) is comprised of all amounts recognized directly in equity (net of tax) resulting from the currency translation of foreign subsidiaries' financial statements and the effects of measuring financial instruments at their fair value as well as the change in benefit obligation.

Changes in the components of other comprehensive income (loss) in 2019 and 2018 were as follows:

€ in millions	Amount before taxes	Tax effect	Amount after taxes
Positions which will be reclassified into net income in subsequent years			
Cash flow hedges	15	-4	11
Change in unrealized gains/losses	-1	0	-1
Realized gains/losses due to reclassifications	16	-4	12
Foreign currency translation	268	-8	260
Positions which will not be reclassified into net income in subsequent years			
Change of fair value of equity investments	5	-1	4
Actuarial gains/losses on defined benefit pension plans	-62	16	-46
Total changes 2018	**226**	**3**	**229**
Positions which will be reclassified into net income in subsequent years			
Cash flow hedges	-13	3	-10
Change in unrealized gains/losses	-26	6	-20
Realized gains/losses due to reclassifications	13	-3	10
Foreign currency translation	398	1	399
Positions which will not be reclassified into net income in subsequent years			
Change of fair value of equity investments	9	-3	6
Actuarial gains/losses on defined benefit pension plans	-222	58	-164
Total changes 2019	**172**	**59**	**231**

OTHER NOTES

29. COMMITMENTS AND CONTINGENCIES

As of December 31, 2019, future investment commitments existed up to the year 2023 from the acquisition contracts for hospitals at projected costs of up to €221 million. Thereof €151 million relate to the year 2020.

Besides the above mentioned contingent liabilities, the current estimated amount of Fresenius Group's other known individual contingent liabilities is immaterial.

LEGAL AND REGULATORY MATTERS

The Fresenius Group is routinely involved in claims, lawsuits, regulatory and tax audits, investigations and other legal matters arising, for the most part, in the ordinary course of its business of providing health care services and products. Legal matters that the Fresenius Group currently deems to be material or noteworthy are described below. The Fresenius Group records its litigation reserves for certain legal proceedings and regulatory matters to the extent that the Fresenius Group determines an unfavorable outcome is probable and the amount of loss can be reasonably estimated. For the other matters described below, the Fresenius Group believes that the loss probability is remote and/or the loss or range of possible losses cannot be reasonably estimated at this time. The outcome of litigation and other legal matters is always difficult to predict accurately and outcomes that are not consistent with Fresenius Group's view of the merits can occur. The Fresenius Group believes that it has valid defenses to the legal matters pending against it and is defending itself vigorously. Nevertheless, it is possible that the resolution of one or more of the legal matters currently pending or threatened could have a material adverse effect on its business, results of operations and financial condition.

Termination of the merger agreement with Akorn, Inc.

On April 24, 2017, Fresenius announced that Fresenius Kabi has agreed to acquire Akorn, Inc. (Akorn), a U.S.-based manufacturer and marketer of prescription and over-the-counter pharmaceutical products, for approximately US$4.3 billion, or US$34 per share, plus the prevailing net debt at closing of the transaction.

Fresenius conducted an independent investigation, using external experts, into alleged breaches of FDA data integrity requirements relating to product development at Akorn.

Fresenius decided on April 22, 2018 to terminate the merger agreement with Akorn, due to Akorn's failure to fulfill several closing conditions.

Fresenius' decision was based on, among other factors, material breaches of FDA data integrity requirements relating to Akorn's operations found during Fresenius' independent investigation. Fresenius offered to delay its decision in order to allow Akorn additional opportunity to complete its own investigation and present any information it wished Fresenius to consider, but Akorn declined that offer.

Akorn disagreed with Fresenius' position and filed a lawsuit on April 23, 2018 purporting to enforce the merger agreement.

Fresenius filed a counterclaim on April 30, 2018. The trial of the lawsuit took place in the Delaware Court of Chancery from July 9 to 13 and on August 23, 2018.

On October 1, 2018, the Court of Chancery in the U.S. state of Delaware ruled in favor of Fresenius in the lawsuit by Akorn, Inc. against Fresenius for the consummation of the April 2017 merger agreement.

Akorn appealed on October 18, 2018 against this ruling to the Delaware Supreme Court. On December 7, 2018, the Delaware Supreme Court, being the highest court and final instance in Delaware, affirmed the ruling of the Court of Chancery in favor of Fresenius. Fresenius has sued Akorn for damages suffered as a result of lost acquisition expenses. The lawsuit is pending before the Delaware Court of Chancery in the United States and is currently being heard.

Internal review

Beginning in 2012, Fresenius Medical Care AG & Co. KGaA (FMC-AG & Co. KGaA) received certain communications alleging conduct in countries outside the United States that might violate the Foreign Corrupt Practices Act (FCPA) or other anti-bribery laws. FMC-AG & Co. KGaA conducted investigations with the assistance of outside counsel and, in a continuing dialogue, advised the Securities and Exchange Commission

(SEC) and the United States Department of Justice (DOJ) about these investigations. The DOJ and the SEC also conducted their own investigations, in which FMC-AG & Co. KGaA cooperated.

In the course of this dialogue, FMC-AG & Co. KGaA identified and reported to the DOJ and the SEC, and took remedial actions with respect to, conduct that resulted in the DOJ and the SEC seeking monetary penalties including disgorgement of profits and other remedies. This conduct revolved principally around FMC-AG & Co. KGaA's products business in countries outside the United States.

FMC-AG & Co. KGaA recorded charges of €200 million in 2017 and €77.2 million in 2018 encompassing estimates for the claims from the DOJ and the SEC for profit disgorgement, penalties, certain legal expenses, and other related costs or asset impairments believed likely to be necessary for full and final resolution, by litigation or settlement, of the claims and issues arising from the investigation.

The increase recorded in 2018 took into consideration preliminary understandings with the DOJ and the SEC on the financial terms of a potential settlement. Following this increase, which takes into account incurred and anticipated legal expenses, impairments and other costs, the provision totaled €224 million as of December 31, 2018.

On March 29, 2019, FMC-AG & Co. KGaA entered into a non-prosecution agreement with the DOJ and a separate agreement with the SEC intended to resolve fully and finally the claims against FMC-AG & Co. KGaA arising from the investigations. FMC-AG & Co. KGaA paid a combined total in penalties and disgorgement of approximately US$232 million to the DOJ and the SEC in connection with these agreements. The entire amount paid to the DOJ and the SEC was reserved for in charges that FMC-AG & Co. KGaA recorded in 2017 and 2018 and announced in 2018. As part of the settlement, FMC-AG & Co. KGaA agreed to retain an independent compliance monitor for a period of at least two years and to an additional year of self-reporting. As of July 26, 2019, the monitor was appointed and the monitorship period commenced.

In 2015, FMC-AG & Co. KGaA self-reported to the German prosecutor conduct with a potential nexus to Germany and continues to cooperate with government authorities in Germany in their review of the conduct that prompted FMC-AG & Co. KGaA's and government investigations.

Since 2012, FMC-AG & Co. KGaA has made and continues to make further significant investments in its compliance and fincancial controls and in its compliance, legal and financial organizations. FMC-AG & Co. KGaA's remedial actions included separation from those employees responsible for the above-mentioned conduct. FMC-AG & Co. KGaA is dealing with post-FCPA review matters on various levels. FMC-AG & Co. KGaA continues to be fully committed to compliance with the FCPA and other applicable anti-bribery laws.

Product liability litigation

Personal injury litigation involving Fresenius Medical Care Holdings, Inc.'s (FMCH) acid concentrate product, labeled as Granuflo® or Naturalyte®, first arose in 2012 and was substantially resolved by settlement agreed in principle in February 2016 and consummated in November 2017. Remaining individual personal injury cases do not present material risk.

FMCH's affected insurers agreed to the settlement of the acid concentrate personal injury litigation and funded US$220 million of the settlement fund under a reciprocal reservation of rights encompassing certain coverage issues raised by insurers and the FMCH's claims for indemnification of defense costs. FMCH accrued a net expense of US$60 million in connection with the settlement, including legal fees and other anticipated costs.

Following entry into the settlement, FMCH's insurers in the AIG group and FMCH each initiated litigation against the other relating to the AIG group's coverage obligations under applicable policies. In the coverage litigation, the AIG group seeks to be indemnified by FMCH for some or all of its US$220 million outlay; FMCH seeks to confirm the AIG group's US$220 million funding obligation, to recover defense costs already incurred by FMCH, and to compel the AIG group to honor defense and indemnification obligations required for resolution of cases not participating in the settlement. As a result of decisions on issues of venue, the coverage litigation is proceeding in the New York state trial court for Manhattan. (National Union Fire Insurance v. Fresenius Medical Care, 2016 Index No. 653108 (Supreme Court of New York for New York County)).

Four institutional plaintiffs filed complaints against FMCH or its affiliates under state deceptive practices statutes resting on certain background allegations common to the GranuFlo®/NaturaLyte® personal injury litigation but seeking as a remedy the repayment of sums paid to FMCH that are attributable to the GranuFlo®/NaturaLyte® products. These cases implicate different legal standards, theories of liability and forms of potential recovery from those in the personal injury litigation and their claims were not extinguished by the personal injury litigation settlement described above. All of the institutional cases have been resolved by settlement except for the claims by the State of Louisiana through its Attorney General and Blue Cross Blue Shield Louisiana, which remain active in the combined proceeding. State of Louisiana ex re. Caldwell and Louisiana Health Service & Indemnity Company v. Fresenius Medical Care Airline, et al 2016 Civ. 11035 (U.S.D.C. D. Mass.). The Caldwell and Blue Cross Louisiana cases remain unresolved and are proceeding together in federal court in Boston but are subject to undecided motions for severance and remand. There is no trial date in either case. FMCH has increased its litigation reserves to account for anticipated resolution of these claims. However, at the present time there are no agreements in principle for resolving either case and litigation through final adjudication may be required in them.

On September 6, 2018, a special-purpose entity organized under Delaware law for the purpose of pursuing litigation filed a Pure Bill of Discovery in a Florida county court seeking discovery from FMCH related to the personal injury settlement, but no other relief. MSP Recovery Claims Series LLC v. Fresenius Medical Care Holdings, No. 2018-030366-CA-01 (11th Judicial Circuit, Dade County, Florida). The Pure Bill was thereafter removed to federal court and transferred into the multidistrict Fresenius Granuflo/Naturalyte Dialysate Products Liability Litigation in Boston. No. 1:13-MD-02428-DPW (D. Mass. 2013). On March 12, 2019, plaintiff amended its Pure Bill by filing a complaint claiming rights to recover monetary damages on behalf of various persons and entities who are alleged to have assigned to plaintiff their rights to recover monetary damages arising from their having provided or paid for medical services for dialysis patients receiving treatments using FMCH's acid concentrate product. FMCH is responding to the amended complaint.

Subpoena "Maryland"

In August 2014, Fresenius Medical Care Holdings, Inc. (FMCH) received a subpoena from the United States Attorney for the District of Maryland inquiring into FMCH's contractual arrangements with hospitals and physicians involving contracts relating to the management of in-patient acute dialysis services. FMCH is cooperating in the investigation.

Civil complaint "Hawaii"

In July 2015, the Attorney General for Hawaii issued a civil complaint under the Hawaii False Claims Act alleging a conspiracy pursuant to which certain Liberty Dialysis subsidiaries of Fresenius Medical Care Holdings, Inc. (FMCH) overbilled Hawaii Medicaid for Liberty's Epogen® administrations to Hawaii Medicaid patients during the period from 2006 through 2010, prior to the time of FMCH's acquisition of Liberty. Hawaii v. Liberty Dialysis – Hawaii, LLC et al., Case No. 15-1-1357-07 (Hawaii 1st Circuit). The State alleges that Liberty acted unlawfully by relying on incorrect and unauthorized billing guidance provided to Liberty by Xerox State Healthcare LLC, which acted as Hawaii's contracted administrator for its Medicaid program reimbursement operations during the relevant period. The amount of the overpayment claimed by the State is approximately US$8 million, but the State seeks civil remedies, interest, fines, and penalties against Liberty and FMCH under the Hawaii False Claims Act substantially in excess of the overpayment. After prevailing on motions by Xerox to preclude it from doing so, FMCH is pursuing third-party claims for contribution and indemnification against Xerox. The State's False Claims Act complaint was filed after Liberty initiated an administrative action challenging the State's recoupment of alleged overpayments from sums currently owed to Liberty. The civil litigation and administrative action are proceeding in parallel. Trial in the civil litigation is scheduled for July 13, 2020.

Subpoenas "Colorado and New York"

On August 31, 2015, Fresenius Medical Care Holdings, Inc. (FMCH) received a subpoena under the False Claims Act from the United States Attorney for the District of Colorado (Denver) inquiring into FMCH's participation in and management of dialysis facility joint ventures in which physicians are partners. FMCH continues to cooperate in the Denver United States Attorney's Office (USAO) investigation, which has come to focus on purchases and sales of minority interests in ongoing outpatient facilities between FMCH and physician groups.

On November 25, 2015, FMCH received a subpoena under the False Claims Act from the United States Attorney for the Eastern District of New York (Brooklyn) also inquiring into FMCH's involvement in certain dialysis facility joint ventures in New York. On September 26, 2018, the Brooklyn USAO declined to intervene on the qui tam complaint filed under seal in 2014 that gave rise to this investigation. CKD Project LLC v. Fresenius Medical Care, 2014 Civ. 6646 (E.D.N.Y. November 12, 2014). The court unsealed the complaint, allowing the relator to serve and proceed on its own. The relator – a special-purpose entity formed by law firms to pursue qui tam proceedings – has served its complaint and litigation is proceeding.

Subpoena "Fresenius Vascular Care"

Beginning October 6, 2015, the United States Attorney for the Eastern District of New York (Brooklyn) has led an investigation, through subpoenas issued under the False Claims Act, of utilization and invoicing by Fresenius Medical Care Holdings, Inc.'s (FMCH) subsidiary Azura Vascular Care for a period beginning after FMCH's acquisition of American Access Care LLC (AAC) in October 2011. FMCH is cooperating in the Brooklyn United States Attorney's Office (USAO) investigation. The Brooklyn USAO has indicated that its investigation is nationwide in scope and is focused on whether certain access procedures performed at Azura facilities have been medically necessary and whether certain physician assistants employed by Azura exceeded their permissible scope of practice. Allegations against AAC arising in districts in Connecticut, Florida and Rhode Island relating to utilization and invoicing were settled in 2015.

Subpoena "Texas (Dallas)"

On June 30, 2016, Fresenius Medical Care Holdings, Inc. (FMCH) received a subpoena from the United States Attorney for the Northern District of Texas (Dallas) seeking information under the False Claims Act about the use and management of pharmaceuticals including Velphoro®. The investigation encompasses DaVita, Amgen, Sanofi, and other pharmaceutical manufacturers and includes inquiries into whether certain compensation transfers between manufacturers and pharmacy vendors constituted unlawful kickbacks. FMCH understands that this investigation is substantively independent of the US$63.7 million settlement by DaVita Rx announced on December 14, 2017 in the matter styled United States ex rel. Gallian v. DaVita Rx, 2016 Civ. 0943 (N.D. Tex.). FMCH has cooperated in the investigation.

Subpoena "New York"

On November 18, 2016, Fresenius Medical Care Holdings, Inc. (FMCH) received a subpoena under the False Claims Act from the United States Attorney for the Eastern District of New York (Brooklyn) seeking documents and information relating to the operations of Shiel Medical Laboratory, Inc. (Shiel), which FMCH acquired in October 2013. In the course of cooperating in the investigation and preparing to respond to the subpoena, FMCH identified falsifications and misrepresentations in documents submitted by a Shiel salesperson that relate to the integrity of certain invoices submitted by Shiel for laboratory testing for patients in long term care facilities. On February 21, 2017, FMCH terminated the employee and notified the United States Attorney of the termination and its circumstances. The terminated employee's conduct is expected to result in demands for FMCH to refund overpayments and to pay related penalties under applicable laws, but the monetary value of such payment demands cannot yet be reasonably estimated. FMCH contends that, under the asset sale provisions of its 2013 Shiel acquisition, it is not responsible for misconduct by the terminated employee or other Shiel employees prior to the date of the acquisition. The Brooklyn United States Attorney's Office (USAO) continues to investigate a range of issues involving Shiel, including allegations of improper compensation (kickbacks) to physicians, and has disclosed that multiple sealed qui tam complaints underlie the investigation.

On December 12, 2017, FMCH sold to Quest Diagnostics certain Shiel operations that are the subject of this Brooklyn subpoena, including the misconduct reported to the United States Attorney. Under the Quest Diagnostics sale agreement, FMCH retains responsibility for responding to the Brooklyn investigation and for liabilities arising from conduct occurring after its 2013 acquisition of Shiel and prior to its sale of Shiel to Quest Diagnostics. FMCH is cooperating in the investigation.

Subpoena "American Kidney Fund"/ CMS Litigation

On December 14, 2016, the Center for Medicare & Medicaid Services (CMS), which administers the federal Medicare program, published an Interim Final Rule (IFR) titled "Medicare Program; Conditions for Coverage for End-Stage Renal Disease Facilities-Third Party Payment." The IFR would have amended the Conditions for Coverage for dialysis providers, like Fresenius Medical Care Holdings, Inc. (FMCH) and would have effectively enabled insurers to reject premium payments made by or on behalf of patients who received grants for individual market coverage from the American Kidney Fund (AKF or the Fund). The IFR could thus have resulted in those patients losing individual insurance market coverage. The loss of coverage for these patients would have had a material and adverse impact on the operating results of FMCH.

On January 25, 2017, a federal district court in Texas responsible for litigation initiated by a patient advocacy group and dialysis providers including FMCH preliminarily enjoined CMS from implementing the IFR. Dialysis Patient Citizens v. Burwell, 2017 Civ. 0016 (E.D. Texas, Sherman Div.). The preliminary injunction was based on CMS' failure to follow appropriate notice-and-comment procedures in adopting the IFR. The injunction remains in place and the court retains jurisdiction over the dispute.

On June 22, 2017, CMS requested a stay of proceedings in the litigation pending further rulemaking concerning the IFR. CMS stated, in support of its request, that it expects to publish a Notice of Proposed Rulemaking in the Federal Register and otherwise pursue a notice-and-comment process. Plaintiffs in the litigation, including FMCH, consented to the stay, which was granted by the court on June 27, 2017.

On January 3, 2017, FMCH received a subpoena from the United States Attorney for the District of Massachusetts under the False Claims Act inquiring into FMCH's interactions and relationships with the AKF, including FMCH's charitable contributions to the Fund and the Fund's financial assistance to patients for insurance premiums. FMCH cooperated in the investigation, which was part of a broader investigation into charitable contributions in the medical industry. On August 1, 2019, the United States District Court for the District of Massachusetts entered an order announcing that the United States had declined to intervene on a qui tam complaint underlying the United States Attorney's Office Boston investigation and unsealing the relator's complaint so as to permit the relator to serve the complaint and proceed on his own. The relator did not serve the complaint within the time allowed, but the court has not yet dismissed the relator's complaint.

On April 8, 2019, United Healthcare served a demand for arbitration against FMCH. The demand asserts that FMCH unlawfully "steered" patients by waiving co-payments and other means away from coverage under government-funded insurance plans including Medicare into United Healthcare's commercial plans, including Affordable Care Act exchange plans. FMCH is contesting United Healthcare's claims and demands. A final hearing date has been scheduled in the arbitration for August 23, 2021.

In early May 2017, the United States Attorney for the Middle District of Tennessee (Nashville) issued identical subpoenas to FMCH and two subsidiaries under the False Claims Act concerning FMCH's retail pharmaceutical business. The investigation is exploring allegations related to improper inducements to dialysis patients to fill oral prescriptions through FMCH's pharmacy service, improper billing for returned pharmacy products and other allegations similar to those underlying the US$63.7 million settlement by DaVita Rx in Texas announced on December 14, 2017. United States ex rel. Gallian, 2016 Civ. 0943 (N.D. Tex.). FMCH is cooperating in the investigation.

Vifor patent infringement Fresenius Medical Care (Delaware)

On March 12, 2018, Vifor Fresenius Medical Care Renal Pharma Ltd. and Vifor Fresenius Medical Care Renal Pharma France S.A.S. (collectively, VFMCRP) (the joint venture between Vifor Pharma and Fresenius Medical Care AG & Co. KGaA), filed a complaint for patent infringement against Lupin Atlantis Holdings SA and Lupin Pharmaceuticals Inc. (collectively, Lupin), and Teva Pharmaceuticals USA, Inc. (Teva) in the U.S. District Court for the District of Delaware (Case 1:18-cv-00390-LPS). The patent infringement action is in response to Lupin and Teva's filings of Abbreviated New Drug Applications (ANDA) with the U.S. Food and Drug Administration (FDA) for generic versions of Velphoro®. Velphoro® is protected by patents listed in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, also known as the Orange Book. The complaint was filed within the 45-day period provided for under the Hatch-Waxman legislation, and triggered a stay of FDA approval of the ANDAs for 30 months (2.5 years) (specifically, up to July 29, 2020 for Lupin's ANDA; and August 6, 2020 for Teva's ANDA), or a shorter time if a decision in the infringement suit is reached that the patents-at-issue are invalid or not infringed.

In response to another ANDA being filed for a generic Velphoro®, VFMCRP filed a complaint for patent infringement against Annora Pharma Private Ltd., and Hetero Labs Ltd. (collectively, Annora), in the U.S. District Court for the District of Delaware on December 17, 2018. A 30-month stay of FDA approval of Annora's ANDA will run through to May 30, 2021.

Subpoena "Colorado (Denver)"

On December 17, 2018, Fresenius Medical Care Holdings, Inc. (FMCH) was served with a subpoena under the False Claims Act from the United States Attorney for the District of Colorado (Denver) as part of an investigation of allegations against DaVita, Inc. involving transactions between FMCH and DaVita. The subject transactions include sales and purchases of dialysis facilities, dialysis-related products and pharmaceuticals, including dialysis machines and dialyzers, and contracts for certain administrative services. FMCH is cooperating in the investigation.

Litigation Tricare Program

On June 28, 2019, certain Fresenius Medical Care Holdings, Inc. (FMCH) subsidiaries filed a complaint against the United States seeking to recover monies owed to them by the United States Department of Defense under the Tricare program, and to preclude Tricare from recouping monies previously paid. Bio-Medical Applications of Georgia, Inc., et al. v. United States, CA 19-947, United States Court of Federal Claims. Tricare provides reimbursement for dialysis treatments and other medical care provided to members of the military services, their dependents and retirees. The litigation challenges unpublished administrative actions by Tricare administrators reducing the rate of compensation paid for dialysis treatments provided to Tricare beneficiaries based on a recasting or "crosswalking" of codes used and followed in invoicing without objection for many years. Tricare administrators have acknowledged the unpublished administrative action and declined to change or abandon it. The Tricare administrators have filed a motion to dismiss the complaint, but are not yet required to articulate, and have not yet presented, a substantive defense to the complaint. FMCH intends to oppose the motion to dismiss. FMCH has imposed a constraint on revenue for accounts receivable in legal dispute otherwise recognized from the Tricare program that it believes, in consideration of facts currently known, sufficient to account for the possibility of not prevailing in the litigation.

Subpoena "Nevada"

In November 2014, Fresenius Kabi Oncology Limited (FKOL) received a subpoena from the U.S. Department of Justice (DOJ), U.S. Attorney for the District of Nevada. The subpoena requests documents in connection with the January 2013 inspection by the U.S. Food and Drug Administration (FDA) of FKOL's plant for active pharmaceutical ingredients in Kalyani, India. That inspection resulted in a warning letter from the FDA in July 2013. The subpoena marks the DOJ's criminal and/or civil investigation in this connection and seeks information from throughout the Fresenius Kabi group. Through an ancillary subpoena of January 2016, the DOJ has requested additional historic information and data. Through further ancillary subpoenas of June 2016 and November 2016, the DOJ has requested further information from Fresenius Kabi USA and Fresenius Kabi AG without changing the focus of the investigation. Fresenius Kabi fully cooperates with the governmental investigation. Fresenius Kabi has entered into a Tolling Agreement with the DOJ, thereby waiving its statute of limitation defense until July 2018. The Tolling Agreement was again extended by mutual agreement until March 2020. Fresenius Kabi is working with the DOJ towards conclusion of the investigation. It is expected that any resolution will include a monetary payment and potentially other measures to ensure that a misconduct of the nature detected in 2013 will not occur again in future.

General risks

From time to time, the Fresenius Group is a party to or may be threatened with other litigation or arbitration, claims or assessments arising in the ordinary course of its business. Management regularly analyzes current information including, as applicable, the Fresenius Group's defenses and insurance coverage and, as necessary, provides accruals for probable liabilities for the eventual disposition of these matters.

The Fresenius Group, like other health care providers, insurance plans and suppliers, conducts its operations under intense government regulation and scrutiny. It must comply with regulations which relate to or govern the safety and efficacy of medical products and supplies, the marketing and distribution of such products, the operation of manufacturing facilities, laboratories, hospitals, dialysis clinics and other health care facilities, and environmental and occupational health and safety. With respect to its development, manufacture, marketing and distribution of medical products, if such compliance is not maintained, the Fresenius Group could be subject to significant adverse regulatory actions by the U.S. Food and Drug Administration (FDA) and comparable regulatory authorities outside the United States. These regulatory actions could include warning letters or other enforcement notices from the FDA, and/or comparable foreign regulatory authority which may require the Fresenius Group to expend significant time and resources in order to implement appropriate corrective actions. If the Fresenius Group does not address matters raised in warning letters or other enforcement notices to the satisfaction of the FDA and/or comparable regulatory authorities outside the United States, these regulatory authorities could take additional actions, including product recalls, injunctions against the distribution of products or operation of manufacturing plants, civil penalties, seizures of the Fresenius Group's products and/or criminal prosecution. Fresenius Medical Care Holdings, Inc. is currently engaged in remediation efforts with respect to one pending FDA warning letter, Fresenius Kabi with respect to three pending FDA warning letters. The Fresenius Group must also comply with the laws of the United States, including the federal Anti-Kickback Statute, the federal False Claims Act, the federal Stark Law, the federal Civil Monetary Penalties Law and the federal Foreign Corrupt Practices Act as well as other federal and state fraud and abuse laws. Applicable laws or regulations may be amended, or enforcement agencies or courts may make interpretations that differ from the Fresenius Group's interpretations or the manner in which it conducts its business. Enforcement has become a high priority for the federal government and some states. In addition, the provisions of the False Claims Act authorizing payment of a portion of any recovery to the party bringing the suit encourage private plaintiffs to commence whistleblower actions. By virtue of this regulatory environment, the Fresenius Group's business activities and practices are subject to extensive review by regulatory authorities and private parties, and continuing audits, subpoenas, other inquiries, claims and litigation relating to the Fresenius Group's compliance with applicable laws and regulations. The Fresenius Group may not always be aware that an inquiry or action has begun, particularly in the case of whistleblower actions, which are initially filed under court seal.

The Fresenius Group operates many facilities and handles the personal data (PD) of its patients and beneficiaries throughout the United States and other parts of the world, and engages with other business associates to help it carry out its health care activities. In such a decentralized system, it is often difficult to maintain the desired level of oversight and control over the thousands of individuals employed by many affiliated companies and its business associates. On occasion, the Fresenius Group or its business associates may experience a breach under the Health Insurance Portability and Accountability Act Privacy Rule and Security Rules, the EU's General Data Protection Regulation and/or other similar laws (Data Protection Laws) when there has been impermissible use, access, or disclosure of unsecured PD or when the Fresenius Group or its business associates neglect to implement the required administrative, technical and physical safeguards of its electronic systems and devices, or a data breach that results in impermissible use, access or disclosure of personal identifying information of its employees, patients and beneficiaries. On those occasions, the Fresenius Group must comply with applicable breach notification requirements.

The Fresenius Group relies upon its management structure, regulatory and legal resources, and the effective operation of its compliance program to direct, manage and monitor the activities of its employees. On occasion, the Fresenius Group may identify instances where employees or other agents deliberately, recklessly or inadvertently contravene the Fresenius Group's policies or violate applicable law. The actions of such persons may subject the Fresenius Group and its subsidiaries to liability under the Anti-Kickback Statute, the Stark Law, the False Claims Act, Data Protection Laws, the Health Information Technology for Economic and Clinical Health Act and the Foreign Corrupt Practices Act, among other laws and comparable state laws or laws of other countries.

Physicians, hospitals and other participants in the health care industry are also subject to a large number of lawsuits alleging professional negligence, malpractice, product liability, worker's compensation or related claims, many of which involve large claims and significant defense costs. The Fresenius Group has been and is currently subject to these suits due to the nature of its business and expects that those types of lawsuits may continue. Although the Fresenius Group maintains insurance at a level which it believes to be prudent, it cannot assure that the coverage limits will be adequate or that insurance will cover all asserted claims. A successful claim against the Fresenius Group or any of its subsidiaries in excess of insurance coverage could have a material adverse effect upon it and the results of its operations. Any claims, regardless of their merit or eventual outcome, could have a material adverse effect on the Fresenius Group's reputation and business.

The Fresenius Group has also had claims asserted against it and has had lawsuits filed against it relating to alleged patent infringements or businesses that it has acquired or divested. These claims and suits relate both to operation of the businesses and to the acquisition and divestiture transactions. The Fresenius Group has, when appropriate, asserted its own claims, and claims for indemnification. A successful claim against the Fresenius Group or any of its subsidiaries could have a material adverse effect upon its business, financial condition, and the results of its operations. Any claims, regardless of their merit or eventual outcome, could have a material adverse effect on the Fresenius Group's reputation and business.

30. LEASES

The Fresenius Group leases land, buildings and improvements, machinery and equipment, as well as IT- and office equipment under various lease agreements.

INITIAL APPLICATION OF IFRS 16

Upon the initial application of IFRS 16 as of January 1, 2019, the Fresenius Group recognized right-of-use assets of €5,679 million and lease liabilities of €5,974 million. The cumulative effect from the first-time application is recognized in the opening balance of retained earnings (-€46 million) as well as in noncontrolling interests (-€98 million) as of January 1, 2019.

The following table shows a reconciliation of the future minimum rental payments as of December 31, 2018 to the lease liabilities as of January 1, 2019:

€ in millions	2019
Future minimum rental payments as of December 31, 2018 (IAS 17)	7,389
less short-term leases	34
less leases of low-value assets	54
less other	53
Future minimum rental payments as of January 1, 2019, gross	**7,248**
Discounting	1,274
Lease liabilities as a result of the initial application of IFRS 16 as of January 1, 2019[1]	**5,974**
Capital lease obligations as of December 31, 2018 (IAS 17)	219
Lease liabilities as of January 1, 2019	**6,193**

[1] As of December 31, 2018, €195 million were already included in other liabilities.

The lease liabilities were discounted using the respective borrowing rate as of January 1, 2019. The weighted-average discount rate was 3.34%.

LEASES IN THE CONSOLIDATED STATEMENT OF INCOME

The following table shows the effects from lease agreements on the consolidated statement of income for 2019:

€ in millions	2019
Depreciation on right-of-use assets	855
Impairments on right-of-use assets	39
Expenses relating to short-term leases	72
Expenses relating to leases of low-value assets	42
Expenses relating to variable lease payments	22
Other expenses/income from lease agreements	–
Interest expenses on lease liabilities	217

LEASES IN THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

At December 31, the acquisition costs and the accumulated depreciation of right-of-use assets consisted of the following:

ACQUISITION COSTS

€ in millions	As of Jan. 1, 2019	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifications	Disposals	As of Dec. 31, 2019
Right-of-use assets: Land	79	1	1	33	-	2	**112**
Right-of-use assets: Buildings and improvements	5,119	73	51	842	155	36	**6,204**
Right-of-use assets: Machinery and equipment	480	8	6	73	47	27	**587**
Right-of-use assets: Advanced Payments	1	-	0	–	-1	0	**–**
Right-of-use assets	5,679	82	58	948	201	65	**6,903**

DEPRECIATION

€ in millions	As of Jan. 1, 2019	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifications	Disposals	**As of Dec. 31, 2019**
Right-of-use assets: Land	0	0	0	9	0	0	**9**
Right-of-use assets: Buildings and improvements	0	-2	-2	730	45	6	**765**
Right-of-use assets: Machinery and equipment	0	0	0	155	40	25	**170**
Right-of-use assets: Advanced Payments	0	0	0	0	0	0	**0**
Right-of-use assets	0	-2	-2	894	85	31	**944**

CARRYING AMOUNTS

€ in millions	**Dec. 31, 2019**
Right-of-use assets: Land	103
Right-of-use assets: Buildings and improvements	5,439
Right-of-use assets: Machinery and equipment	417
Right-of-use assets: Advanced Payments	–
Right-of-use assets	**5,959**

Depreciation expense and impairments on right-of-use assets amounted to €894 million for the year ended December 31, 2019. These expenses are allocated within costs of revenue, selling, general and administrative and research and development expenses depending upon the area in which the asset is used.

As of December 31, 2019, lease liabilites comprised a current portion of €793 million and a non-current portion of €5,646 million. Approximately 73% of the lease liabilities related to Fresenius Medical Care, approximately 16% to Fresenius Helios, approximately 6% to Fresenius Kabi und approximately 5% to Fresenius Vamed.

LEASES IN THE CONSOLIDATED STATEMENT OF CASH FLOWS

Total cash outflows from leases were €1,164 million for the year ended December 31, 2019.

In the consolidated statement of cash flows, the interest component of recognized leases is shown in net cash provided by/used in operating activities, the amortization component is shown in net cash provided by/used in financing activities.

The following potential future cash outflows were not reflected in the measurement of the lease liabilities:

€ in millions	**2019**
Potential cash outflows from:	
extension options	7,019
leases that the Fresenius Group entered into as a lessee that have not yet begun	347
purchase options	271
variable lease payments	86
residual value guarantees	49
penalty payments from the excercise of termination options	5

Potential future cash outflows resulting from the exercise of options were not reflected in the measurement of the lease liabilities if the excercise of the respective option was not considered reasonably certain.

The major part of the potential future cash outflows resulting from extension options relates to extension options in real estate lease agreements, primarily for dialysis clinics of Fresenius Medical Care in North America. Individual lease agreements include multiple extension options. The Fresenius Group uses extension options to obtain a high degree of flexibility in performing its business. These extension options held are exercisable solely by the Fresenius Group.

31. FINANCIAL INSTRUMENTS

VALUATION OF FINANCIAL INSTRUMENTS

Carrying amounts of financial instruments

As of December 31, the carrying amounts of financial instruments by item of the statement of financial position and structured according to categories were as follows:

	December 31, 2019						
					Relating to no category		
€ in millions	Carrying amount	Amortized cost	Fair value through profit and loss[1]	Fair value through other comprehensive income[2]	Derivatives designated as cash flow hedging instruments at fair value	Noncontrolling interest subject to put provisions measured at fair value	Valuation according to IFRS 16 for leasing receivables and liabilities
Financial assets							
Cash and cash equivalents	1,654	1,280	374				
Trade accounts and other receivables, less allowance for doubtful accounts	7,176	7,037	28	33			78
Accounts receivable from and loans to related parties	100	100					
Other financial assets[3]	1,690	825	333	416	4		112
Financial assets	**10,620**	**9,242**	**735**	**449**	**4**	**0**	**190**
Financial liabilities							
Trade accounts payable	1,905	1,905					
Short-term accounts payable to related parties	46	46					
Short-term debt	2,475	2,475					
Short-term debt from related parties	3	3					
Long-term debt	7,009	7,009					
Long-term lease liabilities	6,439						6,439
Bonds	10,467	10,467					
Convertible bonds	865	865					
Other financial liabilities[4]	4,717	3,145	611		9	952	
Financial liabilities	**33,926**	**25,915**	**611**	**0**	**9**	**952**	**6,439**

[1] All included financial assets and liabilities are mandatorily measured at fair value through profit and loss according to IFRS 9.
[2] The option to measure equity instruments at fair value through other comprehensive income upon implementation of IFRS 9 has been exercised. The option has been used for €154 million other investments (included in other financial assets).
[3] Other financial assets are included in the item other current and non-current assets in the consolidated statement of financial position.
[4] Other financial liabilities are included in the items short-term provisions and other short-term liabilities and long-term provisions and other long-term liabilities in the consolidated statement of financial position.

During the fiscal year 2019, no material reclassifications of financial instruments were required.

	December 31, 2018						
					Relating to no category		
€ in millions	Carrying amount	Amortized cost	Fair value through profit and loss[1]	Fair value through other comprehensive income[2]	Derivatives designated as cash flow hedging instruments at fair value	Noncontrolling interest subject to put provisions measured at fair value	Valuation according to IAS 17 for leasing receivables and liabilities
Financial assets							
Cash and cash equivalents	2,709	1,291	1,418				
Trade accounts and other receivables, less allowance for doubtful accounts	6,434	6,339	4	41			50
Accounts receivable from and loans to related parties	135	135					
Other financial assets[3]	1,490	726	262	375	19		108
Financial assets	**10,768**	**8,491**	**1,684**	**416**	**19**	**0**	**158**
Financial liabilities							
Trade accounts payable	1,823	1,823					
Short-term accounts payable to related parties	67	67					
Short-term debt	2,354	2,354					
Short-term debt from related parties	–	–					
Long-term debt and capital lease obligations	6,297	6,078					219
Bonds	8,990	8,990					
Convertible bonds	1,343	1,343					
Other financial liabilities[4]	4,685	3,041	793		12	839	
Financial liabilities	**25,559**	**23,696**	**793**	**0**	**12**	**839**	**219**

[1] All included financial assets and liabilities are mandatorily measured at fair value through profit and loss according to IFRS 9.
[2] The option to measure equity instruments at fair value through other comprehensive income upon implementation of IFRS 9 has been exercised. The option has been used for €124 million (included in other financial assets).
[3] Other financial assets are included in the item other current and non-current assets in the consolidated statement of financial position.
[4] Other financial liabilities are included in the items short-term provisions and other short-term liabilities and long-term provisions and other long-term liabilities in the consolidated statement of financial position.

Fair value of financial instruments

The following table shows the carrying amounts and the fair value hierarchy levels as of December 31:

€ in millions	December 31, 2019				December 31,2018			
		Fair value				Fair value		
	Carrying amount	Level 1	Level 2	Level 3	Carrying amount	Level 1	Level 2	Level 3
Financial assets								
Cash and cash equivalents [1]	374	374			1,418	1,418		
Trade accounts and other receivables, less allowance for doubtful accounts [1]	61		61		45		45	
Other financial assets [1]								
Debt instruments	370	365	5		334	330	4	
Equity investments	369	13	173	183	245	14	231	
Derivatives designated as cash flow hedging instruments	4		4		19		19	
Derivatives not designated as hedging instruments	10		10		58		58	
Financial liabilities								
Long-term debt and capital lease obligations	7,009		7,063		6,297		6,294	
Bonds	10,467	11,102			8,990	9,245		
Convertible bonds	865	896			1,343	1,416		
Other financial liabilities [1]								
Noncontrolling interest subject to put provisions	952			952	839			839
Accrued contingent payments outstanding for acquisitions	595			595	731			731
Derivatives designated as cash flow hedging instruments	9		9		12		12	
Derivatives not designated as hedging instruments	16		16		62		62	

[1] Fair value information is not provided for financial instruments, if the carrying amount is a reasonable estimate of the fair value due to the relatively short period of maturity of these instruments.

The significant methods and assumptions used to estimate the fair values of financial instruments as well as classification of fair value measurements according to the three-tier fair value hierarchy are as follows:

Cash and cash equivalents include short-term financial investments that are measured at fair value through profit and loss. The fair value of these assets, which are quoted in an active market is based on price quotations at the date of the consolidated financial statements (Level 1).

Trade accounts receivable from factoring contracts are measured on the basis of observable market information (Level 2).

The majority of debt instruments included in other financial assets are bonds that are quoted in an active market and therefore measured at fair value (Level 1) which is based on price quotations at the date of the consolidated financial statements. Further debt instruments give rise to cash flows on specified dates (Level 2).

The fair values of equity investments are based on observable market information (Level 2). The fair values of other equity investments that are traded in an active market, are based on price quotations at the date of the consolidated financial statements (Level 1).

Furthermore, at September 30, 2019, the Fresenius Group transferred the Humacyte investment of Fresenius Medical Care with a carrying amount of €186 million from Level 2 to Level 3, because Fresenius Medical Care remeasured the fair value using a discounted cash flow model after events or changes in circumstances were identified that had a significant effect on the fair value of the investment. The Fresenius Group accounts for transfers at the end of the reporting period.

From time to time, the Fresenius Group engages external valuation firms to determine the fair value of Level 3 equity investments. The external valuation uses a discounted cash flow model, which includes significant unobservable inputs such as investment specific forecasted financial statements, weighted-average cost of capital, that reflects current market assessments as well as a terminal growth rate.

The fair values of major long-term financial instruments are calculated on the basis of market information. Liabilities for which market quotes are available are measured with the market quotes at the reporting date (Level 1). The fair values of the other long-term financial liabilities are calculated at the present value of respective future cash flows. To determine these present values, the prevailing interest rates and credit spreads for the Fresenius Group as of the date of the statement of financial position are used (Level 2).

The valuation of the noncontrolling interest subject to put provisions is determined using significant unobservable inputs (Level 3). From time to time, the Fresenius Group engages external valuation firms for these valuations. The method for calculating the fair value is described in note 1. III. q, Financial instruments. 98% of noncontrolling interest subject to put provisions applied to Fresenius Medical Care at December 31, 2019.

Contingent payments outstanding for acquisitions are recognized at their fair value. The estimation of the individual fair values is based on the key inputs of the arrangement that determine the future contingent payment as well as the Fresenius Group's expectation of these factors (Level 3). The Fresenius Group assesses the likelihood and timing of achieving the relevant objectives. The underlying assumptions are reviewed regularly.

The following table shows the changes of the fair values of financial instruments classified as Level 3 in the fiscal year 2019:

€ in millions	Accrued contingent payments outstanding for acquisitions	Noncontrolling interest subject to put provisions
As of January 1, 2019	**731**	**839**
Additions	25	109
Disposals	-85	-20
Gain/loss recognized in profit or loss	-74	154
Gain/loss recognized in equity	0	14
Dividend payments	0	-154
Currency effects and other changes	-2	10
As of December 31, 2019	**595**	**952**

Derivatives, mainly consisting of interest rate swaps and foreign exchange forward contracts, are valued as follows: The fair value of interest rate swaps is calculated by discounting the future cash flows on the basis of the market interest rates applicable for the remaining term of the contract as of the date of the statement of financial position. To determine the fair value of foreign exchange forward contracts, the contracted forward rate is compared to the current forward rate for the remaining term of the contract as of the date of the statement of financial position. The result is then discounted on the basis of the market interest rates prevailing at the date of the statement of financial position for the respective currency.

Fresenius Group's own credit risk is incorporated in the fair value estimation of derivatives that are liabilities. Counterparty credit risk adjustments are factored into the valuation of derivatives that are assets. The Fresenius Group monitors and analyses the credit risk from derivative financial instruments on a regular basis. For the valuation of derivative financial instruments, the credit risk is considered in the fair value of every individual instrument. The basis for the default probability are Credit Default Swap Spreads of each counterparty appropriate for the duration. The calculation of the credit risk considered in the valuation is done by multiplying the default probability appropriate for the duration with the expected discounted cash flows of the derivative financial instrument.

Derivatives not designated as hedging instruments comprise derivatives embedded in convertible bonds and call options which have been purchased to hedge the convertible bonds. The fair value of the embedded derivatives is calculated using the difference between the market value of the particular convertible bonds and the market value of an adequate straight bond discounted with the market interest rates as of the reporting date. The fair value of the call options is based on price quotations.

The calculation of the fair value of derivative financial instruments is based on other observable inputs. Therefore, these are classified as Level 2 in accordance with the defined fair value hierarchy levels.

Derivative financial instruments are marked to market each reporting period, resulting in carrying amounts equal to fair values at the reporting date.

FAIR VALUES OF DERIVATIVE FINANCIAL INSTRUMENTS

	December 31, 2019		December 31, 2018	
€ in millions	**Assets**	**Liabilities**	Assets	Liabilities
Interest rate contracts (current)	**0**	**0**	0	–
Interest rate contracts (non-current)	**1**	**0**	5	0
Foreign exchange contracts (current)	**3**	**9**	14	12
Foreign exchange contracts (non-current)	**0**	**-**	–	0
Derivatives in cash flow hedging relationships	**4**	**9**	19	12
Interest rate contracts (current)	**0**	**–**	0	0
Interest rate contracts (non-current)	**0**	**–**	0	–
Foreign exchange contracts (current)	**8**	**14**	7	11
Foreign exchange contracts (non-current)	**0**	**0**	–	–
Derivatives embedded in the convertible bonds	**0**	**2**	0	51
Call options to secure the convertible bonds	**2**	**0**	51	0
Derivatives not designated as hedging instruments	**10**	**16**	58	62

Derivatives not designated as hedging instruments, which are derivatives that do not qualify for hedge accounting, are also solely entered into to hedge economic business transactions and not for speculative purposes.

The current portion of derivatives indicated as assets in the preceding table is recognized within other current assets in the consolidated statement of financial position, while the current portion of those indicated as liabilities is included in short-term provisions and other short-term liabilities. The non-current portions indicated as assets or liabilities are recognized in other non-current assets or in long-term provisions and other long-term liabilities, respectively. The derivatives embedded in the convertible bonds and the call options to secure the convertible bonds are recognized in other current and non-current liabilities / assets in the consolidated statement of financial position.

To reduce the credit risk arising from derivatives, the Fresenius Group concluded master netting agreements with banks. Through such agreements, positive and negative fair values of the derivative contracts could be offset against one another if a partner becomes insolvent. This offsetting is valid for transactions where the aggregate amount of obligations owed to and receivable from are not equal. If insolvency occurs, the party which owes the larger amount is obliged to pay the other party the difference between the amounts owed in the form of one net payment.

These master netting agreements do not provide a basis for offsetting the fair values of derivative financial instruments in the consolidated statement of financial position as the offsetting criteria under International Financial Reporting Standards are not satisfied.

At December 31, 2019 and December 31, 2018, the Fresenius Group had €11 million and €25 million of derivative financial assets subject to netting arrangements and €22 million and €22 million of derivative financial liabilities subject to netting arrangements. Offsetting these derivative financial instruments would have resulted in net assets of €6 million and €15 million as well as net liabilities of €17 million and €12 million at December 31, 2019 and December 31, 2018, respectively.

The following table shows when the cash flow from derivative financial instruments is expected to occur.

CASH FLOW FROM DERIVATIVE FINANCIAL INSTRUMENTS

	expected in period of			
€ in millions	1 year	1 to 3 years	3 to 5 years	over 5 years
Interest rate contracts	1	–	0	0
Foreign exchange contracts	-6	–	0	0
Derivatives in cash flow hedging relationships	**-5**	**–**	**0**	**0**
Interest rate contracts	–	–	0	0
Foreign exchange contracts	-6	0	0	0
Derivatives not designated as hedging instruments	**-6**	**–**	**0**	**0**

Effects of financial instruments recorded in the consolidated statement of income

The net gains and losses from financial instruments consisted of allowances for doubtful accounts and other receivables in an amount of €52 million and foreign currency transactions of -€1 million. Interest income of €162 million resulted mainly from the valuation of the derivatives embedded in the convertible bonds of Fresenius SE & Co. KGaA and of Fresenius Medical Care AG & Co. KGaA, the valuation of the call options of Fresenius SE & Co. KGaA, trade accounts and other receivables and loans to related parties. Interest expense of €881 million resulted mainly from financial liabilities, which are not recognized at fair value in the consolidated statement of income.

During 2019, the Fresenius Group recognized gains of approximately €76 million from changes in the fair value of equity investments that are measured at fair value through profit and loss within other operating income.

Income and expense from financial instruments recorded in other comprehensive income (loss) related to derivatives in cash flow hedging relationships and to equity investments measured at fair value through other comprehensive income.

The changes of cash flow hedges on the consolidated statement of comprehensive income (loss) before tax for the years 2019 and 2018 are as follows:

EFFECT OF DERIVATIVES ON THE CUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

	2019				
	Cash Flow Hedge Reserve		Costs of Hedging Reserve		
€ in millions	Changes of the unrealized gains/losses in other comprehensive income (loss)	Reclassifications from other comprehensive income (loss)[1]	Changes of the unrealized gains/losses in other comprehensive income (loss)	Reclassifications from other comprehensive income (loss)[1]	Affected line item in the consolidated statement of income/consolidated statement of financial position
Interest rate contracts	-17	3			Interest income/expense
Foreign exchange contracts	-9	10	–	–	
thereof		1		2	Sales
		5		–	Cost of sales
		1		–	General and administrative expenses
		3		1	Other operating income/expenses
		0		-3	Interest income/expense
		–		–	Inventories
Derivatives in cash flow hedging relationships	**-26**	**13**	**–**	**–**	

	2018				
	Cash Flow Hedge Reserve		Costs of Hedging Reserve		
€ in millions	Changes of the unrealized gains/losses in other comprehensive income (loss)	Reclassifications from other comprehensive income (loss)[1]	Changes of the unrealized gains/losses in other comprehensive income (loss)	Reclassifications from other comprehensive income (loss)[1]	Affected line item in the consolidated statement of income/consolidated statement of financial position
Interest rate contracts	–	23			Interest income/expense
Foreign exchange contracts	6	-9	-7	2	
thereof		–		–	Sales
		-8		2	Cost of sales
		-1		–	General and administrative expenses
		–		–	Other operating income/expenses
		0		–	Interest income/expense
		–		–	Inventories
Derivatives in cash flow hedging relationships	**6**	**14**	**-7**	**2**	

[1] In the consolidated statement of income, no gains or losses from ineffectiveness and only immaterial gains/losses from a hedged underlying transaction, that is no longer expected to occur, are recognized. Gains are shown with a negative sign and losses with a positive sign.

Both, the fair value of the spot element and the forward points are recorded within other comprehensive income (loss).

The effective portion of changes in fair value of the spot element of the hedging instruments is accumulated in a cash flow hedge reserve as a separate component within other comprehensive income (loss). The forward points of the foreign exchange forward contract is separately accounted for as cost of hedging reserve within other comprehensive income (loss).

For all cash flow hedges, except for foreign currency risk associated with forecasted purchases of non-financial assets, the amounts accumulated in the cash flow hedge reserve are reclassified to profit or loss as a reclassification adjustment in the same period as the hedged forecasted cash flows affect profit or loss. For cash flow hedges of foreign currency risk associated with forecasted purchases of non-financial assets, the amounts accumulated in the cash flow hedge reserve are instead included directly in the initial cost of the asset when it is recognized. The same approach applies to the amounts accumulated in the costs of hedging reserve.

EFFECT OF DERIVATIVES ON THE CONSOLIDATED STATEMENT OF INCOME

€ in millions	Gain or loss recognized in the consolidated statement of income 2019	2018	Affected line item in the consolidated statement of income
Interest rate contracts	**–**	–	Interest income/expense
Foreign exchange contracts	**-18**	41	Other operating income/expense
Foreign exchange contracts	**3**	–	Interest income/expense
Derivatives embedded in the convertible bonds	**3**	257	Interest income/expense
Call options to secure the convertible bonds	**-3**	-257	Interest income/expense
Derivatives not designated as hedging instruments	**-15**	41	

Losses from foreign exchange contracts not designated as hedging instruments recognized in the consolidated statement of income are faced by gains from the underlying transactions in the corresponding amount.

MARKET RISK

The Fresenius Group is exposed to effects related to foreign exchange fluctuations in connection with its international business activities that are denominated in various currencies. In order to finance its business operations, the Fresenius Group issues bonds and commercial papers and enters into mainly long-term credit agreements and Schuldschein Loans with banks. Due to these financing activities, the Fresenius Group is exposed to interest risk caused by changes in variable interest rates and the risk of changes in the fair value of statement of financial position items bearing fixed interest rates.

In order to manage the risk of interest rate and foreign exchange rate fluctuations, the Fresenius Group enters into certain hedging transactions with highly rated financial institutions as authorized by the Management Board. Derivative financial instruments are not entered into for trading purposes.

The Fresenius Group makes sure that hedge accounting relationships are aligned with its Group risk management objectives and strategy and that a qualitative and forward-looking approach is used for assessing hedge effectiveness.

In general, the Fresenius Group conducts its derivative financial instrument activities under the control of a single centralized department. The Fresenius Group has established guidelines derived from best practice standards in the banking industry for risk assessment procedures and supervision concerning the use of financial derivatives. These guidelines require amongst other things a clear segregation of duties in the areas of execution, administration, accounting and controlling. Risk limits are continuously monitored and, where appropriate, the use of hedging instruments is adjusted to that extent.

The Fresenius Group defines benchmarks for individual exposures in order to quantify interest and foreign exchange risks. The benchmarks are derived from achievable and sustainable market rates. Depending on the individual benchmarks, hedging strategies are determined and generally implemented by means of micro hedges.

The Fresenius Group makes sure there is an economic relationship between the hedged item and the hedging instrument and ensures reasonable hedge ratios of the designated hedged items with interest and currency risks. This is achieved by matching to a large extent the critical terms of the interest and foreign exchange derivatives with the critical terms of the underlying exposures. Therefore, the earnings of the Fresenius Group were not materially affected by hedge ineffectiveness in the reporting period. In principle, sources of inefficiency are risk of credit default and time lags of underlying exposures.

Foreign exchange risk management

The Fresenius Group has determined the euro as its financial reporting currency. Therefore, foreign exchange translation risks resulting from the fluctuation of exchange rates between the euro and the local currencies, in which the financial statements of the foreign subsidiaries are prepared, have an impact on results of operations and financial positions reported in the consolidated financial statements.

Besides translation risks, foreign exchange transaction risks exist. These mainly relate to transactions denominated in foreign currencies, such as purchases and sales, projects and services as well as intragroup sales of products to other Fresenius Group entities in different currency areas. Therefore, the subsidiaries are affected by changes of foreign exchange rates between the invoicing currencies and the local currencies in which they conduct their businesses. Solely for the purpose of hedging existing and foreseeable foreign exchange transaction exposures, the Fresenius Group enters into foreign exchange forward contracts and, on a small scale, foreign exchange options. To ensure that no foreign exchange risks result from loans in foreign currencies, the Fresenius Group enters into foreign exchange swap contracts. The Fresenius Group solely designates the spot element of the foreign exchange forward contract as hedging instrument in cash flow hedges and uses a hedge ratio for designated risks of 1 : 1. The fair value of foreign exchange contracts designated as cash flow hedges used to hedge operating transaction risks was -€3 million and in relation with loans in foreign currencies -€3 million.

As of December 31, 2019, the notional amounts of foreign exchange contracts totaled €2,147 million. Thereof €2,144 million were due in less than 12 months. As of December 31, 2019, the Fresenius Group was party to foreign exchange contracts with a maximum maturity of 14 months. The Fresenius Group uses a Cash-Flow-at-Risk (CFaR) model in order to estimate and quantify such transaction risks from foreign currencies. The basis for the analysis of the currency risks are the foreign currency cash flows that are reasonably expected to arise within the following 12 months, less any hedges. Under the CFaR approach, the potential currency fluctuations of these net exposures are shown as probability distributions based on historical volatilities and correlations of the preceding 250 business days. The calculation is made assuming a confidence level of 95% and a holding period of up to one year. The aggregation of currency risks has risk-mitigating effects due to correlations between the transactions concerned, i. e. the overall portfolio's risk exposure is generally less than the sum total of the underlying individual risks. As of December 31, 2019, the Fresenius Group's cash flow at risk amounted to €59 million based on a net exposure of €2,255 million. This means, with a probability of 95%, a potential loss in relation to the forecasted foreign exchange cash flows of the next 12 months will be not higher than €59 million.

The following table shows the average hedging rates and nominal amounts of foreign exchange contracts for material currency pairs at December 31, 2019.

	Nominal amount in € millions	Average hedging rate
Euro/U.S. dollar	845	1.1377
Euro/Swedish krona	226	10.6396
Euro/Australian dollar	189	1.6270

Interest rate risk management

Fresenius Group's interest rate risks mainly arise from money market and capital market transactions of the Group for financing its business activities.

The Fresenius Group enters into interest rate swaps and, on a small scale, into interest rate options in order to protect against the risk of rising interest rates. These interest rate derivatives are mainly designated as cash flow hedges and have been entered into in order to convert payments based on variable interest rates into payments at a fixed interest rate and in anticipation of future long-term debt issuances (pre-hedges). As of December 31, 2019, euro denominated interest rate swaps had a notional volume of €2 million. Thereof €0.2 million were due in less than 12 months. The fair value was -€95 thousand. The euro interest rate swaps expire in the years 2020 to 2022. They bear an average interest rate of 3.68%. Furthermore, the Fresenius Group had U.S. dollar denominated interest rate swaps in the amount of US$200 million (€178 million) with a fair value of US$1 million (€1 million). They expire in 2021 and bear an average interest rate of 1.22%.

The pre-hedges are used to hedge interest rate exposures with regard to interest rates which are relevant for the future long-term debt issuance and which could rise until the respective debt is actually issued. These pre-hedges are settled at the issuance date of the corresponding long-term debt with the settlement amount recorded in accumulated other comprehensive income (loss) amortized to interest expense over the life of the debt. At December 31, 2019 and December 31, 2018, the Fresenius Group had a loss of €11 million and €3 million, respectively, related to such settlements of pre-hedges deferred in accumulated other comprehensive income (loss), net of tax.

Interest payables and interest receivables in connection with the swap agreements are accrued and recorded as an adjustment to the interest expense at each reporting date. Concerning interest rate contracts, unscheduled repayments or the renegotiation of hedged items may in some cases lead to the de-designation of the hedging instrument, which existed up to that point. From that date, the respective hedging transactions are recognized in the consolidated statement of income.

For purposes of analyzing the impact of changes in the relevant reference interest rates on Fresenius Group's results of operations, the Group calculates the portion of financial debt which bears variable interest rates and which has not been hedged by means of interest rate swaps or options against rising interest rates. For this particular part of its liabilities, the Fresenius Group assumes an increase in the reference rates of 0.5% compared to the actual rates as of the date of the statement of financial position. The corresponding additional annual interest expense is then compared to the net income attributable to shareholders of Fresenius SE & Co. KGaA. This analysis shows that an increase of 0.5% in the relevant reference rates would have an effect of approximately 1.2% on the consolidated net income attributable to shareholders of Fresenius SE & Co. KGaA and an effect of less than 1.0% on Fresenius SE & Co. KGaA shareholders' equity.

CREDIT RISK

The Fresenius Group is exposed to potential losses regarding financial instruments in the event of non-performance by counterparties. With respect to derivative financial instruments, it is not expected that any counterparty fails to meet its obligations as the counterparties are highly rated financial institutions. The maximum credit exposure of derivatives is represented by the fair value of those contracts with a positive fair value amounting to €11 million for foreign exchange derivatives. The maximum credit exposure from interest rate derivatives was €1 million. The maximum credit risk resulting from the use of non-derivative financial instruments is defined as the total amount of all receivables. In order to control this credit risk, the Management of the Fresenius Group performs an aging analysis of trade accounts receivable. For details on trade accounts receivable and on the allowance for doubtful accounts, please see note 15, Trade accounts and other receivables.

LIQUIDITY RISK

The liquidity risk is defined as the risk that a company is potentially unable to meet its financial obligations. The Management of the Fresenius Group manages the liquidity of the Group by means of effective working capital and cash management as well as an anticipatory evaluation of refinancing alternatives. The Management of the Fresenius Group believes that existing credit facilities as well as the cash generated by operating activities and additional short-term borrowings are sufficient to meet the company's foreseeable demand for liquidity (see note 22, Debt).

The following table shows the future undiscounted contractual cash flows (including interests) resulting from recognized financial liabilities and derivative financial instruments:

€ in millions	up to 1 year	1 to 3 years	3 to 5 years	more than 5 years
Long-term debt (including accounts receivable securitization program)[1]	1,149	4,542	983	649
Short-term debt	2,485	0	0	0
Lease liabilities	982	1,802	1,359	3,740
Bonds	1,243	3,317	2,688	4,612
Convertible bonds	402	0	500	0
Trade accounts payable	1,905	0	0	0
Other financial liabilities	3,166	9	1	8
Contingent payments outstanding for acquisitions	77	95	281	187
Noncontrolling interest subject to put provisions	603	130	137	123
Derivative financial instruments – designated as cash flow hedge	9	–	0	0
Derivative financial instruments – not designated as hedging instruments	14	–	2	0
Total	**12,035**	**9,895**	**5,951**	**9,319**

[1] Future interest payments for financial liabilities with variable interest rates were calculated using the latest interest rates fixed prior to December 31, 2019.

32. SUPPLEMENTARY INFORMATION ON CAPITAL MANAGEMENT

The Fresenius Group has a solid financial profile. Capital management includes both equity and debt. A principal objective of Fresenius Group's capital management is to optimize the weighted-average cost of capital. Further, it is sought to achieve a balanced mix of equity and debt. To secure growth on a long-term basis, a capital increase may also be considered in exceptional cases, for instance to finance a major acquisition.

Due to the company's diversification within the health care sector and the strong market positions of the business segments in global, growing and non-cyclical markets, predictable and sustainable cash flows are generated. They allow a reasonable proportion of debt, i. e. the employment of an extensive mix of financial instruments. Moreover, Fresenius Group's customers are generally of high credit quality.

Shareholders' equity and debt have developed as follows:

SHAREHOLDERS' EQUITY

€ in millions	Dec. 31, 2019	Dec. 31, 2018
Shareholders' equity	**26,580**	25,008
Total assets	**67,006**	56,703
Equity ratio	**39.7 %**	44.1%

Fresenius SE & Co. KGaA is not subject to any capital requirements provided for in its articles of association. Fresenius SE & Co. KGaA has obligations to issue shares out of the Conditional Capital relating to the exercise of stock options on the basis of the existing 2008 and 2013 stock option plans (see note 35, Share-based compensation plans).

DEBT

€ in millions	Dec. 31, 2019	Dec. 31, 2018
Debt	**27,258**	18,984
Total assets	**67,006**	56,703
Debt ratio	**40.7 %**	33.5%

The increase in debt and total assets is mainly due to the initial application of IFRS 16, Leases.

Assuring financial flexibility is the top priority in the Group's financing strategy. This flexibility is achieved through a wide range of financing instruments and a high degree of diversification of the investors. Fresenius Group's maturity profile displays a broad spread of maturities with a high proportion of medium- and long-term financing. In the choice of financing instruments, market capacity, investor diversification, flexibility, credit conditions and the existing maturity profile are taken into account.

The leverage ratio on the basis of net debt/EBITDA is a key financial figure for the Fresenius Group. As of December 31, 2019, the leverage ratio before special items and including IFRS 16 was 3.6 (excluding IFRS 16: 3.1).

Fresenius Group's financing strategy is reflected in its credit ratings. The Fresenius Group is covered by the rating agencies Moody's, Standard & Poor's and Fitch.

The following table shows the company rating of Fresenius SE & Co. KGaA:

RATING OF FRESENIUS SE & CO. KGAA

	Dec. 31, 2019	Dec. 31, 2018
Standard & Poor's		
Corporate Credit Rating	**BBB**	BBB-
Outlook	**stable**	positive
Moody's		
Corporate Credit Rating	**Baa3**	Baa3
Outlook	**stable**	stable
Fitch		
Corporate Credit Rating	**BBB-**	BBB-
Outlook	**stable**	stable

On May 23, 2019, Standard & Poor's has upgraded Fresenius' corporate credit rating to BBB with a stable outlook from BBB- with a positive outlook.

33. SUPPLEMENTARY INFORMATION ON THE CONSOLIDATED STATEMENT OF CASH FLOWS

The consolidated statements of cash flows of the Fresenius Group for the fiscal years 2019 and 2018 are shown on pages 168 and 169.

Cash funds reported in the consolidated statement of cash flows and in the consolidated statement of financial position are comprised of cash on hand, checks, securities and cash at bank which are readily convertible within three months and are subject to insignificant risk of changes in value.

In 2019, Fresenius Helios has used subsidies for investments in property, plant and equipment in the amount of €115 million (2018: €133 million), that were offset in purchase of property, plant and equipment in the consolidated statement of cash flows.

Cash paid for acquisitions (without investments in licenses) consisted of the following:

€ in millions	2019	2018
Assets acquired	**3,093**	513
Liabilities assumed	**-306**	-39
Noncontrolling interest	**-138**	-57
Notes assumed in connection with acquisitions	**-139**	-17
Cash paid	**2,510**	400
Cash acquired	**-99**	-5
Cash paid for acquisitions, net	**2,411**	395
Cash paid for investments, net of cash acquired	**35**	590
Cash paid for intangible assets, net	**38**	85
Total cash paid for acquisitions and investments, net of cash acquired, and net purchases of intangible assets	**2,484**	1,070

In 2019, €11 million of cash paid for investments, net of cash acquired, related to investments in securities in the business segment Fresenius Medical Care.

Proceeds from the sale of subsidiaries were €45 million in 2019 (2018: €1,533 million).

The following table shows a reconciliation of debt to cash flow from financing activities in 2019 and 2018:

€ in millions	Dec. 31, 2018	Effect due to the initial application of IFRS 16	Jan. 1, 2019	cash-effective changes	non-cash-effective changes					Dec. 31, 2019
				Cash flow	Assumed as part of acquisitions	Foreign currency translation	Deprecia-tion on financing costs	New lease contracts	Other	
Short-term debt	2,354	0	2,354	93	16	1	0	0	11	**2,475**
Long-term debt, less accounts receivable securitization program	6,297	-219	6,078	475	93	65	7	0	-89	**6,629**
Lease liabilities	0	6,193	6,193	-837	34	90	0	948	11	**6,439**
Bonds	8,990	0	8,990	1,407	0	47	10	0	13	**10,467**
Convertible bonds	1,343	0	1,343	-500	0	0	22	0	0	**865**
Accounts receivable securitization program	0	0	0	381	0	-2	1	0	0	**380**

€ in millions	Jan. 1, 2018	cash-effective changes	non-cash-effective changes					Dec. 31, 2018
		Cash flow	Assumed as part of acquisitions	Foreign currency translation	Depreciation on financing costs	New lease contracts	Other	
Short-term debt	1,550	762	4	-3	0	0	41	**2,354**
Long-term debt and capital lease obligations, less accounts receivable securitization program	6,811	-651	6	111	10	9	1	**6,297**
Bonds	9,069	-245	0	145	12	0	9	**8,990**
Convertible bonds	1,318	0	0	0	25	0	0	**1,343**
Accounts receivable securitization program	294	-299	0	5	0	0	0	**0**

34. NOTES ON THE CONSOLIDATED SEGMENT REPORTING

GENERAL

The consolidated segment reporting tables shown on pages 172 to 174 of this Annual Report are an integral part of the notes.

The Fresenius Group has identified the business segments Fresenius Medical Care, Fresenius Kabi, Fresenius Helios and Fresenius Vamed, which corresponds to the internal organizational and reporting structures (Management Approach) at December 31, 2019.

The key data disclosed in conjunction with the consolidated segment reporting correspond to the key data of the internal reporting system of the Fresenius Group. Internal and external reporting and accounting correspond to each other; the same key data and definitions are used.

Due to the initial application of IFRS 16, the segment reporting for 2019 is shown including and excluding IFRS 16.

Sales and proceeds between the segments are indicative of the actual sales and proceeds agreed with third parties. Administrative services are billed in accordance with service level agreements.

The business segments were identified in accordance with IFRS 8, Operating Segments, which defines the segment reporting requirements in the annual financial statements and interim reports with regard to the operating business, product and service businesses and regions.

The business segments of the Fresenius Group are as follows:

- Fresenius Medical Care
- Fresenius Kabi
- Fresenius Helios
- Fresenius Vamed
- Corporate/Other

The segment Corporate/Other is mainly comprised of the holding functions of Fresenius SE & Co. KGaA as well as Fresenius Netcare GmbH, which provides services in the field of information technology. In addition, the segment Corporate/Other includes intersegment consolidation adjustments as well as special items (see note 3, Special items).

Details on the business segments are shown on page 176 of the notes.

Segment reporting by region takes account of geographical factors and the similarity of markets in terms of opportunities and risks. The allocation to a particular region is based on the domicile of the customers.

NOTES ON THE BUSINESS SEGMENTS

The key figures used by the Management Board to assess segment performance, have been selected in such a way that they include all items of income and expenses which fall under the area of responsibility of the business segments. The Management Board is convinced that the most suitable performance indicator is the operating income (EBIT). The Management Board believes that, in addition to the operating income, the figure for earnings before interest, taxes and depreciation/amortization (EBITDA) can also help investors to assess the ability of the Fresenius Group to generate cash flows and to meet its financial obligations. The EBITDA figure is also the basis for assessing Fresenius Group's compliance with the terms of its credit agreements (e.g. the Fresenius Medical Care Credit Agreement or the Fresenius Credit Agreement).

Depreciation and amortization is presented for property, plant and equipment and intangible assets with definite useful lives of the respective business segment.

Net interest is comprised of interest expenses and interest income.

Net income attributable to shareholders of Fresenius SE & Co. KGaA is defined as earnings after income taxes and noncontrolling interest.

The operating cash flow is the cash provided by/used in operating activities.

The cash flow before acquisitions and dividends is the operating cash flow less net capital expenditure.

Debt is comprised of bank loans, bonds, convertible bonds, lease liabilities, liabilities relating to outstanding acquisitions as well as intercompany liabilities.

Capital expenditure mainly includes additions to property, plant and equipment.

Acquisitions refer to the purchase of shares in legally independent companies and the acquisition of business divisions and intangible assets (e.g. licenses). The key figures shown with regard to acquisitions present the contractual purchase prices comprising amounts paid in cash (less cash acquired), debts assumed and the issuance of shares, whereas for the purposes of the statement of cash flows, only cash purchase price components less acquired cash and cash equivalents are reported.

The EBITDA margin is calculated as a ratio of EBITDA to sales.

The EBIT margin is calculated as a ratio of EBIT to sales.

The return on operating assets (ROOA) is defined as the ratio of EBIT to average operating assets. Operating assets are defined as total assets less deferred tax assets, trade accounts payable and advance payments from customers as well as guaranteed subsidies.

In addition, the key indicators "Depreciation and amortization in % of sales" and "Operating cash flow in % of sales" are also disclosed.

RECONCILIATION OF KEY FIGURES TO CONSOLIDATED EARNINGS

€ in millions	2019	2018
Total EBIT of reporting segments	4,720	4,607
Special items	-57	690
General corporate expenses Corporate/Other (EBIT)	-32	-46
Group EBIT	4,631	5,251
Interest expenses	-881	-942
Interest income	162	355
Income before income taxes	3,912	4,664

RECONCILIATION OF NET DEBT WITH THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

€ in millions	Dec. 31, 2019	Dec. 31, 2018
Short-term debt	2,475	2,354
Short-term debt from related parties	3	–
Current portion of long-term debt	892	353
Current portion of long-term lease liabilities	793	0
Current portion of bonds	945	1,744
Current portion of convertible bonds	400	493
Long-term debt, less current portion	6,117	5,944
Long-term lease liabilities, less current portion	5,646	0
Bonds, less current portion	9,522	7,246
Convertible bonds, less current portion	465	850
Debt	**27,258**	18,984
less cash and cash equivalents	1,654	2,709
Net debt	**25,604**	16,275

Net debt excluding lease liabilities amounted to €19,165 million at December 31, 2019.

The following table shows the non-current assets by geographical region:

€ in millions	Dec. 31, 2019	Dec. 31, 2018
Germany	9,973	9,212
Spain	6,942	6,225
Europe (excluding Germany and Spain)	3,995	2,914
North America	25,347	19,033
Asia-Pacific	2,511	1,951
Latin America	924	701
Africa	78	48
Total non-current assets[1]	**49,770**	40,084

[1] The aggregate amount of net non-current assets is the sum of non-current assets less deferred tax assets and less other non-current financial assets.

In 2019, the Fresenius Group generated sales of €7,647 million (2018: €7,359 million) in Germany. Sales in the United States were €14,241 million at actual rates (2018: €13,652 million) and €13,500 million in constant currency in 2019.

In 2019, the segment Fresenius Medical Care generated other sales in the amount of €374 million, Fresenius Kabi €5 million, Fresenius Helios €13 million and Fresenius Vamed €6 million. All other sales are sales from contracts with customers.

35. SHARE-BASED COMPENSATION PLANS

COMPENSATION COST IN CONNECTION WITH THE SHARE-BASED COMPENSATION PLANS OF THE FRESENIUS GROUP

In 2019, the Fresenius Group recognized compensation cost in an amount of €21 million for stock options granted since 2015. For stock incentive plans which are performance-based, the Fresenius Group recognizes compensation cost over the vesting periods, based on the market values of the underlying stock at the grant date.

The expenses related to cash-settled share-based payment transactions are determined based upon the fair value at measurement date and the number of phantom stocks or performance shares granted which will be recognized over the vesting period. In 2019, the Fresenius Group recognized expenses of €57 million in connection with cash-settled share-based payment transactions.

FAIR VALUE OF STOCK OPTIONS

The Fresenius Group uses a binomial option pricing model in determining the fair value of stock options granted under the stock option plans of Fresenius SE & Co. KGaA and Fresenius Medical Care AG & Co. KGaA. Option valuation models require the input of highly subjective assumptions including expected stock price volatility. Fresenius Group's assumptions are based upon its past experiences, market trends and the experiences of other entities of the same size and in similar industries. To incorporate the effects of expected early exercise in the model, an early exercise of vested options was assumed as soon as the share price exceeds 150% of the exercise price. Fresenius Group's stock options have characteristics that vary significantly from traded options and changes in subjective assumptions can materially affect the fair value of the option.

The expected volatility results from the historical volatility calculated over the expected life of options. The volatility was determined when the fair value of stock options was calculated for the first time and since then has been controlled every year upon issuance of a new tranche.

SHARE-BASED COMPENSATION PLANS OF FRESENIUS SE & CO. KGAA

Description of the Fresenius SE & Co. KGaA share-based compensation plans in place

As of December 31, 2019, Fresenius SE & Co. KGaA had two share-based compensation plans in place: the Fresenius SE & Co. KGaA Long Term Incentive Program 2013 (2013 LTIP) which is based on stock options and phantom stocks and the Long Term Incentive Plan 2018 (LTIP 2018) which is solely based on performance shares. Currently, solely LTIP 2018 can be used to grant performance shares.

LTIP 2018

On April 12, 2018 and March 15, 2018, respectively, the Management Board and Supervisory Board of the general partner, Fresenius Management SE, resolved the Long Term Incentive Plan 2018 (LTIP 2018).

The LTIP 2018 is based solely on virtual stocks (performance shares). The performance shares issued through the plan are non-equity-backed, virtual compensation instruments. When performance targets are reached and other prerequisites are met, they guarantee the entitlement to a cash payment by Fresenius SE & Co. KGaA or one of its affiliated companies.

The new plan is available both for members of the Management Board (with the exception of Mr. Rice Powell, who receives his compensation from Fresenius Medical Care Management AG) and other executives. Performance shares may be granted once annually over a period of five years. The grant to the members of the Management Board is made by the Supervisory Board of the general partner, Fresenius Management SE, the grant to the other executives is made by the Management Board of Fresenius Management SE, in each case on the basis of a grant value determined at its discretion. The grant value is determined in consideration of the personal performance and the responsibilities of the concerned plan participant. The number of performance shares granted is calculated through applying the grant value and the average stock market price of the Fresenius share over the period of 60 stock exchange trading days prior to the grant date.

The number of performance shares may change over a period of four years, depending on the level of achievement of the performance targets described in more detail below. This could entail the entire loss of all performance shares or also – at maximum – the doubling of their number. The resulting number of performance shares, which is determined after a performance period of four years and based on the respective level of target achievement, is deemed finally earned four years after the date of the respective grant. The number of vested performance shares is then multiplied by the average stock exchange price of Fresenius SE & Co. KGaA's share over a period of 60 stock exchange trading days prior to the lapse of this vesting period plus the total of the dividends per share of Fresenius SE & Co. KGaA paid by Fresenius SE & Co. KGaA between the grant date and the vesting date. The resulting amount will be paid to the respective plan participant in cash. The potential disbursement entitlement of each member of the Management Board is limited to a maximum value of 250% of the grant value, the entitlement of all other plan participants is limited to a maximum value of 400%.

The LTIP 2018 has two equally weighted performance targets: firstly, the growth rate of the adjusted consolidated net income (adjusted for currency effects) and, secondly, the relative Total Shareholder Return based on the STOXX Europe 600 Health Care Index. Disbursement entitlement requires that at least one of the two performance targets must be reached or surpassed over the four-year performance period.

For the performance target "Net Income Growth Rate" a level of target achievement of 100% is reached when the same is at least 8% over the four-year performance period. If the growth rate falls below or corresponds to only 5%, the level of target achievement is 0%. If the growth rate is between 5% and 8%, the level of target achievement is between 0% and 100%, while, where the growth rate is between 8% and 20%, the level of target achievement will be between 100% and 200%. Intermediate values are calculated through linear interpolation. The net income is the consolidated net income attributable to shareholders of Fresenius SE & Co. KGaA reported in the consolidated financial statements of Fresenius SE & Co. KGaA prepared in accordance with IFRS, adjusted for extraordinary effects.

The determination of the adjusted net income (adjusted for currency effects) and the change in comparison with the adjusted net income (not adjusted for currency effects) of the previous Fresenius Group fiscal year will be verified in a binding manner by the auditors of Fresenius SE & Co. KGaA on the basis of the audited consolidated financial statements. For the ascertainment of the currency translation effects, all line items of the income statements of the companies that are included in the consolidated financial statements and which have a functional currency other than the reporting currency (Euro) of the Fresenius Group are translated with the average exchange rates of the Fresenius Group fiscal year of the consolidated financial statements that are the basis for the comparison.

For the "Total Shareholder Return" performance target, a target achievement of 100% is met when the Total Shareholder Return of Fresenius SE & Co. KGaA in comparison with the Total Shareholder Return of the other companies of the STOXX Europe 600 Health Care Index achieves an average ranking within the benchmark companies, i.e. exactly in the middle (50^{th} percentile), over the four-year performance period. If the ranking corresponds to the 25^{th} percentile or less, the level of target achievement is 0%. Where the ranking is between the 25^{th} percentile and the 50^{th} percentile, the level of target achievement is between 0% and 100%; and, for a ranking between the 50^{th} percentile and the 75^{th} percentile, between 100% and 200%. Intermediate values will also be calculated through linear interpolation. Total Shareholder Return denotes the percentage change in the stock market price within the performance period including re-invested dividends and all capital measures, whereby capital measures are to be calculated through rounding down to the fourth decimal place.

The ranking values are determined using the composition of STOXX Europe 600 Health Care on the grant date. For equalization purposes, the relevant market price is the average market price in the period of 60 stock exchange trading days prior to the beginning and end of a performance period; the relevant currency is that of the main stock exchange of a company, which was listed in STOXX Europe 600 Health Care on the grant date.

A level of target achievement in excess of 200% is not possible for both performance targets.

To calculate the level of overall target achievement, the level of target achievement of the two performance targets are given equal weighting. The total number of performance shares vested on each plan participant is calculated through multiplying the number of performance shares granted by the overall target achievement.

In the event of violation of compliance rules, the Supervisory Board of Fresenius Management SE, in due exercise of its discretion, is entitled to reduce the number of performance shares vested on a member of the Management Board to zero. Regarding all other plan participants, such decision is made by the Management Board of Fresenius Management SE. Furthermore, Fresenius SE & Co. KGaA is entitled to a complete or partial reimbursement in the event of violation of compliance rules in the period of three years following disbursement.

2013 LTIP

The 2013 LTIP is comprised of the Fresenius SE & Co. KGaA Stock Option Plan 2013 (2013 SOP) and the Fresenius SE & Co. KGaA Phantom Stock Plan 2013 (2013 PSP). It combines the granting of stock options with the granting of phantom stock awards which entitle the holder to receive cash payments upon exercising the phantom stock. Each of the 2013 SOP and 2013 PSP making up the 2013 LTIP have been established under a stand-alone legal documentation.

2013 SOP

Under the 2013 SOP, which was approved by the Annual General Meeting of Fresenius SE & Co. KGaA on May 17, 2013, Fresenius Management SE was originally authorized to issue up to 8.4 million subscription rights for an amount of 8.4 million non-par value ordinary bearer shares of Fresenius SE & Co. KGaA until May 16, 2018.

Of the up to 8.4 million options, up to 1.6 million options were designated for members of the Management Board of Fresenius Management SE; up to 4.4 million options were designated for members of the management of directly or indirectly affiliated companies (except for Fresenius Medical Care) and up to 2.4 million options were designated for executive employees of Fresenius SE & Co. KGaA and its affiliated companies (except for Fresenius Medical Care).

In connection with the stock split in 2014, the total volume of not yet granted subscription rights increased in the same proportion as the subscribed capital (factor 3) as far as options had not yet been granted under the 2013 SOP. The same applies to the subsets of the subscription rights that are attributable to individual groups of participants. For stock options that were granted before the stock split 2014 came into effect, the entitlement of the participants to receive new shares through the exercise of stock options increased in the same proportion as the subscribed capital (factor 3). The participants are now entitled to receive three bearer ordinary shares of Fresenius SE & Co. KGaA. The exercise price was reduced proportionally.

The granting of the options occurred in five annual tranches, each to the last Monday in July or the first Monday in December. With respect to new options, the Supervisory Board of Fresenius Management SE determined the stock options granted to members of Fresenius Management SE's Management Board, whereas the Management Board of Fresenius Management SE determined the other participants in the 2013 SOP and the stock options granted to them.

The exercise price of an option equals the volume-weighted average stock market price (closing price) of the non-par value ordinary bearer share of Fresenius SE & Co. KGaA in the electronic Xetra trading of Deutsche Börse AG in Frankfurt am Main, or a comparable successor system, on the last 30 calendar days prior to the respective grant date.

Options granted have an eight-year term but can be exercised only after a four-year vesting period. The exercise of options is subject to the condition precedent, in each case, that the annual success target within a four-year waiting period is achieved. The success target is achieved in each case if, after the granting of the options to the respective entitled person, either (i) the consolidated net income attributable to shareholders of Fresenius SE & Co. KGaA according to IFRS, adjusted for extraordinary effects and on a constant currency basis, has increased by at least 8% per annum in comparison to the previous year in each case within the waiting period, or (ii) – if this is not the case – the compounded annual growth rate of the consolidated net income attributable to shareholders of Fresenius SE & Co. KGaA according to IFRS, adjusted for extraordinary effects and on a constant currency basis, during the four years of the waiting period amounts to at least 8%. In the event that the success target within the four-year waiting period is not achieved for the individual years or for the compounded annual growth rate, the options issued in each case are forfeited in proportion to the non-achievement of the success target within the waiting period, i. e. by one quarter, two quarters, three quarters, or completely. The performance targets for the years 2013 to 2019 were met.

The adjusted net income attributable to shareholders of Fresenius SE & Co. KGaA according to IFRS (currency adjusted) and changes thereto compared to the adjusted net income according to IFRS (without currency adjustment) of the relevant comparison year shall be verified with binding effect in each case by the auditors of Fresenius SE & Co. KGaA on the basis of the audited consolidated financial statements. Upon exercise of vested options, Fresenius SE & Co. KGaA has the right to grant treasury shares in lieu of increasing capital by the issuance of new shares.

After the expiration of the waiting period, all options in respect of which the success target has been achieved may be exercised at any time outside the designated blackout periods.

The last options were granted in 2017.

2013 PSP

Fresenius SE & Co. KGaA's 2013 PSP was established in May 2013, together with the 2013 SOP in line with the 2013 LTIP. Awards of phantom stock can be granted on each stock option grant date. Phantom stock awarded under the 2013 PSP may be granted to the members of Fresenius Management SE's Management Board, the members of the management of directly or indirectly affiliated companies (except for Fresenius Medical Care) and to executive employees of Fresenius SE & Co. KGaA and its affiliated companies (except for Fresenius Medical Care).

The holders of phantom stocks, that had been issued before the stock split 2014 came into effect, were granted an economic compensation through retroactively tripling the number of phantom stocks granted before the stock split 2014 came into effect.

As under the 2013 SOP, the Supervisory Board of Fresenius Management SE determined the phantom stocks granted to members of Fresenius Management SE's Management Board, whereas the Management Board of Fresenius Management SE determined the other participants in the 2013 PSP and the phantom stocks granted to them.

Phantom stock awards under the 2013 PSP entitle the holder to receive a cash payment. Each phantom stock award shall entitle the holder to receive the volume-weighted average stock market price (closing price) of the non-par value ordinary bearer share of Fresenius SE & Co. KGaA in the electronic Xetra trading of Deutsche Börse AG in Frankfurt am Main, or a comparable successor system, during the last three months prior to the date the phantom stock is exercised.

The exercise of phantom stock is subject to the condition precedent, in each case, that the annual success target within a four-year waiting period is achieved. The success target is achieved in each case if, after the granting of the subscription rights to the respective entitled person, either (i) the consolidated net income attributable to shareholders of Fresenius SE & Co. KGaA according to IFRS, adjusted for extraordinary effects and on a constant currency basis, has increased by at least 8% per annum in comparison to the previous year in each case within the waiting period, or (ii) – if this is not the case – the compounded annual growth rate of the consolidated net income attributable to shareholders of Fresenius SE & Co. KGaA according to IFRS, adjusted for extraordinary effects and on a constant currency basis, during the four years of the waiting period amounts to at least 8%. In the event that the success target within the four-year waiting period is not achieved for the individual years or for the compounded annual growth rate, the phantom stock awards issued in each case are forfeited in proportion to the non-achievement of the success target within the waiting-period, i.e. by one quarter, two quarters, three quarters, or completely. The performance targets for the years 2013 to 2019 were met.

The adjusted net income attributable to shareholders of Fresenius SE & Co. KGaA according to IFRS (currency adjusted) and changes thereto compared to the adjusted net income according to IFRS (without currency adjustment) of the relevant comparison year shall be verified with binding effect in each case by the auditors of Fresenius SE & Co. KGaA on the basis of the audited consolidated financial statements.

After the expiration of the waiting period, all exercisable phantom stock will be deemed to be exercised and cashed out on March 1 following the end of the waiting period (or the following banking day).

The last phantom stocks were granted in 2017.

Stock Option Plan 2008

During 2008, Fresenius SE adopted the 2008 Plan to grant subscription rights to members of the Management Board and executive employees of the company and affiliated companies. Under the 2008 Plan, originally, up to 6.2 million options could be issued, which carried the entitlement to exclusively obtain 6.2 million ordinary shares.

For stock options that were granted before the stock split 2014 came into effect, the entitlement of the participants to receive new shares through the exercise of stock options increased in the same proportion as the subscribed capital (factor 3). The participants were then entitled to receive three bearer ordinary shares of Fresenius SE & Co. KGaA. The maximum number of ordinary shares to be issued increased accordingly. The exercise price was reduced proportionally.

The options granted had a seven-year term but could be exercised only after a three-year vesting period. The vesting of options granted was mandatorily subject to the condition, in each case, that the annual success target within the three-year vesting period was achieved. For each such year, the success target was achieved if the consolidated net income attributable to shareholders of Fresenius SE & Co. KGaA, adjusted for extraordinary effects, had increased by at least 8% compared to the respective adjusted net income attributable to shareholders of Fresenius SE & Co. KGaA of the previous fiscal year. The adjusted net income attributable to shareholders of Fresenius SE & Co. KGaA was calculated on the basis of the calculation method of the accounting principles according to U.S. GAAP. For the purposes of the 2008 Plan, the adjusted net income attributable to shareholders of Fresenius SE & Co. KGaA was determined and verified with binding effect by Fresenius SE & Co. KGaA's auditor during the audit of the consolidated financial statements. The performance targets were met in all years. If all conditions were fulfilled, stock options could be exercised throughout the year with the exception of certain pre-determined blackout periods.

This stock incentive plan was replaced by the 2013 SOP. The last options were granted in 2012. On December 2, 2019, the term of the options granted under the 2008 Plan expired.

Transactions during 2019

On September 9, 2019, Fresenius SE & Co. KGaA awarded 795,741 performance shares under the LTIP 2018, the total fair value at the grant date being €36 million, including 198,415 performance shares or €9 million awarded to the members of the Management Board of Fresenius Management SE. The fair value per performance share at the grant date was €45.36.

During the fiscal year 2019, Fresenius SE & Co. KGaA received cash of €33 million from the exercise of 1,154,825 stock options. The average stock price of the ordinary share at the exercise date was €48.23.

Out of 8,435,555 outstanding stock options issued under the 2013 LTIP, 4,245,296 were exercisable at December 31, 2019. The members of the Fresenius Management SE Management Board held 1,434,375 stock options. 631,021 phantom stocks issued under the 2013 LTIP were outstanding at December 31, 2019. The members of the Fresenius Management SE Management Board held 114,762 phantom stocks. At December 31, 2019, the Management Board members of Fresenius Management SE held 331,849 performance shares and employees of Fresenius SE & Co. KGaA held 993,600 performance shares under the LTIP 2018.

Stock option transactions are summarized as follows:

Ordinary shares Dec. 31	Number of options	Weighted-average exercise price in €	Number of options exercisable
Balance 2017	**11,763,149**	**52.02**	**3,186,239**
Exercised	1,514,681	29.12	
Forfeited	316,125	63.19	
Balance 2018	**9,932,343**	**55.15**	**3,534,981**
Exercised	1,154,825	28.47	
Forfeited	341,963	66.64	
Balance 2019	**8,435,555**	**58.34**	**4,245,296**

The following table provides a summary of fully vested options outstanding and exercisable for ordinary shares at December 31, 2019:

OPTIONS FOR ORDINARY SHARES

	Options outstanding			Options exercisable		
Range of exercise price in €	Number of options	Weighted-average remaining contractual life in years	Weighted-average exercise price in €	Number of options	Weighted-average remaining contractual life in years	Weighted-average exercise price in €
30.01 – 35.00	983,311	1.64	32.30	983,311	1.64	32.30
35.01 – 40.00	1,391,595	2.58	36.92	1,391,595	2.58	36.92
60.01 – 65.00	1,876,765	3.62	60.71	1,845,640	3.58	60.64
65.01 – 70.00	2,036,213	4.57	66.05	24,750	3.92	67.99
70.01 – 75.00	2,147,671	5.58	74.77	0		
	8,435,555	**3.95**	**58.34**	**4,245,296**	**2.81**	**46.34**

At December 31, 2019, the aggregate intrinsic value of exercisable options for ordinary shares was €16 million.

At December 31, 2019, total unrecognized compensation cost related to non-vested options granted under the 2013 LTIP was €15 million. This cost is expected to be recognized over a weighted-average period of 1.3 years.

SHARE-BASED COMPENSATION PLANS OF FRESENIUS MEDICAL CARE AG & CO. KGAA

As of December 31, 2019, Fresenius Medical Care AG & Co. KGaA (FMC-AG & Co. KGaA) has various share-based compensation plans, which may either be equity- or cash-settled.

Fresenius Medical Care AG & Co. KGaA long-term incentive plans during 2016 – 2019

As of May 11, 2016, the issuance of stock options and phantom stocks under the FMC-AG & Co. KGaA Long-Term Incentive Program 2011 (LTIP 2011) is no longer possible. Furthermore, as of January 1, 2019, the issuance of performance shares under the FMC-AG & Co. KGaA Long-Term Incentive Plan 2016 (LTIP 2016) is no longer possible. In order to continue to enable the members of the Management Board, the members of the management boards of affiliated companies and managerial staff members to adequately participate in the long-term, sustained success of Fresenius Medical Care, successor programs effective January 1, 2019 were introduced. For members of the Management Board, the Supervisory Board of Fresenius Medical Care Management AG (FMC Management AG) has approved and adopted the Fresenius Medical Care Management AG Management Board Long-Term Incentive Plan 2019 (MB LTIP 2019). For the members of the management boards of affiliated companies and managerial staff members, the Management Board of FMC Management AG has approved and adopted the FMC-AG & Co. KGaA Long-Term Incentive Plan 2019 (LTIP 2019).

The MB LTIP 2019, the LTIP 2019 and the LTIP 2016 are variable compensation programs with long-term incentive effects. Similar to the LTIP 2016, which granted so-called performance shares annually or semiannually from 2016 to 2018, pursuant to the MB LTIP 2019 and the LTIP 2019, plan participants may be granted performance shares once or twice during 2019 for the MB LTIP 2019 and throughout 2019 to 2021 for the LTIP 2019. Performance shares are non-equity, cash-settled virtual compensation instruments which may entitle plan participants to receive a cash payment depending on the achievement of pre-defined performance targets further defined below as well as FMC-AG & Co. KGaA's share price development.

For members of the Management Board, the Supervisory Board of FMC Management AG will, in due exercise of its discretion and taking into account the individual responsibility and performance of each Management Board member, determine an initial value for each grant for any awards to Management Board members. For plan participants other than the members of the Management Board, such determination will be made by the Management Board. The initial grant value is determined in the currency in which the respective participant receives his or her base salary at the time of the grant. In order to determine the number of performance shares each plan participant receives, the respective grant value will be divided by the value per performance share at the time of the grant, which is mainly determined based on the average price of FMC-AG & Co. KGaA's shares over a period of 30 calendar days prior to the respective grant date.

The number of granted performance shares may change over the performance period of three years, depending on the level of achievement of the following: (i) revenue growth at constant currency (revenue growth), (ii) growth of the net income attributable to the shareholders of FMC-AG & Co. KGaA at constant currency (net income growth) and (iii) return on invested capital (ROIC). For the LTIP 2019 exclusively, the level of achievement for performance shares granted in fiscal year 2019 may be subject to an increase if certain targets in relation to the second phase of FMC-AG & Co. KGaA's Global Efficiency Program are achieved (GEP-II targets).

Revenue, net income and ROIC are determined according to FMC-AG & Co. KGaA's consolidated reported and audited figures in Euro for the financial statements prepared in accordance with IFRS, applying the respective plan terms. Revenue growth, net income growth and the fulfillment of the GEP-II targets, for the purpose of the relevant plan, are determined at constant currency.

An annual target achievement level of 100% will be reached for the revenue growth performance target if revenue growth is 7% in each individual year of the three-year performance period; revenue growth of 0% will lead to a target achievement level of 0% and the maximum target achievement level of 200% will be reached in case of revenue growth of at least 16%. If revenue growth ranges between these values, the degree of target achievement will be linearly interpolated between these values.

An annual target achievement level of 100% for the net income growth performance target will be reached if net income growth is 7% in each individual year of the three-year performance period. In case of net income growth of 0%, the target achievement level will also be 0%; the maximum target achievement of 200% will be reached in the case of net income growth of at least 14%. Between these values, the degree of target achievement will be determined by means of linear interpolation.

With regard to ROIC, an annual target achievement level of 100% will be reached if the target ROIC as defined for the respective year is reached. For the MB LTIP 2019 and the LTIP 2019, the target ROIC is 7.9% for 2019 (LTIP 2016: 7.3% in 2016 and increased by 0.2 percentage points for each consecutive year until 2020). A target achievement level of 0% will be reached if the ROIC falls below the target ROIC for the respective year by 0.2 percentage points or more, whereas the maximum target achievement level of 200% will be reached if the target ROIC for the respective year is exceeded by 0.2 percentage points or more. The degree of target achievement will be determined by means of linear interpolation if the ROIC ranges between these values. In case the annual ROIC target achievement level in the third year of a performance period is equal or higher than the ROIC target achievement level in each of the two previous years of such performance period, the ROIC target achievement level of the third year is deemed to be achieved for all years of the respective performance period.

The achievement level for each of the three performance targets will be weighted annually at one-third to determine the yearly target achievement for each year of the three-year performance period. The level of overall target achievement over the three-year performance period will then be determined on the basis of the mean of these three average yearly target achievements. The overall target achievement can be in a range of 0% to 200%. For the LTIP 2019, the overall target achievement for performance shares granted in fiscal year 2019 shall be increased by 20 percentage points if the GEP-II targets achievement is 100%. In case of a GEP-II targets achievement between 0% and 100%, the respective increase of the overall target achievement will be calculated by means of linear interpolation. The overall target achievement increased by the GEP-II targets achievement shall not exceed 200%.

The number of performance shares granted to the plan participants at the beginning of the performance period will each be multiplied by the level of overall target achievement in order to determine the final number of performance shares.

For the MB LTIP 2019, the final number of performance shares is generally deemed earned four years after the day of a respective grant (the four-year vesting period). The number of such vested performance shares is then multiplied by the average FMC-AG & Co. KGaA share price over a period of 30 days prior to the lapse of this four-year vesting period. The respective resulting amount will then be paid to the plan participants as cash compensation.

For plan participants of the LTIP 2019, the final number of performance shares is generally deemed earned three years after the day of a respective grant (the three-year vesting period). The number of such vested performance shares is then multiplied by the average FMC-AG & Co. KGaA share price over a period of 30 days prior to the lapse of this three-year vesting period. The respective resulting amount, which is capped in total at an amount equaling 400% of the grant value received by the participant, will then be paid to the plan participants as cash compensation.

For plan participants of the LTIP 2016, the final number of performance shares is generally deemed earned four years after the day of a respective grant (the four-year vesting period). The number of such vested performance shares is then multiplied by the average FMC-AG & Co. KGaA share price over a period of 30 days prior to the lapse of this four-year vesting period. The respective resulting amount will then be paid to the plan participants as cash compensation.

Fresenius Medical Care AG & Co. KGaA Long-Term Incentive Program 2011

On May 12, 2011, the Fresenius Medical Care AG & Co. KGaA Stock Option Plan 2011 (2011 SOP) was established by resolution of Fresenius Medical Care AG & Co. KGaA's (FMC-AG & Co. KGaA) Annual General Meeting. The 2011 SOP, together with the Phantom Stock Plan 2011, which was established by resolution of FMC Management AG's Management and Supervisory Boards, forms FMC-AG & Co. KGaA's Long-Term Incentive Program 2011 (LTIP 2011). Under the LTIP 2011, participants were granted awards, which consisted of a combination of stock options and phantom stocks. The final grant under the LTIP 2011 was made in December 2015. Awards under the LTIP 2011 were subject to a four-year vesting period. Vesting of the awards granted was subject to achievement of pre-defined performance targets. The 2011 SOP was established with a conditional capital increase up to €12 million subject to the issue of up to 12 million non-par value bearer ordinary shares with a nominal value of €1.00 per share.

Stock options granted under the LTIP 2011 have an eight-year term and can be exercised for the first time after a four-year vesting period. The exercise price of stock options granted under the LTIP 2011 shall be the average stock exchange price on the Frankfurt Stock Exchange of FMC-AG & Co. KGaA's shares during the 30 calendar days immediately prior to each grant date. Stock options granted under the LTIP 2011 to U.S. participants are non-qualified stock options under the United States Internal Revenue Code of 1986, as amended. Stock options under the LTIP 2011 are not transferable by a participant or a participant's heirs, and may not be pledged, assigned, or disposed of otherwise.

Phantom stock awards under the LTIP 2011 entitle the holders to receive payment in euro from FMC-AG & Co. KGaA upon exercise of the phantom stock. The payment per phantom stock in lieu of the issuance of such stock shall be based upon the share price on the Frankfurt Stock Exchange of one of FMC-AG & Co. KGaA's shares on the exercise date. Phantom stock awards have a five-year term and can be exercised for the first time after a four-year vesting period. For participants who are U.S. tax payers, the phantom stock is deemed to be exercised in any event in the month of March following the end of the vesting period.

Transactions during 2019

During 2019, FMC-AG & Co. KGaA awarded 114,999 performance shares under the MB LTIP 2019 at a measurement date weighted average fair value of €60.70 each and a total fair value of €7 million, which will be revalued if the fair value changes. The total fair value will be amortized over the four-year vesting period.

During 2019, FMC-AG & Co. KGaA awarded 817,089 performance shares under the LTIP 2019 at a measurement date weighted average fair value of €62.16 each and a total fair value of €51 million, which will be revalued if the fair value changes. The total fair value will be amortized over the three-year vesting period.

During 2019, FMC-AG & Co. KGaA received cash of €17 million from the exercise of stock options. The intrinsic value of stock options exercised in 2019 was €5 million.

In connection with cash-settled share-based payment transactions under the LTIP 2011, the LTIP 2016, the MB LTIP 2019 and the LTIP 2019, FMC-AG & Co. KGaA recognized compensation expense of €41 million and -€5 million (income) for the years ended December 31, 2019 and 2018, respectively.

At December 31, 2019, the members of the Management Board of FMC Management AG held 452,989 stock options and plan participants other than the members of the Management Board held 3,036,000 stock options under the 2011 SOP.

At December 31, 2019, the members of the Management Board of FMC Management AG held 23,336 phantom stocks and plan participants other than the members of the Management Board held 311,650 phantom stocks under the LTIP 2011.

At December 31, 2019, the members of the Management Board of FMC Management AG held 211,878 performance shares and plan participants other than the members of the Management Board held 1,747,142 performance shares under the LTIP 2016.

At December 31, 2019, the members of the Management Board of FMC Management AG held 102,435 performance shares under the MB LTIP 2019. Former members of the Management Board of FMC Management AG held 12,564 performance shares under the MB LTIP 2019.

At December 31, 2019, the plan participants held 797,659 performance shares under the LTIP 2019.

The table below provides reconciliations for options outstanding at December 31, 2019 as compared to December 31, 2018:

	Number of options in thousands	Weighted-average exercise price in €
Balance at December 31, 2018 (options for ordinary shares)	**3,896**	**68.85**
Exercised	329	51.72
Forfeited	78	75.08
Balance at December 31, 2019 (options for ordinary shares)	**3,489**	**70.32**

At December 31, 2019, there were no unrecognized compensation cost related to non-vested options granted under all plans.

36. RELATED PARTY TRANSACTIONS

In 2019, €16 million (2018: €12 million) were paid to Fresenius Management SE as compensation for the Management Board and the Supervisory Board, general partners' fees and other reimbursements of out-of pocket expenses. At December 31, 2019, there were outstanding liabilities payable to Fresenius Management SE in the amount of €43 million (December 31, 2018: €38 million), consisting mainly of pension obligations and Management Board compensation.

The aforementioned payments are net amounts. In addition, VAT was paid.

Fresenius Medical Care has entered into exclusive supply agreements to purchase certain pharmaceuticals from its equity method investee Vifor Fresenius Medical Care Renal Pharma Ltd. Under the terms of certain unconditional purchase agreements, Fresenius Medical Care is obligated to purchase approximately €753 million of pharmaceuticals, of which €424 million is committed at December 31, 2019 for 2020. The terms of these agreements run up to five years.

37. SUBSEQUENT EVENTS

With the exception of the issuance of bonds as described in note 23, Bonds, there have been no significant changes in the Fresenius Group's operating environment following the end of the fiscal year 2019 until February 19, 2020. No other events of material importance on the assets and liabilities, financial position, and results of operations of the Group have occurred following the end of the fiscal year.

NOTES IN ACCORDANCE WITH THE GERMAN COMMERCIAL CODE (HGB)

38. COMPENSATION OF THE MANAGEMENT BOARD AND THE SUPERVISORY BOARD

Individualized information regarding the compensation of the members of the Management Board and of the Supervisory Board is disclosed in the audited Compensation Report (see page 150 ff.), which is part of the Group Management Report.

The compensation of the Management Board is, as a whole, performance-based and geared towards promoting sustainable corporate development. It is composed of three elements:

- non-performance-based compensation (fixed compensation and fringe benefits)
- short-term performance-based compensation (one-year variable compensation (bonus))
- components with long-term incentive effects (multi-year variable compensation comprising performance shares and postponed payments of the one-year variable compensation / of the bonus)

The cash compensation paid to the Management Board for the performance of its responsibilities was €15,468 thousand (2018: €15,760 thousand). Thereof, €6,166 thousand (2018: €6,051 thousand) is not performance-based and €9,302 thousand (2018: €9,709 thousand) is performance-based. The amount of the performance-based compensation depends on the achievement of targets relating to the net income of the Fresenius Group and business segments. As a long-term incentive component, the members of the Management Board received performance shares in the equivalent value of €11,232 thousand.

The total compensation of the Management Board was €26,872 thousand (2018: €27,322 thousand).

The total compensation paid to the Supervisory Boards of Fresenius SE & Co. KGaA and Fresenius Management SE and their committees was €4,285 thousand in 2019 (2018: €5,185 thousand). Of this amount, €2,775 thousand was fixed compensation (2018: €2,775 thousand), €160 thousand was compensation for committees services (2018: €160 thousand), and €1,350 thousand was variable compensation (2018: €2,250 thousand).

In 2019, based on pension commitments to former members of the Management Board, €1,154 thousand (2018: €1,101 thousand) was paid. The pension obligation for these persons amounted to €24,863 thousand in 2019 (2018: €22,319 thousand).

In the fiscal years 2019 and 2018, no loans or advance payments of future compensation components were made to members of the Management Board of Fresenius Management SE.

39. AUDITOR'S FEES

In 2019 and 2018, fees for the auditor KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin (KPMG), and its affiliates were expensed as follows:

€ in millions	2019 Total	2019 Germany	2018 Total	2018 Germany
Audit fees	**21**	**8**	18	7
Audit-related fees	**3**	**2**	3	3
Tax consulting fees	**1**	**–**	1	–
Other fees	**–**	**–**	2	0
Total auditor's fees	**25**	**10**	24	10

The leading auditor has been responsible for the audit of the consolidated financial statements since 2018.

In the fiscal year 2019, both worldwide and in Germany, audit-related fees and other fees mainly related to the review of quarterly financial statements and audit services in connection with financing activities.

40. CORPORATE GOVERNANCE

For each consolidated stock exchange listed entity, the declaration pursuant to Section 161 of the German Stock Corporation Act (Aktiengesetz) has been issued and made available to shareholders on the website of Fresenius SE & Co. KGaA (www.fresenius.com/corporate-governance), and of Fresenius Medical Care AG & Co. KGaA (www.freseniusmedicalcare.com).

41. PROPOSAL FOR THE DISTRIBUTION OF EARNINGS

The general partner and the Supervisory Board of Fresenius SE & Co. KGaA propose to the Annual General Meeting that the earnings for 2019 of Fresenius SE & Co. KGaA are distributed as follows:

in €	
Payment of a dividend of €0.84 per bearer ordinary share on the 557,379,979 ordinary shares entitled to dividend	468,199,182.36
Balance to be carried forward	935,018.35
Retained earnings	**469,134,200.71**

42. RESPONSIBILITY STATEMENT

"To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group."

Bad Homburg v. d. H., February 19, 2020

Fresenius SE & Co. KGaA,
represented by:
Fresenius Management SE, its general partner

The Management Board

S. Sturm | Dr. F. De Meo | R. Empey | Dr. J. Götz

M. Henriksson | R. Powell | Dr. E. Wastler

Note: This is a translation of the German original. Solely the original text in German language is authoritative.

INDEPENDENT AUDITOR'S REPORT

To Fresenius SE & Co. KGaA, Bad Homburg v. d. Höhe

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

OPINIONS

We have audited the consolidated financial statements of Fresenius SE & Co. KGaA, Bad Homburg v. d. Höhe and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2019, and the consolidated statement of income, the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from January 1, 2019 to December 31, 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 Fresenius SE & Co. KGaA for the financial year from January 1, 2019 to December 31, 2019. In accordance with German legal requirements we have not audited the content of those components of the group management report specified in the "Other Information" section of our 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 December 31, 2019, and of its financial performance for the financial year from January 1, 2019 to December 31, 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 those components of the group management report specified in the "Other Information" section of the auditor´s report.

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 January 1, 2019 to December 31, 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.

Impairment of goodwill

For details of the accounting and valuation principles used and the assumptions used, please refer to Note 1. IVa. Information on the amount of goodwill can be found in Note 19 to the consolidated financial statements.

The financial statement risk

The goodwill reported in the consolidated financial statements of Fresenius SE & Co. KGaA as at December 31, 2019, at €27.7 billion, represents around 41% of the balance sheet total and thus has a material significance for the net assets of the Group.

The goodwill impairment test is complex and largely dependent on estimates of future business performance by the legal representatives of the company, the interest rate used to discount future cash inflows, and other estimates. These assumptions are inherently subject to uncertainties. There is a risk for the consolidated financial statements that appropriate impairments are not recognized.

In addition, there is a risk that the required information for the impairment test of goodwill, provided within the notes to the consolidated financial statements, may not be appropriate.

Our audit approach

When testing for impairment of goodwill, we have convinced ourselves of the reasonableness of significant value-determining assumptions and parameters. We have assessed the adequacy of the controls established by the company to ensure that the assumptions and parameters used, including the budget and projections, based on developments in the relevant markets are regularly updated by the legal representatives, and approved by the Supervisory Board. We have reconciled the budgetary calculations underlying the Discounted Cash Flow calculations with the budget for the years 2020 – 2022 and the mid-term planning for the following years.

Furthermore, we have convinced ourselves of the company's previous forecasting quality by comparing plans from previous financial years with the actual results achieved and analyzing deviations.

We evaluated the material value assumptions and parameters of the underlying discount rate (WACC) and growth rates, using our valuation specialists taking into account market data and tracking the underlying valuation methods. Since even small changes in the parameters used can have a significant impact on the valuation result, we conducted our own sensitivity analyzes, in particular for the cash-generating units with a tendency to be low, in order to simulate the effects of changing individual parameters.

Finally, we assessed whether the disclosures within the notes to the consolidated financial statements on the fair value of goodwill are appropriate.

Our observations

The valuation method is consistent with the valuation principles to be applied. The assumptions and parameters underlying the valuation are in total appropriate.

The disclosures within the notes to the consolidated financial statements required for the impairment test of goodwill are appropriate.

Financial reporting of significant company transactions in the financial year

Please refer to the note 1 III a) in the notes to the consolidated financial statements for more information on the accounting policies applied. Disclosures on significant acquisitions and sales of the Fresenius Group can be found in the notes to the consolidated financial statements under note 2. For information on the risks associated with acquisitions and divestitures, please refer to the description of the financial position (in the "Investments and acquisitions" section), as well as the risk report (in the "Risks from acquisitions" section) in the group management report.

The financial statement risk

On February 21, 2019, Fresenius Medical Care acquired all the outstanding shares in NxStage at a price of USD 30 per ordinary share. The total purchase price for the acquisition less the cash funds acquired amounted to approx. USD 1,976 million (EUR 1,741 million as of the acquisition date). Taking into account the acquired net assets of USD 774 million (EUR 683 million as of the acquisition date), goodwill amounts to USD 1,202 million (EUR 1,058 million as of the acquisition date).

The acquired identifiable assets and assumed liabilities are usually recognized at fair value pursuant to IFRS 3 on the date of acquisition. Fresenius Medical Care engaged an external expert to determine and measure the identifiable assets acquired and the liabilities assumed.

The identification and measurement of acquired assets and assumed liabilities is complex and based on assumptions of management that require judgment. The key assumptions relate to revenue growth, the gross margin adjusted for synergies from savings effects in production, and the discount rate.

There is the risk for the consolidated financial statements that the assets acquired and liabilities assumed are identified improperly or measured inaccurately. There is also the risk that the disclosures in the notes to the consolidated financial statements are not sufficiently detailed and appropriate.

Our audit approach

We assessed the process for identifying the assets acquired and liabilities assumed in terms of conformity with the requirements of IFRS 3 using our knowledge of Fresenius Medical Care's business model. Fresenius Medical Care has implemented controls to ensure that the acquired assets and liabilities are fully identified and measured correctly and that the disclosures in the notes to the consolidated financial statements are sufficiently detailed and appropriate. We reviewed the design and effectiveness of these controls.

With the involvement of our own valuation experts, we assessed the appropriateness of the key assumptions as well as the identification and calculation methods used, among other things. We initially obtained an understanding of the acquisition by interviewing employees in the Finance and M&A departments as well as by assessing the relevant contracts.

We assessed the competence, professional skills and impartiality of the independent expert engaged by Fresenius Medical Care. We investigated the measurement methods used for their compliance with the accounting policies.

We evaluated the rates used by Fresenius Medical Care for revenue growth and for the gross margin by comparing these with the historical revenue and gross margins of NxStage and of comparable companies from the medical device industry and health care sector. We verified the planned synergies from savings effects in production based on an inspection of invoices and unit costs for products selected based on risk criteria. In addition, we reviewed presentations from Fresenius Medical Care discussing detailed plans for product improvements and compared the expected future production volumes with the production volumes of the current reporting year. With the involvement of our own valuation experts, we assessed the appropriateness of the discount rate.

We recalculated the valuation model to assess the computational accuracy. Finally, we assessed whether the disclosures in the notes regarding the acquisition of NxStage were sufficiently detailed and appropriate.

Our observations

The approach used for identifying and measuring the assets acquired and liabilities assumed is appropriate and in line with the accounting policies to be applied. The key assumptions are appropriate and they are properly presented in sufficient detail in the notes to the consolidated financial statements.

Recoverability of trade receivables

Please refer to the note 1 IV c) in the notes to the consolidated financial statements for more information on the accounting policies applied. Disclosures on the amount of receivables as of December 31, 2019, can be found in the notes to the consolidated financial statements under note 15.

The financial statement risk

Trade receivables after allowances amounted to EUR 7.2 billion as at 31 December 2019 and represent 11% of the balance sheet total. Determining allowances for doubtful accounts requires extensive estimates and the exercise of judgment by management.

The major debtors or debtor groups of trade receivables as of December 31, 2019, are the US Medicare and Medicaid health care programs (14%), private insurers in the USA (7%) and public health authorities in the Madrid region (14%).

Deterioration in the aging of receivables and collection difficulties could necessitate an increase in the estimate of allowances for doubtful accounts. Additional expenses for uncollectible receivables could have a significant negative impact on future operating results.

There is the risk for the consolidated financial statements that allowances for receivables have been understated as of the reporting date. There is also the risk that the required disclosures in the notes are not appropriate.

Our audit approach

To assess the measurement of trade receivables, we verified the appropriateness of the key value-determining assumptions. We evaluated the appropriateness of the controls established by the Company that are intended to ensure that the underlying assumptions and estimates are regularly adjusted to current developments and findings.

We also verified the quality of the estimates requiring judgment by comparing the allowances recognized in the past with the actual collectibility of the receivables and by analyzing deviations.

On the basis of this information, we assessed the assumptions and estimates made to assess the recoverability of trade receivables and reviewed the calculation of the respective allowances for computational accuracy.

Finally, we assessed whether the disclosures in the notes on the recoverability of trade receivables are appropriate.

Our observations

The approach underlying the measurement of trade receivables is in line with the applicable accounting policies. The assumptions used for measurement are appropriate overall.

The related disclosures in the notes are appropriate.

OTHER INFORMATION

Management respectively supervisory board are responsible for the other information. The other information comprises the following components of the group management report, whose content was not audited:

- the corporate governance statement referred to in the group management report,

The other information also includes:

- the separate non-financial group report, which is published with the group management report, and
- the remaining parts of the annual report.

The other information does not include the consolidated financial statements, the group management report information audited for content and our auditor's report thereon.

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 information audited for content or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

In accordance with our engagement, we conducted a separate assurance engagement of the separate Group non-financial report. Please refer to our assurance report dated February 19, 2020, for information on the nature, scope and findings of this assurance engagement.

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 controls.
- 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 auditors by the Annual General Meeting on May 17, 2019. We were engaged by the Supervisory Board on December 5, 2019. We have been working continuously for more than 25 years for Fresenius SE & Co. KGaA and its legal predecessor as Group auditors.

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).

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Thomas Rodemer.

Frankfurt am Main, 19 February 2020

KPMG AG Wirtschaftsprüfungsgesellschaft

[Original German version signed by:]

Rodemer	Wetzel
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

FURTHER INFORMATION

6

BOARDS

SUPERVISORY BOARD FRESENIUS SE & CO. KGAA

Name	Occupation	Year of birth	Initial appointment	Membership of statutory supervisory boards and comparable domestic or foreign supervisory bodies: External positions as at Dec. 31, 2019	Membership of statutory supervisory boards and comparable domestic or foreign supervisory bodies: Fresenius Group company positions as at Dec. 31, 2019
Dr. Gerd Krick Chair	Chairman of the Supervisory Board of Fresenius SE & Co. KGaA	1938	2003		Fresenius Management SE (Chair) Fresenius Medical Care Management AG VAMED AG, Austria (Chair)
Prof. Dr. med. D. Michael Albrecht	Medical Director and Spokesman of the Management Board of the University Hospital Carl Gustav Carus Dresden	1949	2011	Dresden International University (DIU) GÖK Consulting AG Universitätsklinikum Aachen	
Stefanie Balling	Full-time Works Council Member Fresenius Medical Care Deutschland GmbH	1968	2016		
Bernd Behlert	Full-time Works Council Member Helios Vogtland-Klinikum Plauen GmbH	1958	2018		Helios Vogtland-Klinikum Plauen GmbH
Michael Diekmann Deputy Chair	Member of various Supervisory Boards	1954	2015	Allianz SE[1] (Chair) Siemens AG[1]	Fresenius Management SE
Konrad Kölbl	Full-time Works Council Member VAMED-KMB Krankenhausmanagement und Betriebsführungsges. m.b.H.	1959	2007		VAMED-KMB Krankenhausmanagement und Betriebsführungsges. m.b.H., Austria
Frauke Lehmann	Full-time Works Council Member Helios Kliniken Schwerin GmbH	1963	2016		Helios Kliniken Schwerin GmbH (Deputy Chair)
Prof. Dr. med. Iris Löw-Friedrich	Chief Medical Care Officer and Executive Vice President, Head of Development, UCB S.A.	1960	2016	Evotec AG[1]	
Klaus-Peter Müller	Honorary Chairman of the Supervisory Board of Commerzbank AG	1944	2008		Fresenius Management SE
Oscar Romero de Paco	Production staff member Fresenius Kabi España S.A.U.	1974	2016		

The term of office expires at the end of the Annual General Meeting 2021

[1] Stock-listed company

BOARDS

SUPERVISORY BOARD FRESENIUS SE & CO. KGAA

				Membership of statutory supervisory boards and comparable domestic or foreign supervisory bodies	
Name	Occupation	Year of birth	Initial appointment	External positions as at Dec. 31, 2019	Fresenius Group company positions as at Dec. 31, 2019
Hauke Stars	Member of the Executive Board Deutsche Börse AG	1967	2016	Clearstream International S.A., Luxembourg (Deutsche Börse AG Group mandate) Eurex Frankfurt AG (Deutsche Börse AG Group mandate) Kühne + Nagel International AG, Switzerland[1]	
Niko Stumpfögger Deputy Chair	Secretary of the Trade Union ver.di, Head of Company and Industry Politics in Health Care and Social Affairs	1955	2007		

The term of office expires at the end of the Annual General Meeting 2021

[1] Stock-listed company

COMMITTEES OF THE SUPERVISORY BOARD

Nomination Committee	Audit Committee	Joint Committee[1]
Dr. Gerd Krick (Chair)	Klaus-Peter Müller (Chair)	Dr. Dieter Schenk (Chair)
Michael Diekmann	Konrad Kölbl	Michael Diekmann
Klaus-Peter Müller	Dr. Gerd Krick	Dr. Gerd Krick
	Hauke Stars	Dr. Karl Schneider (until December 31, 2019)
	Niko Stumpfögger	Klaus-Peter Müller (as of January 1, 2020)

[1] The committee consists equally of two members each of the Supervisory Board of Fresenius SE & Co. KGaA and of Fresenius Management SE

BOARDS

MANAGEMENT BOARD FRESENIUS MANAGEMENT SE

(General partner of Fresenius SE & Co. KGaA)

					Membership of statutory supervisory boards and comparable domestic or foreign supervisory bodies	
Name	Segment	Year of birth	Initial appointment	Term expires	External positions as at Dec. 31, 2019	Fresenius Group company positions as at Dec. 31, 2019
Stephan Sturm	Chairman	1963	2005	2021	Deutsche Lufthansa AG[1]	Fresenius Kabi AG (Chair) Fresenius Medical Care Management AG (Chair) VAMED AG, Austria (Deputy Chair)
Dr. Francesco De Meo	Business Segment Fresenius Helios	1963	2008	2021		
Rachel Empey	Chief Financial Officer	1976	2017[2]	2025	Inchcape, plc, Great Britain[1] (Non-Executive Director)	Fresenius Kabi AG (Deputy Chair) Fresenius Medical Care Management AG (Deputy Chair)
Dr. Jürgen Götz	Chief Legal and Compliance Officer, and Labor Relations Director	1964	2007	2020		
Mats Henriksson	Business Segment Fresenius Kabi	1967	2013	2022		Fenwal, Inc., USA FHC (Holdings) Ltd., Great Britain Fresenius Kabi Austria GmbH, Austria (Chair) Fresenius Kabi Compounding LLC, USA Fresenius Kabi España S.A.U., Spain Fresenius Kabi Pharmaceuticals Holding, Inc., USA Fresenius Kabi USA LLC, USA Labesfal – Laboratórios Almiro, S.A., Portugal Quercus Acquisition, Inc., USA
Rice Powell	Business Segment Fresenius Medical Care	1955	2013	2022		Fresenius Medical Care Holdings, Inc., USA (Chair) Vifor Fresenius Medical Care Renal Pharma Ltd., Switzerland[1] (Deputy Chair)
Dr. Ernst Wastler	Business Segment Fresenius Vamed	1958	2008	2020		Vamed-KMB Krankenhausmanagement und Betriebsführungsges. m. b. H., Austria (Chair)

[1] Stock-listed company
[2] Initial appointment until July 31, 2020

BOARDS

SUPERVISORY BOARD FRESENIUS MANAGEMENT SE

(General partner of Fresenius SE & Co. KGaA)

Name	Occupation	Year of birth	Initial appointment	Membership of statutory supervisory boards and comparable domestic or foreign supervisory bodies: External positions as at Dec. 31, 2019	Membership of statutory supervisory boards and comparable domestic or foreign supervisory bodies: Fresenius Group company positions as at Dec. 31, 2019
Dr. Gerd Krick Chair	Chairman of the Supervisory Board of Fresenius SE & Co. KGaA	1938	2010		Fresenius Medical Care Management AG Fresenius SE & Co. KGaA [1] (Chair) VAMED AG, Austria (Chair)
Dr. Kurt Bock	Former Chief Executive Officer BASF SE	1958	2016	BMW Group [1] FUCHS PETROLUB SE [1] (Chair) Münchener Rückversicherungs-Gesellschaft [1]	
Michael Diekmann	Member of various Supervisory Boards	1954	2015	Allianz SE [1] (Chair) Siemens AG [1]	Fresenius SE & Co. KGaA [1] (Deputy Chair)
Wolfgang Kirsch (since January 1, 2020)	Former Chairman of the Supervisory Board of DZ Bank AG	1955	2020	Adolf Würth GmbH & Co. KG Würth Finance International B.V., Netherlands	
Klaus-Peter Müller	Honorary Chairman of the Supervisory Board of Commerzbank AG	1944	2010		Fresenius SE & Co. KGaA [1]
Dr. Dieter Schenk Deputy Chair	Lawyer and Tax Consultant	1952	2010	HWT invest AG (formerly Bank Schilling & Co. AG; Chair) Gabor Shoes AG (Chair) TOPTICA Photonics AG (Chair) Else Kröner-Fresenius-Stiftung (Chair of Foundation Board)	Fresenius Medical Care AG & Co. KGaA [1] (Chair) Fresenius Medical Care Management AG (Deputy Chair)
Dr. Karl Schneider (until December 31, 2019)	Former Spokesman of Südzucker AG	1927	2010	Else Kröner-Fresenius-Stiftung (Deputy Chair of Foundation Board)	

The term of office expires at the end of the Annual General Meeting 2021

[1] Stock-listed company

GLOSSARY

Health care terms/Products and services

Administrative data
Data transmitted to sickness funds as part of the billing process or to federal agencies like the German Federal Statistical Office due to legal requirements. In Germany, this includes information about coded diagnoses and procedures.

Apheresis
A medical technology in which the blood of a person is passed through a device that separates out one particular blood component and returns the remainder to the circulation. This technology is used for the collection of various blood components by donors, as well as for therapeutic applications for patients.

Biosimilars
A biosimilar is a drug that is "similar" to another biologic drug already approved.

Blood volume substitutes
They are used for the temporary stabilization and/or maintenance of blood volume, for example, in the event of major blood loss.

Catalog effect
Change in severity applied to own case number portfolio.

Dialysis
Form of renal replacement therapy where a semipermeable membrane – in peritoneal dialysis the peritoneum of the patient, in hemodialysis the membrane of the dialyzer – is used to clean a patient's blood.

Dialysis machine
The hemodialysis process is controlled by a dialysis machine, which pumps blood, adds anticoagulants, regulates the cleansing process, and controls the mixture of dialysate and its flow rate through the system.

Dialysis solution/Dialysate
Fluid used in the process of dialysis in order to remove the filtered out substances and excess water from the blood.

Dialyzer
Special filter used in hemodialysis for removing toxic substances, waste products of metabolic processes, and excess water from the blood. The dialyzer is sometimes referred to as the "artificial kidney".

Enteral nutrition
Application of liquid nutrition as a tube or sip feed via the gastrointestinal tract.

EPO (Erythropoietin)
Hormone that stimulates red blood cell production. Recombinant (i.e., artificially produced) human EPO is commonly prescribed to patients on dialysis who suffer from anemia.

FDA (U.S. Food & Drug Administration)
Official authority for food observation and drug registration in the United States.

HD (Hemodialysis)
A treatment method for dialysis patients where the blood of the patient is cleansed by a dialyzer. The solute exchange between blood and dialysate is dominated by diffusive processes.

Hemoglobin
Component of red blood cells that transports oxygen around the body. An insufficient level of hemoglobin is indicative of anemia, which typically occurs in patients with chronic kidney failure. Besides dialysis, anemia is treated with iron supplements and the hormone compound erythropoietin (EPO).

Medicare/Medicaid
A program developed by the federal U.S. Social Security Administration that reimburses health insurance companies and providers of medical services for medical care to individuals over 65, people with chronic kidney failure, or the disabled.

Outpatient clinic
Interdisciplinary facility for outpatient care, managed by physicians. The responsible body of a medical care center includes all service providers (such as physicians, pharmacists, health care facilities) that are authorized to treat patients with statutory health insurance.

Parenteral nutrition
Application of nutrients directly into the bloodstream of the patient (intravenously). This is necessary if the condition of a patient does not allow them to absorb and metabolize essential nutrients orally or as sip and tube feed in a sufficient quantity.

PD (Peritoneal dialysis)
Dialysis treatment method using the patient's peritoneum as a filter to cleanse their blood.

Prevalence
Number of all patients who suffer from a specific disease within a defined period. The prevalence rate indicates the number of people with this specific disease (e.g., terminal kidney failure) treated per million population.

GLOSSARY

Health care terms/Products and services

PPP (public-private partnership model)
Public-private partnership describes a government service or private business venture that is funded and operated through a partnership of government and one or more private-sector companies. In most cases, PPP accompanies a part-privatization of governmental services.

Three-chamber bag
The three-chamber bag contains all the macronutrients like amino acids, glucose, and lipids, as well as electrolytes, in three separate chambers. Immediately before infusion, all nutrients are mixed thoroughly within the bag simply by opening individual chambers. This reduces the risk of contamination and saves time when preparing the infusions.

Financial terms[1]

After adjustments
In order to measure the operating performance extending over several periods, key performance measures are “adjusted“ where applicable. Adjusted measures are labelled with “after adjustments”. A reconciliation table is available within the respective quarterly or annual report and presents the composition of special items.

Before special items
In order to measure the operating performance extending over several periods, key performance measures are adjusted by special items, where applicable. Adjusted measures are labelled with “before special items”. A reconciliation table is available within the respective quarterly or annual report and presents the composition of special items.

Cash flow
Financial key figure that shows the net balance of incoming and outgoing payments during a reporting period.

Operating cash flow
Operating cash flow is a financial measure showing cash inflows from operating activities during a period. Operating cash flow is calculated by subtracting non-cash income and adding non-cash expenses to net income.

Cash flow from investing activities
Cash flow from investing activities is a financial measure opposing payments for the acquisition or purchase of property, plant and equipment and investments versus proceeds from the sale of property, plant and equipment and investments.

Cash flow from financing activities
Cash flow from financing activities is a financial measure showing how the investments of the reporting period were financed.

Cash flow from financing activities is calculated from additions to equity plus proceeds from the exercise of stock options, less dividends paid, plus proceeds from debt increase (loans, bonds, etc.), less repayments of debt, plus the change in noncontrolling interest, plus proceeds from the hedge of exchange rate effects due to corporate financing.

Cash flow before acquisitions and dividends
Fresenius uses the cash flow before acquisitions and dividends as the financial measure for free cash flow. Cash flow before acquisitions and dividends is calculated by operating cash flow less investments (net). Net investments are calculated by payments for the purchase of property, plant and equipment less proceeds from the sale of property, plant and equipment.

[1] Integral part of Group Management Report

GLOSSARY

Financial terms[1]

Constant currencies
Constant currencies for income and expenses are calculated using prior-year average rates; constant currencies for assets and liabilities are calculated using the mid-closing rate on the date of the respective statement of financial position.

CSR (Corporate Social Responsibility)
CSR refers to the social responsibility of companies. Their operations can affect economic, social, and environmental conditions all over the world.

DSO (Days Sales Outstanding)
Indicates the average number of days it takes for a receivable to be paid.

EBIT (Earnings before Interest and Taxes)
EBIT does include depreciation and write-ups on property, plant and equipment.

EBIT is calculated by subtracting cost of sales, selling, general, and administrative expenses, and research and development expenses from sales.

EBIT margin
EBIT margin is calculated as the ratio of EBIT to sales.

EBITDA (Earnings before Interest, Taxes, Depreciation and Amortization)
EBITDA is calculated from EBIT by adding depreciations recognized in income and deducting write-ups recognized in income, both on intangible assets as well as property, plant and equipment.

EBITDA margin
EBITDA margin is calculated as the ratio of EBITDA to sales.

Net debt/EBITDA
Net debt/EBITDA is a financial measure reflecting the ability of Fresenius to fulfill its payment obligations. Net debt and EBITDA are calculated at LTM (last-12-month) average exchange rates, respectively.

Calculation of net debt:
Short-term debt
\+ Short-term debt from related parties
\+ Current portion of long-term debt and capital lease obligations
\+ Current portion of Senior Notes
\+ Long-term debt and capital lease obligations, less current portion
\+ Senior Notes, less current portion
\+ Convertible bonds
= Debt
\- less cash and cash equivalents
= Net debt

NOPAT
Net Operating Profit After Taxes (NOPAT) is calculated from operating income (EBIT), as stated in the profit and loss statement, less income taxes.

Organic growth
Growth that is generated by a company's existing businesses and not by acquisitions, divestitures, or foreign exchange impact.

ROE (Return on Equity)
Measure of a corporation's profitability revealing how much profit a company generates with the money shareholders have invested.
ROE is calculated by fiscal year's net income/ total equity × 100.

ROIC (Return on Invested Capital)
Calculated by: (EBIT - taxes)/Invested capital.

Invested capital = total assets + accumulated amortization of goodwill - deferred tax assets - cash and cash equivalents - trade accounts payable - accruals (without pension accruals) - other liabilities not bearing interest.

ROOA (Return on Operating Assets)
Calculated as the ratio of EBIT to operating assets (average).

Operating assets = total assets - deferred tax assets - trade accounts payable - cash held in trust - payments received on account - approved subsidies.

SOI (Scope of Inventory)
Indicates the average number of days between receiving goods as inventory and the sale of the finished product.

Calculated by: (Inventories/Costs of goods sold) × 365 days.

Working capital
Current assets (including deferred assets) - accruals - trade accounts payable - other liabilities - deferred charges.

[1] Integral part of Group Management Report

GLOSSARY

Financial terms[1]

RECONCILIATION OF AVERAGE INVESTED CAPITAL AND ROIC

€ in millions, except for ROIC	December 31, 2019	December 31, 2019[5]	December 31, 2018
Total assets	**67,006**	**61,237**	56,703
Plus: Cumulative goodwill amortization	**539**	**539**	520
Minus: Cash and cash equivalents	**-1,654**	**-1,654**	-2,709
Minus: Loans to related parties	**-61**	**-61**	-60
Minus: Deferred tax assets	**-839**	**-845**	-777
Minus: Accounts payable	**-1,905**	**-1,905**	-1,823
Minus: Accounts payable to related parties	**-46**	**-46**	-67
Minus: Provisions and other current liabilities[1]	**-7,079**	**-7,079**	-7,141
Minus: Income tax payable	**-474**	**-474**	-428
Invested capital	**55,487**	**49,712**	44,218
Average invested capital as of December 31, 2019/2018[2]	**53,846**	**47,980**	42,769
Operating income[3,4]	**4,692**	**4,603**	4,547
Income tax expense	**-1,092**	**-1,075**	-1,000
NOPAT[3,4]	**3,600**	**3,528**	3,547
ROIC in %	**6.7%**	**7.4%**	8.3%

[1] Includes non-current provisions and payments outstanding for acquisition; does not include pension liabilities and noncontrolling interest subject to put provisions.
[2] Includes adjustments for acquisitions in the respective reporting period with a purchase price above a certain level (2019: €7,987 million; 2019 adjusted for IFRS 16: €2,029 million; 2018: -€808 million).
[3] Includes adjustments for acquisitions in the respective reporting period with a purchase price above a certain level (2019: €4 million; 2018: -€14 million).
[4] Before special items
[5] Adjusted for IFRS 16 effect

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

RECONCILIATION OF AVERAGE OPERATING ASSETS AND ROOA

€ in millions, except for ROOA	December 31, 2019	December 31, 2019[4]	December 31, 2018
Total assets	**67,006**	**61,237**	56,703
Minus: Contract liabilities	**-92**	**-92**	-108
Minus: Payments received on account	**0**	**0**	0
Minus: Cash held in trust	**-111**	**-111**	-123
Minus: Loans to related parties	**-61**	**-61**	-60
Minus: Deferred tax assets	**-839**	**-845**	-777
Minus: Accounts payable	**-1,905**	**-1,905**	-1,823
Minus: Accounts payable to related parties	**-46**	**-46**	-67
Minus: Approved subsidies due to Hospital Funding Act ("Krankenhausfinanzierungsgesetz", KHG)	**-112**	**-112**	-150
Operating assets	**63,840**	**58,065**	53,595
Average operating assets as of December 31, 2019/2018[1]	**61,841**	**56,042**	50,722
Operating income[2,3]	**4,692**	**4,603**	4,547
ROOA in %	**7.6%**	**8.2%**	9.0%

[1] Includes adjustments for acquisitions in the respective reporting period with a purchase price above a certain level (2019: €6,246 million; 2019 adjusted for IFRS 16: €424 million; 2018: -€2,343 million).
[2] Includes adjustments for acquisitions in the respective reporting period with a purchase price above a certain level (2019: €4 million; 2018: -€14 million).
[3] Before special items
[4] Adjusted for IFRS 16 effect

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 56–61.

[1] Integral part of Group Management Report

IMPRINT

Commercial Register: Bad Homburg v. d. H.; HRB 11852
Chairman of the Supervisory Board: Dr. Gerd Krick

General Partner: Fresenius Management SE
Registered Office and Commercial Register: Bad Homburg v. d. H.; HRB 11673
Management Board: Stephan Sturm (President and CEO), Dr. Francesco De Meo, Rachel Empey, Dr. Jürgen Götz, Mats Henriksson, Rice Powell, Dr. Ernst Wastler
Chairman of the Supervisory Board: Dr. Gerd Krick

The German version of this Annual Report is legally binding.
The editorial closing date of this Annual Report was on March 12, 2020, and it was published on March 18, 2020. Rounding differences may occur.

The Annual Report and the financial statements of Fresenius SE & Co. KGaA are available on our website and may be obtained upon request under Investor Relations.

You will find further information and current news about our company on our website at: www.fresenius.com.

Forward-looking statements:
This Annual Report contains forward-looking statements. These statements represent assessments that we have made on the basis of the information available to us at the time. Should the assumptions on which the statements are based not occur, or if risks should arise – as mentioned in the risk report and the SEC filings of Fresenius Medical Care AG & Co. KGaA – the actual results could differ materially from the results currently expected.

Design concept/realization: Hilger & Boie Design, Wiesbaden

FINANCIAL CALENDAR

Report on 1st quarter 2019 Conference call, live webcast	May 6, 2020
Annual General Meeting, Frankfurt am Main, Germany	May 20, 2020
Payment of dividend[1]	May 26, 2020
Report on 2nd quarter 2019 Conference call, live webcast	July 30, 2020
Report on 3rd quarter 2019 Conference call, live webcast	October 29, 2020

[1] Subject to prior approval by the Annual General Meeting

Schedule updates, information on live webcasts, and other events at www.fresenius.com/events-and-presentations

FRESENIUS SHARE / ADR

	Ordinary share		ADR
Securities identification no.	578 560	CUSIP	35804M105
Ticker symbol	FRE	Ticker symbol	FSNUY
ISIN	DE0005785604	ISIN	US35804M1053
Bloomberg symbol	FRE GR	Structure	Sponsored Level 1 ADR
Reuters symbol	FREG.de	Ratio	4 ADR = 1 share
Main trading location	Frankfurt / Xetra	Trading platform	OTCQX

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