FRESENIUS

2018

ANNUAL REPORT

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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 275,000 employees have dedicated themselves to the service of health in over 100 countries worldwide.

FRESENIUS

FRESENIUS GROUP IN FIGURES (IFRS)

€ in millions	**2018**	2017	2016	2015	2014
Sales and Earnings					
Sales	**33,530**	33,886	29,471	27,995	23,459
EBITDA [1]	**5,991**	6,267	5,517	5,125	4,114
EBIT [1]	**4,561**	4,830	4,302	4,001	3,159
Net income [2]	**1,871**	1,816	1,560	1,436	1,088
Depreciation and amortization	**1,430**	1,437	1,215	1,124	955
Earnings per share in € [2]	**3.37**	3.28	2.85	2.64	2.01
Cash flow and Balance sheet					
Operating cash flow	**3,742**	3,937	3,585	3,349	2,560
Operating cash flow in % of sales	**11.2%**	11.6%	12.2%	12.0%	10.9%
Total assets	**56,703**	53,133	46,697	43,233	39,955
Non-current assets	**41,913**	40,529	34,953	32,800	30,389
Equity [3]	**25,008**	21,720	20,849	18,453	15,860
Equity ratio [3]	**44%**	41%	45%	43%	40%
Net debt	**16,275**	17,406	13,201	13,725	14,173
Net debt/EBITDA [4, 5]	**2.71**	2.84	2.33	2.65	3.22
Investments [6]	**3,249**	8,680	2,559	2,051	3,770
Profitability					
EBIT margin [1]	**13.6%**	14.3%	14.6%	14.3%	13.5%
Return on equity after taxes (ROE) [2]	**12.1%**	13.3%	12.3%	12.9%	11.4%
Return on operating assets (ROOA) [4]	**9.0%**	9.4%	10.0%	10.2%	9.0%
Return on invested capital (ROIC) [4]	**8.3%**	8.0%	8.5%	8.4%	7.5%
Dividend per share in €	**0.80** [7]	0.75	0.62	0.55	0.44
Employees (December 31)	**276,750**	273,249	232,873	222,305	216,275

[1] Before special items
[2] Net income attributable to shareholders of Fresenius SE & Co. KGaA; before special items
[3] Including noncontrolling interest
[4] Before special items; 2014, 2016, 2017, 2018 pro forma acquisitions
[5] At LTM average exchange rates for both net debt and EBITDA
[6] Investments in property, plant and equipment, and intangible assets, acquisitions
[7] Proposal

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

Our interactive tool with additional key figures is available on www.fresenius.com/interactive-tool.

FRESENIUS MEDICAL CARE

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

	2018 € in millions	2017 € in millions	Change
Sales	**16,547**	16,739[2]	-1%
EBIT	**2,346**[2]	2,278[2]	3%
Net income[3]	**1,377**[2]	1,242[2]	11%
Operating cash flow	**2,062**	2,192	-6%
Capital expenditure/ acquisitions	**2,014**	1,627	24%
R & D expenses	**134**	131	2%
Employees (December 31)	**120,328**	121,245	-1%

FRESENIUS KABI

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

	2018 € in millions	2017 € in millions	Change
Sales	**6,544**	6,358	3%
EBIT	**1,139**[1]	1,177[1]	-3%
Net income[3]	**742**[1]	702[1]	6%
Operating cash flow	**1,040**	1,010	3%
Capital expenditure/ acquisitions	**615**	585	5%
R & D expenses	**534**[1]	427	25%
Employees (December 31)	**37,843**	36,380	4%

FRESENIUS HELIOS

HOSPITAL OPERATION

	2018 € in millions	2017 € in millions	Change
Sales	**8,993**	8,668	4%
EBIT	**1,052**	1,052	0%
Net income[3]	**686**	728	-6%
Operating cash flow	**554**	733	-24%
Capital expenditure/ acquisitions	**501**	6,394	-92%
Order intake	**n/a**	n/a	
Employees (December 31)	**100,144**	105,927	-5%

FRESENIUS VAMED

PROJECTS AND SERVICES FOR HOSPITALS AND OTHER HEALTH CARE FACILITIES

	2018 € in millions	2017 € in millions	Change
Sales	**1,688**	1,228	37%
EBIT	**110**	76	45%
Net income[3]	**72**	50	44%
Operating cash flow	**106**	42	152%
Capital expenditure/ acquisitions	**540**	49	--
Order intake	**1,227**	1,096	12%
Employees (December 31)	**17,299**	8,667	100%

[1] Before special items
[2] On a comparable basis
[3] Net income attributable to the parent company of the respective business segment

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

TARGETS / RESULTS / OUTLOOK

	TARGETS 2018 [1]	RESULTS 2018	OUTLOOK 2019 [9]
Fresenius Group			
Sales (growth, in constant currency)	5% – 8% [3] low end	**6%** [3]	3 % – 6%
Net income [2] (growth, in constant currency)	6% – 9% [4] low end	**7%** [4]	~0%
Net income [2] (growth, in constant currency) excluding biosimiliars	~10% – 13% [4] low end	**11%** [4]	
Investments in property, plant and equipment	6% of sales	**6% of sales**	7% of sales
Business segments			
Fresenius Medical Care			
Sales (growth, in constant currency)	2% – 3% [3]	**4%** [3]	3% – 7%
Net income [5] on comparable basis [4] (growth, in constant currency)	11% – 12%	**14%**	
Net income [5] adjusted [4] (growth, in constant currency)	2% – 3%	**4%**	- 2% – + 2%
Fresenius Kabi			
Sales (growth, organic)	4% – 7% top end	**7%**	3% – 6%
EBIT [6] (growth, in constant currency)	1% – 3%	**2%**	3% – 6%
EBIT [6] (growth, in constant currency) excluding biosimiliars	~9% – 11%	**10%**	
Fresenius Helios			
Sales (growth, organic)	3% – 6% [10] low end	**3%** [10]	2% – 5%
EBIT (growth)	0% – 2% [8]	**0%** [8]	- 5% – - 2 %
Fresenius Vamed			
Sales (growth, organic)	5% – 10%	**16%**	~10%
EBIT (growth)	32% – 37% [8]	**45%** [8]	15% – 20%
Financing			
Cash flow margin	10% – 12%	**11%**	10% – 12%
Net debt/EBITDA [7]	Comparable 2017: 2.84	**2.71**	broadly on FY/18 level

[1] Updated October 2018
[2] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[3] 2017 adjusted for IFRS 15 adoption and divestitures of Care Coordination activities
[4] Before special items and after adjustments
[5] Net income attributable to shareholders of Fresenius Medical Care AG & Co. KGaA
[6] Before special items
[7] Calculated at annual average exchange rates, for both net debt and EBITDA; pro forma closed acquisitions/divestitures, excluding NxStage transaction; excluding further potential acquisitions
[8] After transfer of German post-acute care business from Fresenius Helios to Fresenius Vamed
[9] Before special items and after adjustments, adjusted for IFRS 16 effects, excluding effects from NxStage transaction by FMC
[10] Helios Spain contributes 11 month to organic growth

Stephan Sturm
Chairman of the Management Board

Dear shareholders,

2018 was another eventful year for Fresenius. Many developments were positive and took us forward – I'll tell you about the most important ones a little farther down. 2018 was also a successful business year for our company, as we set new records for sales and earnings – for the 15th straight year! We will, therefore, be proposing to the Annual General Meeting our 26th consecutive dividend increase.

There were also some less positive events last year, particularly the legal dispute with Akorn. Our original intent was to acquire this U.S.-based generic drugs producer to achieve a very targeted and sensible expansion of Fresenius Kabi's generics portfolio. It was the right plan at the time – until we discovered grave misconduct at Akorn relating to product data, which had been systematically manipulated. Misconduct of this kind violates all our principles of integrity and moral behavior, and after very careful consideration it was clear to us that we had no choice but to terminate the merger agreement. We knew this would lead to a very complicated legal battle. But we also knew that we were in the right, and in the end the courts in Delaware confirmed it.

The courts also confirmed that our due diligence of Akorn was as thorough as legally possible. Unfortunately, deliberate intent to deceive can never be completely ruled out, which is why we secured contractual assurances concerning compliance and correctness in those areas we were not allowed to examine during the due diligence process. The fact that we stopped the transaction on time showed that our risk management works. And it showed that we are uncompromising in defense of our shareholders' interests and our rights – however difficult that may sometimes be.

Also very difficult last year was the fact that we had to reduce our communicated earnings targets twice in the second half – once for our 2018 guidance and once concerning our mid-term

targets. That is not something we are used to doing, and it falls short of our own standards. The main reasons were that Fresenius Medical Care's growth in North America and some emerging market countries, while solid, was less than forecast, and that patient admissions at Fresenius Helios in Germany did not develop as expected. In both areas we have already initiated strong measures to rectify the situation. In addition, we will make additional investments that will pay off in future, but will temporarily limit our earnings growth. The two releases communicating our reduced targets created quite some uncertainty on the capital markets, and triggered a sharp slide in our share price. We will work hard to once again strengthen confidence in the capabilities and dynamism of our company.

In 2018, the groundbreaking ceremony was held in Schweinfurt for a new, 8,000-square-meter technology center for the development of dialysis machines.

» 2018 was another eventful year for Fresenius. «

The negative headlines should, however, not obscure the fact that overall, 2018 was a successful year for Fresenius. In constant currency, we increased our sales by 6 percent and net income by 7 percent. That made 2018 our 15th consecutive record year. The number of our employees climbed to more than 276,000, we successfully expanded our activities in every business segment, and some important milestones were achieved. I'd like to tell you briefly about a few of them:

At Fresenius Medical Care, we have developed a new dialysis machine – the 4008A – specially designed to meet the needs of emerging markets. Sturdy, and simple to operate, it offers Fresenius Medical Care's high therapy standards while keeping costs for healthcare systems low. In Asia, especially, there is a huge treatment gap: Only one-third of people suffering from kidney disease receive dialysis. With the 4008A, we want to help make life-saving dialysis available to a growing number of patients. The machine has been launched in India, with a phased introduction to follow in other Asia-Pacific region countries.

The 4008A is the result of cooperation between Fresenius experts from around the world, and we are steadily expanding our international research and development network to create products tailored to the different needs of different markets. In the past year we have started work on a technology center in Schweinfurt and the expansion of our R & D center in Bad Homburg. We have taken a stake in the U.S. medical R & D company Humacyte, and entered a strategic partnership to introduce a new vascular access for dialysis patients based on human cells. And we have established a long-term research collaboration with Germany's Medical Center Hamburg-Eppendorf to explore the molecular and cellular mechanisms of kidney diseases.

We have further increased the number of our dialysis clinics to more than 3,900. And we have been growing not only in our established markets but in growth markets such as Brazil and China. Through the divestment of Sound Inpatient Physicians Holdings, we have optimized our Care Coordination portfolio.

Fresenius Kabi brought numerous new products on to the market last year across our full portfolio, from I.V. generic drugs to infusion pumps. To meet the steadily increasing demand for high-quality medicines, we are continuously investing in the expansion and modernization of our production facilities. These projects are now underway in China, the Dominican Republic, the United Kingdom, Canada, the Netherlands and the United States. Just in our Melrose Park plant, near Chicago, we will invest about €350 million by 2026.

These investments not only ensure the continued growth of Fresenius Kabi, they are helping us fulfill our responsibility as a producer of essential medicines. Shortages of important drugs occur regularly – even in advanced nations like the United States. Thanks to the high quality of our production processes and facilities, and our international production network, we are often able to help overcome these shortages. Last year we received an award from the U.S. Food and Drug Administration for our efforts in helping to relieve a shortage of I.V. saline solutions in the wake of Hurricane Maria.

Foto credit: Foto Wallner

In 2018, the German post-acute care business of Fresenius Helios was transferred to Fresenius Vamed. Fresenius Helios will now focus even more strongly on the acute care hospital business and its continued internationalization.

We are also satisfied with the development of our biosimilars business, acquired in 2017. We expect to bring our first biosimilar to market in Europe this year – a biosimilar of Humira®, currently the world's top-selling pharmaceutical product. We expect to launch it in the United States in 2023.

At Fresenius Helios, the picture is more mixed. Internationally, the business continues to run outstandingly. Quirónsalud is developing according to plan in Spain, where we opened a new hospital in Cordoba and increased the number of our hospitals in Andalusia to six. In October we agreed to acquire Clínica Medellín, which operates two hospitals with a total of 185 beds in Colombia's second-largest city. After our market entry in Peru in 2017, we are strengthening our presence in South America's growing hospital market.

In Germany, however, we have been facing strong headwinds. After many years of steady growth, admissions declined at our HELIOS hospitals. Some of them had trouble filling job vacancies, especially for highly specialized personnel, so we

could not handle as many patients as planned. Another reason was the continuing trend toward more outpatient treatments. We have already initiated active measures to respond to these developments.

In addition, we reorganized our inpatient rehabilitation business inside the Fresenius Group, transferring 38 healthcare facilities and 13 service companies in Germany specializing in inpatient post-acute and nursing care from Fresenius Helios to Fresenius Vamed. This has strengthened Fresenius Vamed's position as one of the leading providers of post-acute care in Europe, while Fresenius Helios will be able to focus even more strongly on the acute care hospital business and continued internationalization.

Fresenius Vamed developed strongly in other areas, as well. We won contracts on almost every continent. In Germany, we are now the leading supplier of services for sterile supplies, following our acquisition of Instruclean. And in Austria, we opened the country's first family-oriented children's rehabilitation clinic in St. Veit im Pongau, and took over management of a health resort in Bad Waltersdorf. VAMED Vitality World now operates 10 thermal spas and health resorts in Austria and Hungary.

As you can see, Fresenius is in very good shape. We have excellent prospects to continue our dynamic growth in the future. But success does not happen by itself – you have to make it happen. So for us, 2019 will mean increasing our already very substantial investments in R & D and the further development of our business. In this way we will be positioning Fresenius even better for the coming decade. Here are a few concrete examples:

At the end of February, Fresenius Medical Care closed the acquisition of the U.S. medical technology company NxStage, which will greatly strengthen our position in home dialysis. To extensively expand in home dialysis, we have to invest in the necessary infrastructure. We will also invest more in new products and in growth markets such as China.

» Fresenius is in very good shape. We have excellent prospects to continue our dynamic growth in the future. «

At Fresenius Kabi, we are investing massively in our strongest growth areas: generics, but also enteral nutrition and infusion solutions. We will also invest to further develop our new biosimilars business. We are thereby securing significant growth opportunities for the future.

The trend toward more outpatient treatments also offers opportunities, and to profit from them at Fresenius Helios in Germany we are expanding our outpatient offering in a new division of Helios. In another, newly established division we will build attractive business models. These include, for example, video consultations in addition to our regular outpatient care, check-ups as a standalone business, and occupational medicine as a service for companies. Another major focus is the ongoing digitalization of hospital processes. We will also continue to work on establishing compe-

tence centers for specific pathologies and disease patterns. And we want to hire 1,000 new care personnel, to further improve care for our patients.

In Spain we are building a hospital just outside Madrid, in Torrejón, while inside Madrid we are building Spain's first proton beam therapy center for the treatment of cancer.

At Fresenius Vamed, our main investment focus will be on the expansion of the post-acute care business in Europe.

But more investments mean more costs, and these will temporarily weigh on our earnings. For this reason, we expect Fresenius' 2019 income to be at about the same level as last year's. Sales, however, are expected to increase between 3 and 6 percent. After this year of investment, we are forecasting a resumption of dynamic growth in our net income as well, with organic growth averaging 5 to 9 percent annually between 2020 and 2023. Over the same period, organic sales growth should average 4 to 7 percent.

This guidance is based on our expectations for organic growth. If we add in small and medium-sized acquisitions, growth rates 1 percentage point higher can be expected. Large, strategic takeovers will continue to be a driver of our successful development; here we will remain prudent and selective, but bold when it comes to seizing opportunities.

The long-term trends for the continued, positive development of our company remain intact. The healthcare market is growing, and life expectancies are continuously increasing. Demand for high-quality medicine is rising around the world, and needs and expectations are changing. It is no longer only about preserving lives, but about raising people's quality of life into old age. The mighty challenge of keeping quality healthcare affordable over the long term remains, but Fresenius is making substantial contributions and is superbly positioned to do even more in the future.

» Each of our four business segments will remain on its own a strong and stable pillar of our success. «

2018 showed, once again, the advantages of a diversified healthcare Group standing on four strong pillars. Each of our four business segments is active in a different, fast-growing area of healthcare, which enables us to recognize trends early, respond quickly to meet changing needs, and then offer tailored solutions. At the same time, we can offer increased stability. Temporary slowdowns in individual business segments can generally be balanced by faster growth in the others. Even when, as in 2018, we encounter unexpected challenges in individual segments, our size and stability allow us to address them efficiently and comprehensively, without excessive time pressure. In many cases the area in question comes out stronger than before.

And remember this: As a large, diversified company we can take a totally different approach to strategic investments than smaller companies active in fewer business areas. We are not focused on the next quarter, but oriented to the long term. What is decisive for us are the future developments in healthcare – and not only in the coming years, but over the coming decades.

Each of our four business segments will remain on its own a strong and stable pillar of our success. The measures we have been taking to reinforce and better connect them will make the business segments an even stronger foundation for our future growth, because we are working to harness more of the opportunities created by closer cooperation within our company. In the past we have placed great weight on decentralization, and strong units that operate as independently as possible. That has many advantages and we want to continue benefiting from them, but in some cases it means lost synergies and untapped potential. I am convinced that with our current size and structure, closer cooperation will create additional benefits. That is why I am pushing this development forward, along with my colleagues on the Management Board.

Some first, very promising steps have been taken. For example, Fresenius Medical Care is supporting Fresenius Kabi on its entry into the North American infusion solutions market. In other parts of the world, Fresenius Kabi is already a leading producer of these products. In North America, Fresenius Medical Care has large production and logistical capacities. Through a close collaboration of these two business segments, we want to achieve low production and logistics costs while providing a high-quality, fast and reliable supply.

In the announced acquisition of Clínica Medellín by Quirónsalud, it was also a great advantage that Fresenius Medical Care and Fresenius Kabi have been operating successfully in Colombia for years. Fresenius Medical Care already operates a dialysis center in Clínica Medellín, and Fresenius Kabi is currently working with the company to establish a blood bank. We want to expand this cooperation and bring in Fresenius Vamed, as we also plan more growth in the Andes region. Fresenius Vamed and Fresenius Helios have been working very closely together in Spain and Germany on medical technology procurement, hospital construction, and non-medical services.

We are also working to network more closely together our employees, who now number more than 270,000. They all want to help patients, and there is enormous potential there. We want to encourage it, and get even more from it for our company.

Above all, one thing remains crystal clear to us: The well-being of patients is the key to our success! If they are doing well, Fresenius will do well. And then you also profit, dear shareholders.

With warm regards,

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

In 2018, 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 2018 – 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.

Every member of the Supervisory Board of Fresenius SE & Co. KGaA attended all of the Supervisory Board Meetings in 2018.

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

MAIN FOCUS OF THE SUPERVISORY BOARD'S ACTIVITIES

In 2018, the Supervisory Board mostly focused its monitoring and consulting activities on business operations and investments by the business segments. The Supervisory Board thoroughly reviewed and discussed all business activities of significance to the Company with the Management Board. This related to the

intended acquisition of Akorn, Inc., USA (Akorn) by Fresenius Kabi and the related litigation, and investments in the expansion of existing production facilities of Fresenius Kabi. The Supervisory Board also dealt with the following items:

- 2019 budget
- medium-term strategy of the Fresenius Group
- business segment strategies (particularly the business outlook for Fresenius Helios and Fresenius Medical Care)
- auditor rotation (scheduled for the annual financial statements for 2020)

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 16, 2018, 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 consolidated management report of Fresenius SE & Co. KGaA. The results for 2017 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 2017.

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 Medical Care. Furthermore, the Supervisory Board was informed by Fresenius Kabi about the status of the Akorn transaction and the plans to expand the Fresenius Kabi plants in Melrose Park, United States, and Haina, Dominican Republic. Another item discussed was the agenda of the Annual General Meeting of Fresenius SE & Co. KGaA on May 18, 2018. The Supervisory Board also dealt with IT security ("cybersecurity"). Finally, the Supervisory Board conducted its annual efficiency review at this meeting.

At its meeting on May 18, 2018, immediately following the Annual General Meeting, the Supervisory Board passed resolutions on the appointment of the auditor of the annual and consolidated financial statements for 2018. In addition, the Management Board reported on business performance for the months January through April 2018. Furthermore, the Supervisory Board was informed about the status of the Akorn transaction and the litigation related to it.

At the Supervisory Board meeting on October 19, 2018, the members of the Supervisory Board were informed in detail about business performance from January through September 2018. The focus was on

the Fresenius Helios business segment. The Management Board of the general partner reported on the biosimilars business of Fresenius Kabi, the Akorn litigation, and the effects of the withdrawal of the United Kingdom from the European Union on the Fresenius Group.

The meeting of the Supervisory Board on December 7, 2018, focused on the development of business in 2018. Plans for the years 2019 to 2021 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 financial statements. Additional focal points were the deliberations on the rotation of the auditor planned for 2020 and the resolution on the recommendation of the Audit Committee on the proposal for the selection of the auditor for 2020. In addition, resolutions were passed on the Declaration of Conformity with the German Corporate Governance Code and on the commissioning of the auditor of the Group Non-financial Report of Fresenius SE & Co. KGaA for 2018. In addition, the members of the Supervisory Board dealt with compliance, regulatory issues, and legal risks, as well as the Akorn litigation.

CORPORATE GOVERNANCE

On December 20, 2018, 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.

Prof. Dr. med. D. Michael Albrecht is a member of the Supervisory Board of our Company and medical director and spokesman for the management board of the University Hospital Carl Gustav Carus Dresden, as well as a member of the supervisory board of the University Hospital in Aachen. The Fresenius Group maintains regular business relationships with these hospitals in line with normal market conditions. Mr. Klaus-Peter Müller is a member of the Supervisory Board and chairman of the Audit Committee of our Company and a member of the Supervisory Board of Fresenius Management SE. He was also Chairman of the Supervisory Board of Commerzbank AG until May 8, 2018. The Fresenius Group maintains business relations with Commerzbank under normal market conditions. Mr. Michael Diekmann is Deputy Chairman of the Supervisory Board and a member of the Supervisory Board of Fresenius Management SE. He is also a member of the Supervisory Board of Allianz SE. In 2018, the Fresenius Group paid insurance premiums to Allianz under normal market conditions.

There are no direct consultant or other service agreements between the Company and any member of the Supervisory Board.

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

For more information on Corporate Governance at Fresenius, please refer to the Corporate Governance Declaration and Report on pages 131 to 162 of the Annual Report. Fresenius has disclosed the information on related parties in its quarterly reports and on page 258 of the Annual Report.

GROUP NON-FINANCIAL REPORT

KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, audited the Group Non-financial Report for 2018. This was done in accordance with a resolution of the Supervisory Board of December 7, 2018, 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 13 and 14, 2019, 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 14, 2019, the Supervisory Board approved the Group Non-financial Report presented by the general partner.

The Group Non-financial Report is published on pages 92 to 130 of the Annual Report and the auditor's findings are published on page 129 f. of the Annual Report.

WORK OF THE COMMITTEES

The Audit Committee held three meetings and four conference calls in 2018. 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 2017 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 of Fresenius SE & Co. KGaA and the Group for 2018. The Supervisory Board's proposal to the Annual General Meeting in 2018 to elect KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, as auditor was based on a recommendation to this effect by the Audit Committee. The Audit Committee also dealt with the following items in detail:

- the 2018 quarterly reports,
- monitoring reports on progress of acquisitions,
- compliance,
- review of the risk management system, the internal control system, and the internal auditing system,
- preparation of the selection of the auditor for the annual financial statements for 2020 (auditor rotation), 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 2018.

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 Foundation. In 2018, there were no transactions conducted that required its approval. For this reason, it did not meet in 2018.

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 135 and 136 and page 271 of the Annual Report.

PERSONNEL

Mr. Rainer Stein retired from the Supervisory Board of Fresenius SE & Co. KGaA on August 31, 2018. He was succeeded on the Board by Mr. Bernd Behlert with effect from September 1, 2018. At its meeting on May 18, 2018, the Supervisory Board elected Mr. Niko Stumpfögger as a member of the Audit Committee with effect from the date of Mr. Rainer Stein's resignation.

In 2018, there were no changes in the composition of the Management Board of the general partner Fresenius Management SE.

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 2018. The firm was elected as auditor in accordance with a resolution passed at the Annual General Meeting of Fresenius SE & Co. KGaA on May 18, 2018, 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 statement, the consolidated financial statement, 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 13 and 14, 2019, 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 Reports. At its meeting on March 14, 2019, 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 on the 2018 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 14, 2019

The Supervisory Board of Fresenius SE & Co. KGaA

Dr. Gerd Krick
Chairman

FRESENIUS MEDICAL CARE. Operating performance in 2018 was influenced by special items. We were able to increase the number of dialysis patients treated worldwide, further strengthening our market position.

Fresenius Medical Care is the world's leading provider of products and services for people with chronic kidney failure. Around 3.4 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. We care for more than 333,000 patients in our global network of more than 3,900 dialysis clinics. At the same time, we operate 42 production sites, to provide dialysis products such as dialysis machines, dialyzers, and related disposables.

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.

BUSINESS DEVELOPMENT

Fresenius Medical Care decreased sales by 7% to €16,547 million in 2018 (currency adjusted: -2%). Organic sales growth was 4%. The application of IFRS 15 reduced sales by 3%. With the prior-year basis additionally adjusted for divested Care Coordination activities, sales in fiscal year 2018 decreased by 1% (increased by 4% in constant currency).

Health care services sales[1] (dialysis services and Care Coordination) decreased by 2% (increased by 4% in constant currency) to €13,264 million. Sales of health care products (e. g., dialysis products) increased by 1% (5% in constant currency) to €3,283 million.

EBIT increased by 29% to €3,038 million (2017: €2,362 million). The increase is mainly attributable to the divested Care Coordination activities. The EBIT margin was 18.4% (2017: 13.3%). EBIT on a comparable basis[1] increased by 6%; the EBIT margin[1,] was 14.2% (2017: 13.6%).

SALES BY REGION

€ in millions	2018	2017	Change	Currency translation effects	% of total Fresenius Medical Care sales
North America	**11,570**	12,879	-10%	-4%	70%
Europe/Middle East/Africa	**2,587**	2,547	2%	-2%	16%
Asia-Pacific	**1,689**	1,623	4%	-4%	10%
Latin America	**686**	720	-5%	-27%	4%
Corporate	**15**	15	0%	0%	0%
Total	**16,547**	17,784	-7%	-5%	100%

[1] On a comparable basis

For a detailed reconciliation please refer to the tables on page 60.

Net income[1] increased by 55% (60% in constant currency) to €1,982 million (2017: €1,280 million). The adjusted net income[1] increased currency-adjusted by 4%.

Comparable basis net income[1,2] increased by 14% in constant currency.

REGIONAL DEVELOPMENT

North America remained Fresenius Medical Care's largest business region. In 2018, sales[2] decreased by 2% (increased by 2% in constant currency) to €11,570 million, compared to €11,834 million in 2017. EBIT increased by 28% to €2,665 million (2017: €2,086 million), with an EBIT margin of 23.0% (2017: 16.2%). The changes are mainly attributable to the divestiture of Care Coordination activities.

The average revenue per treatment in the United States was US$354 in 2018, compared to US$342 in 2017. The average cost per treatment in the United States increased from US$271 in 2017 to US$289 in 2018.

In 2018, 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 1% (8% in constant currency) to €4,962 million (2017: €4,890 million). EBIT decreased by 10% to €731 million (2017: €815 million). The EBIT margin was 14.7% (2017: 16.7%).

SALES BY SEGMENT[1]

€ in millions	2018	2017	Change
North America			
Health care services[2]	**10,725**	10,991	-2%
Health care products[3]	**845**	843	0%
Total	**11,570**	11,834	-2%
International[4]			
Health care services[2]	**2,539**	2,496	2%
Health care products[3]	**2,423**	2,394	1%
Total	**4,962**	4,890	1%
Worldwide			
Health care services[2]	**13,264**	13,487	-2%
Health care products[3,5]	**3,283**	3,252	1%
Total	**16,547**	16,739	-1%

[1] On a comparable basis
[2] Sales from dialysis services and Care Coordination
[3] Sales from dialysis products such as dialysis machines, dialyzers, and related disposables and non-dialysis products
[4] International represents the business segments EMEA (Europe/Middle East/Africa), Asia-Pacific, and Latin America
[5] Including sales generated by corporate functions of €15 million in 2018 and €15 million in 2017

ACQUISITIONS/DIVESTITURES

In 2018, Fresenius Medical Care further expanded its clinical network.

With the announced acquisition of NxStage Medical, Inc., a provider of dialysis machines and other products for use in home dialysis and critical care, we intend to broaden the range of therapies. The transaction remains subject to regulatory approvals and other customary closing conditions. Fresenius Medical Care expects the closing of the transaction to occur in early 2019.

As of June 28, 2018, Fresenius Medical Care closed the announced divestiture of Sound Inpatient Physicians Holdings, LLC (Sound) to an investment consortium led by Summit Partners. The divestment of Sound is aligned with Fresenius Medical Care's goal of further sharpening the profile of the company's Care Coordination portfolio in the United States.

TREATMENT QUALITY

Again in 2018, physicians and clinical staff in our dialysis clinics offered patients the highest-quality treatment. Please see page 96 ff. of the Group Non-financial Report for further details on treatment quality.

Please refer to page 75 f. of the Group Management Report for the 2019 financial outlook of Fresenius Medical Care. For further information, please see Fresenius Medical Care's Annual Report 2018 or visit the website at www.freseniusmedicalcare.com.

FRESENIUS MEDICAL CARE BY REGION

	North America	Europe/ Middle East/ Africa	Latin America	Asia-Pacific	**Total 2018**	Change 2018/2017
Dialysis clinics (December 31)	2,529	776	229	394	**3,928**	5%
Dialysis patients (December 31)	204,107	65,061	32,687	31,476	**333,331**	4%
Treatments	30,843,876	9,731,941	5,080,020	4,371,742	**50,027,579**	4%

[1] Net income attributable to Fresenius Medical Care AG & Co. KGaA
[2] On a comparable basis

For a detailed reconciliation please refer to the tables on page 60.

FRESENIUS KABI. Our business grew across all regions and product segments in 2018. Organic sales growth of 7% and EBIT growth in constant currency of 2% significantly exceeded original expectations.

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 are also developing **biosimilars** with a focus on oncology and autoimmune diseases. 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 components, as well as in transfusion medicine.

BUSINESS DEVELOPMENT

Sales increased by 3% to €6,544 million in 2018. Organic sales growth was 7%. Negative currency translation effects (4%) were mainly related to the devaluation of the U.S. dollar, the Brazilian real, and the Argentinian peso against the euro.

In Europe, we achieved organic sales growth of 3% based on the good development of the clinical nutrition product segment. In North America, organic sales growth was 8%, driven by persisting IV drug shortages and new product launches. Fresenius Kabi also showed strong overall growth in the emerging markets. We achieved organic sales growth of 17% in Latin America. In Asia-Pacific we achieved organic sales growth of 12%.

SALES BY REGION

€ in millions	2018	2017	Change	Currency translation effects	% of total Fresenius Kabi sales
Europe	**2,248**	2,214	2%	-1%	34%
North America	**2,359**	2,290	3%	-5%	36%
Asia-Pacific	**1,300**	1,196	9%	-3%	20%
Latin America/Africa	**637**	658	-3%	-15%	10%
Total	**6,544**	6,358	3%	-4%	100%

ACQUISITIONS / INVESTMENTS

In the lawsuit by Akorn, Inc., a U.S.-based manufacturer and marketer of prescription and over-the-counter pharmaceutical products, against Fresenius for the consummation of the April 2017 merger agreement, the Supreme Court in the U.S. state of Delaware ruled in favor of Fresenius on December 7, 2018. As this is the highest Court in Delaware, no further appeal is possible (for further details please see page 67).

In the United States, we are expanding our plant in Melrose Park, near Chicago, into a state-of-the-art campus for the manufacture of intravenously administered drugs. The investment volume for this expansion amounts to approximately US$350 million. At our existing site in Wilson, North Carolina, we will invest approximately US$350 million in the construction of a new manufacturing facility.

Enteral nutrition products are Fresenius Kabi's fastest-growing product segment. Due to strong demand, we will create additional production capacities: last year, we started to expand our plant in Wuxi, China, to produce enteral nutrition products. Production is scheduled to start in 2019. We are also expanding our production capacities in Europe, where we will invest almost €100 million in our plant in Emmer-Compascuum, Netherlands.

Sales by **product segment** were as follows:

€ in millions	2018	2017	Organic sales growth
IV drugs	**2,735**	2,699	5%
Clinical nutrition	**1,796**	1,671	13%
Infusion therapy	**929**	903	7%
Medical devices/ Transfusion technology	**1,084**	1,085	4%
Total	**6,544**	6,358	7%

EBIT[1] rose by 5% to €1,305 million. Currency translation had a negative effect of 5%.

€ in millions	2018	2017	Change
Europe	**355**	351	1%
North America	**894**	853	5%
Asia-Pacific/ Latin America/Africa	**398**	373	7%
Administrative and corporate R & D expenses	**-508**	-400	27%
EBIT[1]	**1,139**	1,177	-3%
EBIT excl. biosimilars[1]	**1,305**	1,237	5%
EBIT margin excl. biosimilars[1]	**19.9%**	19.5%	
Net income[1,2]	**742**	702	6%

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

PRODUCT SEGMENTS

In the **generic IV drugs** segment, we have expanded our product portfolio to additional regional markets. There were more than 90 product launches of IV drugs worldwide. In the **biosimilars** segment, we took an important step in the future commercialization of our biosimilar products with the conclusion of a global settlement and license agreement with AbbVie for our biosimilar candidate of AbbVie's Humira®. Subject to regulatory approval, we will be able to market our biosimilar candidate in the United States from September 30, 2023. Fresenius Kabi expects to launch the product in Europe from the first half of 2019 onwards.

In **clinical nutrition**, we 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. In 2018, we launched our new product SmofKabiven extra Nitrogen, a three-chamber bag with a special protein-energy ratio, in Europe. We also introduced a new product line in enteral nutrition in the year under review: Fresubin 2kcal Savoury is a high-calorie, high-protein formula that we launched in Europe and Latin America.

In **infusion therapy,** we launched our isotonic sodium chloride solution in the freeflex bag in the United States.

In 2018, we continued to move forward with the internationalization of our product range and we introduced new products in our **medical devices/transfusion technology** business segment. For example, for our new Agilia SP PCA infusion pump and our new Amika+ nutrition pump we received CE marking and started launch activities worldwide.

Please refer to pages 75 f. of the Group Management Report for the 2019 financial outlook of Fresenius Kabi. For further information, please see Fresenius Kabi's website at www.fresenius-kabi.com.

[1] Before special items; before expenditures for further development of biosimilars business.

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

FRESENIUS HELIOS. The business development in 2018 was a mixed picture. While preparatory measures for expected regulatory requirements and a decline in the number of admissions weighed on business at Helios Germany, Helios Spain continued to show dynamic growth.

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[1] outpatient clinics, and 10[1] 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, 57 outpatient centers, and around 300 Occupational Risk Prevention (ORP) centers. Quirónsalud is Spain's largest private hospital operator with a comprehensive range of inpatient and outpatient medical care.

BUSINESS DEVELOPMENT

Fresenius Helios increased sales by 4% (6%[2]) to €8,993 million in 2018. Organic sales growth was 3%.

Sales of Helios Germany decreased by 2% (increased by 2%[2]) to €5,970 million. Organic sales growth was 2%. Sales are impacted by a decline in admissions, inter alia due to a trend towards outpatient treatments. In addition, vacancies among specialized nurses and doctors in some of our hospitals led to a decline in the number of cases. Measures to swiftly fill vacant positions have been intensified. In order to benefit from the trend towards outpatient treatments, Helios Germany is expanding outpatient services in a separate division. In addition, a new business segment was established to develop attractive innovative business models and exploit resulting growth opportunities.

Helios Spain increased sales by 17% to €3,023 million. Quirónsalud has been consolidated since February 1, 2017. Organic sales growth was 6%.

EBIT of Fresenius Helios remained on the previous year's level at €1,052 million (increased by 3%[2]). The EBIT margin was 11.7%. EBIT of Helios Germany decreased by 14% (-10%[2]) to €625 million with a margin of 10.5%. Given a significant fixed-cost base, top-line performance impacts EBIT over-proportionately. Additionally, EBIT development of Helios Germany is negatively affected by DRG catalogue effects, preparatory initiatives for expected regulatory requirements (e. g., clustering), and a lack of privatization opportunities in the German market. An unexpectedly high fluctuation rate

SALES AND EARNINGS DEVELOPMENT

€ in millions	2018	2017	Change
Sales	**8,993**	8,668	4%
Helios Germany	**5,970**	6,074	-2%
Helios Spain	**3,023**	2,594	17%
EBIT	**1,052**	1,052	0%
Helios Germany	**625**	725	-14%
Helios Spain	**413**	327	26%
EBIT margin in %	**11.7**	12.1	
Helios Germany	**10.5**	11.9	
Helios Spain	**13.7**	12.6	
Net income[1]	**686**	728	-6%

2017: 11 months' contribution of Helios Spain

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

[1] The year-on-year increase is mainly related to a changed reporting method. The figures now include locations instead of corporate entities.
[2] Adjusted for German post-acute care business transferred from Fresenius Helios to Fresenius Vamed

among doctors and the shortage of personnel in the field of nursing had an additional negative impact on earnings.

EBIT of Helios Spain increased by 26% to €413 million, mainly due to the strong operating performance and the additional month of consolidation compared to the prior-year period, with a margin of 13.7%.

TRANSFER OF POST-ACUTE CARE BUSINESS

On July 1, 2018, 38 health care facilities and 13 service companies in Germany specializing in inpatient rehabilitation and care were transferred from Fresenius Helios to Fresenius Vamed. Fresenius Helios will now focus even more strongly on the acute care hospital business and its continued internationalization. The strategic focus of Fresenius Helios will remain on its acute care hospitals, as well as the outpatient acute care – including preventative medicine – and outpatient post-acute care. The transaction had a total volume of €468 million.

ACQUISITIONS / NEW HOSPITAL BUILDINGS

In September 2018, Helios Spain opened a new hospital in Córdoba. The company now has six hospitals in Andalusia. Quirónsalud has invested €50 million in this new hospital.

In October 2018, it was announced that Helios Spain had entered the attractive private hospital market in Colombia with the acquisition of Clínica Medellín. Clínica Medellín operates two centrally located hospitals in Medellín, a major city of 2.5 million people. The two facilities have a total of about 185 beds. The total investment for Clínica Medellín is more than €50 million. Fresenius Helios expects the transaction to close in Q1 2019, pending antitrust and regulatory clearance.

	2018	2017	Change
Acute clinics Germany	**83**	88	-6%
Beds	**28,802**	29,438	-2%
Dwell time (days)	**5.9**	6.2	
Acute clinics Spain	**47**	45	4%
Beds	**7,019**	6,652	6%
Dwell time (days)	**4.2**	4.3	
Patient numbers Germany	**5,321,445**	5,324,164	0%
Patients treated in hospital	**1,218,199**	1,237,068	-2%
Patients treated as outpatients	**4,073,047**	4,028,503	1%
Patient numbers Spain	**13,318,066**	11,592,758	15%
Patients treated in hospital	**437,855**	353,307	24%
Patients treated as outpatients	**12,880,211**	11,239,451	15%

INVESTMENTS

In 2018, Fresenius Helios invested a total of €634 million (2017: €6,508 million). Of this, €60 million accounted for acquisitions. The main focus of investment in **Germany** was new construction and the modernization of hospitals in Duisburg, Dachau, Wiesbaden, and Wuppertal, among other locations.

In **Spain** we are investing around €40 million in the construction of a proton beam therapy center in Madrid. Scheduled for opening at the end of 2019, it will be the first facility of this type for treating cancer patients in Spain.

Further, we are investing around €30 million in a new hospital site in Torrejón, which is located just outside of Madrid. The opening of the new facility is planned for 2021.

ACT TO ENHANCE NURSE STAFFING LEVELS

The Act to Enhance Nurse Staffing Levels (PpSG) entered into force on January 1, 2019 in Germany. 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. In 2019, each additional nursing job caring for bedridden patients – compared to 2018 – will be fully reimbursed by health insurers. In addition, from 2019, a regulation setting a minimum limit for nursing will apply to hospitals in Germany for the following areas: geriatrics, intensive care, cardiology, and trauma surgery. This regulation is valid for one year and is intended as a provisional measure. From 2020, GKV[1] and DKG[2] will jointly set minimum limits for additional areas in hospitals as well.

Please refer to pages 75f. of the Group Management Report for the 2019 financial outlook of Fresenius Helios.
For further information on Fresenius Helios, please see www.helios-gesundheit.de (in German only) and www.quironsalud.es/en (in Spanish and English).

[1] Central Association of the Statutory Health Insurance Funds
[2] German Hospital Association

FRESENIUS VAMED. Our company developed very well in 2018 and achieved both its sales target and its earnings target, which had been increased in the course of the year. The acquisition of post-acute care facilities in Germany strengthens our service business. A 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 31. Our offerings target different areas of health care, from prevention to acute care, rehabilitation, and nursing care. 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 more than 900 projects in about 90 countries.

BUSINESS DEVELOPMENT

In 2018, Fresenius Vamed increased sales by 37% to €1,688 million. Organic growth was 16%. Currency translation effects had no major impact on sales.

SALES BY REGION

€ in millions	2018	2017	Change	% of total Fresenius Vamed sales
Europe	**1,312**	889	48%	78%
Africa	**109**	92	18%	6%
Asia-Pacific	**221**	200	11%	13%
Latin America	**46**	47	-2%	3%
Total	**1,688**	1,228	37%	100%

The table shows the sales development by activity:

€ in millions	2018	2017	Change	% of total Fresenius Vamed sales
Project business	**712**	606	17%	42%
Service business	**976**	622	57%	58%

EBIT grew by 45% (9%[1]) to €110 million (2017: €76 million). The EBIT margin increased to 6.5% (2017: 6.2%). EBIT in the project business increased by 11% to €30 million. In the service business, EBIT grew by 63% to €80 million. Net income[2] improved to €72 million (2017: €50 million).

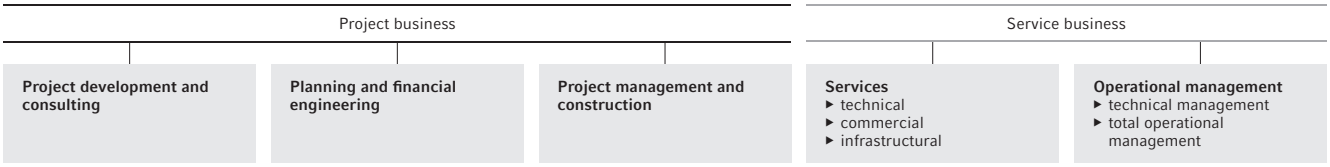
PROJECT BUSINESS

VAMED's project business comprises the consulting, 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 25 implemented projects, VAMED is a pioneer in public-private partnership (PPP) projects.

In **Europe,** VAMED has continued its positive development. Among other things, we moved forward with construction and modernization of the University Hospital Schleswig-Holstein (UKSH), the largest PPP project in the German health care sector. The handover of the new buildings at the two locations in Kiel and Lübeck is planned for the second half of 2019. We were commissioned with the turnkey construction of a research facility in Potsdam. In Austria and Switzerland,

[1] Adjusted for German post-acute care business transferred from Fresenius Helios to Fresenius Vamed
[2] Net income attributable to VAMED AG

VAMED VALUE CHAIN



we received orders to expand rehabilitation clinics. In Bosnia-Herzegovina, we completed the new clinic center in Banja Luka, the largest health care facility in the region. We are also supporting other projects, including in the Netherlands, Poland, Switzerland, and Italy.

We have also obtained important contracts in **Africa,** including the turnkey construction of general hospitals in Angola. In the **Asia-Pacific** region, new orders were received from Indonesia, Mongolia, Sri Lanka, and Vietnam. In the **Middle East,** we received an order to supply medical technology to Oman. In Abu Dhabi, the construction of an integrated health care center is progressing. In **Latin America,** VAMED is responsible for new projects in Nicaragua, Bolivia, and Trinidad and Tobago.

ORDER INTAKE AND ORDER BACKLOG FOR PROJECTS

€ in millions	2018	2017	Change
Order intake	**1,227**	1,096	12%
Order backlog (December 31)	**2,420**	2,147	13%

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.

We were responsible for the total operational management of 100 health care facilities with approximately 18,000 beds in 2018. In addition, as part of its technical operation services, VAMED provides services globally to more than 840 health care facilities with approximately 193,000 beds. Acquisitions in Germany and the United Kingdom have strengthened the high-end services segment.

In **Austria,** we continued the partnership we have maintained since 1986 with Vienna's General Hospital (AKH), one of Europe's largest hospitals. In **Germany,** we have been providing technical services for UKSH since mid-2015. In addition to Germany and Austria, we have obtained new service contracts in important European markets such as **Austria, Italy,** the **Netherlands,** the **United Kingdom,** and **Spain.**

On July 1, 2018, VAMED acquired from Fresenius Helios 38 health care facilities and 13 service companies in Germany with a focus on inpatient rehabilitation and care. This acquisition makes VAMED a leading provider of private rehabilitation services in Europe. We are the largest private provider in Austria and have expanded our offer to include a children's rehabilitation facility. In **Switzerland**, we strengthened our position as 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 operate Hungary's largest thermal and health care spa, the Aqua World Budapest.

Please refer to pages 75 f. of the Group Management Report for the 2019 financial outlook. For further information, please see Fresenius Vamed's website at www.vamed.com.

FRESENIUS SHARE. We propose the 26th consecutive dividend increase. The financial markets are currently in a highly sensitive phase. In this market environment, the Group's outlook for 2018 and the adjustment of the medium-term targets have significantly impacted the Fresenius share price.

STOCK MARKETS AND DEVELOPMENT OF THE FRESENIUS SHARE

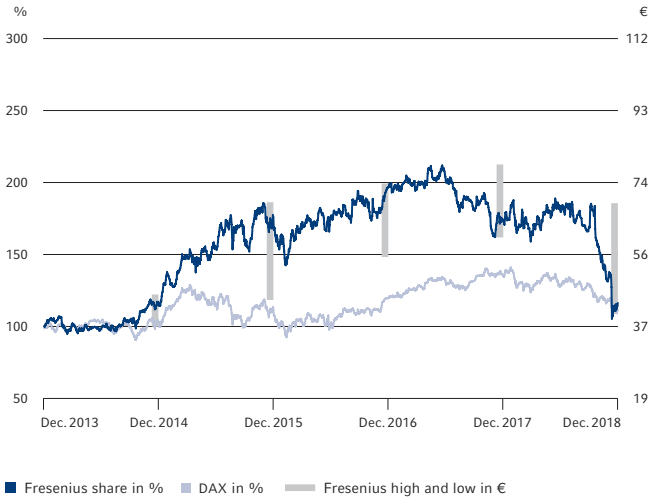
In 2018, the weak stock market year was marked by nervousness and uncertainty among investors. The trade conflict between China and the United States, the Brexit negotiations, the sharp rise in interest rates, especially in the United States, and concerns about Italy's budget were the dominant issues in 2018.

The **DAX** decreased by 18%; the **EURO STOXX 50** lost 14% for the year. The **STOXX Europe 600** index ended the year down by 13%. In this index, the subsector STOXX Europe 600 Health Care decreased by 3%. The leading U.S. indices performed as follows: the **S & P 500** and the **Dow Jones Industrial Average** both decreased by 6%.

The closing price for the Fresenius share on December 31, 2018, was €42.38 and thus 35% below the closing price of 2017.

The **market capitalization** of Fresenius was €23.6 billion as of December 31, 2018, a decrease of 35% compared to the previous year. The average daily **trading volume on Xetra** increased by 42% to 1,648,837 Fresenius shares compared to the previous year (2017: 1,164,824). DAX trading volume increased by 14% in the same comparison time period.

RELATIVE SHARE PRICE PERFORMANCE 2014 – 2018
FRESENIUS SHARE VS. DAX



ABSOLUTE SHARE PRICE PERFORMANCE 2018
FRESENIUS SHARE IN €

Despite the share price decline in 2018, Fresenius shares remain an attractive investment. Anyone who invested €1,000 ten years ago and reinvested the dividends would have increased their capital to €3,938 as of December 31, 2018. That is an average annual return of 13% (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 2018 was 556,225,154 (December 31, 2017: 554,710,473 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 250 to 258 of the Notes to this Annual Report.

KEY DATA OF THE FRESENIUS SHARE

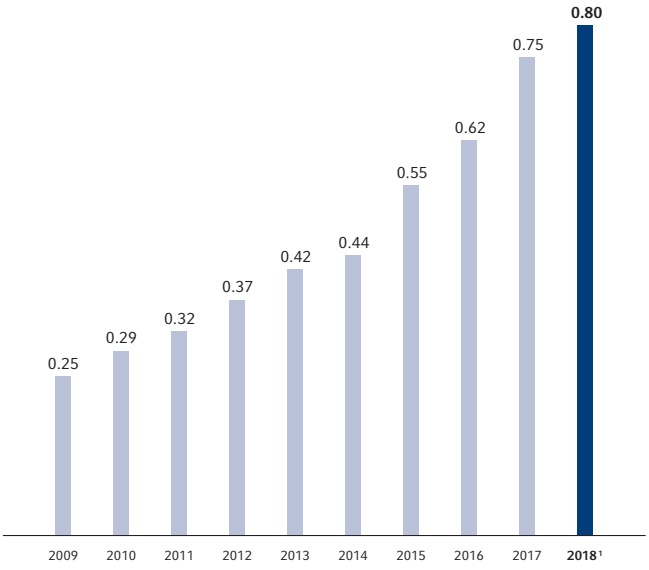
	2018	2017	2016	2015	2014
Number of shares	**556,225,154**	554,710,473	547,208,371	545,727,950	541,532,600
Stock exchange quotation[1] in €					
High	**70.94**	79.65	74.26	69.75	44.12
Low	**38.99**	60.58	53.05	42.41	35.00
Year-end quotation	**42.38**	65.07	74.26	65.97	43.16
Market capitalization[2] in million €	**23,573**	36,095	40,636	36,002	23,373
Total dividend distribution in million €	**445.0**[3]	416.0	343.1	300.2	238.3
Dividend per share in €	**0.80**[3]	0.75	0.62	0.55	0.44
Earnings per share in €[4]	**3.37**	3.28	2.85	2.64	2.01

[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

DIVIDEND

In 2018, Fresenius again delivered solid financial results. For the **26th consecutive year**, we are proposing to our shareholders to increase the dividend – by 7% per share, to €0.80 (2017: €0.75). The proposed dividend distribution to the shareholders of Fresenius SE & Co. KGaA will be €445 million, equivalent to 24% of Group net income. Based on the proposed dividend and the closing price at the end of 2018, the dividend yield is 1.9%.

DEVELOPMENT OF DIVIDENDS IN €



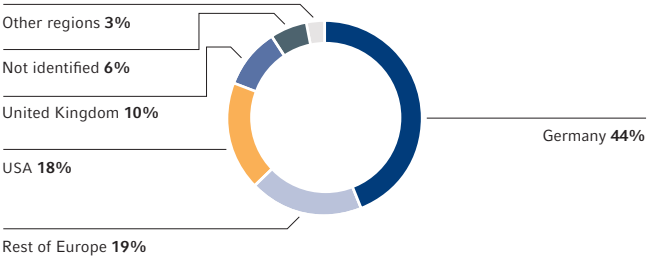
¹ Proposal

SHAREHOLDER STRUCTURE

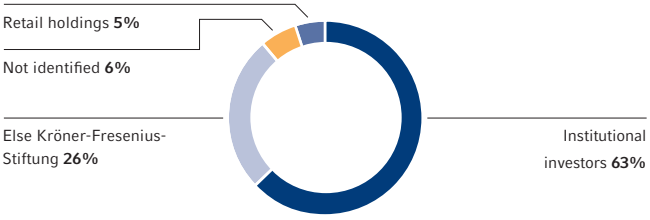
The charts below show the shareholder structure at the end of 2018. The Else Kröner-Fresenius-Stiftung was the largest shareholder of Fresenius SE & Co. KGaA, with 26.3% of the shares. According to notifications pursuant to the German Securities Trading Act (WpHG), Allianz Global Investors GmbH and BlackRock, Inc. held about 5% of the shares, each. For further information on notifications, please visit www.fresenius.com/shareholder-structure.

As of December 31, 2018, a **shareholder survey** identified the ownership of about 94% of our subscribed capital. The shareholder base of Fresenius is solid: a total of approximately 620 institutional investors held about 350 million shares or 63% of the subscribed capital; 28.8 million shares were identified as retail holdings. The **10 largest investors** held about 22% of the share capital. Our shares were mostly held by investors in Germany, the United States, and the United Kingdom.

SHAREHOLDER STRUCTURE BY REGION



SHAREHOLDER STRUCTURE BY INVESTORS

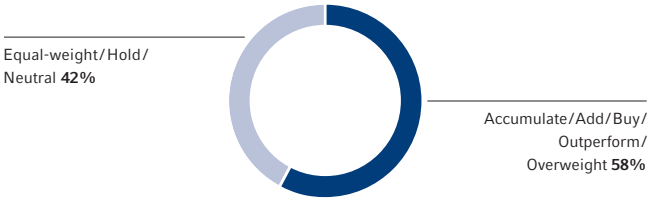


ANALYST RECOMMENDATIONS

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 12, 2019, we were rated with 11 "buy", 8 "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.

ANALYST RECOMMENDATIONS



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 intensified our **dialog with the capital markets** in 2018. 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 21 international investor conferences, 26 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 as the best in the MedTech sector in Europe.

In addition, "Institutional Investor" honored Fresenius for the best investor relations work in the health care sector in Europe. Furthermore, the management and investor relations team received the "Investor Darling" award for the best financial communication of DAX companies from "Manager Magazin".

We also continued the dialog with our **private investors**, especially via the Internet. In addition, 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 use our continuously increased information offer on our website and social media channels.

If you would like to contact us or find out about our 2019 financial calendar, please take a look at the last page of this Annual Report. For additional information visit us at www.fresenius.com/investors.

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GROUP MANAGEMENT REPORT. The advantages of our diversified Group structure were clearly evident in fiscal year 2018. We achieved our Group sales and earnings targets for fiscal year 2018.

FUNDAMENTAL INFORMATION ABOUT THE GROUP

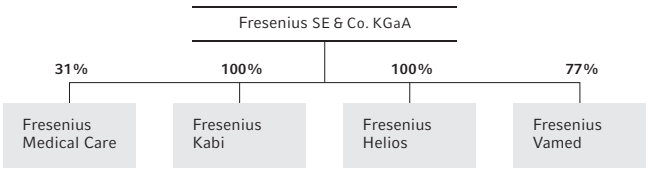
THE GROUP'S BUSINESS MODEL

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.

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, 2018, Fresenius Medical Care treated 333,331 patients at 3,928 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 is developing 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); both are part of the holding company Helios Health. At the end of 2018, Helios Germany operated a total of 86 hospitals, around 125 outpatient clinics, and 10 prevention centers. Quirónsalud operated 47 hospitals, 57 outpatient centers, and around 300 occupational risk prevention centers at the end of 2018.
- **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.

GROUP STRUCTURE



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. Production plants are also located in other European countries and in Latin America, Asia-Pacific, and South Africa.

IMPORTANT MARKETS AND COMPETITIVE POSITION

Fresenius operates in about 90 countries through its subsidiaries. The **main markets** are Europe with 43% and North America with 42% 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 35%. **Fresenius Kabi** holds leading market positions in Europe for large parts of its product portfolio 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 50 f. **Fresenius Helios** is Europe's leading private hospital operator. The company comprises Helios Germany, the country's largest private hospital operator, and Helios Spain, Spain's largest private hospital operator. **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 2018. 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. Preparatory measures for upcoming regulatory changes in the German hospital business already had a negative impact on earnings in the 2018 fiscal year. For detailed information on our markets, please see pages 49 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 2018, the average annual exchange rate between the U.S. dollar and the euro of 1.18 was above the 2017 rate of 1.13, and therefore had a negative 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 2018 fiscal year. As a result of exchange rate changes (from 1.20 U.S. dollars on December 31, 2017, to 1.15 U.S. dollars on December 31, 2018), the balance sheet total increased by 7% (increased by 5% in constant currencies).

In 2018, 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 and an ongoing internal compliance review at Fresenius Medical Care can be found on pages 225 to 234 of the Notes.

We carefully monitor and evaluate country-specific, political, legal, and financial conditions. This applies in particular 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 withdrawal. 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 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 271 of this Annual Report. The Company's annual corporate governance declaration describes the procedures of the Supervisory Board's committees on page 135 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 146 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 556,225,154 ordinary shares as of December 31, 2018 (December 31, 2017: 554,710,473).

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)**. Shareholders' pre-emptive rights 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 €5,141,264.00 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 €24,928,200.00 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 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, 2018.

As the **largest shareholder**, Else Kröner-Fresenius-Stiftung, Bad Homburg, Germany, informed the Company on December 18, 2018, that it held 146,261,594 ordinary shares of Fresenius SE & Co. KGaA. This corresponds to an equity interest of 26.3% as of December 31, 2018.

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

Our goal is to strengthen the position of Fresenius as a leading global provider of products and therapies for critically and chronically ill people. With our four business segments, we are concentrating on a limited number of health care areas. As a result of this clear focus, we have developed unique competencies. We are following our long-term strategies consistently and are seizing our opportunities.

The key elements of the Fresenius Group's strategy and goals are to:

- **Expand market position and worldwide presence**: 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 focus on markets with strong growth rates.

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, as well as the focused range in Care Coordination. In this area, Fresenius Medical Care offers additional services for the holistic care of patients and meets the increasing demand with this model.

Fresenius Kabi is the market leader in infusion therapy and/or clinical nutrition in Europe and in the key markets in Asia-Pacific (including China) and Latin America. 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 growth markets and to launch existing products in the United States. 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.

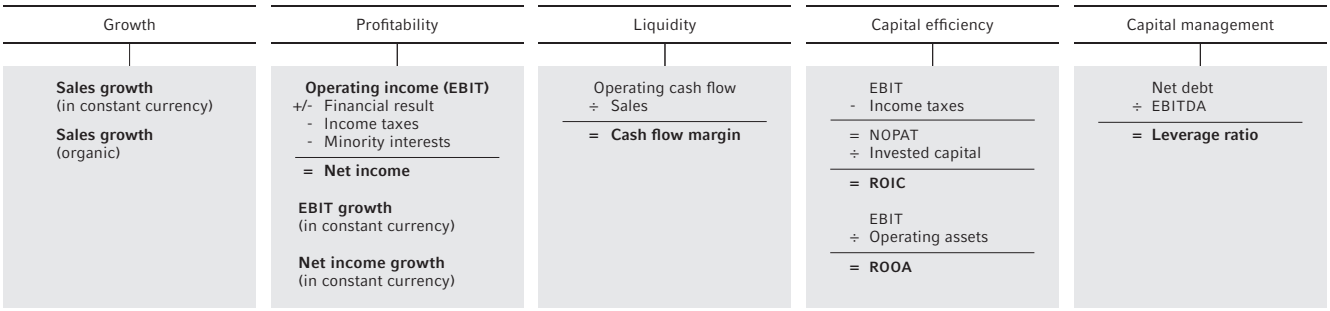
With 86 hospitals, Fresenius Helios operates in nearly all of Germany. Building on this, Fresenius Helios is now in the position to develop new patient care models. To benefit from the trend towards outpatient treatment, Helios Germany has been expanding outpatient service offerings in a separate division since September 2018.

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 Health 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. Helios Spain announced the acquisition of Clínica Medellín in 2018. Fresenius Helios is thus entering the attractive private hospital market in Colombia.

Fresenius Vamed will further expand its position as a global specialist for projects and services for hospitals and other health care facilities. With the acquisition of Fresenius Helios' German inpatient rehabilitation business, Fresenius Vamed developed itself into one of the leading providers of private rehabilitation services in Europe. Moreover, the cooperation with Fresenius Helios is being intensified, for example in technical services and procurement, where Fresenius Helios and Fresenius Vamed are now jointly purchasing certain products.

- **Strengthen innovation**: Fresenius' strategy is to continue building on its strength in technology, its competence and quality in patient care, and its ability to manufacture cost-effectively. We want to develop products and systems that provide a high level of safety and user-friendliness and enable tailoring to individual patient needs. We intend to continue to meet our requirements of best-in-class medical standards by offering more effective products and treatment methods for the critically and chronically ill. Fresenius Kabi, for example, develops imitation products of biotechnologically produced drugs called biopharmaceuticals, with a focus on oncology and autoimmune diseases. 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. Since September 2018, Helios Germany has been developing innovative business areas such as digital offerings in its own division. Fresenius Vamed's goal is to realize further projects in integrated health care services and to support patient-oriented health care systems more efficiently.
- **Enhance profitability**: Our goal is to continue to improve Group profitability. To contain costs, we are concentrating particularly 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. 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

FINANCIAL PERFORMANCE INDICATORS



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 2.5 to 3.0 (before adoption of IFRS 16). Please see the following section "Corporate Performance Criteria", and pages 54 and 68, for more details.

We report on our goals in detail in the Outlook section on pages 70 to 76.

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 276 to 278.

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. The Group is therefore able to use debt to finance its growth to a greater extent than companies in other industries.

[1] Does not reflect a core performance indicator
[2] For a detailed calculation of ROIC and ROOA please see page 277

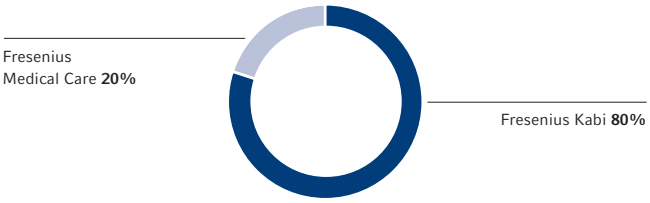
INVESTMENT AND ACQUISITION PROCESS

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 investment object 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:

R & D EXPENSES BY SEGMENT [1]



2018: €669 million

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

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

Research and development **expenses** [1] were €669 million (2017: €558 million), approximately 6.9% of our product sales (2017: 5.9%). Research services provided by third parties are mainly used by Fresenius Kabi, especially in the field of biosimilars. Fresenius Kabi increased its R & D spending by 25% [1], Fresenius Medical Care increased its R & D spending by 2%. Detailed figures are included in the segment reporting on pages 170 f.

As of December 31, 2018, there were 3,042 employees in research and development (2017: 2,772). Of that number, 970 were employed at Fresenius Medical Care (2017: 848) and 2,072 at Fresenius Kabi (2017: 1,924).

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

KEY FIGURES RESEARCH AND DEVELOPMENT

	2018	2017	2016	2015	2014
R & D expenses, € in millions [1]	**669**	558	528	450	364
as % of product sales [1, 2]	**6.9**	5.9	5.6	5.2	4.7
R & D employees	**3,042**	2,772	2,770	2,247	2,107

[1] 2018 before revaluations of biosimilars contingent liabilities
[2] 2014 – 2016, 2018 excluding impairment losses from capitalized in-process R & D activities

[1] Before revaluations of biosimilars contingent liabilities

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 renowned 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 leading 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**. This work is being conducted in our own development center in China and at other locations.

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 more and more patients 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 2018, we had approximately 90 active projects in the area of generics. We focus, among other items, 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, which helps improve patient care.

In the **biosimilars business,** we have a pipeline of molecules at different stages of development. A biosimilar is biological medicine highly similar to another already approved biological medicine (which is called "reference product"). The aim of our development activities is to obtain marketing approval for the biosimilars contained in our development portfolio. The development of a biosimilar is different from 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 product. The focus is instead on reproduc-

[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.

ibility of the product quality of the reference product. At the end of 2017, we submitted our first application for approval of a biosimilar product to the European regulatory authority, the biosimilar version of MSB11022 (Adalimumab[1]), which can be used for chronic inflammatory diseases such as rheumatoid arthritis, intestinal diseases, and psoriasis (skin disease). We plan to launch Adalimumab in Europe in 2019. In 2018, we reached a milestone on the way to the approval of another biosimilar. MSB 11455, a biosimilar candidate for Neulasta® (Pegfilgrastim[2]), has achieved its primary endpoints in the two pivotal clinical studies. Pegfilgrastim stimulates the formation of white blood cells (leukocytes) in certain cancer treatments. MSB11456, a biosimilar candidate of Tocilizumab, which is used in chronic inflammatory diseases such as rheumatoid arthritis, is already 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 with serious or chronic illnesses or malnourishment. Early and correct intervention can help patients avoid malnutrition and its consequences.

In **parenteral nutrition**, we devote our efforts to products that make a significant contribution to improving clinical treatment and the nutritional condition of patients and to innovative containers such as our multi-chamber bags that are safe and convenient in everyday use. In 2018, we continued the development of parenteral formulations. We are concentrating on formulations that are tailored to the needs of individual patient groups. During 2018, we completed the decentralized approval procedure in 28 European countries for our new multi-chamber bag SmofKabiven Low Osmo for parenteral nutrition. With that, we are expanding our range of SmofKabiven three-chamber bags with a further product that enables parenteral nutrition for patients with higher energy requirements and at the same time a well-tolerated composition for peripheral application.

In addition, we received approval exclusively for the U.S. market in a new indication for Omegaven, a 10% fish-oil-based lipid emulsion. This approval has been issued as an orphan drug. Omegaven (fish oil triglycerides) injectable emulsion is indicated as a source of calories and fatty acids in pediatric patients with parenteral nutrition-associated cholestasis (PNAC). Our research and development work also includes the development of market-specific parenteral formulations. In 2018, we worked on products for the United States, South Korea, and China, among other markets, as well as the further internationalization of our product range.

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. These include, for example, developing products with a wide variety of flavors to offer patients a wide choice of daily treatments, as well as products with a higher concentration of nutrients to facilitate the intake of the necessary amount of nutrients. We are also working on products that best meet the needs of specific patient groups.

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 of hospital staff. 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.

In our work in **medical devices/transfusion technology,** 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 2018, for example, we received the CE mark for our Vigilant Master Med software and subsequently launched it in Europe. This drug library software offers a capacity of up to 10,000 drugs and up to 30 therapies per drug and can be connected to our Agilia infusion pump in hospitals, among other things. Vigilant Master Med helps to reduce dosage errors in the daily medical routine.

[1] MSB 11022 is developed as a biosimilar for Humira® and has not yet been approved by the relevant health authorities. Humira® (Adalimumab) is a registered trademark of AbbVie Biotechnology Ltd.
[2] MSB 11455 is developed as a biosimilar for Neulasta® and has not yet been approved by the relevant health authorities. Neulasta® (Pegfilgrastim) is a registered trademark of Amgen Inc.

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.

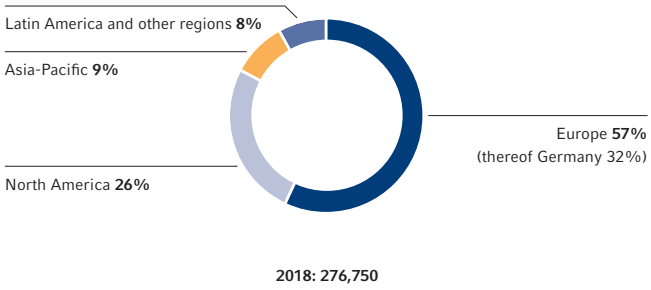
The **number of employees** increased by 1% to 276,750 employees at the end of 2018. With the transfer of Fresenius Helios' post-acute care business in Germany to Fresenius Vamed, approximately 7,600 employees were taken over by Fresenius Vamed.

Personnel expenses for the Fresenius Group were €13,426 million in 2018 (2017: €13,496 million), equivalent to 40.0% of sales (2017: 39.8%). Personnel expenses are on the previous year's level. Personnel expenses per employee were at €48.6 thousand (2017: €50.1 thousand) and at €50.0 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 2018.

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** and a long-term account for long-term professional planning.

EMPLOYEES BY REGION



2018: 276,750

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 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 are the only thing that matters in the selection of personnel. Consequently, at Fresenius women and men with comparable qualifications will continue to have the same career opportunities. As of December 31, 2018, the proportion of female employees within the Fresenius Group was 68%. Women also held 30% of senior manage-

NUMBER OF EMPLOYEES

	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2016	Change 2018/2017	% of total as of Dec. 31, 2018
Fresenius Medical Care	**120,328**	121,245	116,120	-1%	44%
Fresenius Kabi	**37,843**	36,380	34,917	4%	14%
Fresenius Helios	**100,144**	105,927	72,687	-5%	36%
Fresenius Vamed	**17,299**	8,667	8,198	100%	6%
Corporate/Other	**1,136**	1,030	951	10%	0%
Total	**276,750**	273,249	232,873	1%	100%

PERSONNEL EXPENDITURE

€ in millions	2018	2017	2016
Fresenius Medical Care	**6,440**	6,898	6,291
Fresenius Kabi	**1,506**	1,443	1,372
Fresenius Helios	**4,815**	4,672	3,528
Fresenius Vamed	**545**	358	339
Corporate/Others	**120**	125	113
Total	**13,426**	13,496	11,643

ment 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 289f of the German Commercial Code (HGB) on our website, see www.fresenius.com/corporate-governance, as well as on page 144 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 113 ff. of our Annual Report.

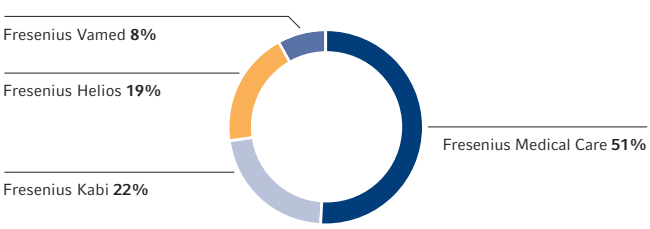
PROCUREMENT

In 2018, the cost of raw materials and supplies and of purchased components and services was €9,366 million (2017: €9,032 million) and increased by 4% due to business expansion.

€ in millions	2018	2017
Cost of raw materials and supplies	**7,899**	7,766
Write-downs of raw materials, supplies, and purchased components	**0**	0
Cost of purchased components and services	**1,467**	1,266
Total	**9,366**	9,032

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.

COST OF MATERIAL BY BUSINESS SEGMENT [1]



2018: €9,366 million

[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 pages 82 f. as well as our Group Non-financial Report on pages 96 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 121 ff. of our Annual Report.

ECONOMIC REPORT

HEALTH CARE INDUSTRY

The health care sector is one of the world's largest industries and 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
- 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
- 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 8.9% of GDP in the OECD countries in 2017, with an average of US$4,003 spent per capita.

As in previous years, the United States had the highest per capita spending (US$9,892). Germany ranked fifth among the OECD countries with per capita spending of US$5,551.

In Germany, 85% of **health spending** was funded by public sources in 2017, 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 2016, average life expectancy in the OECD countries was 80.8 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 %	2017	2010	2000	1990	1980	1970
USA	17.2	16.4	12.5	11.3	8.2	6.2
France	11.5	11.2	9.5	8.0	6.7	5.2
Germany	11.3	11.0	9.8	8.0	8.1	5.7
Switzerland	12.3	10.7	9.8	7.9	6.6	4.9
Spain	8.8	9.0	6.8	6.1	5.0	3.1
China	5.4	4.4	4.5	-	-	-

Source: OECD Health Data 2018

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

THE DIALYSIS MARKET

In 2018, the global **dialysis market** (products and services) was worth approximately €71 billion. In constant currency, the global dialysis market grew by 4%.

Worldwide, approximately 4.1 million **patients with chronic renal failure** were treated in 2018. Of these patients, around 3.4 million received dialysis treatments and about 786,000 were living with a transplanted kidney. About 89% were treated with hemodialysis and 11% with peritoneal dialysis.

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 2018. In the United States, Japan, and Western and 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 2018, the global **dialysis care market** (including renal pharmaceuticals) was worth approximately €58 billion.

10% of worldwide dialysis patients were treated by Fresenius Medical Care. With 3,928 dialysis clinics and 333,331 dialysis patients in approximately 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 2018. 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 2018, the global **dialysis products market** was worth approximately €13 billion.

Fresenius Medical Care is the leading provider of dialysis products in the world, with a **market share** of about 35%.

Fresenius Medical Care is the leading supplier worldwide of hemodialysis products, with a market share of 39%, and has a market share of approximately 17% in the worldwide market of products for peritoneal dialysis.

Care Coordination

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

Chronic diseases such as diabetes or cardiovascular diseases are steadily increasing. Nearly two-thirds of all people worldwide die of those diseases. In many countries, the majority of the health expenditure is spent on the treatment of chronic diseases. To counteract the increasing cost pressure that results from this, 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 a 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 expansion 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 €86 billion in 2018.

Thereof, the global **market for generic IV drugs** was worth about €33 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, among others, in the area of complex formulations, liposomal solutions, and pre-filled syringes.

In Europe and the United States, the market for IV drugs grew by 4%. Growth is mainly achieved through products that are brought to market when the original drug goes off-patent, as well as through 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, and Teva Pharmaceutical Industries.

In 2017, Fresenius Kabi successfully completed the acquisition of the biosimilar business of Merck KGaA. The transaction comprised the complete product pipeline, focusing on oncology and autoimmune diseases. The relevant **market for the original biopharmaceuticals** is worth about €32 billion.

In 2018, the global **market for clinical nutrition** was worth about €8 billion. In Europe, the market grew by about 3%. 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 6% to 8% 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, and Shanxi Pude Pharmaceuticals. In the market for enteral nutrition, Fresenius Kabi competes with, among others, Danone, Nestlé, and Abbott.

In 2018, Fresenius Kabi considers its global **market for infusion therapy** to have been worth about €6 billion. The global market for infusion therapies grew by around 6%. 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. Competitors include B. Braun and Baxter.

In 2018, the global **market for medical devices/transfusion technology** was worth more than €6 billion, including approximately €4 billion for medical devices and about €2 billion for transfusion technology. The market grew by approximately 4%. In the medical devices market, the main growth drivers are IT-based solutions that focus on application safety and therapy efficiency. In the transfusion technology market, growth is driven by generally increased demand for blood products in emerging markets. 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. The areas of plasma collection and therapeutic apheresis are also experiencing positive growth.

[1] Market data based on company research and refers to Fresenius Kabi's addressable 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. Market data for clinical nutrition refers to Fresenius Kabi's addressable markets, excluding Japan.

[2] Market definition adjusted as in prior year: among other items, sales volume of non-patented branded drugs is included.

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 transfusion technology, Fresenius Kabi is one of the world's leading companies. Competitors include Haemonetics, Macopharma, and Terumo.

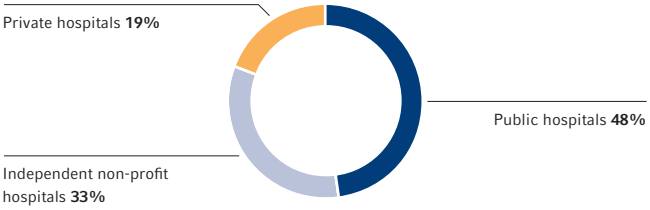
THE HOSPITAL MARKET [1]

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.

Although their economic situation has improved compared with previous years, almost a third (30%) of the German hospitals recorded losses in 2017. A further 11% broke even, and 59% were able to generate a profit for the year. 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 Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI) estimates that the annual investment requirement at German hospitals (excluding university hospitals) is at least €5.8 billion. This is about twice the funding for investment currently being provided by the federal states.

HOSPITAL BEDS BY OPERATOR



2017: 497,182

Source: German Federal Statistical Office 2017

Helios Germany is the country's leading hospital operator in terms of sales, with a share of about 5.4% (2016: 5.5%) 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 2018 it was 2.97% (2017: 2.50%).

The **private Spanish hospital market volume** was about €14 billion [3] in 2017. 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.

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

[1] Most recent market data available: German Federal Statistical Office 2018; German Hospital Institute (DKI), Krankenhaus Barometer 2018; Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI), Krankenhaus Rating Report 2018
[2] The market is defined by total costs of the German acute care hospitals (gross), less academic research and teaching.
[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 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.

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 hospitals and other 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. By acquiring 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 is one of the world's leading companies in its market. The company has no **competitors** that cover its comprehensive portfolio of services across the entire life cycle worldwide. Competitors offer only parts of Fresenius Vamed's service portfolio. 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 2018. 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

The advantages of our diversified Group structure were clearly evident in fiscal year 2018. We achieved our Group sales and earnings targets for fiscal year 2018. Hence, the Management Board is of the opinion that the Fresenius Group's performance in 2018 was successful overall.

Fresenius Medical Care's sales on a comparable basis in constant currency increased by 4%[1] to €16,547 million. On an adjusted basis[2], net income attributable to shareholders of Fresenius Medical Care increased by 2% (4% in constant currency) to €1,185 million. On a comparable basis[2], net income increased by 11% (14% in constant currency) to €1,377 million.

Fresenius Kabi achieved organic sales growth of 7%. EBIT[3] decreased by 3% (increased by 2% in constant currency) to €1,139 million. EBIT[3] before expenses for the further development of the biosimilars business increased by 5% (increased by 10% in constant currency) to €1,305 million. Organic sales growth of Fresenius Helios was 3%. EBIT was on the previous year's level at €1,052 million (increased by 3%[4]). Fresenius Vamed achieved organic sales growth of 16%. EBIT grew by 45% (9%[4]) to €110 million.

[1] 2017 adjusted for IFRS 15 adoption and divestitures of Care Coordination activities
[2] Before special items and after adjustments
[3] Before special items
[4] Adjusted for German post-acute care business transferred from Fresenius Helios to Fresenius Vamed

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

COMPARISON OF THE ACTUAL BUSINESS RESULTS WITH THE FORECASTS

For 2018, we had assumed that strong demand for our products and services would continue. This proved to be the case.

The table below shows the guidance development for 2018 for the Group as well as for the business segments.

The financial developments at Fresenius Medical Care and Fresenius Helios, which were below our expectations, were only partially offset by the very good development at Fresenius Kabi. Hence, we narrowed the **Group sales and earnings growth guidance** to the low end of the respective ranges.

The guidance for the currency-adjusted **sales growth** was achieved by the Fresenius Group. At 6%[1], this was within the targeted range of 5% to 8%[1]. **Net income**[2,3] increased by 7% in constant currency and was likewise within the targeted range of 6% to 9%. Excluding expenditures for the further development of the biosimilars business, net income[2,3] increased by 11% in constant currency and was thus within the guided range of ~10% to 13% as well.

Fresenius invested €2,163 million in **property, plant and equipment** (2017: €1,828 million). At 6.5%, the investments in property, plant and equipment are above the prior-year level of 5.4% as percentage of sales.

Operating cash flow was €3,742 million (2017: €3,937 million). The cash flow margin was 11.2% (2017: 11.6%)

ACHIEVED GROUP TARGETS 2018

	Guidance 2018, published February 2018	Guidance adjustment/ concretization, published May 2018	Guidance adjustment/ concretization, published July 2018	Guidance adjustment/concretization, published October 2018	Achieved in 2018
Group					
Sales (growth, in constant currency)	5% – 8%[3]			confirmed (low end)	6%[3]
Net income[1] (growth, in constant currency)	6% – 9%[2]			confirmed (low end)	7%[2]
Net income[1] (growth, in constant currency) excluding biosimilars	~10% – 13%[2]			confirmed (low end)	11%[2]
Fresenius Medical Care					
Sales on a comparable basis (growth, in constant currency)	~8%	5% – 7%		2% – 3%	4%
Net income on a comparable basis[4] (growth, in constant currency)	13% – 15%			11% – 12%	14%
Net income adjusted[4] (growth, in constant currency)		7% – 9%		2% – 3%	4%
Fresenius Kabi					
Sales (growth, organic)	4% – 7%			confirmed (top end)	7%
EBIT[7] (growth, in constant currency)	-6% – -3%		-2 – 1%	1% – 3%	2%
EBIT[7] (growth, in constant currency) excluding biosimilars	~2% – 5%		~6 – 9%	~9% – 11%	10%
Fresenius Helios					
Sales[5] (growth, organic)	3% – 6%			confirmed (low end)	3%
EBIT (growth)	7% – 10%		5 – 8%[6]	0% – 2%[6]	0%[6]
Fresenius Vamed					
Sales (growth, organic)	5% – 10%			confirmed	16%
EBIT (growth)	5% – 10%		32 – 37%[6]	confirmed	45%[6]

[1] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[2] Before special items and after adjustments
[3] 2017 adjusted for IFRS 15 adoption and divestitures of Care Coordination activities
[4] Net income attributable to shareholders of Fresenius Medical Care AG & Co. KGaA
[5] Helios Spain contributes 11 months to organic growth
[6] After transfer of the German post-acute care business from Fresenius Helios to Fresenius Vamed
[7] Before special items

[1] 2017 adjusted for IFRS 15 adoption and divested Care Coordination activities
[2] Net income attributable to the shareholders of Fresenius SE & Co. KGaA
[3] Before special items and after adjustments

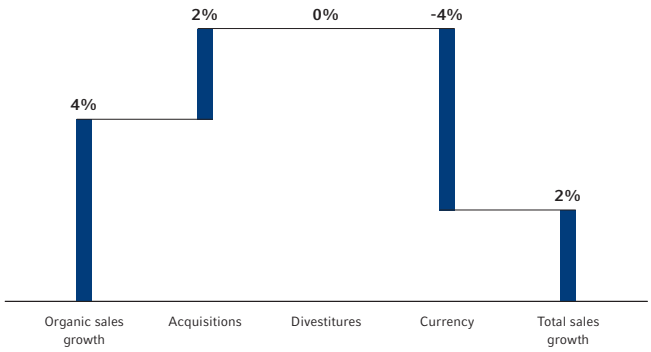
For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

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 2.71[1,2] (31 December 2017: 2.84[1,2]) and excluding divestitures of Care Coordination activities 2.91[1,2].

Group ROIC was 8.3%[2] (2017: 8.0%[2]), and Group ROOA was 9.0%[2] (2017: 9.4%[2]). The change is mainly driven by a lower EBIT due to currency translation effects and the R & D expenses for the biosimilars business. For the ROIC these effects were compensated by lower tax expenses due to the US tax reform.

SALES GROWTH ANALYSIS



RESULTS OF OPERATIONS, FINANCIAL POSITION, ASSETS AND LIABILITIES

RESULTS OF OPERATIONS

Sales

In 2018, we increased Group sales[3] by 6% in constant currency and by 2% at actual rates to €33,530 million (2017: €32,841 million). The chart on the right shows the various influences on Fresenius' Group sales.

In 2018, Fresenius Medical Care faced effects from the shift of calcimimetic drugs into the clinical environment and from lower sales with commercial payors. Sales of Fresenius Helios are impacted by a decline in admissions. The volume decline was offset by DRG price increases and better outcome from the negotiations with the payors. In addition to that, there were no major effects due to changes in **product mix** or changes in **prices** in 2018.

Negative currency translation effects of 4% were mainly driven by the devaluation of the U.S. dollar and the Argentinian peso against the euro.

Sales growth by region is shown in the table below.

Sales growth in the business segments was as follows:

- Sales of Fresenius Medical Care decreased by 7% (-2% in constant currency) to €16,547 million (2017: €17,784 million). Organic sales growth was 4%. Currency translation effects reduced sales by 5%. The adoption of IFRS 15 reduced sales by 3%. With the 2017 base additionally adjusted for divestitures of Care Coordination activities, sales decreased by 1% (increased by 4% in constant currency). Health Care services sales[3] (dialysis services and care coordination) decreased by 2% (increased by 4% in constant currency) to €13,264 million (2017: €13,487 million). With €3,283 million (2017: €3,252 million), Health Care product sales increased by 1% (5% in constant currency).
- Fresenius Kabi increased sales by 3% to €6,544 million (2017: €6,358 million). Sales growth was mainly driven by persisting IV drug shortages and new product launches in the United States. Moreover, Fresenius Kabi achieved strong sales growth in the emerging markets. Organic

SALES BY REGION

€ in millions	2018	2017	Change	Organic sales growth	Currency translation effects	Acquisitions/ divestitures	% of total sales[4]
North America	**13,861**	14,048[3]	-1%	3%	-4%	0%	42%
Europe	**14,484**	13,767	5%	3%	-1%	3%	43%
Asia-Pacific	**3,366**	3,182	6%	8%	-3%	1%	10%
Latin America	**1,387**	1,431	-3%	16%	-20%	1%	4%
Africa	**432**	413	5%	7%	-2%	0%	1%
Total	**33,530**	32,841[3]	2%	4%	-4%	2%	100%

[1] At average exchange rates for the last 12 months for both net debt and EBITDA
[2] Pro forma closed acquisitions/divestitures, excluding NxStage transaction; before special items
[3] 2017 adjusted for IFRS 15 adoption and divestitures of Care Coordination activities
[4] Based on contribution to consolidated sales

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

sales growth was 7%. Negative currency translation effects (4%) were mainly related to the devaluation of the U.S. dollar, the Argentinian peso, and the Brazilian real against the euro.

- Fresenius Helios increased sales by 4% (6%[1]) to €8,993 million (2017: €8,668 million). Organic sales growth was 3%. Sales of Helios Germany decreased by 2% (increased by 2%[1]) to €5,970 million (2017: €6,074 million). Sales were impacted by a decline in admissions, inter alia due to a trend towards outpatient treatments. To profit from this trend, Helios Germany is expanding outpatient services offerings in a separate division. In addition, vacancies among doctors and specialized nurses in some of our hospitals led to a decline in the number of cases. Measures to swiftly fill vacant positions were intensified. Helios Spain increased sales by 17% (organic growth: 6%) to €3,023 million, mainly due to the additional month of consolidation compared to the prior-year period and excellent operating performance.
- Fresenius Vamed increased sales by 37% (19%[1]) to €1,688 million (2017: €1,228 million). Sales in the project business increased by 17% to €712 million (2017: €606 million). Sales in the service business grew by 57% to €976 million (2017: €622 million). The increase in sales is due to a strong momentum in both the project and service businesses as well as increased sales from services for Fresenius Helios. The strong increase in the service business was mainly driven by the transfer of the German post-acute care business from Fresenius Helios to Fresenius Vamed effective July 1, 2018. **Order intake** in the project business again developed well; it increased to €1,227 million (2017: €1,096 million). Fresenius Vamed increased its **order backlog** by 13% to €2,420 million (December 31, 2017: €2,147 million). Fresenius Vamed is the only business segment within the Fresenius Group whose business is significantly influenced by order intake and order backlog.

Earnings structure

Group net income[2] after special items increased by 12% to €2,027 million (2017: €1,814 million). Growth in constant currency was 15%. **Earnings per share[2] after special items** increased to €3.65 (2017: €3.27). This represents an increase of 12% at actual rates and of 15% in constant currency. The weighted average number of shares was 555.5 million.

Group net income[2,3] before special items increased by 3% to €1,871 million (2017: €1,816 million). Growth in constant currency was 6%. **Earnings per share[2,3]** increased to €3.37 (2017: €3.28). This represents an increase of 3% at actual rates and of 6% in constant currency.

SALES BY BUSINESS SEGMENT

€ in millions	2018	2017	Change	Organic sales growth	Currency translation effects	Acquisitions/ Divestitures	% of total sales[5]
Fresenius Medical Care	**16,547**	16,739[4]	-1%	4%	-5%	0%	49%
Fresenius Kabi	**6,544**	6,358	3%	7%	-4%	0%	19%
Fresenius Helios	**8,993**	8,668	4%	3%	0%	1%	27%
Fresenius Vamed	**1,688**	1,228	37%	16%	-1%	22%	5%

ORDER INTAKE AND ORDER BACKLOG – FRESENIUS VAMED

€ in millions	2018	2017	2016	2015	2014
Order intake	**1,227**	1,096	1,017	904	840
Order backlog (December 31)	**2,420**	2,147	1,961	1,650	1,398

[1] Adjusted for German post-acute care business transferred from Fresenius Helios to Fresenius Vamed
[2] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[3] Before special items
[4] 2017 adjusted for IFRS 15 adoption and divestitures of Care Coordination activities
[5] Based on contribution to consolidated sales

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

Group net income[1,3] before special items and after adjustments increased by 4% (7% in constant currency) to €1,871 million (2017: €1,804 million). Earnings per share[1,3] increased by 3% (6% in constant currency) to €3.37 (2017: €3.26).

Group net income[1,3] before expenses for the further development of the biosimilars business increased by 8% to €1,991 million (2017: €1,847 million). Growth in constant currency was 11%. **Earnings per share[1,3] before expenses for the further development of the biosimilars business** increased to €3.58 (2017: €3.33). This represents an increase of 8% at actual rates and of 11% in constant currency.

With the exception of hyperinflation in Argentina, inflation did not have a significant impact on our results of operations.

Group EBITDA[3] decreased by 3% to €5,991 million (2017: €6,174 million). This corresponds to 0% in constant currency. **Group EBIT[3]** decreased by 4% to €4,561 million (2017: €4,746 million). This corresponds to a decrease of 1% in constant currency.

EBIT development by business segment was as follows:

- Fresenius Medical Care's EBIT increased by 29% (constant currency: 33%) to €3,038 million (2017: €2,362 million), mainly driven by the divestitures of Care Coordination activities. EBIT growth was also negatively impacted by the difficult economic situation in some emerging markets, including hyperinflation in Argentina. The EBIT margin increased to 18.4% (2017: 13.3%). EBIT on a comparable basis increased by 6% in constant currency and EBIT margin was 14.2% (2017: 13.6%).
- Fresenius Kabi's EBIT[2] decreased by 3% (increased by 2% in constant currency) to €1,139 million (2017: €1,177 million). The increase in constant currency was mainly driven by strong sales and earnings growth in the United States and in the emerging markets. The EBIT[2] margin was 17.4% (2017: 18.5%). Fresenius Kabi's EBIT[2] before expenses for the further development of the biosimilars business increased by 5% (10% in constant currency) to €1,305 million (2017: €1,237 million). The EBIT[2] margin was 19.9% (2017: 19.5%).
- The EBIT of Fresenius Helios remained on the previous year's level at €1,052 million (increased by 3%[4]). The EBIT margin was 11.7% (2017: 12.1%). EBIT of Helios Germany decreased by 14% (-10%[4]) to €625 million. The EBIT margin was 10.5% (2017: 11.9%). This was mainly due to the low sales growth and the transfer of the post-acute facilities to Fresenius Vamed. The significant fixed-cost base in the hospital business has a disproportionately strong operating leverage effect on EBIT as the market dynamics and sales development slow down. Furthermore, the development of Helios Germany is slowed by additional catalogue effects, preparatory structural measures for expected regulatory requirements (e. g., clustering), and a lack of privatization opportunities in the German market. An unexpectedly high fluctuation rate among doctors and the shortage of personnel in the field of nursing had an additional negative impact on earnings. EBIT of Helios Spain increased by 26% to €413 million (2017: €327 million), mainly due to the strong operating performance and the additional month of consolidation compared to the prior-year period, with a margin of 13.7% (2017: 12.6%).
- Fresenius Vamed increased EBIT by 45% (9%[4]) to €110 million (2017: €76 million). The EBIT margin increased to 6.5% (2017: 6.2%).

Development of other major items in the statement of income

Group gross profit decreased by 6% (-3% in constant currency) to €9,834 million (2017: €10,491 million). The gross margin increased to 29.3% (2017: 31.0%). The **cost of sales** increased by 1% to €23,696 million (2017: €23,395 million). Cost of sales as a percentage of Group sales increased to 70.7% in 2018, compared to 69.0% in 2017.

[1] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[2] Before special items
[3] Before special items and after adjustments
[4] Adjusted for German post-acute care business transferred from Fresenius Helios to Fresenius Vamed

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

Selling, general, and administrative expenses consisted primarily of personnel costs, marketing and distribution costs, and depreciation and amortization. These expenses decreased by 27% to €3,910 million (2017: €5,344 million). This change is mainly due to divestitures of Care Coordination activities. Their ratio as a percentage of Group sales decreased to 11.7% (2017: 15.8%). **R&D expenses** were €673 million (2017: €558 million). They increased by 21%, mainly due to the R&D expenses for the further development of the biosimilars business. **Depreciation and amortization** was €1,430 million (2017: €1,437 million). The ratio as a percentage of sales was 4.3% (2017: 4.2%). Group **personnel costs** decreased to €13,426 million (2017: €13,496 million). The personnel cost ratio was 40.0% (2017: 39.8%).

Group net interest improved to -€587 million (2017: -€667 million). The change is mainly driven by refinancings at lower rates, lower debt, currency effects as well as proceeds from the divestitures of Care Coordination activities at Fresenius Medical Care.

The decrease of the **Group tax rate** before special items to 22.0% (2017: 28.0%) was mainly due to the U.S. tax reform and some positive one-time effects at Fresenius Medical Care and Fresenius Kabi.

Noncontrolling interest increased to €1,687 million (2017: €1,219 million). Of this, 96% was attributable to the noncontrolling interest in Fresenius Medical Care.

The following table shows the profit margin development in 2018.

GROUP RETURN RATIOS

in %	**2018**[1]	2017[1]	2016	2015[1]	2014[1]
EBITDA margin	**17.9**	18.5	18.7	18.3	17.5
EBIT margin	**13.6**	14.3	14.6	14.3	13.5
Return on sales (before taxes and noncontrolling interest)	**11.9**	12.3	12.6	12.1	10.9

[1] Before special items

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

STATEMENT OF INCOME (SUMMARY)

€ in millions	**2018**	2017	Change	Change in constant currency
Sales	**33,530**	33,886	-1%	2%
Cost of goods sold	**-23,696**	-23,395	-1%	-5%
Gross profit	**9,834**	10,491	-6%	-3%
Selling, general, and administrative expenses	**-3,910**	-5,344	27%	24%
Research and development expenses	**-673**	-558	-21%	-23%
EBIT	**5,251**	4,589	14%	18%
Net interest	**-587**	-667	12%	10%
Income taxes	**-950**	-889	-7%	-11%
Noncontrolling interest in profit	**-1,687**	-1,219	-38%	-43%
Net income (before special items)[1]	**1,871**	1,816	3%	6%
Net income[1]	**2,027**	1,814	12%	15%
Earnings per ordinary share in € (before special items)[1]	**3.37**	3.28	3%	6%
Earnings per ordinary share in €[1]	**3.65**	3.27	12%	15%
EBITDA	**6,681**	6,026	11%	14%
Depreciation and amortization	**1,430**	1,437	0%	2%

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

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

RECONCILIATION FRESENIUS GROUP

€ in millions	2018	2017	Growth rate	Growth rate in constant currency
Sales reported	**33,530**	33,886	-1%	2%
Adjustments from IFRS 15	-	-486		
Divestitures of Care Coordination activities at Fresenius Medical Care (FMC) (H2/2017)	-	-559		
Sales basis for growth rates	**33,530**	32,841	2%	6%
EBIT reported (after special items)	**5,251**	4,589	14%	18%
Transaction Costs Akorn, biosimilars	**35**	41		
Revaluations of biosimilars contingent liabilities	**7**	-		
Impact of FCPA-related charge	**77**	200		
Gain related to divestitures of Care Coordination activities	**-809**	-		
EBIT (before special items)	**4,561**	4,830	-6%	-3%
Divestitures of Care Coordination activities at FMC (H2/2017)	-	-84		
EBIT basis for growth rates (before special items and after adjustments)	**4,561**	4,746	-4%	-1%
Expenditures for further development of biosimilars business	**166**	60		
EBIT basis for growth rates (before special items and after adjustments; excluding biosimilars)	**4,727**	4,806	-2%	1%
Net interest reported (after special items)	**-587**	-667	12%	10%
Bridge Financing Costs Akorn	**17**	15		
Net interest (before special items)	**-570**	-652	13%	10%
Divestitures of Care Coordination activities at FMC (H2/2017)	-	22		
Net interest (before special items and after adjustments)	**-570**	-630	10%	7%
Expenditures for further development of biosimilars business	**7**	2		
Net interest (before special items and after adjustments; excluding biosimilars)	**-563**	-628	10%	8%

Reconciliation to Group net income

Consolidated results for 2018 include special items related to the Akorn transaction. These are mainly transaction costs in the form of legal and consulting fees, as well as costs of the financing commitment for the Akorn transaction (transaction-related expenses). Moreover, special items arose from gains/losses of divestitures in Care Coordination and the impact of the FCPA-related charge at Fresenius Medical Care. Furthermore, special items from revaluations of biosimilars' contingent liabilities are included.

In order to compare the results with the scope of original guidance, key figures are additionally adjusted for expenditures for further development of the biosimilars business and divestitures of Care Coordination activities 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	2018	2017	Growth rate	Growth rate in constant currency
Income taxes reported (after special items)	**-950**	-889	-7%	-11%
Transaction Costs Akorn, biosimilars	**-10**	-9		
Bridge Financing Costs Akorn	**-5**	-4		
Revaluations of biosimilars contingent liabilities	**-2**	-		
FCPA-related charge	**-49**	-		
Gain related to divestitures of Care Coordination activities	**136**	-		
U.S. tax reform	**-**	-266		
Income taxes (before special items)	**-880**	-1,168	25%	22%
Divestitures of Care Coordination activities at FMC (H2/2017)	**-**	20		
Income taxes (before special items and after adjustments)	**-880**	-1,148	23%	21%
Expenditures for further development of biosimilars business	**-53**	-19		
Income taxes (before special items and after adjustments; excluding biosimilars)	**-933**	-1,167	20%	17%
Noncontrolling interest (after special items)	**-1,687**	-1,219	-38 %	-43%
FCPA-related charge	**-19**	-138		
Gain related to divestitures of Care Coordination activities	**466**	-		
U.S. tax reform	**-**	163		
Noncontrolling interest (before special items)	**-1,240**	-1,194	-4%	-7%
Divestitures of Care Coordination activities at FMC (H2/2017)	**-**	30		
Noncontrolling interest (before special items and after adjustments)	**-1,240**	-1,164	-7%	-10%
Net income reported (after special items)	**2,027**	1,814	12%	15%
Transaction Costs Akorn, biosimilars	**25**	32		
Bridge Financing Costs Akorn	**12**	11		
Revaluations of biosimilars contingent liabilities	**5**	-		
FCPA-related charge	**9**	62		
Gain related to divestitures of Care Coordination activities	**-207**	-		
U.S. tax reform	**-**	-103		
Net income (before special items)	**1,871**	1,816	3%	6%
Divestitures of Care Coordination activities at FMC (H2/2017)	**-**	-12		
Net income basis for growth rates (before special items and after adjustments)	**1,871**	1,804	4%	7%
Expenditures for further development of biosimilars business	**120**	43		
Net income basis for growth rates (before special items and after adjustments; excluding biosimilars)	**1,991**	1,847	8%	11%

RECONCILIATION BUSINESS SEGMENTS

Reconciliation according to Fresenius Medical Care

FRESENIUS MEDICAL CARE

€ in millions	2018	2017	Growth rate	Growth rate in constant currency
Sales reported	**16,547**	17,784	-7%	-2%
Effect from IFRS 15 implementation	-	-486		
Divestitures of Care Coordination activities (H2/2017)	-	-559		
Revenue on a comparable basis	**16,547**	16,739	-1%	4%
VA Agreement[1]	-	-94		
Sales adjusted	**16,547**	16,645	-1%	4%
EBIT reported	**3,038**	2,362	29%	33%
Gain related to divestitures of Care Coordination activities	**-809**	-		
Divestitures of Care Coordination activities (H2/2017)	-	-84		
2018 FCPA[2]-related charge	**77**	-		
U.S. ballot initiatives	**40**	-		
EBIT on a comparable basis	**2,346**	2,278	3%	6%
VA Agreement[1]	-	-87		
Natural disaster costs	-	18		
2017 FCPA[2]-related charge	-	200		
EBIT adjusted	**2,346**	2,409	-3%	1%
Net income reported	**1,982**	1,280	55%	60%
Gain related to divestitures of Care Coordination activities	**-673**	-		
Divestitures of Care Coordination activities (H2/2017)	-	-38		
2018 FCPA[2]-related charge	**28**	-		
U.S. ballot initiatives	**40**	-		
Net income on a comparable basis	**1,377**	1,242	11%	14%
VA Agreement[1]	-	-51		
Natural disaster costs	-	11		
2017 FCPA[2]-related charge	-	200		
U.S. tax reform (excl. impact of Divestitures of Care Coordination activities (H2/2017)	**-192**	-240		
Net income adjusted	**1,185**	1,162	2%	4%

[1] Effects from the agreement with the United States Departments of Veterans Affairs and Justice
[2] FCPA – Foreign Corrupt Practices Act

Reconciliation according to the Fresenius Group

FRESENIUS MEDICAL CARE

€ in millions	2018	2017	Growth rate	Growth rate in constant currency
EBIT reported (after special items)	**3,038**	2,362	29%	33%
Gain related to divestitures of Care Coordination activities	**-809**	-		
FCPA[1]-related charge	**77**	200		
EBIT (before special items)	**2,306**	2,562	-10%	-7%
Net income reported (after special items)	**1,982**	1,280	55%	60%
Gain related to divestitures of Care Coordination activities	**-673**	-		
FCPA[1]-related charge	**28**	200		
U.S. tax reform	-	-236		
Net income (before special items)	**1,337**	1,244	7%	10%

[1] FCPA – Foreign Corrupt Practices Act

RECONCILIATION BUSINESS SEGMENTS

FRESENIUS KABI

€ in millions	2018	2017	Growth rate	Growth rate in constant currency
Sales reported	**6,544**	6,358	3%	7%
Transaction Costs Akorn, biosimilars	**34**	41		
Revaluations of biosimilars contingent liabilities	**7**	-		
EBIT (before special items)	**1,139**	1,177	-3%	2%
Expenditure for further development of biosimilars business	**166**	60		
EBIT basis for growth rates (before special items; excluding biosimilars)	**1,305**	1,237	5%	10%
Transaction Costs Akorn, biosimilars	**24**	32		
Revaluations of biosimilars contingent liabilities	**5**	-		
Book gain from U.S. tax reform	**-**	-30		
Net income (before special items)	**742**	702	6%	12%
Expenditures for further development of biosimilars business	**120**	43		
Net income basis for growth rates (before special items; excluding biosimilars)	**862**	745	16%	21%

FRESENIUS HELIOS

€ in millions	2018	2017	Growth rate
Sales reported	**8,993**	8,668	4%
German post-acute care business transferred from Fresenius Helios to Fresenius Vamed	**230**	-	
Sales adjusted	**9,223**	8,668	6%
EBIT reported	**1,052**	1,052	0%
German post-acute care business transferred from Fresenius Helios to Fresenius Vamed	**27**	-	
EBIT adjusted	**1,079**	1,052	3%

FRESENIUS VAMED

€ in millions	2018	2017	Growth rate
Sales reported	**1,688**	1,228	37%
German post-acute care business transferred from Fresenius Helios to Fresenius Vamed	**-230**	-	
Sales adjusted	**1,458**	1,228	19%
EBIT reported	**110**	76	45%
German post-acute care business transferred from Fresenius Helios to Fresenius Vamed	**-27**	-	
EBIT adjusted	**83**	76	9%

FINANCIAL POSITION

Financial management policies and goals

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

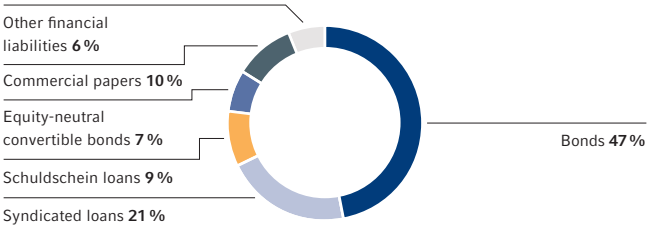
- Ensure financial flexibility
- Optimize the weighted average cost of capital

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.

FINANCING MIX OF THE FRESENIUS GROUP



Dec. 31, 2018: €18,984 million

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.

Due to the balanced maturity profile, **refinancing activities** were carried out only to a limited extent in 2018. In July 2018, Fresenius Medical Care AG & Co. KGaA issued a bond with a volume of €500 million and a tenor of seven years. The bond has a coupon of 1.5% and an issue price of 99.704%. It was issued under the Fresenius Medical Care European Medium Term Note (EMTN) program. In December 2018, Fresenius Medical Care increased its accounts receivable securitization program to US$900 million and extended it until December 2021.

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, 2018, €973 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, 2018, the Group had approximately €3.8 billion in unused credit lines available (including committed credit lines of about € 3.0 billion). These credit facilities are mainly available for general corporate purposes. They are generally unsecured.

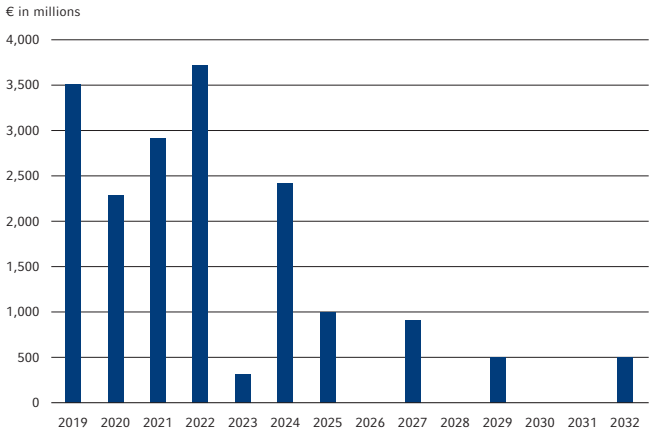
As of December 31, 2018, both Fresenius SE & Co. KGaA and Fresenius Medical Care AG & Co. KGaA, including all subsidiaries, complied with the covenants under their debt arrangements.

Detailed information on the Fresenius Group's financing can be found on pages 208 to 216 of the Notes. Further information on financing requirements in 2019 is included in the Outlook section on page 76.

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, 2018, major financing instruments

[2] Pro forma incl. newly issued Fresenius SE & Co. KGaA €500 million and €500 million bonds maturing in 2025 and 2029, excl. €300 million and €500 million bonds, maturing February and April 2019 and €200 million commercial papers

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 bank facilities. Additionally, Fresenius Medical Care can sell receivables under its accounts receivable securitization program. Mid- and long-term funding are mostly

FINANCIAL POSITION – FIVE-YEAR OVERVIEW

€ in millions	2018	2017	2016	2015	2014
Operating cash flow	**3,742**	3,937	3,585	3,349	2,560
as % of sales	**11.2**	11.6	12.2	12.0	10.9
Working capital [1]	**7,827**	7,771	6,998	6,091	5,451
as % of sales	**23.3**	22.9	23.7	21.8	23.2
Investments in property, plant and equipment, net	**2,077**	1,705	1,616	1,484	1,344
Cash flow before acquisitions and dividends	**1,665**	2,232	1,969	1,865	1,216
as % of sales	**5.0**	6.6	6.7	6.7	5.2

[1] Trade accounts receivable and inventories, less trade accounts payable and payments received on accounts

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 inflows from bond issuances, as well as the operating cash flows and additional sources of short-term funding, are sufficient to meet the Company's foreseeable liquidity needs.

The cash inflow of €1,531 million from the sale of Fresenius Medical Care's Care Coordination activities was primarily used to reduce financial liabilities. Therefore, there was an overall cash outflow from financing activities in 2018.

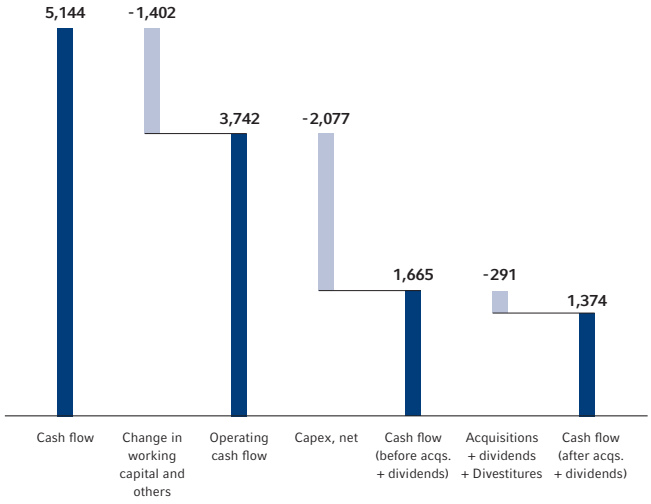
Dividend

The general partner and the Supervisory Board will propose a dividend increase to the Annual General Meeting. For 2018, a dividend of €0.80 per share is proposed (2017: €0.75 per share). This is an increase of about 7%. The total dividend distribution will also increase by about 7% to €445 million (2017: €416 million).

Cash flow analysis

Cash flow increased by 15% to €5,144 million (2017: €4,470 million). The change in working capital and others was -€1,402 million (2017: -€533 million), mainly due to business expansion. **Operating cash flow** decreased by 5% to €3,742 million (2017: €3,937 million). The decrease is mainly due to the following effects: Fresenius Medical Care received a ~€200

CASH FLOW IN € MILLIONS



CASH FLOW STATEMENT (SUMMARY)

€ in millions	2018	2017	Change	Margin
Net income	**3,714**	3,033	22%	
Depreciation and amortization	**1,430**	1,437	0%	
Change in working capital and others	**-1,402**	-533	-163%	
Operating cash flow	**3,742**	3,937	-5%	**11.2%**
Capital expenditure, net	**-2,077**	-1,705	-22%	
Cash flow before acquisitions and dividends	**1,665**	2,232	-25%	**5.0%**
Cash used for acquisitions, net	**613**	-5,865	--	
Dividends paid	**-904**	-924	2%	
Cash flow after acquisitions and dividends	**1,374**	-4,557	--	
Cash provided by/used for financing activities	**-369**	4,796	--	
Effect of exchange rate changes on cash and cash equivalents	**68**	-182	--	
Change in cash and cash equivalents	**1,073**	57	--	

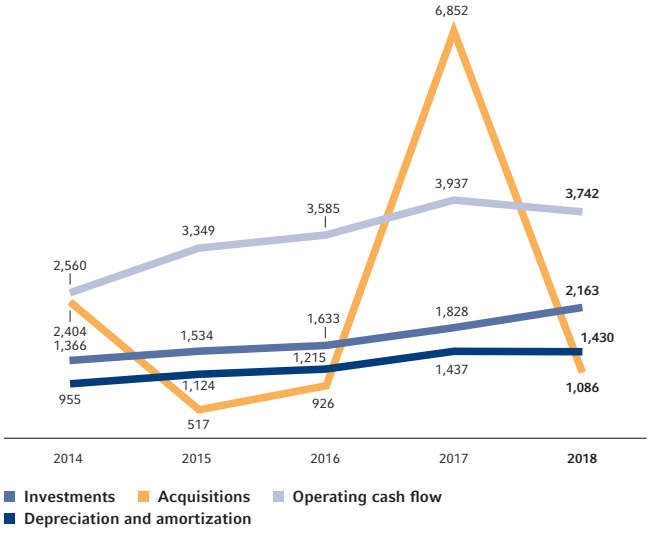
The detailed cash flow statement is shown in the consolidated financial statements.

million payment under the VA agreement in the prior-year period. Furthermore, the earnings decrease at Helios Germany and a change in working capital items at Fresenius Helios impacted the cash flow development. In addition, negative currency translation effects weighed on the cash flow development in 2018. The cash flow margin was 11.2% (2017: 11.6%). Operating cash flow was more than sufficient to meet all financing needs for investment activities, excluding acquisitions, whereby cash used for capital expenditure was €2,149 million, and proceeds from the sale of property, plant and equipment were €72 million (2017: €1,823 million and €118 million, respectively).

Cash flow before acquisitions and dividends was €1,665 million (2017: €2,232 million). This was sufficient to finance the Group dividends of €904 million. Group dividends consisted of dividend payments of €416 million to the shareholders of Fresenius SE & Co. KGaA, payments of €325 million by Fresenius Medical Care to its shareholders, and dividends paid to third parties of €263 million (primarily relating to Fresenius Medical Care). These payments were offset by the dividend of €100 million, which Fresenius SE & Co. KGaA received as a shareholder of Fresenius Medical Care. The cash inflow of €1,531 million from divestitures of Care Coordination activities at Fresenius Medical Care was primarily used to reduce financial liabilities. Therefore, net acquisition expenditures were €613 million. Overall, cash used for financing activities was €369 million (2017 cash provided by financing activities: €4,796 million).

Cash and cash equivalents increased by €1,073 million to €2,709 million as of December 31, 2018 (December 31, 2017: €1,636 million). Cash and cash equivalents were positively influenced by currency translation effects of €68 million (2017: -€182 million).

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



Investments and acquisitions

In 2018, the Fresenius Group provided €3,249 million (2017: €8,680 million) for investments and acquisitions. **Investments in property, plant and equipment** increased to €2,163 million (2017: €1,828 million). At 6.5% of sales (2017: 5.4%), this was well above the depreciation level of €1,430 million and serves as the basis for enabling expansion and preserving the Company's value over the long term. A total of € 1,086 million was invested in **acquisitions** (2017: €6,852 million). Of the total capital expenditure in 2018, 67% was invested in property, plant and equipment and 33% was spent on acquisitions.

The table below shows the distribution of investments/acquisitions by business segment.

INVESTMENTS/ACQUISITIONS BY BUSINESS SEGMENT

€ in millions	2018	2017	Thereof property, plant and equipment	Thereof acquisitions	Change	% of total
Fresenius Medical Care	**2,014**	1,627	1,057	957	24%	62%
Fresenius Kabi	**615**	585	572	43	5%	19%
Fresenius Helios	**501**	6,394	441	60	-92%	15%
Fresenius Vamed	**540**	49	44	496	--	17%
Corporate/Other	**-421**	25	49	-470	--	-13%
Total	**3,249**	8,680	2,163	1,086	-63%	100%

The chart on the right shows the regional breakdown.

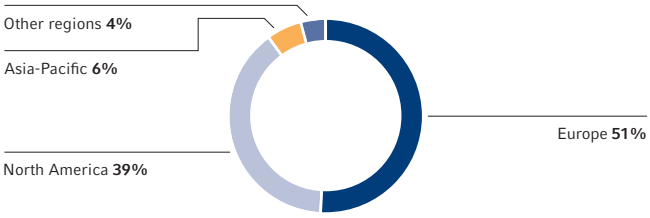
The cash outflow for acquisitions is primarily related to the following business segments:

- Fresenius Medical Care's acquisition spendings were mainly related to the purchase of dialysis clinics as well as an equity investment in Humacyte, Inc., a medical research and development company.
- 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 purchase of outpatient clinics in Germany.
- Fresenius Vamed's acquisition spending was mainly for the purchase of Fresenius Helios' German post-acute care business.

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.
- new building and modernization of hospitals at Fresenius Helios. The most significant individual projects were the Amper-Kliniken, hospitals in Duisburg, Wiesbaden, and Wuppertal, and the construction of a proton beam therapy center in Madrid.

INVESTMENTS BY REGION



2018: €2,163 million

Investments in property, plant and equipment of €544 million will be made in 2019, 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 August 7, 2017, Fresenius Medical Care announced the acquisition of NxStage Medical, Inc. (NxStage), a U.S.-based medical technology and services company, for a total transaction value of approximately US$2.0 billion (€1.7 billion). On October 27, 2017, the shareholders of NxStage approved the acquisition. The transaction remains subject to regulatory approvals and other customary closing conditions. Fresenius Medical Care expects the closing of the transaction to occur in early 2019.

Termination of the merger agreement with Akorn, Inc.

In the lawsuit by Akorn, Inc., a U.S.-based manufacturer and marketer of prescription and over-the-counter pharmaceutical products, against Fresenius for the consummation of the April 2017 merger agreement, the Supreme Court in the U.S. state of Delaware ruled in favor of Fresenius on December 7, 2018. As this is the highest court in Delaware, no further appeal is possible.

Fresenius terminated the merger agreement due to Akorn's failure to fulfill several closing conditions. An independent investigation initiated by Fresenius had revealed, among other things, material breaches of FDA data integrity requirements relating to Akorn's operations. Akorn responded by suing in the Court of Chancery in Delaware for the consummation of the agreement, but Akorn's lawsuit has been dismissed by the Court of Chancery of Delaware in the first instance, as well as in the second and last instance before the Delaware Supreme Court.

Fresenius intends to hold Akorn liable for damages suffered as a result of lost acquisition expenses.

Divestment of Sound Holdings, LLC

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). 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.

INVESTMENTS AND ACQUISITIONS

€ in millions	2018	2017	Change
Investment in property, plant and equipment	**2,163**	1,828	18%
thereof maintenance	**47%**	51%	
thereof expansion	**53%**	49%	
Investment in property, plant and equipment as % of sales	**6.5**	5.4	
Acquisitions	**1,086**	6,852	-84%
Total investments and acquisitions	**3,249**	8,680	-63%

ASSETS AND LIABILITIES

Asset and liability structure

The **total assets** of the Group rose by 7% to €56,703 million (Dec. 31, 2017: €53,133 million). In constant currency, this was an increase of 5%. The increase is mainly driven by business expansion. Inflation had no significant impact on the assets of Fresenius in 2018.

Current assets increased to €14,790 million (Dec. 31, 2017: €12,604 million). Within current assets, trade accounts receivable increased by 4% to €6,540 million (Dec. 31, 2017: €6,260 million). At 74 days, average days sales outstanding was above the previous year's level (65).

Inventories decreased by 1% to €3,218 million (Dec. 31, 2017: €3,252 million). The scope of inventory in 2018 was 60 days (Dec. 31, 2017: 50 days). The ratio of inventories to total assets decreased to 5.7% (Dec. 31, 2017: 6.1%).

ASSETS AND LIABILITIES – FIVE-YEAR OVERVIEW

€ in millions	2018	2017	2016	2015	2014
Total assets	**56,703**	53,133	46,697	43,233	39,955
Shareholders' equity[1]	**25,008**	21,720	20,849	18,453	15,860
as % of total assets[1]	**44**	41	45	43	40
Shareholders' equity[1]/non-current assets, in %	**60**	54	60	56	52
Debt	**18,984**	19,042	14,780	14,769	15,348
as % of total assets	**33**	36	32	34	38
Gearing in %	**65**	80	63	74	89

[1] Including noncontrolling interest

Non-current assets increased by 3% to €41,913 million (Dec. 31, 2017: €40,529 million). In constant currency, the increase was 2%. Additions to property, plant and equipment, and to goodwill had a strong effect. The goodwill and intangible assets in the amount of €28,843 million (Dec. 31, 2017: €28,457 million) has proven sustainable and increased mainly due to the acquisitions made in fiscal year 2018. The addition to the goodwill from acquisitions was €495 million in fiscal year 2018. Please see page 203 ff. of the Notes for further information.

Shareholders' equity, including noncontrolling interest, rose by 15% to €25,008 million (Dec. 31, 2017: €21,720 million). In constant currency, shareholders' equity, including noncontrolling interest, rose by 13%. **Group net income** attributable to Fresenius SE & Co. KGaA increased shareholders' equity by €2,027 million. The equity ratio, including noncontrolling interest, was 44.1% as of December 31, 2018 (Dec. 31, 2017: 40.9%).

The liabilities and equity side of the balance sheet shows a solid financing structure. Total shareholders' equity, including noncontrolling interest, covers 60% of non-current assets (Dec. 31, 2017: 54%). Shareholders' equity, noncontrolling interest, and long-term liabilities cover all non-current assets and 47% of inventories.

Long-term liabilities decreased by 11% to €18,420 million as of December 31, 2018 (Dec. 31, 2017: €20,748 million). **Short-term liabilities** increased by 24% to €13,275 million (Dec. 31, 2017: €10,665 million).

Besides the FCPA provision (for details please see page 206 f.), the Group has no additional major other **accruals** that are of major significance as individual items.

Group debt remained on the prior year's level at €18,984 million (decreased by 2% in constant currency). Its relative weight in the balance sheet was 33% (Dec. 31, 2017: 36%). Approximately 28% of the Group's debt is denominated in U.S. dollars. Liabilities due in less than one year were €4,944 million (Dec. 31, 2017: €2,899 million), while liabilities due in more than one year were €14,040 million (Dec. 31, 2017: €16,143 million).

Group net debt decreased by 6% (-8% in constant currency) to €16,275 million (Dec. 31, 2017: €17,406 million).

The net debt to equity ratio including noncontrolling interest (gearing) is 65% (Dec. 31, 2017: 80%).

The return on equity after taxes[1] (equity attributable to shareholders of Fresenius SE & Co. KGaA) increased to 12.1% (Dec. 31, 2017: 13.3%). The return on total assets after taxes and before noncontrolling interest[1] decreased to 5.5% (2017: 5.7%).

Group ROIC was 8.3%[1] (2017: 8.0%[1]), and Group ROOA was 9.0%[1] (2017: 9.4%[1]). Within the position invested capital, the goodwill of €25.7 billion had a significant effect on the calculation of ROIC. It is important to take 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

FIVE-YEAR OVERVIEW FINANCING KEY FIGURES

	Dec. 31, 2018[1,2]	Dec. 31, 2017[1,2]	Dec. 31, 2016[2]	Dec. 31, 2015[1]	Dec. 31, 2014[1,2]
Debt/EBITDA	**3.2**	3.1	2.7	2.9	3.7
Net debt/EBITDA[3]	**2.7**	2.8	2.3	2.7	3.2
Net debt/EBITDA[4]	**2.7**	2.8	2.4	2.7	3.4
EBITDA/net interest[1]	**10.5**	9.6	9.5	8.4	6.8

[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

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

[1] Pro forma closed acquisitions/divestitures, excluding NxStage transaction; before special items

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58 to 61.

Pharmaceuticals in 2008, Liberty Dialysis Holdings in 2012, hospitals of Rhön-Klinikum AG in 2014, and Quirónsalud and the biosimilars business in 2017. Those have significantly strengthened the competitive position of the Fresenius Group.

In 2018, 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 5.99%; the WACC of the other business segments was 5.79%.

Currency and interest risk management

The nominal value of all foreign currency hedging contracts was €3,301 million as of December 31, 2018. These contracts had a market value of -€2 million. The nominal value of interest rate hedging contracts was €381 million. These contracts had a market value of €5 million. Please see the Opportunities and Risk Report on pages 85 f. and the Notes on pages 235 to 246.

ROIC AND ROOA BY BUSINESS SEGMENTS:

	ROIC		ROOA	
in %	**2018**	2017	**2018**	2017
Fresenius Medical Care [1,2]	**9.5**	8.9	**10.0**	10.9
Fresenius Kabi [1,2]	**10.2**	9.0	**11.1**	10.8
Fresenius Helios [1]	**5.8**	6.2	**6.8**	6.9
Fresenius Vamed [3]	**–**	–	**9.1**	9.8
Group [1,2]	**8.3**	8.0	**9.0**	9.4

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

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.

The table below shows the company rating and the respective outlook as of December 31, 2018.

RATING OF FRESENIUS SE & CO. KGAA

	Dec. 31, 2018	Dec. 31, 2017
Standard & Poor's		
Corporate Credit Rating	**BBB-**	BBB-
Outlook	**positive**	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 77 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. The successful acquisition of the largest private hospital operator in Spain in 2017 gives Fresenius Helios a presence outside Germany. Fresenius Helios sees, beyond that, good opportunities for further international growth.
- 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 cross-selling of Quirónsalud's facilities for Occupational Risk Prevention within the Spanish hospital network offers additional growth opportunities. Helios Spain announced the acquisition of Clínica Medellín in 2018. Fresenius Helios was thus entering the attractive private hospital market in Colombia.

- 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 is developing 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 has been developing innovative business areas such as digital offerings in its 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 2019 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 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, with the transfer of the German inpatient post-acute care business from Fresenius Helios to Fresenius Vamed, the company has positioned itself as a leading provider in that segment 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 growing demand for high-quality medical treatment is 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 2019.

The number of dialysis patients worldwide is expected to rise by approximately 6% in 2019, 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 by up to 4%. In economically weaker regions, the growth rates are even higher.

Driven by the development of infrastructure, the establishment of health care reimbursement systems and the growing number of chronically ill patients, over-proportional growth is expected in some regions.

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 49 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 7% in 2019.

In 2019, the **market for generic IV drugs** in Europe and the United States is expected to grow by approximately 2% to 3%. 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 13% in 2019.

[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. Market data for clinical nutrition refers to Fresenius Kabi's addressable markets, excluding Japan. Percentage increase based on market value (price × volume).

Source: Company research

In 2019, growth of about 3% is expected for the **clinical nutrition market** in Europe. However, given the financial constraints in many countries, the efforts to contain costs in the health care sector are being pursued undiminished. Continued high growth potential is projected in Asia-Pacific, Latin America, and Africa. We assume a growth of up to 10% in individual countries.

We expect the **market for infusion therapy** in Europe to remain at the prior year's level in 2019. Besides a slightly decreasing blood volume substitutes market due to restrictions imposed on the use of these products, 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 remain at the prior year's level in 2019, whereby Latin America is expected to grow by up to 4%.

The worldwide **market for medical devices/transfusion technology** is expected to grow by up to 4% in 2019.

THE HOSPITAL MARKET

The number of hospital admissions in Germany declined slightly in 2017. No reliable figures are available yet for 2018. However, we assume that 2019 will see a further decline in inpatient hospital admissions and an increase in outpatient treatments as a result of the increasing provision of outpatient services. The development of the market up to and including 2017 shows that, contrary to the market trend, Helios was able to increase its share of inpatient hospital treatment compared with its competitors in percentage terms. On the basis of the measures adopted in 2018 and currently being implemented to consolidate hospital locations, the merging or centralizing of departments, joint management of several specialist departments by a responsible chief physician, the active handling of the issue of center formation, the consistent development of the outpatient sector, and the active handling of patient services, we expect Helios Germany to record an increase in inpatient hospital admissions in 2019.

The so-called change in value figure is relevant for the increase in the **reimbursement of hospital treatments** in Germany. For 2019 it was set at 2.65%. 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.

Since 2017, the care supplement has replaced the extra charge on invoiced hospital treatments. This is intended to support care in hospitals and is granted based on the cost of care at the individual hospitals. The funding volume for 2019 is around €500 million. From 2020 onwards, the previous supplement will be used to provide funding of €200 million, which will be included in the state base rates.

As a result of the Act To Enhance Nurse Staffing Levels (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. As early as 2019, each additional or increased care place at the bed will be completely refinanced by the cost bearers. Unlike in the past, there is no upper limit for the additional funds. Measures to relieve the burden on nursing care are also to be financially supported to a certain extent from 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 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 2018 survey by the German Hospital Institute (DKI), only one sixth (18%) of the hospitals expect their economic situation to improve in 2019, whereas 37% 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%. 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,

Source: Company research; Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI), Krankenhaus Rating Report

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.

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

For 2019, 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. The demand for projects and services for hospitals and other health care facilities will continue to grow due to demographic changes and the rising investment and modernization needs of public health facilities. The focus is on services ranging from the maintenance and repair of medical and hospital equipment, facility management, and technical operation, through to total operational management and infrastructure process optimization – especially within the framework of public-private partnership (PPP) models. Additional growth opportunities are presented by an increasing number of non-medical services, which are outsourced from public facilities to private service providers. In addition, an expansion of the range of post-acute care 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 expected financial results for 2019, Group sales are projected to grow organically with a compounded annual growth rate (CAGR) of 4% to 7% in 2020 to 2023. Group net income [1,2] is projected to increase organically with a CAGR of 5% to 9% in 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 2019, we expect to increase **Group sales** [3] by 3% to 6% in constant currency. We project **Group net income** [1,4] to increase by ~0% in constant currency.

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 2019

	Targets 2019	Fiscal year 2018 [1]
Sales growth (in constant currency)	3% – 6% [2]	€33,009 m
Net income [3] growth (in constant currency)	~0% [4]	€1,872 m
Dividend	Further increase intended	Proposal +7% per share

[1] Before special items and after adjustments (see table on page 75)
[2] Adjusted for effects of IFRS 16, excluding effects from pending acquisition of NxStage by FMC
[3] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[4] Before special items (before transaction-related expenses, expenses associated with the cost optimization program at FMC, revaluations of biosimilars contingent liabilities), adjusted for IFRS 16 effects, excluding effects from pending acquisition of NxStage by FMC

[1] Net income attributable to shareholders of Fresenius SE & Co. KGaA
[2] Before special items
[3] Base 2018: €33,009 million; 2018 adjusted for divestitures of Care Coordination activities at FMC (H1/18); 2019 adjusted for IFRS 16 effects, excluding effects from pending acquisition of NxStage by FMC
[4] Base 2018: €1,872 million; 2018 before special items and adjusted for divestitures of Care Coordination activities at FMC (H1/18); 2019 before special items (before transaction-related expenses, expenses associated with the cost optimization program at FMC, revaluations of biosimilars contingent liabilities), adjusted for IFRS 16 effects, excluding effects from pending acquisition of NxStage by FMC

FINANCIAL TARGETS BY BUSINESS SEGMENT 2019

	Targets 2019[1]	Fiscal year 2018[2]
Fresenius Medical Care		
Sales growth (in constant currency)	3% – 7%	€16,026 m
Net income[3] growth (in constant currency)	-2% – +2%	€1,341 m
Fresenius Kabi		
Sales growth (organic)	3% – 6%	€6,544 m
EBIT growth (in constant currency)	3% – 6%	€1,139 m
Fresenius Helios		
Sales growth (organic)	2% – 5%	€8,993 m
EBIT growth	-5% – -2%	€1,052 m
Fresenius Vamed		
Sales growth (organic)	~10%	€1,688 m
EBIT growth	15% – 20%	€110 m

[1] Before special items (before transaction-related expenses, expenses associated with the cost optimization program at FMC, revaluations of biosimilars contingent liabilities), adjusted for IFRS 16 effects, excluding effects from pending acquisition of NxStage by FMC
[2] Before special items and after adjustments (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 2019, we expect sales and earnings development in our business segments as shown below:

For 2019, **Fresenius Medical Care** expects adjusted sales to grow by 3% to 7%[1,2] in constant currency. Adjusted net income attributable to shareholders of Fresenius Medical Care AG & Co. KGaA is expected to develop in the range of -2% to +2%[1,2] in constant currency.

For 2019, **Fresenius Kabi** expects organic sales growth of 3% to 6%[1] and EBIT growth in constant currency of 3% to 6%[1,3].

For 2019, **Fresenius Helios** expects organic sales growth of 2% to 5%, and EBIT decline of -5% to -2%.

For 2019, **Fresenius Vamed** expects to achieve organic sales growth of ~10% and EBIT growth of 15% to 20%.

FRESENIUS GROUP / FRESENIUS MEDICAL CARE / FRESENIUS KABI – 2018 BASE FOR GUIDANCE 2019

€ in millions	Fresenius Group	Fresenius Medical Care	Fresenius Kabi
Sales (as reported)	33,530	16,547	6,544
Divestitures of Care Coordination activities at FMC (H1/2018)	-521	-521	
Sales (adjusted = base for guidance)	**33,009**	**16,026**	**6,544**
Transaction costs Akorn, biosimilars			34
Revaluations of biosimilars contingent liabilities			7
EBIT (before special items = base for Kabi guidance)			**1,139**
Net income (as reported)	**2,027**	**1,982**	
Gain related to divestitures of Care Coordination activities	-207	-673	
Impact of FCPA-related charge	+9	+28	
Transaction Costs Akorn, biosimilars	+25		
Bridge Financing Costs Akorn	+12		
Revaluations of biosimilars contingent liabilities	+5		
Net income (before special items)	**1,871**	**1,337**	
Divestitures of Care Coordination activities at FMC (H1/2018)	+1	+4	
Net income (adjusted = base for FSE & FMC guidance)	**1,872**	**1,341**	

[1] For details on the 2018 base please see table on page 75
[2] 2019 before special items (cost optimization program), adjusted for IFRS 16 effects, excluding effects from pending acquisition of NxStage by FMC
[3] 2019 before special items (before transaction-related expenses, revaluations of biosimilars contingent liabilities), adjusted for IFRS 16 effects

FINANCING

For 2019, we expect continued strong **cash flow** with a cash flow margin between 10% and 12%.

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

The bonds of Fresenius SE & Co. KGaA maturing due in 2019 were already successfully refinanced in January 2019. Bonds with a total volume of €1,000 million were issued. Furthermore, the financing activities in 2019 will mainly focus on the refinancing of Fresenius Medical Care bonds and the equity-neutral convertible bond of Fresenius SE & Co. KGaA.

Without acquisitions and adoption of IFRS 16 we expect **net debt/EBITDA**[1] by year-end 2019 to be broadly stable over the year-end 2018 figure.

INVESTMENTS

In 2019, we expect to invest about 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. The remaining funds are intended for other investments and the expansion of the Group headquarters. 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 55% and 35%, 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[2] (ROOA) and the return on invested capital[2] (ROIC) will be slightly below the level of 2018.

ORGANIZATION

In order to ensure future growth and to sharpen the profitability of Fresenius Kabi, we will explore and evaluate strategic options for Fresenius Kabi's transfusion and cell technologies business.

DIVIDEND

The dividend increases provided by Fresenius in the last 25 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 further increase its dividend for 2019.

[1] Calculated at expected annual average exchange rates, for both net debt and EBITDA; excluding effects from pending acquisition of NxStage by FMC; excluding further potential acquisitions; adjusted for IFRS 16 effects
[2] Excluding NxStage

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 experience, as well as our strong market position, serve as a solid basis for a reliable 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

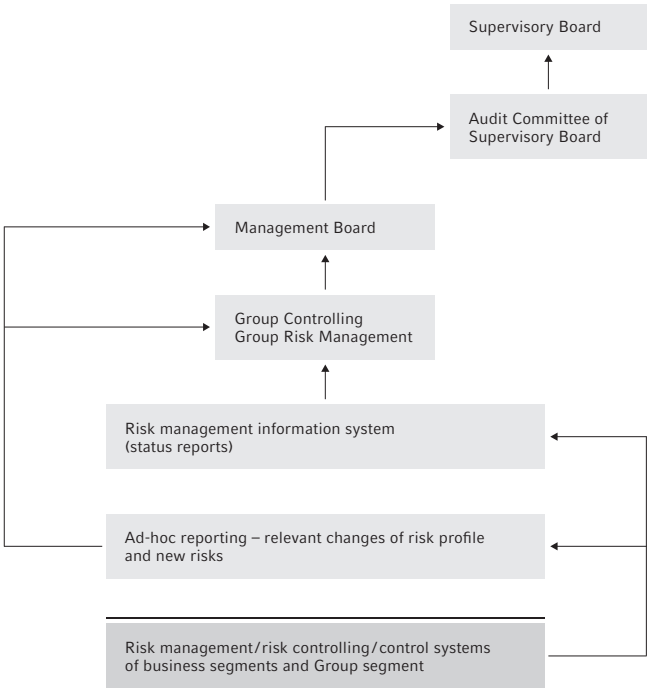
Managing opportunities is an ongoing, integral part of corporate activity aimed at securing the Company's long-term success. In this way, we can explore new prospects and consolidate and improve on what we have already achieved. The organization and management of the Fresenius Group have a decentralized, 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 dialogue with research groups and scientific institutions, 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 recognized in the risk management system.

STRUCTURE OF THE FRESENIUS 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 the **risk management processes** and the **monitoring of risks** in the business segments have been assigned as follows:

- The business areas 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 measures** 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 consists of organizational safeguarding measures, as well as internal controls and audits, with which we can 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. 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 scope and focus of the organizational structure and systems for identifying, assessing, and controlling risks, and for developing countermeasures and for the avoidance of risks, are aligned suitably with the Company-specific requirements 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, and thus 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.,

- the local entity,
- the region,
- the business segment, and
- the Group,

financial data and key figures are reported, discussed, and compared on a regular monthly basis with the prior-year figures, budget, and latest forecast. 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.

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 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 again 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.**

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 2019, 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 the firm balance of its business in the main regions and between established and emerging markets.

The risk situation for each business segment depends in particular on the development of its 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 also applies to the possible impact on our business activities resulting from the decision by the United Kingdom to leave the European Union and the continuing uncertainty about the exit conditions. This further applies to Catalonia's quest for independence from Spain.

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

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, for example in the reimbursement of dialysis treatments, could have a considerable impact on our business. In 2018, approximately 33% of Fresenius Medical Care's sales in the United States were attributable to U.S. federal health care benefit programs, such as **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 its 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:

- Under CMS's Comprehensive ESRD Care Model, dialysis providers and physicians can form entities known as ESRD Seamless Care Organizations (ESCOs) as part of a new payment and care delivery model that seeks to deliver better health outcomes for Medicare ESRD patients while lowering CMS' costs. ESCOs that achieve the program's minimum quality thresholds and generate reductions in costs of care above certain thresholds for the ESRD patients covered by the ESCO will receive a share of the cost savings, which is adjusted based on the ESCO's performance on certain quality metrics. 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 if actual costs rise above set thresholds.

- Bundled Payment for Care Improvement ("BPCI") is a CMS pilot initiative, extended through September 30, 2018, with bundled payments for the individual services furnished to Medicare beneficiaries during a single episode of illness or course of treatment, including acute inpatient hospital services, physician services, and post-acute services. We commenced participation in several markets under the BPCI in April 2015 through our majority-owned subsidiary, Sound Inpatient Physicians, Inc. ("Sound"). On June 28, 2018, we divested our controlling interest in Sound. Under the BPCI, we had the ability to receive additional payments if we were able to deliver quality care at a cost that was lower than certain established benchmarks, but also had the risk of incurring financial penalties if we were unsuccessful in doing so.
- Furthermore, Fresenius Medical Care provided Medicare Advantage Chronic Special Needs Plan (MA-CSNP) products until December 31, 2018. MA-CSNPs are Medicare health plans offered by private companies that contract with Medicare to provide Medicare benefits to special needs individuals with specific severe or disabling chronic conditions such as ESRD, with a focus on improving the coordination of care. As an MA-CSNP, Fresenius Medical Care provided health care services and received set payments from CMS for the complete care of ESRD patients who enrolled in our MA-CSNP.
- In addition, Fresenius Medical Care has entered into sub-capitation and other risk-based and value-based arrangements with certain payers to provide care to Medicare Advantage ESRD patients.

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 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 patient care upon initiation of dialysis, increasing the percentage of patients using home therapies, 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 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. Some commercial 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. 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 commercially 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 commercial insurers, a shift of commercially insured patients to Medicare and Medicaid could have a material adverse impact on the business, financial conditions, and result of operations of Fresenius Medical Care.

Further federal or state legislation or regulations may be enacted in the future through a public referendum process in the United States that could substantially modify or reduce the amounts paid for services and products offered by us and our subsidiaries and/or implement new or alternative operating models and payment models that could present more risk to our health care service operations. For example, the ballot initiatives introduced at the state level could result in further regulation of clinic staffing requirements, state inspection

requirements, and margins on commercial business. State regulation at this level would introduce an unprecedented level of oversight and additional expense at the clinic level that could have a material adverse effect on the business of Fresenius Medical Care in the impacted 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 2018, 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 reimbursement, or the share of reimbursements by private health insurers, it would significantly reduce the 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 Enhance Nurse Staffing Levels (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. As early as 2019, each additional or increased care place at the bed will be completely refinanced by the cost bearers.

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. To counter 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, financial condition, and result of operations.

Quirónsalud, our private chain of clinics in Spain, operates hospitals through **PPP contracts (public-private partnership),** among others 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 program 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 the assets and liabilities, 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 new 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 and to keep abreast of developments in alternative treatment methods. These enable us 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 **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, equipment, 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;
- the rate of, and accurate reporting and billing for, government and third-party reimbursement;
- the labeling and designation of pharmaceutical products and their marketing;
- attracting qualified personnel;
- compensation of medical directors and other 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 and administrative penalties, increased compliance costs, exclusion from governmental 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, 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 and manufacturing regulations** is ensured by our quality management systems, which are, inter alia, structured in accordance with the internationally recognized **quality standards ISO 9001** and **ISO 13485**, taking into account relevant national and international 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 regulations in all areas – from management and administration to production and clinical services and 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, as, for example, following the inspections of our production facilities in India in 2017.

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.

Performing **medical treatments** on patients in our hospitals, rehabilitation clinics, and dialysis clinics is subject to inherent risks. For example, disruptions to processes, also due to 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 working 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 and the 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, could materially affect the future pricing and sale of our products and services adversely. The introduction of generic or patented drugs by competitors may have an impact on the sales and operational results of our products.

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, our financial position, and our operational results.

In the United States, almost all Fresenius Kabi injectable pharmaceutical products are sold to customers through arrangements with **group purchasing organizations (GPOs)** and distributors. The majority of hospitals undertake contracts with GPOs of their choice for their purchasing needs. Currently, three GPOs control the large majority of sales in the United States to hospital customers. Fresenius Kabi derives a large percentage of its revenue in the United States through a small number of GPOs and has purchasing agreements with the most important of them. To maintain these business relationships, Fresenius Kabi needs to be a reliable supplier of a comprehensive and high-quality product line, remain price-competitive, and comply with the regulations of the U.S. Food and Drug Administration (FDA). The 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 serving the United States. Blood centers in the United States are consolidating in response to blood-saving efforts at hospitals, which is having an effect on pricing. We are countering this pricing development with efficiency improvements and cost reductions.

Referrals from physicians

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 physician. Physicians make their recommendations based on various factors, including the quality of the medical treatment and the competence of the hospital staff, as well as the distance to the hospital, 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 physicians because they increasingly perceive Fresenius Helios' outpatient services as competition or because they no longer take specialized hospitals with a certain medical focus into account when making their choice. These factors could result in lower sales and adversely affect our business, our financial position, and our operational results.

Payment default

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 2018, 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, development, 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 talents with subsequent retention programs, as well as comprehensive apprenticeships for students.

With more than 4,000 apprentices and dual students, Fresenius is one of the biggest training companies in Germany. In order to meet the manifold demand for qualified personnel, we offer 1,300 apprenticeship places in more than 50 professions and dual study programs every year. We provide information about our apprenticeship and study program offers on our career website, as well as at our locations through various marketing activities and vocational orientation offers (e. g., vocational information days, Night of Apprenticeship, student internships, Apprentices' Navigation System).

Furthermore, we offer young academic talents the opportunity to gain initial practical experience and to establish contacts within our company in the context of internships 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.

Effective January 1, 2019, the German hospital market will also be 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. Most of the hospitals of Helios Germany already meet these requirements. 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 risk prevention, and career opportunities.

Additional information on our measures to recruit and develop qualified personnel and to retain employees can be found in our Group Non-financial Report from page 113 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 avoid any possible negative impacts of these risks. However, we limit ourselves to non-exchange-traded, marketable instruments, used exclusively to hedge our operations 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 guidelines assign responsibilities for currency risk determination, the execution of hedging transactions, and the regular reporting of risk management. These responsibilities are coordinated with the management structures in the residual business processes of the Group. Decisions on the use of derivative financial instruments in **interest rate management** are taken 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, 2018, approximately 64% of the Fresenius Group's debt was protected against increases in interest rates either by fixed-rate financing arrangements or by interest rate hedges; 36% 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 1.0% 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 €120 million on Group sales, about €22 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 arise within the following 12 months, less any hedges, form the basis for the analysis of the currency risk. As of December 31, 2018, the Fresenius Group's cash flow at risk was €66 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 €66 million. Further details on financial risks can be found on pages 235 to 246 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 consultants. The amount of intangible assets, including goodwill, product rights, trade names, and management contracts, represents a considerable part of 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 laws 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 resulting from tax audits and additional import duties could lead to higher tax payments.

Debt and liquidity

Fresenius' debt was €18,984 million as of December 31, 2018. 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 208 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. For the fiscal year 2018, this resulted in an effect on net income (net income attributable to the shareholders of Fresenius SE & Co. KGaA) of -€12 million. Furthermore, as of December 31, 2017, there was an effect on the equity of the shareholders of Fresenius SE & Co. KGaA of €15 million.

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, either as a result of 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 has therefore been 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. 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.

RISKS FROM ACQUISITIONS

The **acquisition and integration** of companies carries risks that can adversely affect the assets and liabilities, 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. Noncompliance 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, key managers can leave the company and both the course of ongoing business processes and relationships with customers and employees can 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. To comply with these 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 areas 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 areas. Further information about our Data Protection Management Systems can be found in the Group Non-financial Report on pages 104 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.

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** in all business segments worldwide. 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. Business segments have established compliance responsibilities in line with their organizational and corporate structure. The Corporate Compliance department of Fresenius SE & Co. KGaA supports the compliance officers in each business segment with standardized instruments, processes, and methods, and reports to the Chief Compliance Officer of Fresenius SE & Co. KGaA – the member of the Management Board for Legal Affairs, Compliance, and Human Resources.

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.

Further information about our Compliance Management Systems can be found in the Group Non-financial Report on pages 109 ff.

Legal risks

Risks that arise from **legal disputes** 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. Legal disputes can also result in an inability to insure against risks of this kind at acceptable terms in future. Products from the health care industry can also be subject to recall actions. This could have a negative effect on our reputation and on the assets and liabilities, financial position, and results of operations of the Group.

The Fresenius Group is routinely involved in claims, lawsuits, investigations and other legal matters arising, for the most part, in the ordinary course of its business of providing health care services and products. The outcome of litigation and other legal matters is always difficult to predict accurately. However, we do not expect any material adverse effect on our business, results of operations, and financial condition from the legal matters currently pending.

Further information regarding legal matters and the FCPA review at Fresenius Medical Care can be found on pages 225 to 234 of the Notes.

OTHER RISKS

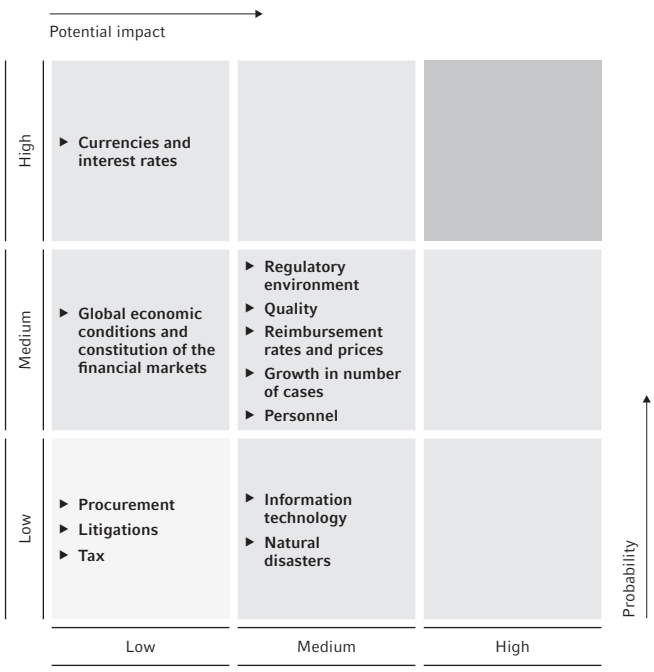
Our international orientation also gives rise to the following risks, which could have an adverse effect on our business and thus on our financial position, and operational results.

- Political, social, or economic instability, especially in developing and emerging countries,
- civil unrest, armed conflict, outbreaks of disease,
- 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 121 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.

RISKS AFFECTING THE ONE-YEAR FORECAST PERIOD



ASSESSMENT OF OVERALL RISK

The basis for evaluating overall risk is the risk management that is regularly audited by management. Potential risks for the Group include factors beyond its control, such as the evolution of economies, which are constantly monitored by Fresenius. Risks also include factors immediately within its control, such as operating risks, which the Company anticipates and reacts to appropriately, as required. There are currently no recognizable risks regarding future performance that appear to present a long-term and material threat to the Group's assets and liabilities, 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 on page 90 shows the significant risks that could lead to deviations from the expected business performance within the one-year forecast period. Compared to the previous year, the risk in connection with the recruitment of qualified personnel, especially given the background of regulatory requirements on the minimum level of nursing staff in hospitals, and the risk of possible lower growth in the number of cases in the German hospital market, were also included. Apart from that, no changes have occurred in the grouping 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. With regard to reimbursement rates, possible changes to patient structures in the United States increase the risk with regard to reimbursements by private health insurance schemes.

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

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	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 target. We believe the following will be particularly important for this:

- Risks relating to the quality, safety, and effectiveness of our products and services (Operating risks, see page 82 ff.);
- Risks arising from the financing of health systems and potential changes in reimbursement systems (Risks in the health care sector, see page 79 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 79).

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GROUP NON-FINANCIAL REPORT. We are committed to responsible management and ethical business principles as an integral part of the Fresenius corporate culture. These principles, which underpin our professionalism, include honesty and integrity in relations with our patients, customers, governments, and the general public.

OUR RESPONSIBILITY

At Fresenius, the patient always comes first. For more than 100 years, we have been working to save lives, promote health, and improve the quality of life of our patients. Economic success is not an end in itself for Fresenius; it rather enables us to keep investing in better medicine.

Every business decision we make is consistently guided by the well-being of our patients. It is at the center of everything we do. We are committed to integrity in conducting business with external partners and responsible action, as well as reliability in our communication.

With the Fresenius Code of Conduct, we set binding rules for our course of business that cover all employees of Fresenius SE & Co. KGaA, managers, and board members. The rules are intended to help us make the right decisions in our daily work. In addition, the Code of Conduct is the framework for the individual Codes of the business segments. The structure of this Group Non-financial Report is therefore aligned with our Code of Conduct and the Codes of the business segments.

The Fresenius Code of Conduct defines **material topics** for all our employees, which are mirrored in the materiality analysis conducted for this Group Non-financial Report:

- We take **responsibility for the well-being of the patient** and commit 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.
- Our success and growth are based on the commitment of our more than 276,000 employees worldwide. As an **attractive employer** we want to attract talent, retain employees, and develop them in the long term.
- With every business decision we make, we think and act long term. Therefore, it is natural for us to **protect nature as a basis for life** and to conserve resources.
- We **care for human rights** as they are defined by international standards, e. g., 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, 2018, Fresenius Medical Care treated 333,331 patients at 3,928 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, we are developing 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 is part of the holding company Helios Health, which comprises Helios Germany and Helios Spain (Quirónsalud). At the end of 2018, Helios Germany operated a total of 86 hospitals, 124 outpatient clinics, and 10 prevention centers. Quirónsalud operated 47 hospitals, 57 outpatient centers, and around 300 occupational risk prevention centers at the end of 2018.
- **Fresenius Vamed** manages projects and provides services for hospitals and 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. Production plants are also located in other European countries and in Latin America, Asia-Pacific, and South Africa. In total, Fresenius operates in about 90 countries through its subsidiaries. The main markets are Europe with 43% and North America with 42% of sales, respectively.

For additional information on the Group's business model, especially legal and economic factors, as well as important markets and competitive positions, please see page 37 f. 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). Statements and key figures are reported in reference to internationally applicable standards for sustainability reporting set out by the Global Reporting Initiative (GRI) guidelines. This separate Group Non-financial Report has been subject to a limited assurance engagement conducted by KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin.

Reference to data or information outside of the Group management report is further information and not part of the separate Group Non-financial Report. References to additional information are part of this Group Non-financial Report.

The report is published annually and is an integral part of the Annual Report. The report encompasses all Fresenius entities worldwide in which Fresenius SE & Co. KGaA has legal or effective control, as in the consolidated financial statement.

The business models of the four segments place different demands on effective management of key issues at the operational level. Fresenius ensures that global standards are implemented as a framework, building the base for the specific codes and standards tailored to the business segments' nature and market.

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 ▶ 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

We want our reporting on non-financial topics to be closely aligned with our business model, the interests of our stakeholders, and legal requirements. In 2017, we defined the material non-financial topics for the Fresenius Group in a three-step process. This process consisted of an external analysis, 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 requirement of the Corporate Social Responsibility Directive Implementation Act. The most important aspects are those that are relevant for an understanding of Fresenius' business performance, results of operations, and position, as well as the effects of its own business activities on the non-financial aspects. Thus, social matters[1] include: quality of medical outcomes and patient satisfaction, quality and safety of products, as well as data protection. As anti-corruption and bribery are an integral part of the Compliance Management System, Fresenius reports on the Code of Conduct, the Compliance Organization, and the Compliance Management Systems. A detailed list of the non-financial activity areas identified as material can be found in the overview above. There were no developments or events in the year under review which require an adjustment of the activity areas and the associated topics.

The key topics identified and their specific management are explained for the individual business segments. Group-wide concepts such as data protection, compliance, and human rights are not reported on a segment-specific basis.

SUSTAINABILITY GOVERNANCE STRUCTURE

At Fresenius, the Group CEO is responsible for sustainability. The Investor Relations department directly reports to the CEO, coordinates the operational implementation of sustainability guidelines and standards, and is responsible for the non-financial reporting of the Fresenius Group. In addition, Investor Relations provides further guidance on the development of sustainability policies and management concepts. The Management Board and the Supervisory Board discuss the results of the sustainability efforts in the form of the Non-Financial Report. In this context, the Supervisory Board reviews the Non-Financial Report and is supported by the auditor's limited assurance engagement.

Fresenius Medical Care is a separately listed company and has its own sustainability governance structure. At Fresenius Medical Care, sustainability is also firmly established at Management Board level. Responsibility for the Company's sustainability efforts lies with the Sustainability Decision Board, Fresenius Medical Care's highest decision-making body for sustainable development, which is headed by the CEO.

The Sustainability Decision Board and the Corporate Sustainability Committee enable the Corporate Sustainability Office to manage Fresenius Medical Care's sustainability program.

[1] The standards developed by 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 items. 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.

The Corporate Sustainability Committee has an advisory and steering role. It consists of senior representatives of all regions and global functions who have been nominated so that regional and functional interests are appropriately represented in the company's sustainability program.

The Corporate Sustainability Office has introduced a global sustainability program in 2018 to further strengthen and harmonize Fresenius Medical Care's sustainability management concepts.

NON-FINANCIAL RISKS

The Fresenius Group has not identified material risks related to its own operations, business relationships, products, or services that are very likely to have a material adverse effect on the non-financial aspects or on the Group's business operations. For a detailed overview of the Group's risk management please see pages 77 ff. of the Group Management Report.

SERVING THE WELL-BEING OF THE PATIENT

At Fresenius, our aspiration is: better medicine for more people. We commit ourselves to strive for the highest quality in our products, services, and therapies. Our patients' well-being is the main non-financial aspect in the Fresenius Group to measure our success. We achieve this through the medical quality of our treatments and services, product safety and quality, as well as protection of personal data and patient satisfaction.

QUALITY OF OUR PRODUCTS, SERVICES, AND THERAPIES

We place great importance on the high quality of our products, services, and therapies. The patients' health depends on it. All business segments make an overall contribution to increasing the quality and **efficiency of health care**. This will enable access to high-quality and affordable medical care for a growing number of people.

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 in production plants, care centers, and clinics have a special duty of care while working in the manufacturing of products or providing medical services.

In our business segments, we **focus on value-enhancing processes** oriented toward efficiency and the needs of our customers. With our quality management, we aim to monitor and manage them on the basis of performance indicators, as well as to improve procedures.

The business segments adapt their quality management systems to their respective business models, resulting in different approaches. We therefore 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

Fresenius Medical Care is committed to providing exceptional clinical care to its patients. To measure the quality of products and services, the company applies different frameworks in clinics and production facilities. This section focuses on the quality management system used in dialysis clinics. For information on Fresenius Medical Care's quality management system at plant level, please refer to the section on "Customer health and product safety".

Fresenius Medical Care aims to improve patients' quality of life by offering them high-quality products and services. For this reason, the company has set out clear and consistent general **principles regarding patient care** for all members of staff who interact with patients treated in the company's 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.

Among other things, Fresenius Medical Care expects all staff 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,
- respond carefully and accurately to patients' and families' questions.

Quality standards and guidelines

To improve the quality of Fresenius Medical Care's dialysis care services, the company continuously measures and assesses the quality of care at its dialysis clinics in all operating segments on the basis of generally recognized quality standards and international guidelines[1], industry-specific clinical benchmarks, and own quality targets. In each operating segment, responsibility for this process lies with our **Chief Medical Officers (CMOs)** and relevant specialist departments. Together they develop and review internal quality policies, standards, and guidelines based on the general standards and international guidelines mentioned above. Fresenius Medical Care's specialists use various IT systems and algorithms in line with local requirements to calculate, monitor, and review **key performance indicators** (KPIs) relating to quality. In addition, they use IT-supported systems and processes to assess such data within the scope provided by the standards and guidelines, aiming to continuously improve the quality of patient care at Fresenius Medical Care.

Quality parameters

As a further indicator of Fresenius Medical Care's **culture of quality improvement**, the company implements and monitors quality parameters so that the quality of care remains on a consistently high level. As part of this approach, the company regularly shares aggregated data on the quality of care as well as financial results with executives in the individual operating segments as well as with the Management Board. In addition, Fresenius Medical Care publishes selected results of its treatment analyses on a quarterly basis to provide transparency on the quality of patient care and to emphasize Fresenius Medical Care's social responsibility towards its patients. Fresenius Medical Care uses the following global quality parameters for public reporting:

- **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).

FRESENIUS MEDICAL CARE: QUALITY PARAMETERS BY OPERATING SEGMENT

			North America		Europe, Middle East, Africa		Latin America		Asia-Pacific	
	Description	Possible impact if too low	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
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%	**95%**	95%	**91%**	93%	**96%**	96%
Hemoglobin[2,3,4] = 10 – 12 g/dl	Hemoglobin is responsible for transporting oxygen around the body	Indicator for anemia	**72%**	73%	**83%**	83%	**53%**	52%	**58%**	58%
Calcium[1] = 8.4 – 10.2 mg/dl	Measures the patient's nutritional status and mineral balance	Marker for increased mortality	**86%**	85%	**81%**	80%	**75%**	77%	**74%**	75%
Albumin[5] ≥ 3.5 g/dl			**81%**	79%	**90%**	88%	**90%**	90%	**89%**	88%
Phosphate[1,6] ≤ 5.5 mg/dl			**62%**	63%	**81%**	81%	**75%**	76%	**67%**	70%
Patients without catheter (after 90 days)[7]	Measures the number of patients with vascular access	More days spent in hospital	**83%**	83%	**79%**	80%	**80%**	81%	**86%**	88%
Days in hospital per patient year[8]	Result of complications during dialysis	Restrictions in quality of life	**10.2**	10.7	**7.5**	7.7	**4.2**	4.1	**3.3**	3.8

[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

[1] Including "Kidney Disease: Improving Global Outcomes (KDIGO) foundation", Kidney Disease Outcome Quality Initiative (KDOQI), European Renal Best Practice Guidelines (ERBP)

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

In the reporting year, Fresenius Medical Care included the quality parameters of 88% of its dialysis clinics worldwide in its table of quality parameters by operating segment on page 97.

Holistic dialysis care for patients worldwide

Fresenius Medical Care has identified a need for **integrated care for patients** with advanced renal disease to optimize care transition, develop cost-effective alternative therapies and care structures, increase renal transplantation rates, and reduce the costs associated with caring for patients. Based on these considerations, the CMOs as well as other specialist departments at Fresenius Medical Care and other dialysis organizations have set up a **global initiative** to collaborate and share their clinical expertise with the aim of aligning the various definitions of clinical parameters used in quality management for end-stage renal disease. This group of experts is also dedicated to improving care as well as outcomes for dialysis patients worldwide. To this end, they analyze good clinical practices, develop new guidelines, and promote their distribution in the respective clinic networks.

Patient satisfaction

Patient surveys are essential to measure, manage, and improve the services and care Fresenius Medical Care offers its patients. The company carries out **patient surveys** in selected countries with the aim of collecting information on the patients' experience and finding out where further improvements can be made and in which areas the company should expand its services. The survey results are used to identify process improvements and consequently to improve patients' quality of life and the care given to each individual patient.

To improve local responsiveness, responsibility for the patient surveys lies with each region. In the U.S. for example, the state-run public health care authority, the Centers for Medicare & Medicaid Services (CMS), determines the content of patient satisfaction surveys. The EMEA, Latin America, and Asia-Pacific segments also conduct surveys to measure and improve patient satisfaction. 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.

Patient support in emergency situations

Fresenius Medical Care as a whole fulfills its social responsibility in crisis situations or in the event of international disasters. To continue providing patients with their vital dialysis treatment even in extreme conditions such as severe storms or floods, Fresenius Medical Care has established a system of regionally organized emergency response teams. Their task is to protect patients and employees in emergency situations and to give patients the best possible care, even under extremely difficult conditions.

In addition to its **disaster response activity**, Fresenius Medical Care donates funds, dialysis machines, and medical supplies to organizations that urgently require help. In 2018, the company's response to the life-threatening conditions caused by Hurricanes Michael and Florence in the United

States is a good example of Fresenius Medical Care's social responsibility and our strong commitment to patients. The company's 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 as well as providing support and safety for the company's employees. Applying best practices from prior seasons, Fresenius Medical Care made sure that all patients and staff were accounted for after the storm and was happy to report only minor damages to the facilities.

FRESENIUS MEDICAL CARE – CUSTOMER HEALTH AND PRODUCT SAFETY

For Fresenius Medical Care, customer health and product safety mean creating a safe and healthy clinical environment to avoid potential harm caused by Fresenius Medical Care's products. The quality and safety of our products and services are the foundation of the company's business success.

Depending on the target market and the country of production, Fresenius Medical Care is subject to different rules and regulations. In the European Union, these include the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), the Restriction of Hazardous Substances (RoHS) legislation, and the Medical Device Directive 93/42/EEC. Furthermore, Fresenius Medical Care continuously strives to meet the requirements of selected relevant standards, including those of the Association for the Advancement of Medical Instrumentation (AAMI), the International Organization for Standardization (ISO), and the International Electrotechnical Commission (IEC). To fulfill its commitment to customer health and product safety while complying with the numerous relevant regulatory requirements, Fresenius Medical Care's processes are embedded in comprehensive **quality management systems (QMS)**. These QMS enable all of the company's products and procedures to 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.

Global Quality Policy and quality manuals

To allow the company to provide its products and processes with a high quality, Fresenius Medical Care is committed to adhering to its Global Quality Policy, which is a key component of the QMS. The policy reflects Fresenius Medical Care's commitment to providing uncompromised product and service quality, while maintaining compliance with relevant regulations. By approving the Global Quality Policy, the heads of the Global Research & Development (GRD) and Global Manufacturing & Quality (GMQ), who are also members of the Management Board, confirmed their commitment to implementing a harmonized quality management system and maintaining its effectiveness.

Aside from quality policies, quality manuals are a vital framework for describing Fresenius Medical Care's quality systems. For this reason, the North America segment has developed a quality manual to satisfy applicable regulatory requirements and internal policies and procedures. In 2018, the GMQ and GRD functions in EMEA, Latin America, and Asia-Pacific have also introduced a quality manual. This manual identifies key policies and procedures, describes corporate oversight responsibilities, and includes sub-system policies according to ISO 13485 and ISO 9001 as well as other documents needed by the organization to allow effective process planning, operation, and control.

Quality management systems and quality inspections

Quality management systems and quality inspections play an important role when it comes to the quality, safety, and efficacy of medical and pharmaceutical products and supplies. It is therefore of great importance to Fresenius Medical Care that all plants have successfully passed the annual ISO 13485, ISO 9001, or Good Manufacturing Practice (GMP) inspections required for recertification.

As regulatory requirements vary around the world, the QMS are managed at a regional or local level. Responsibility always lies with the Head of Quality of the corresponding region. As part of this approach, local sites are subject to management reviews and regular **internal quality audits** performed by personnel who are not directly involved in the processes. Furthermore, the company's manufacturing sites in all regions undergo **external audits** by notified bodies and authorities such as the U.S. Food and Drug Administration (FDA) or the German Ministry of Health. Any cases of nonconformance are forwarded to the respective department to determine and implement appropriate corrective and preventive actions in due time.

As a result of this management concept, all of our sites in North America are GMP-compliant and four out of eight sites are certified according to ISO 13485. In EMEA, all sites coordinated by GMQ are certified according to ISO 9001 and ISO 13485. In Asia-Pacific, three out of eight sites are GMP-compliant. Furthermore, all plants that produce medical devices or pharmaceuticals are certified in accordance with ISO 9001 and/or ISO 13485. In Latin America, one plant is certified in accordance with ISO 13485. Furthermore, all production sites are GMP-compliant and have the applicable certifications required by law to manufacture, import, distribute, and export pharmaceutical products and medical devices.

Reporting adverse events and product complaints

Patient safety is given top priority at Fresenius Medical Care. To continuously improve the quality and safety of its products and services, the company reviews adverse events and analyzes product complaints. It uses this information to maximize safety in its facilities. Furthermore, Fresenius Medical Care requires all staff involved in the relevant tasks to understand, be familiar with, and follow Fresenius Medical Care's policies 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 of paramount importance to Fresenius Kabi.

The overarching **goals of the 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. In its quality management, Fresenius Kabi establishes quality processes and standards and has defined the following **principles**:

- clear assignment of responsibilities
- educated and well-trained employees
- monitoring of product and patient safety
- transparent and documented processes and procedures
- achieving full regulatory compliance
- continuous improvement
- maintaining an effective Quality Management System

The importance of quality management is reflected within the organization of Fresenius Kabi. The global quality managers report directly 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 the global level. It also covers local sites through a matrix certification. More than 115 Fresenius Kabi organizations are included in the matrix certification process and are certified according to the ISO 9001 standard. The quality management system also covers applicable national and international regulations, including Good Clinical Practice (GCP), Good Manufacturing Practice (GMP), Good Distribution Practice (GDP), 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.

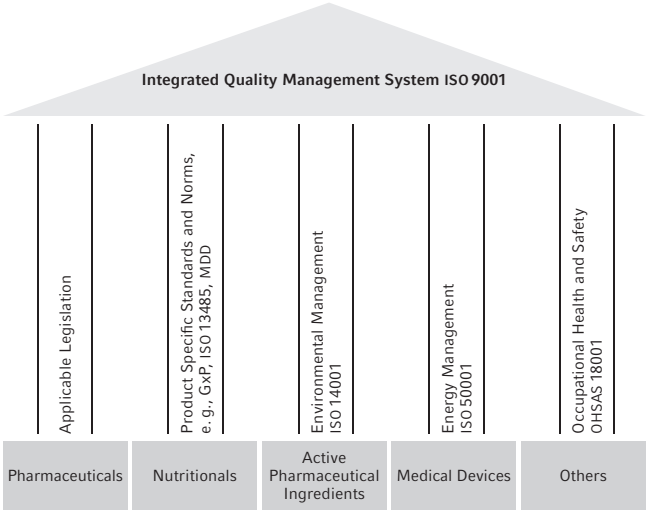
In 2018, more than 90 audits and inspections were performed at Fresenius Kabi by regulatory authorities or certifying bodies, and more than 70 global internal audits were carried out.

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 globally defined processes and enables the review of implementation of requirements.

The core components of quality management at Fresenius Kabi are:

- **Global processes and standards**: Fresenius Kabi has implemented a global quality management handbook, as well as standard operating procedures. They are applicable globally and covering all sites. Through 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.
- Fresenius Kabi has set up a **global monitoring and reporting system (vigilance system)** in order to be informed about product quality and patient safety issues in a timely manner and deal with them appropriately. The system comprises global **product risk management**, and an early-warning system. In the product risk management, specially trained safety & complaints officers worldwide record complaints and side effects in IT systems and route reports to experts for evaluation. Reports are passed on to product experts to be investigated. 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 is able to evaluate the safety profile of any of its products at a global level.

INTEGRATED QUALITY MANAGEMENT SYSTEM ISO 9001



- 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.

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

In the past fiscal year, no events with a material adverse impact were recorded that conflict with our quality management goals.

Crisis management

In 2018, Fresenius Kabi responded swiftly in crisis situations. In the United States, employees who work at the Wilson plant and our field-based staff in the region affected in the Carolinas withstood tropical storm Florence without significant personal damage or injury. In preparation for Florence, the plant allowed employees to prepare their homes for the storm and the facility was closed briefly after the company had completed established hurricane preparedness and safety procedures.

FRESENIUS HELIOS – QUALITY OF MEDICAL OUTCOME, PATIENT SATISFACTION, AND PATIENT SAFETY

Fresenius Helios places great importance on high standards of treatment quality, hygiene, patient safety, and care in its hospitals. With the acquisition of Quirónsalud (Helios Spain), the company fosters mutual knowledge and best practice sharing to expand competencies across borders: in medicine and care, Fresenius Helios brings together colleagues in specialist groups. Helios Germany's quality management and peer review approaches will be implemented at Helios Spain. At Helios Germany, management would like to use Helios Spain's experience with regard to the close cooperation between outpatient and inpatient care. More information on the structure of the German and Spanish hospital markets can be found on pages 51 f. of the Group Management Report.

Helios Germany

Helios measures the **quality of medical outcomes** using key indicators on the basis of G-IQIs (German Inpatient Quality Indicators). These G-IQIs are not only used in the Helios hospitals. In more than 450 German hospitals, different hospital operators have implemented these key indicators. Clinically relevant indications and surgical procedures are documented with the help of more than 1,500 key figures derived from routine administrative data. Helios Germany uses the latest reference data from the German Federal Statistics Office to benchmark its own performance. Helios Germany has defined specific **targets** for 46 G-IQIs. These targets are set at a level above the national average for Germany. In 2018, Helios Germany achieved the targets for 41 quality indicators, a success rate of 89% (2017: 98%). For the five targets that the company did not meet, it will analyze all cases in the respective hospitals and initiate corrective measures.

HELIOS QUALITY PERFORMANCE INDICATORS

Germany	**2018**	2017	2016
Key indicators, total	**>1,500**	>1,500	>1,500
G-IQI targets	**46**	45	46
Targets achieved	**89%**	98%	93%
Peer reviews	**55**	69	58

Further information can be found at:
www.helios-gesundheit.de/unternehmen/was-wir-tun/medizin/qualitaet/qualitaetskennzahlen/

Head doctors and hospital managers receive monthly reports on the medical quality of each department. Helios analyzes the cases – including treatments and medical routines – in hospitals where target values were not achieved, to identify improvement opportunities. The **peer review** is of great importance in this process. In Germany, this review is a discussion between specially trained medical experts from Helios and from the **Initiative of Quality Medicine** (IQM). They question statistical abnormalities and systematically search for improvements. Insights can be translated into concrete recommendations for action in the hospital to increase patient safety. In 2018, a total of 55 peer reviews were conducted in our German hospitals.

Helios Germany is involved in the IQM to exchange ideas and knowledge with other hospital operators. IQM members are committed to observing three basic principles: quality measurement with administrative data, publication of results, and peer review processes. IQM members provide acute care for approximately 7.7 million inpatients in more than 450 hospitals in Germany and Switzerland. In Germany, their share of acute care is 40%.

Helios Spain

The quality of clinical practice and patient safety are key for Helios Spain. The **quality management** is aligned with the Joint Commission International and European Foundation for Quality Management (EFQM). Further, the quality standards of the ISO norms help to ensure high quality levels. The first hospitals were certified according to ISO 14001 in 2018. In 2019, further hospitals will be included in this certification.

In addition to the already existing ISO certifications, Helios Spain has initiated the implementation of quality indicators aligned to the G-IQI used by Helios Germany. Helios Spain reached an agreement with Fundación IDIS (Instituto para el Desarrollo e Integración para la Sanidad) to calculate the G-IQIs based on Spanish medical routine data and make them comparable using public reference statistical data. Furthermore, Helios Spain has conducted four peer reviews in the reporting period.

For 2019, Helios Spain aims to increase the number of G-IQIs for which targets will be set as well as the number of peer reviews.

Hygiene management and patient safety

The principal goal of hygiene management at Fresenius Helios is to prevent the spread of infections by pathogens in a clinic.

At Helios Germany the **Helios Group Hygiene Regulation** (Helios Konzernregelung Hygiene) is based on the recommendations of the Robert Koch Institute and is binding for all employees and clinics. Helios Germany conducts regular training courses on hygiene management. In daily operations, hygiene management is conducted locally by specially qualified nurses and hospital hygienists. It differentiates between nosocomial (i. e., acquired in the hospital) infections and those brought from the outside by patients.

Further data on the most common pathogens[1] are published in the Helios Germany publication Hygiene EinBlick (Hygiene InSight) and on the Internet.

Complementing its quality management, Helios Germany plans to further develop a system of **indicators for patient safety**, which is already internally reported. Internationally established indicators – Patient Safety Indicators (PSI) of the U.S. Agency for Healthcare Research and Quality (AHRQ) – will be combined with internal indicators. Helios has already had very good experience with this: the quality indicators of the AHRQ were used as international reference values in the development of the G-IQIs.

In its hospitals, Helios Spain aims to achieve the following:

- to promote continuous hand hygiene to prevent infections associated with care in health care facilities,
- to monitor perioperative antibiotic prophylaxis use to prevent surgical site infections, and
- to enhance the implementation of good biosafety practices in the operating theater

In 2018, the Corporate Safety Committee of Helios Spain approved the **Patient Safety Strategy**. The strategy is based on the principles of international reference bodies in patient safety such as WHO and 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 Health Services Risk Management for Patient Safety. Further, Helios Spain aims to certify its hospitals according to UNE standard 179006 System for surveillance, prevention, and control of infections related to health care in hospitals. The standards support the hospitals in their daily work to prevent and control infections in health care facilities.

Patient satisfaction

At Helios Germany employees conduct weekly inpatient **interviews** at the hospital sites and electronically and anonymously record the information. The surveys are evaluated locally. Through the questionnaire, patients can ask for more transparency on their treatment and request more support throughout the daily hospital routine. The feedback also facilitates a more intense dialogue between the nurses and the patients. Helios can measure how satisfied patients are with treatment, care, and services in order to initiate improvement processes without delay. The overall goal is to react to patients' feedback within 24 hours.

For Helios Spain, the main causes of dissatisfaction among patients are waiting times and lack of information. To monitor this, Helios Spain 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 has to be below 15 minutes. In emergency departments, 30 minutes is the maximum waiting time.

[1] The most relevant pathogens published are: MRSA (methicillin-resistant Staphylococcus aureus), VRE (vancomycin-resistant Enterococcus), and MRGN (multiresistant gram-negative rods).

Handling of patient complaints is based on standard operating procedures and monitored internally through an IT-based management system. 48 hours after hospital attendance, an e-mail is sent to patients asking if they would recommend Helios Spain services or not, and the reasons. Unsatisfied patients are specifically interviewed to gain a better understanding of the criticism they raised.

Helios is convinced that transparency creates the best incentive for improvement. In addition, the results for medical treatment quality, key indicators in the field of hygiene, and results of patient surveys in Germany are published on the website www.helios-gesundheit.de.

FRESENIUS VAMED – QUALITY MANAGEMENT AND PATIENT SATISFACTION

Fresenius Vamed designs its quality processes based on established 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 has certified health care facilities according to the Joint Commission International (JCI), ISO, or QMS Reha models. To ensure its quality standards, Fresenius Vamed uses regular internal audits as well as external recertifications.

Fresenius Vamed uses performance indicators in the quality management system of its health care facilities. These are exclusively used for the optimization of local and internal processes.

Patient satisfaction

Fresenius Vamed has implemented a continuous and structured process for patient satisfaction surveys in its health care facilities. The company evaluates data internally and implements improvement measures in the respective facilities.

PROTECTING DATA

As a globally operating company, we process personal data of our customers, business partners, employees, and patients. We take responsibility for the careful handling of their data. This has priority for Fresenius as a trusted partner. We continuously develop our data protection measures to fulfill our responsibility towards our patients, employees, and other partners.

Fresenius respects the right to informational self-determination and the privacy of all persons of whom we receive data as part of our business. This includes processing of personal data by third parties on our behalf. This commitment is voiced in the Fresenius Code of Conduct.

To implement the requirements of the **EU General Data Protection Regulation (GDPR)**, effective since May 25, 2018, we have improved our data protection management system through a number of measures. We have strengthened our data protection organization and continuously developed our data protection management system. From a Fresenius Group perspective, data protection is a focus risk area in compliance. In this context, operational measures of data protection management are the responsibility of the functional departments. Basic measures, such as risk assessments or monitoring, are supported by the Compliance Management Systems.

The following sections describe the way data protection is handled at Fresenius SE & Co. KGaA, Fresenius Kabi, Fresenius Vamed, and Fresenius Helios. For information on Fresenius Medical Care's Global Privacy Program, Global Privacy Organization, and Privacy Organization Team, please refer to pages 107 f.

ORGANIZATION

Fresenius SE & Co. KGaA and all business segments have implemented data protection organizations based on their corporate structure. These include appointed independent **data protection officers** reporting to the respective company's management. The data protection organization supports the management of the respective companies in complying with and monitoring of applicable legal data protection requirements. Fresenius Netcare also maintains its own data protection organization in order to fulfill its particular responsibility as a regular data processor for the business segments. All

data protection organizations have both advisory and monitoring functions, which complement each other in their respective tasks.

The data protection officers are contact persons for national and international supervisory authorities and are supported by **expert data protection advisors and coordinators** who are organized both centrally and locally, reflecting the company structure. In total, Fresenius employs more than 200 employees who are entrusted with data protection tasks.

Our goal is to establish comparable and effective data protection measures wherever we process personal data. For this, data protection colleagues from all business segments regularly exchange experience and best practices, e. g., within Group Coordination Meetings and peer-to-peer reviews.

RISK ASSESSMENT

We regularly assess risks related to data protection and IT security in every business segment and Fresenius SE & Co. KGaA using standardized methods in a top-down approach.

We record data processing activities in all business segments and Fresenius SE & Co. KGaA in central tools and put them under 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 to carry out assessments under data protection law. In this way, we can implement the data protection principles and the necessary technical and organizational measures included in the processing to meet the requirements of the GDPR and minimize potential risks. New or significantly changed IT systems operated by Fresenius Netcare are subject to a standardized review process in which implementation of data protection and IT security requirements are reviewed.

DATA SUBJECT RIGHTS

We at Fresenius respect and protect the rights of all persons from whom we collect or process data. This applies to employees, patients, and customers as well as to our business partners. We process, collect, and store data only to the extent and as long as it is appropriate and necessary for the respective purpose. Likewise, we process the data collected only for the lawful purposes specified in each case.

All business segments and Fresenius SE & Co. KGaA support the rights of data subjects by appropriately informing data subjects on their rights and responding to their requests in a timely manner. We inform our employees on their rights through appropriate privacy employee notices. In addition, we have established an organization to protect data subject rights according to the GDPR requirements.

In addition, we give data subjects, external and employees, an additional easy way to request information on their data that is processed by us. Fresenius SE & Co. KGaA and Fresenius Kabi have developed easily accessible technical solutions for sending data subject requests to the companies. The requests will be handled and answered centrally.

PATIENT DATA

The patient always comes first at Fresenius. This also and especially applies to handling the data of our patients. We are aware of our responsibility within the especially trusted relationship with our patients. Our patients expect adequate protection in handling of their data. This guides our procedures in handling patient data.

We inform every patient of whom we take care and thereby process data about their rights in an adequate manner. We process data of our patients only after obtaining consent or based on a legal basis and to the extent necessary. A **privacy impact assessment** is conducted for processing activities that involve processing of patient data. We protect patient data by minimizing access to this data according to the principles of minimum right to the responsibilities necessary for processing.

INTERNATIONAL DATA TRANSFER

As a globally operating company, ensuring an appropriate level of data protection in international data transfers as defined by the GDPR is our priority.

All business segments and Fresenius SE & Co. KGaA transfer data to third countries outside the European Union only based on the adequacy decision of the European Commission, generally recognized certifications, or sufficient guarantees. To do so, we conclude contracts with the data recipients. These contain EU model clauses provided by the European Commission.

In addition, Fresenius SE & Co. KGaA and Fresenius Kabi intend to submit **Binding Corporate Rules (BCR)** to the respective data protection authorities for review and approval and implement them subsequently. These will drive the harmonization of the level of data protection in countries outside the European Union.

Fresenius Helios processes personal data – especially patient data – preferably within internal networks. If data is processed in countries outside the European Union, the contractor will be reviewed diligently and protection measures will be implemented.

DATA PROTECTION & CYBERSECURITY

Fresenius takes responsibility for future-oriented health care. This includes the use of information and communication technologies. This requires us to act with special care when handling the data of our patients, employees, customers, and partners. We ensure this by continuously working to improve our cybersecurity measures.

The data protection organizations of the Fresenius Group are in close cooperation with the respective IT security departments when carrying out the risk assessments. Based on the risk analysis, the respective data protection and IT security specialists develop and implement suitable measures to further minimize the identified risks. These measures are supplemented by data protection impact assessments and resulting security measures for processing activities that are likely to lead to a high risk for the rights of individuals.

We want to prevent loss of data and to ensure its confidentiality, availability, and integrity. We thereby focus on all areas within the Group, where cybersecurity risks can occur. This includes the protection of IT within our clinics, production sites, and medical devices against potential attacks.

All business segments and Fresenius SE & Co. KGaA collaborate in order to set a common cybersecurity baseline for the Group. These standards are adopted, implemented, and continuously monitored within the respective business segments.

To minimize cybersecurity risks, such as tampering or unauthorized access to critical information assets, we have implemented **security concepts**. These include access controls, perimeter security measures, and adequate protection of Fresenius endpoints (e. g. desktop, server, mobile devices, etc.). We carry out regular penetration tests for information assets with sensitive data (for example, patient or employee data). We maintain redundant systems for all critical systems, e. g., communications infrastructure or clinical information systems. A central Cybersecurity Dashboard acts as a platform to monitor current and emerging threats to our information assets. We introduce further automated response capabilities to increase the efficiency when responding to cybersecurity incidents.

Our own Cyber Emergency Response Team (CERT) follow up on potential attacks against our information assets, suspected violations, and inquiries from people who have been affected by incidents or from the authorities. We take all identified weaknesses or potential violations and new developments as an opportunity to improve our internal processes. If current developments require it, we take further ad hoc measures to respond to cyber incidents in an effective and timely manner.

In November 2017, the Management Board of Fresenius SE & Co. KGaA approved a new **global Cybersecurity Strategy**. Based on a cross-business-segment governance model, the program's intent is to identify cyber risks, establish common and agreed upon security policies to shape the global security baseline, and to monitor the global security level. Within the CARE governance model, every business segment and their respective regions are responsible for determining and reporting on the effectiveness of proper risk mitigation strategies based on their context, strategic objectives, and synergies to already established security capabilities.

AWARENESS

Data protection is a shared effort of all employees of the Fresenius Group. The foundation is the joint commitment of all business segments and Fresenius SE & Co. KGaA toward data protection, which is voiced in the codes of conduct.

All business segments and Fresenius SE & Co. KGaA have created **policies** for protection and processing of personal data. These support our employees to implement GDPR requirements and other relevant legal regulations within their responsibility. Guidelines, principles, and operating procedures complement the data protection policies.

In addition, we **train** employees on current requirements and threats in relation to data protection and IT security. For this, we offer a comprehensive range of e-learnings, classroom training, and additional training to employees. Thereby, we combine general training with targeted training measures for specific employee groups. This ensures that employees responsible for data processing activities are aware of current legal and internal requirements.

New employees are informed about confidentiality in handling sensitive data and bound to secrecy.

In addition, new employees of Fresenius Helios in Germany need to undergo mandatory data protection training within a defined time period. Every Helios entity needs to prove training of their employees on data protection every two years.

Fresenius Vamed conducts training on dealing with critical incidents, which were recently focused on data protection.

AUDIT AND MONITORING

A number of governance functions regularly perform controls with different focus areas to ensure compliance with data protection regulations in all business segments.

As part of this, Internal Audit conducts independent audits in all business segments and entities, also regarding relevant aspects of data protection and IT security. These focus on implementation of principles and procedures. In addition, there are reviews in cooperation with the responsible data protection officer. All business segments and Fresenius SE & Co. KGaA have defined respective audit concepts.

Furthermore, relevant **data protection controls** are part of the different internal controls frameworks of the business segments and reviewed by the responsible internal control departments. We use insights and identified improvement potential from audits and reviews to continuously improve our data protection processes. In addition, the data protection officers of the business segments and Fresenius SE & Co. KGaA review compliance with data protection principles and regulations as an independent supervisory function.

The audit concept of Fresenius Helios foresees a regular audit, minimum every one to two years, of every entity regarding data protection and IT security.

All employees of the Fresenius Group have the opportunity 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 facts quickly and to review and adjust our company processes where needed.

PROTECTION OF PATIENTS' MEDICAL INFORMATION AT FRESENIUS MEDICAL CARE

As a company in the health care sector, Fresenius Medical Care is entrusted with sensitive personal data on patients' treatment. Fresenius Medical Care uses this data to continuously optimize the quality of care it provides and fulfill its social responsibility towards the company's patients.

Fresenius Medical Care takes data privacy and security seriously and respects the privacy of all its stakeholders. Fresenius Medical Care is committed to maintaining the trust of its stakeholders and protecting patients' medical information. As the company highly values quality, honesty, and integrity, it uses its best efforts to handle patient data with the expected and appropriate care. This includes continuous attention and dedication to the protection of personal data that we process.

Fresenius Medical Care aims to apply adequate and **global minimum privacy standards** relating to the way we handle patient data at Fresenius Medical Care, and its affiliates, subsidiaries, and majority-controlled joint ventures. As legal requirements differ throughout the world, Fresenius Medical Care has established the Global Privacy Foundation, which specifies a consistent set of minimum requirements so that personal data is used appropriately throughout its life cycle. While the Global Privacy Foundation creates a baseline requirement for all affiliates to comply with, Fresenius Medical Care is also committed to adhering to applicable local laws that may impose stricter standards.

Fresenius Medical Care's **global privacy program** is overseen by its Management Board, which is informed on a bi-annual basis of the program status and any privacy-related issues that need to be addressed. Through the Global Head of Data Protection and Cybersecurity Laws, as well as the Global Privacy Team, the Fresenius Medical Care affiliates are guided in order to meet their compliance with the global privacy program. The Global Privacy Team maintains the Global Privacy Foundation by developing policies, procedures, and guidelines, planning training and awareness programs, monitoring and reporting on compliance, collecting, investigating, and resolving privacy inquiries, concerns, and complaints, as well as determining and updating appropriate sanctions for violations of these rules. Each Fresenius Medical Care affiliate is accountable for establishing and implementing at the minimum the baseline global privacy program for its operations. They shall, as deemed appropriate, designate resources qualified to serve in such capacity by virtue of their background, experience, education, and training.

In 2018, Fresenius Medical Care continued to further develop its global privacy program with a focus on its General Data Protection Regulation (GDPR) readiness program, so that our systems, databases, and applications meet GDPR requirements.

As expressed in the company's Code of Ethics and Business Conduct, Fresenius Medical Care is committed to protecting the privacy of its patients and only uses information collected in accordance with local data protection and privacy rules. Furthermore, Fresenius Medical Care's employees are expected to promptly report lost, stolen, or damaged devices owned by the company or containing company information. To safeguard the confidentiality of sensitive patient information, all relevant employees of Fresenius Medical Care with access to patient data are instructed to never disclose personal information to any unauthorized persons, either inside or outside the company, who do not have a legal right of access to this information.

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. All Fresenius business segments have implemented 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

Organization

Each of our business segments has appointed a **Chief Compliance Officer** who oversees 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 established compliance responsibilities at the respective organizational levels. Within these structures, local management is responsible for compliance in the legal entities. Besides this, more than 400 employees are working on compliance topics within the Fresenius Group. They support management and employees in all compliance-related questions.

Corporate Compliance department

The Corporate Compliance department of Fresenius SE & Co. KGaA supports the compliance functions of the business segments with standardized tools, processes, and methodologies. To further develop the Group's **Compliance Management Systems**, Corporate Compliance develops global compliance initiatives in consultation with the compliance functions of the business segments. The Compliance departments on the corporate level of the business segments develop further segment-specific global compliance initiatives and support the responsible compliance colleagues in the regions and divisions. In addition, the Corporate Compliance department of Fresenius SE & Co. KGaA is responsible for developing, implementing, and monitoring the CMS of Fresenius SE & Co. KGaA and its corporate functions. The Corporate Compliance department reports to the Chief Compliance Officer of Fresenius SE & Co. KGaA – the member of the Management Board responsible for Legal, Compliance, and Labor Relations.

Compliance Steering Committee

The Compliance Steering Committee (CSC) is the **central consultative committee** at Fresenius SE & Co. KGaA for compliance topics. It facilitates exchange with other relevant 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 planning and Internal Audit reports. In addition, participants discuss severe cases of potential misconduct and remediation actions. 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, and the Corporate Compliance department. All business segments provide the CSC with an annual update on their Compliance Management Systems. CSC meetings are held every six to eight weeks, minimum six times per year.

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.

COMPLIANCE MANAGEMENT SYSTEMS (CMS)

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** every two months, and regular jour fixes. In addition, subject matter experts of all business segments work together on relevant topics in regular group exchanges.

COMPLIANCE MANAGEMENT SYSTEMS

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.

Prevent

Essential measures for prevention include a thorough risk assessment, adequate and effective policies and procedures, regular training, and continuous advice.

Risk assessment

We assess compliance risks regularly using standardized methodologies in each business segment and at Fresenius SE & Co. KGaA. These risk assessments include up to 21 **compliance risk groups** depending on the business structure and are conducted in a top-down approach. 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.

In 2018, Fresenius Kabi has implemented an integrated risk management system. This system consolidates risk assessment processes within the business segment in one tool using a bottom-up approach and thereby enhancing risk analysis. We use the experiences of Fresenius Kabi for successful implementation of the tool within the whole Group. Thereby, we harmonize the risk assessment processes in one tool to achieve development risk management by analyzing risks across all reporting and risk areas.

Across all business segments, bribery and anti-corruption is one of the **focus risk areas**. From a Fresenius Group perspective, antitrust, data protection, anti-money laundering, foreign trade, and human rights are additional focus risk areas.

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 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

We support our employees through regular classroom and online training. Training covers the Codes of Conduct, company policies, or specific topics, such as anti-corruption, antitrust, or data protection. Training has a high priority for Fresenius. We plan and conduct training tailored to the relevant employee groups based on their function and risk. 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. We conduct job-specific compliance training for high-risk areas. In addition, we have processes in place to ensure that all employees join relevant compliance training on a regular basis. 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. The trust of our patients, business partners, and the public must not be compromised 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 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 especially care for cooperating with health care professionals and organizations as well as patient organizations and public customers in a transparent way. 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 of the business partner, we implement necessary mitigation measures, such as contractual commitments, to prevent corruption at the business partner and 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 adequately, e. g., with additional control measures, depending on the severity of the misconduct.

Acquisitions and investments

We also take compliance risks into account for acquisition and investment decisions. For this, specific due diligence procedures are performed in all business segments to identify potential **compliance risks**. The results are considered in the decision making and relevant safeguards, such as compliance representations and warranties in the contracts, are implemented. 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 continuously worked to implement the guideline and related measures 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 **internal controls**, such as prohibiting certain cash transactions, as well as risk assessment and due diligence processes for relevant transactions. Implemented controls will be outlined in policies and trained respectively.

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, including for 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 has a tool in place to give an overview on 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.

Cash controls
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 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 enable us to detect compliance risks early on.

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 number of international workshops in 2018, also supported by the Corporate Compliance Department of Fresenius SE & Co. KGaA.

Helios Germany has introduced a compliance indicator, 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 adherence to the regulations in the transparency guideline is tested on a sample basis.

Internal Audit
The Internal Audit departments of Fresenius perform independent **audits** of the Compliance Management Systems 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 2018, the Internal Audit departments performed multiple compliance-related audits at Fresenius SE & Co. KGaA and in the business segments across the world, also with particular focus on 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., 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.

Respond

Handling of potential compliance cases
We follow up 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.

Continuous improvement
In addition, we analyze audit findings to identify and realize additional improvement potential in our compliance measures. 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.

Further relevant information regarding legal and regulatory matters can be found on pages 225 ff. of the Notes.

BEING AN ATTRACTIVE EMPLOYER

The commitment of our more than 276,000 employees worldwide is the basis for the success and sustained growth of Fresenius. With their achievements and skills, our employees are helping our businesses occupy leading positions in their markets. We want to attract, retain, and develop talent at Fresenius. That is why we offer them a variety of attractive development opportunities. Furthermore, we promote international and interdisciplinary cooperation, as well as diversity in the business areas and regions. In the Group Management Board, the member of the Management Board responsible for Legal and Compliance and Labor Relations is responsible for all central employee matters.

Reporting on employee matters includes the key topics: personnel structure and diversity, employee engagement, profit-sharing schemes, how Fresenius attracts, retains, and develops talents, as well as occupational health and safety. The business models of our segments are adjusted to the individual needs of the health care markets we operate in. Therefore, we report on Group personnel concepts as well as on specific measures within our business segments.

PERSONNEL STRUCTURE AND DIVERSITY

At the end of fiscal year 2018, the Fresenius Group employed 276,750 employees. That was 3,501 people or 1% more than in the previous year (December 31, 2017: 273,249).

Our **employee structure by function** remained fairly unchanged compared to the previous year's figure. About 15% of our employees work in production while 70% are engaged in service.

The **proportion of female employees** in the Fresenius Group was again 68% as of December 31, 2018 (December 31, 2017: 68%). The number of women who participate in the Group-wide Long Term Incentive Plan (LTIP 2018) is a good indication for the women's share in management positions worldwide. The female quota among these approximately 1,400 top executives amounted to 30.3% as of December 31, 2018.

The **average age**[1] of an employee was 41.6 years in 2018 (2017: 41.5 years). The majority (55%) of our employees is between the age of 30 and 50.

The **length of service**[1] within the Group may vary due to acquisitions in the business segments. In 2018 it was 7.4 years (2017: 8.2 years).

In 2018, the **voluntary turnover rate**[1] was 9.6% (2017: 9.9%). On page 120, we provide an overview of key personnel structure and diversity figures per business segment.

Fresenius respects and promotes a **culture of diversity**. We are convinced that the combination of different perspectives, opinions, cultural impressions, experiences, and values will enable us to exploit the potential that will make us successful as a global company. The knowledge and social skills of our employees of different ethnic, social, and religious backgrounds support us in developing a high sensitivity for local needs of our customers and patients. The Fresenius Code of Conduct is the foundation of this company culture characterized by collaboration and mutual respect. It 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 137 ff. of our Annual Report.

ATTRACT TALENT, RETAIN AND DEVELOP EMPLOYEES

The ongoing globalization of our markets remains a challenge for our human resources management. Since needs differ in the various business segments, all employee development concepts are formulated and implemented according to specific market requirements and cultural differences. Our human resources management focuses on three topics:

- **Attract talent**: 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. Over recent years, we significantly broadened our personnel marketing activities and expanded our global career website. In fiscal year 2018, the market research institute Potentialpark named Fresenius as the best German company in the category "Online appeal to applicants" for the seventh consecutive year.

[1] Data of Fresenius Medical Care based on country data representing 96% all employees. Prior year information was adjusted to reflect the increased scope and to conform to the current year's presentation. Fresenius Kabi's data encompass employees globally. Data of Helios Germany in 2016 and 2017 inlcude the post-acute care business in Germany. Data of Fresenius Vamed also include temporary staff in 2017 and as of 2018 the German post-acute care business transferred from Fresenius Helios to Fresenius Vamed.

- **Retain employees**: As an international health care Group, our human resources management and accompanying activities are designed for local needs, e. g., flexible working time models or incentive programs to participate in the company's success.
- **Develop employees**: We offer our employees the opportunity to develop their career in an international, dynamic environment. Our personnel management instruments are continuously adjusted to meet future challenges. The Group-wide binding trainings on our Code of Conduct are accompanied by mandatory training in the business segments, e. g., in quality management, environmental management, or occupational health and safety management. Further individual training courses for employees and executives, as well as training relevant to the respective departments, complement our personnel development measures. Depending on the customer and market structure, our business segments place very different demands on concepts and measures for personnel development.

The Fresenius Group devotes a lot of attention to **vocational training**. We trained more than 4,150 young people in 53 different occupations at our German locations in 2018 and also put more than 150 university students through 31 degree programs in cooperation with dual institutions of higher learning. In order to meet the challenges of the digitization of its work processes, Fresenius has further increased the number of training and study places it offers in IT and IT-related professions. In 2018 we added dual courses of study in Information Technology, specializing in Cybersecurity, as well as in Electrical Engineering, specializing in Medical Technology, and training programs as an electronics technician in Industrial Engineering as well as Automation Technology. Alongside the traditional channel of direct job entry, Fresenius offers trainee programs for university graduates. The **Group-wide training catalog** is available to all employees. It includes, for example, programs for communication and presentation, self-management, project management, and target-group-specific learning content.

In addition to the training catalog, Fresenius documents training activities through the learning management system **Fresenius Learning Center (FLC)**. Those training activities are conducted in cooperation with a business segment or a department. Depending on the subject, these training programs may consist of one or more modules. Most training programs are provided as e-learning, as traditional web-based training, but may also include webinars or classroom training sessions. Employees in Germany who do not have access to a company computer, or who do not have a quiet work environment, can carry out the necessary training at specially designed learning places. Employees who have been enrolled into a training module are required to start and successfully finish the training within a defined period. Fresenius Medical Care, Fresenius Kabi, and the Group departments of Fresenius SE & Co. KGaA manage and document the majority of their e-learning programs in the FLC system from the headquarters in Bad Homburg. Fresenius Helios and Fresenius Vamed offer e-learning independently and document the training activities in their own management systems. Group-wide **compliance training**, for example on the Code of Conduct, is compulsory for all employees and conducted on a regular basis. Furthermore, Fresenius conducts management-specific training for high-risk compliance areas. Fresenius has implemented control processes to ensure that all employees are trained on topics relevant for their work on a regular basis. In 2018, the focus was on compliance-specific training modules. The training will continue in 2019. Further information can be found in the compliance section, see page 110.

Fresenius has established two **Group-wide programs for executives**. The Top Executive Program Maximizing Leadership Impact in cooperation with the Harvard Business School targets senior executives. The Executive Program with the University of St. Gallen, Switzerland, focuses on strategy and change management, and is designed for executives in middle and upper management.

TRAINEES AND TRAINING RATIO FOR GERMANY

	2018	2017	2016
Trainees[1]	**4,354**	4,019	3,743
Training ratio	**4.94**	4.64	4.45

[1] includes vocational training and university students

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. In addition, they are critical for giving the company a competitive

edge. Fresenius Medical Care invests in its employees and provides them with attractive development opportunities, taking their roles and individual strengths into consideration. This is reflected in various local, regional, and global development programs. For instance, in the reporting year, the company developed and started to implement a global leadership development program for the top 400 leaders, built around specified leadership expectations. It also runs the Clinical Advancement Program (CAP), a development program designed specifically for state-registered nurses in the U.S, and the new FAME program with a focus on providing management essentials in the Asia-Pacific region. Another aspect of this investment is the use of online training, which is available in all countries in which Fresenius Medical Care employs staff.

To further boost its global talent management, the company continued to refine the process for regularly reviewing leadership talent and succession planning and expanded its scope, including a focus on female talent. The results support managers and HR colleagues in recognizing and delivering "best-fit" solutions in the future; they are the basis for identifying, promoting, and developing future leaders at Fresenius Medical Care.

FRESENIUS KABI

Fresenius Kabi has created global, regional, and local structures for the training and development of employees. All employees are trained and qualified according to their functions and/or tasks. All new employees receive mandatory training on the Code of Conduct. Furthermore, data protection and information security training has been mandatory for our employees since the end of 2018. In addition, our employees in production receive obligatory training with respect to good manufacturing practice, as well as occupational health and safety and environmental protection. In 2018, Fresenius Kabi documented training activities in more than 50 countries in the FLC.

Management development at Fresenius Kabi aims to support the corporate strategy and to achieve the growth targets. This is why Fresenius Kabi aims to identify talents, retain them within the company, and develop them further. The development of executives requires continuous learning and is focused on the company values of Fresenius Kabi. The company supports the development of its executives with an annual talent review, a dialogue on performance, competences, and development potential. This talent review is the basis for identifying, evaluating, and developing talents in all of Fresenius Kabi's regions, divisions, and central functions worldwide.

FRESENIUS HELIOS

Knowledge is one of the four strategic corporate goals of Fresenius Helios: we want to share and increase our knowledge. It directly influences the quality of medical services and supports our ambition to present Fresenius Helios as an attractive employer in the health care market. All employee development programs support Fresenius Helios in reaching its other three corporate strategic goals: patient benefit, profitability, and growth. In 2018, recruitment of new personnel was a challenge in the hospital business. The company's focus was on attracting new employees and retaining those we have.

In Germany, the **Helios Academy** and the **Helios training centers** offer extensive opportunities for competence-oriented education and further education to all professional groups in the hospitals. In 2018, a new training center was opened in Berlin. Up to 300 employees will be trained there for nursing care in the future. Helios is also increasing the number of training places at its other nursing schools. Starting in 2019, a comprehensive training program with the focus on "patient-centered communication" is to be rolled out. A multi-year program is planned with the aim of imparting communication skills. A pilot project in our clinic in Erfurt showed initial success.

Helios Germany supports young talents in medical care and nursing care through a **central talent management system**. We offer a special development program to leading executives in the medical service. Thanks to its trainee programs and management training, Helios Germany enjoys a reputation as an attractive employer among university graduates.

Helios Spain has implemented a **corporate talent plan** to develop its employees. This contains a talent pool for internal exchange and training activities. The company continues to expand the training program, focusing specifically on occupational health and safety, patient information, patient

safety, and patient care improvements. In our hospitals we have implemented a training program on the topic of "Dialogue and Nursing" for doctors. In 2018, we focused on emergency units and developed classes tailored to this area. More than 940 employees were trained.

FRESENIUS VAMED

One of Fresenius Vamed's key success factors is the individual performance of its employees based on training, expertise, and project experience. The focus is on the further development of this success factor. Fresenius Vamed therefore offers its employees tailored programs for **professional training and development**. Key to all personnel development programs is keeping employees updated with regard to health care developments. The VAMED **Human Capital Management (HCM) program** is a leadership and development program for the identification of those with potential and their individual further development in order to be able to take on management and performance functions in the future.

Fresenius Vamed is also dedicated to the qualification and training of young employees through its various **trainee programs**. The trainee programs offer young employees 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**. Besides specialist topics, training is offered for self-development, leadership, and social and methodological competence. Various knowledge platforms, such as the International Medical Board (IMB), bundle the know-how of more than 1,200 health care professionals who work for Fresenius Vamed.

EMPLOYEE ENGAGEMENT AND PARTICIPATION

EXCHANGE WITH EMPLOYEE REPRESENTATIVES

Fresenius acts responsibly towards its employees. This includes the voluntary 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 125 ff.

Employees engage in dialogue with their supervisors, but can also contact their human resources or compliance officers, as well as the works council, their union representatives, or other employee representatives. In Europe, more than 70% of our employees are covered by a **collective bargaining agreement**[1].

In European countries, workplace representations of interests are organized according to national law. When dealing with local employee representatives and trade unions, the main responsibility lies with the divisions at the country or site level. The focus of our discussions is on local and regional conditions. Together with the employee representatives we want to find tailor-made solutions for the different challenges for each location.

DIALOGUE AT EUROPEAN LEVEL

Fresenius SE & Co. KGaA has a European Works Council (EWC) consisting of 22 employee representatives as of December 31, 2018. They come from the member states of the EU and the EEA (European Economic Area) in which Fresenius employs workers.

The EWC is responsible for the participation of Fresenius employees in **cross-border actions**, insofar as they have a significant impact on the interests of Fresenius workers and cover at least two countries within its area of responsibility, such as relocation or closure of companies or collective redundancies. The management informs and consults the EWC, for example, about the structure and the economic and financial situation of the Group and its expected development, employment situation, investments, organizational changes, and introduction of new work and production processes.

The EWC meets once, its executive committee three times a year. The European trade union federations IndustriAll and European Public Services Union attend the meetings at the invitation of the EWC. The main areas of discussion of the EWC in the reporting period were the integration of Quirónsalud, digital transformation projects in the Group, and the EU General Data Protection Regulation. The EWC elects six employee representatives to the supervisory board of Fresenius SE & Co. KGaA, including at least one representative from trade unions.

[1] Number of employees covered by collective agreements or other collective agreements with unions or comparable social partners in total. This does not include agreements with works councils or other local representatives.

PROFIT-SHARING BONUS

	2017	2016	2015
Profit-sharing bonus[1] in €	2,200	2,200	2,200
Eligible employees	6,228	6,130	5,934
Total of profit-sharing bonus[1] payment, € in millions	12.5	12.2	11.9

[1] The profit participation is paid retroactively for the respective fiscal year. It forms part of the compensation in some German Group companies.

The trusting cooperation between company management and employee representatives is an established practice at Fresenius.

PROFIT-SHARING SCHEME AND STOCK OPTION PLAN

For many years, Fresenius has paid a **stock-based profit-sharing bonus**, which is distributed when the Fresenius Group's EBIT and earnings targets defined in the program have been achieved. The table above shows the development in the profit-sharing bonus over the last several years. In 2018, the Group targets for this program were not achieved.

The share-based **Long Term Incentive Plan 2018** (LTIP 2018) is a global compensation instrument linking management's entrepreneurial responsibility to future opportunities and risks. For additional information, please see pages 251 ff. of the Notes.

Fresenius Medical Care has its own share-based compensation plans.

OCCUPATIONAL HEALTH AND SAFETY

Ensuring the health and safety of our employees is part of our corporate responsibility. The Fresenius Code of Conduct bindingly stipulates that all necessary measures for employee safety are taken to prevent work-related incidents. All business segments focus on preventive measures in the field of occupational health and safety and on the individual responsibility of the employees. The safety concepts are adapted to the business models of the four business segments and cover production-related occupational health and safety as well as corporate health initiatives for employees in health care facilities and administration. We aim to secure the occupational safety of our employees, as well as the safety of our patients.

All Fresenius business segments record data on occupational health and safety in line with regulatory provisions. Those which are consolidated at the business segment level are published in the following section.

FRESENIUS MEDICAL CARE

The company aims to foster a culture of continuous improvement in the work environment with the goal of minimizing injuries and reducing incident rates. This includes:

- reporting and analyzing work-related accidents and injuries,
- identifying their root causes,
- implementing corrective action as appropriate.

As part of this concept, Fresenius Medical Care has introduced KPIs for occupational health and safety to production sites and dialysis clinics to provide information, as required by governmental authorities. To further strengthen and harmonize management concepts and KPIs in this context, Fresenius Medical Care launched an **occupational health and safety initiative** in 2018 as part of our global sustainability program.

At Fresenius Medical Care, the topic of occupational health and safety is managed locally, allowing the company to meet local and regional legislative requirements. In many countries, medical facilities are obliged to fulfill country-specific occupational health and safety requirements to achieve certification. In North America, operational activities related to occupational health and safety are monitored and evaluated by a specialized department. This function also assesses external regulatory and legal requirements and incorporates them into our internal policies and guidelines together with regional and local management.

Every year, Fresenius Medical Care's production sites and laboratories in the U.S. are put through a formal program to monitor **environmental protection and occupational safety standards**. Audits are carried out to check compliance with the regulations of the U.S. Occupational Safety & Health Administration, the Department of Transportation, and the

Environmental Protection Agency, as well as state and local statutes. In the EMEA region, we have established an **Environmental Health & Safety (EHS) Basic System** that focuses on compliance and risk control in connection with environmental and employee matters. The EHS Basic System applies to all operational units within the Integrated Management System (IMS) that have a certified quality management system in place. Aside from the EHS Basic System, all operational units in EMEA are required to file an annual declaration of responsible management confirming their compliance with environmental and occupational health and safety regulations (Declaration of EHS Compliance). Fresenius Medical Care's occupational health and safety procedures in the EMEA region are bundled in a central management system for occupational health and safety based on the British Standards for Occupational Health and Safety Assessment Series 18001 (BS OHSAS 18001), which is incorporated into the company's IMS. As a result, Fresenius Medical Care conducts internal reviews and audits as part of its regional QMS to monitor compliance with occupational health and safety policies and procedures in the dialysis care business.

In Latin America, the company has established occupational health and safety management systems under local responsibility. In the GMQ-managed production sites, dedicated functions like work safety officers or EHS officers are responsible for introducing OHS guidelines, policies, and procedures in accordance with local regulations. These functions record and report work-related injuries to local authorities, the local OHS committee, or local management. The dialysis care business in Latin America has introduced OHS guidelines, policies, or procedures in accordance with local regulations. All of these sites are subject to regular internal reviews as well as external audits from government agencies or national regulatory bodies.

In Asia-Pacific, occupational health and safety management in production sites is under local responsibility. All production sites have dedicated personnel including OHS Committees, and HR or EHS departments responsible for overseeing the application of OHS laws and regulations. As part of this management approach, the production sites have established OHS guidelines, policies, or procedures in accordance with the applicable local regulations. In the provider business, the clinical quality team has introduced a risk management system that covers occupational health and safety aspects. This includes infection prevention and control, medication management, and the safe use of sharps and disposables, as well as other clinical quality tools. Fresenius Medical Care provides a clinical framework including guidelines, standards, operating procedures, and policies. To monitor compliance with the clinical framework as well as country, state, and federal legislation, we regularly perform internal clinical quality audits.

FRESENIUS KABI

Fresenius Kabi has implemented binding **occupational health and safety guidelines**. The guidelines on occupational health and safety focus on the following principles:

- Avoidance of work-related injuries, illnesses, and other incidents
- Performing hazard and risk assessments for all routine and non-routine activities
- Compliance with applicable legal requirements and other occupational health and safety requirements
- Avoiding unsafe activities
- Provision and continuous safe operation of facilities, machinery, and equipment
- Safe handling, use, storage, and proper disposal of hazardous substances

The aim is to avoid all work-related accidents. To achieve this goal, standard operating procedures (SOPs) and standard process guidelines were implemented to provide a global framework for occupational health and safety. In addition, Fresenius Kabi uses a **management system for occupational health and safety** in accordance with the international standard OHSAS 18001. This management system will be rolled out globally. Fresenius Kabi aims to improve occupational health and safety processes and control mechanisms at all locations to align them with internationally recognized standards.

The employees at Fresenius Kabi's **Global Work and Environmental Safety department** analyze and evaluate working procedures, risks, and processes and enable the exchange

of best practices within the business segment. Fresenius Kabi performs internal audits at its locations to identify potential for improvement. To exploit this potential, measures are defined together with local employees responsible for occupational health and safety. Fresenius Kabi documents all occupational health and safety incidents and accidents that lead to lost working time for its employees or temporary workers worldwide. Reported cases are categorized according to their severity and might lead to technical improvements, further training, or, in some cases, the adjustment of the existing standard operating procedures, to avoid future work-related incidents and improve occupational health and safety of employees.

All recorded incidents are transferred into the **key performance indicator** LTIFR (Lost Time Injury Frequency Rate) to evaluate the occupational health and safety. This KPI improved in 2018, compared to the previous year's figure. Further, in 2018, no work-related fatalities or severe accidents were recorded at Fresenius Kabi.

FRESENIUS HELIOS

Helios Germany is subject to various laws and regulations regarding occupational health and safety. Throughout 2018, the health and safety indicator (GSI) developed by the company has made a contribution to identifying and exploiting the status quo and potential for improvement in occupational health and safety. The department for employee health and safety held responsibility for occupational health and safety at Helios Germany. As Helios Germany wants this issue to carry more weight beyond the company itself, this internal area was merged into the new AMAGS division (Occupational Medicine, Employee Health and Safety – Arbeitsmedizin, Mitarbeitergesundheit und Sicherheit). In the future, AMAGS will also be a provider of occupational health and safety services outside the German Helios hospitals and will continue to develop these areas.

Irrespective of this, Helios Germany works internally with time management reports, which focus on **trends in absenteeism**. If Helios Germany identifies weak points in its own hospitals, measures are taken and programs are offered, for example to promote occupational health or for occupational integration management. Helios Germany is developing additional online training courses and will roll them out throughout the company in order to strengthen its expertise in the area of occupational health and safety.

Helios Spain strives to develop a role-model culture of prevention within the health care sector focused on caring for health, preventing occupational health risks, and promoting healthy habits among its employees. Helios Spain unified the joint OHS service of its private hospitals and companies and developed a corporate training platform for specific, workplace-related risks to train employees.

FRESENIUS VAMED

The management of the local entities of Fresenius Vamed is responsible for the implementation of occupational health and safety measures and procedures, in compliance with the applicable laws and regulations. Occupational health and safety is a corporate responsibility of Fresenius Vamed and included in its corporate culture and the vision statement of the company.

All locations are subject to regular **occupational health and safety inspections**. Furthermore, the employees of Fresenius Vamed are provided with occupational medical care and a related offer of checkups.

Fresenius Vamed offers all employees a wide range of health promotion offers through its occupational health management.

EMPLOYEES (FTE) BY BUSINESS SEGMENT

	2018	2017	2016
Fresenius Medical Care	**112,658**	114,000	109,319
Fresenius Kabi	**36,423**	34,923	33,476
Helios Germany[1]	**51,429**	57,719	56,596
Helios Spain (Quirónsalud)	**31,094**	27,858	n. a.
Fresenius Vamed	**13,665**	7,215	6,909
Corporate/Other	**1,060**	969	889
Total (FTE) as of Dec. 31	**246,329**	242,684	207,189

[1] Number of employees converted to the full collectively agreed working time on monthly average (Vollkräfte)

AVERAGE AGE[1]

	2018	2017	2016
Fresenius Medical Care	**42.1**	41.7	n. a.
Fresenius Kabi	**38.4**	38.5	38.7
Helios Germany	**42.6**	42.7	42.6
Helios Spain	**40.0**	n. a.	n. a.
Fresenius Vamed	**43.6**	43.0	43.5
Corporate/Other	**38.9**	39.2	39.2
Total	**41.6**	41.5	41.5

EMPLOYEES BY FUNCTION

as of Dec. 31	2018	2017	2016
Production	**41,100**	40,189	38,069
Service	**194,868**	194,117	161,495
Administration	**26,112**	25,015	19,955
Sales and marketing	**11,628**	11,156	10,584
Research and development	**3,042**	2,772	2,770

AVERAGE LENGTH OF SERVICE[1]

in years	2018	2017	2016
Fresenius Medical Care	**7.4**	7.0	n. a.
Fresenius Kabi	**7.5**	7.4	7.6
Helios Germany	**10.8**	10.5	10.8
Helios Spain	**8.2**	n. a.	n. a.
Fresenius Vamed	**7.8**	6.1	6.0
Corporate/Other	**7.3**	7.6	7.6
Total	**7.4**	8.1	8.4

EMPLOYEES (HEADCOUNT) BY REGION

	2018	2017	2016
Europe	**158,939**	154,172	119,434
thereof Germany	**88,086**	86,613	84,165
Europe excl. Germany	**70,853**	67,559	35,269
North America	**72,672**	75,083	72,803
Asia-Pacific	**25,575**	24,381	22,441
Latin America	**17,610**	17,709	16,283
Africa	**1,954**	1,904	1,912
Total as of Dec. 31	**276,750**	273,249	232,873

VOLUNTARY TURNOVER RATE[1]

in %	2018	2017	2016
Fresenius Medical Care	**12.9**	12.2	n. a.
Fresenius Kabi	**9.4**	11.3	10.7
Helios Germany	**6.9**	6.0	5.3
Helios Spain	**3.8**	n. a.	n. a.
Fresenius Vamed	**9.5**	8.0	n. a.
Corporate/Other	**3.8**	2.7	2.5
Total	**9.6**	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.

FEMALE EMPLOYEES IN THE BUSINESS SEGMENTS

as of Dec. 31	2018	2017	2016
Fresenius Medical Care	**69%**	69%	69%
Fresenius Kabi	**50%**	51%	51%
Fresenius Helios	**75%**	76%	76%
Fresenius Vamed	**64%**	56%	56%
Corporate/Other	**39%**	39%	39%

AGE STRUCTURE[1]

	2018			2017			2016		
as of 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
Fresenius Medical Care	**17%**	**56%**	**27%**	18%	56%	26%	n. a.	n. a.	n. a.
Fresenius Kabi	**23%**	**60%**	**17%**	25%	59%	16%	24%	60%	16%
Helios Germany	**18%**	**49%**	**33%**	19%	49%	32%	19%	50%	32%
Helios Spain	**19%**	**61%**	**20%**	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
Fresenius Vamed	**15%**	**50%**	**35%**	18%	54%	28%	18%	54%	29%
Corporate/Other	**25%**	**54%**	**21%**	24%	55%	21%	23%	57%	20%
Total	**18%**	**55%**	**26%**	19%	55%	26%	20%	53%	27%

[1] Data of Fresenius Medical Care based on country data representing 96% all employees. Prior year information was adjusted to reflect the increased scope and to conform to the current year's presentation. Fresenius Kabi's data encompass employees globally. Data of Helios Germany in 2016 and 2017 inlcude the post-acute care business in Germany. Data of Fresenius Vamed also include temporary staff in 2017 and as of 2018 the German post-acute care business transferred from Fresenius Helios to Fresenius Vamed.

PROTECTING NATURE AS THE BASIS OF LIFE

Fresenius is committed to protecting nature as the basis of life and using its resources responsibly. We comply with legal requirements and aim to improve the safety of our plants and our performance in the areas of environmental protection, product responsibility, and logistics. The four Fresenius business segments manage environmental matters differently to meet their individual business requirements. Therefore, we present the corresponding **environmental management approaches** separately for each business segment.

Fresenius Medical Care, Fresenius Kabi, and Fresenius Vamed use the ISO 14001 standard as the basis for their environmental management and have locations certified according to this standard. Furthermore, they have certified locations according to the energy management standard ISO 50001.

Energy consumption, water consumption, and greenhouse gas emissions (GHG) data are collected in all business segments. To comply with the interests of external stakeholders, we have been reporting key figures[1] since 2017. External stakeholders, such as investors and environmental associations, frequently inquire about information on waste and effluents for the Group. Therefore, we also include information on these topics.

Water is an important resource for all of the 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 have to ensure that adequate management and control systems are in place.

Water management and **water treatment** is coordinated and controlled locally within the Fresenius Group. The business segments have to ensure compliance with all applicable laws and regulations. In fiscal year 2018, Fresenius[1] consumed a total of approximately 56 million m³ of water. The same applies to **wastewater**: the business segments are expected to treat wastewater from production or health care facilities in compliance with local laws and regulations and implement relevant management provisions, if necessary.

FRESENIUS GROUP[1] WATER CONSUMPTION

m³ in millions	2018	2017	2016
Fresenius Medical Care	**41.8**	n. a.	n. a.
Fresenius Kabi	**9.7**	9.8	9.8
Fresenius Helios	**3.7**	3.2	3.0
Fresenius Vamed	**0.7**	0.3	0.3
Total	**55.9**	n. a.	n. a.

Production processes and patient treatments in hospitals or other health care facilities require a high amount of **energy**. The structural condition of health care facilities also influences energy consumption. Fresenius continuously invests in environmental protection through structural measures, such as new construction projects and modernizations in line with the latest standards of efficient heat insulation and applicable energy savings regulations. In fiscal year 2018, Fresenius[1] consumed a total of approximately 5.3 million MWh of energy. As with water consumption, our patients' well-being and product safety are the focus of energy management. Safe and uninterruptible power supply is therefore a top priority. Measures for saving energy are always considered with the utmost care. We continually optimize our energy procurement and generate energy ourselves at numerous locations. This makes us independent and shall secure the energy supply in the long term.

FRESENIUS GROUP[1] ENERGY CONSUMPTION

MWh in millions	2018	2017	2016
Fresenius Medical Care	**2.35**	n. a.	n. a.
Fresenius Kabi	**1.65**	1.57	1.49
Fresenius Helios	**1.14**	0.95	0.96
Fresenius Vamed	**0.16**	0.05	0.05
Total	**5.30**	n. a.	n. a.

In fiscal year 2018, Fresenius[1] caused a total of 1,523 thousand t **CO_2 equivalents**.

[1] Fresenius Medical Care figures include data on energy and water consumption provided by GMQ-coordinated manufacturing sites as well as data on electricity and water consumption from dialysis centers. Greenhouse gases are calculated based on energy data. Due to the timing of this publication and the availability of data sources such as energy or water bills, the company has performed a limited amount of extrapolations to complete this reporting year's dataset. The data from Fresenius Helios contain all company-owned hospitals in Germany and Spain. Fresenius Kabi's data include all facilities worldwide. Fresenius Vamed's data include all fully consolidated health care facilities, and as of 2018 the German post-acute care business transferred from Fresenius Helios to Fresenius Vamed.

GREENHOUSE GAS EMISSIONS FRESENIUS GROUP [1], SCOPE 1 AND 2

t CO_2 equivalents in thousands		2018	2017
Fresenius Medical Care	Scope 1	**218**	n. a.
	Scope 2	**548**	n. a.
Fresenius Kabi	Scope 1	**169**	174
	Scope 2	**255**	248
Fresenius Helios	Scope 1	**114**	103
	Scope 2	**182**	152
Fresenius Vamed	Scope 1	**18**	3
	Scope 2	**19**	6
Total	Scope 1	**519**	n. a.
	Scope 2	**1,004**	n. a.

In the health care industry, **waste** is a strictly regulated factor. All Fresenius locations have to adhere to all applicable laws and regulations and also to 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. This ranges from the selection of suitable disposal containers, cleaning, and sterilization procedures to the occupational safety of our employees when disposing of hazardous – e. g., infectious – waste.

Where necessary, business segments lay down specific rules and requirements in internal guidelines, training, and controls for our employees, for example in the area of hygiene in our acute care clinics.

FRESENIUS MEDICAL CARE – ENVIRONMENTAL MANAGEMENT

Environmental management at Fresenius Medical Care includes management of water, wastewater, energy, waste and as well as greenhouse gas emissions. These topics are the focus of the company's environmental management activities. Fresenius Medical Care aims to achieve environmental improvements along the entire life cycle of its products and reduce negative environmental impacts and risks for its patients and employees.

Fresenius Medical Care is subject to a broad range of federal, state, and local laws and regulations relating to the protection of the environment. These laws regulate, among other things, the discharge of substances into the environment, the handling and disposal of waste and wastewater and the remediation of contaminated sites. As the company operates in highly regulated markets, it has established management structures in line with its decentralized structure to comply with applicable laws and regulations.

In North America, environmental management is established at regional level. As part of this approach, the company constantly monitors national and international regulations relating to environmental, chemical, and occupational health and safety issues so that internal policies, guidelines, and SOPs are up-to-date. For the purpose of compliance with applicable laws and internal guidelines, manufacturing sites, distribution centers, and laboratories are subject to regular audits by the company's Corporate Audit team. Furthermore, Fresenius Medical Care regularly analyzes energy, water, and waste and reviews them to reduce consumption and improve efficiency in all of its facilities. 91% of Fresenius Medical Care's dialysis clinics in the U.S. are covered by this approach.

In the EMEA segment, environmental management is part of Fresenius Medical Care's Integrated Management System (IMS). Its aim is to systematically reduce and control risks associated with environmental protection, comply with applicable legislation, and meet the expectations of our customers and patients. Since the environmental certification strategy is focused on but not limited to production sites with high consumption levels, eight of Fresenius Medical Care's largest production sites in the EMEA segment are certified according to ISO 14001. Two of these production sites are also certified according to ISO 50001. In addition, almost 50% of the company's dialysis clinics are certified according to ISO 14001. Compliance with ISO standards is regularly reviewed by internal and external experts.

At present, more than 70% of Fresenius Medical Care's clinics in the EMEA segment 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, we intend to continuously increase the pro-

[1] Fresenius Medical Care figures include data on energy and water consumption provided by GMQ-coordinated manufacturing sites as well as data on electricity and water consumption from dialysis centers. Greenhouse gases are calculated based on energy data. Due to the timing of this publication and the availability of data sources such as energy or water bills, the company has performed a limited amount of extrapolations to complete this reporting year's dataset. The data from Fresenius Helios contain all company-owned hospitals in Germany and Spain. Fresenius Kabi's data include all facilities worldwide. Fresenius Vamed's data include all fully consolidated health care facilities, and as of 2018 the German post-acute care business transferred from Fresenius Helios to Fresenius Vamed.

portion of clinics using e-con5. For further information on our Environmental Health & Safety (EHS) Basic System and the Declaration of EHS compliance, please refer to the section on "Occupational health and safety" on page 117.

In Latin America, Fresenius Medical Care has implemented an environmental management program to control and improve its environmental performance in terms of energy, water, and waste in dialysis clinics. More than 92% of the company's clinics are covered by the integrated software solution e-con5 for eco-controlling. The environmental data is reviewed on a regular basis to control developments as well as target achievements and define measurements and activities for improvement.

ENVIRONMENTALLY SOUND AND EFFICIENT OPERATIONS IN GMQ AND GRD

Fresenius Medical Care's corporate GMQ function encourages local sustainability projects as part of the Green & Lean initiatives with the aim of continuously improving the company's environmental performance and incorporating environmental management best practices into its business operations. This means that 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 and recycling waste and wastewater. The key objectives of the initiatives are compliance with applicable environmental regulations, managing and reducing environmental risks, and implementing environmentally sustainable operations. In 2018, the Green & Lean initiatives included the conversion to LED lighting in warehouses and production areas, wastewater heat recovery, the replacement of production chillers and boilers to adapt to environmental conditions, and the increased use of solar power. Fresenius Medical Care also saved water and wastewater by implementing and optimizing reverse osmosis systems, autoclaves, and purification systems. Furthermore, the company improved its production processes and recycling activities and was consequently able to reduce waste produced at its manufacturing sites.

Fresenius Medical Care's commitment to using natural resources efficiently is also part of the environmental policy set out by the GMQ function in EMEA and Latin America as well as by GRD. In this policy, the company pledges to minimize the impact of our activities on the environment, comply with applicable laws and regulations, and provide safe and healthy working conditions for all employees. Using natural resources efficiently, preventing environmental pollution, recycling waste efficiently, and enhancing our environmental performance are core elements of the company's efforts to continually improve its environmental management system.

REDUCING ENVIRONMENTAL IMPACT ALONG THE PRODUCT LIFE CYCLE

At Fresenius Medical Care, innovations and new technologies help to reduce the company's impact on the environment and the use of resources. Most of the **water utilized** by Fresenius Medical Care is needed to produce dialysate during life-saving dialysis treatment in our 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 at the same time being eco-friendly by automatically adjusting the dialysate flow to the effective blood flow. This allows the saving of substantial amounts of dialysate, water, and energy while maintaining a constant dialysis quality. Fresenius Medical Care is continuously increasing sales of these machines worldwide. In 2018, more than one in five dialysis machines produced belonged to one of these **resource-friendly machine generations**.

With the aim of reducing its environmental impact, Fresenius Medical Care takes a life cycle approach that takes into consideration all significant environmental impacts along the entire product life cycle. To this end, the company has established a simplified, lean product life cycle assessment (Screening LCA) as part of its EMEA environment, health, and safety program. Based on international guidelines, we calculate the environmental impact caused during the different stages of a product's life cycle in order to meet the requirements of ISO 14001 and IEC 60601-1-9. The Screening LCA covers the majority of the company's active medical device product lines.

FRESENIUS KABI – ENVIRONMENTAL MANAGEMENT

Fresenius Kabi has implemented binding global environmental guidelines. In addition, Fresenius Kabi uses an **environmental management system** in line with the international standard ISO 14001 as well as an **energy management system** in line with the international standard ISO 50001. An environmental and energy management handbook as well as standard process guidelines are the framework for the environmental and energy management of all certified local units. Both the environmental and energy management systems are certified by TÜV Rheinland and audited annually. Both in its environmental and energy management, Fresenius Kabi focuses on the continuous improvement of energy and water usage, as well as the reduction of wastewater, waste, and emissions – depending on the overall production volume. Fresenius Kabi also expects careful and responsible handling of nature and its resources from its suppliers. This is implemented in Fresenius Kabi's Supplier Code of Conduct.

Responsibility for environmental and energy management is allocated to global, divisional, and local organizations ultimately reporting to Fresenius Kabi's CEO. Employees in the Global Work and Environmental Safety division analyze and evaluate processes centrally and at the sites. They facilitate the exchange of best practices. With internal audits, Fresenius Kabi identifies improvement opportunities at its own sites and develops appropriate measures with locally responsible managers to tap these potentials.

The production sites place special importance on the improvement of **energy performance and environmental impact**. At our plant in Wuxi, China, we have installed a solar thermal-based preheating system to support the central heating. With this measure, we were able to achieve annual savings of 58.4 t CO_2 and 27,000 m³ natural gas.

FRESENIUS HELIOS – ENVIRONMENTAL MANAGEMENT

At Helios Germany, the business unit Infrastructure[1] is responsible for environmental management. The business unit reports directly to the manager responsible for operating the company's international business (COO).

The business unit Infrastructure supports purchasing activities and the exchange of best practices at the clinics. On an operational level, environmental topics are managed by the individual hospitals. For them, the **energy consumption** and **drinking water quality** are of particular importance in environmental management. However, as drinking water quality has to be ensured at all times and microbiological contamination must be prevented, Helios can only control the water consumption in hospitals and clinics to a small extent.

The business unit has also established a central purchasing and management system to control energy consumption at all sites and clinics. It allows the company to regularly and promptly compare targets with actual values and to derive improvement measures. In addition to this system, all Helios Germany hospitals are certified according to the German Energy Saving Act (EDL-G). Through this certification, we fulfill the DIN EN 16247 standard.

Helios Spain uses the ISO 50001 standard for the certification of its hospitals' energy management and aims to increase their energy efficiency. By 2018, some hospitals had already been certified, with other hospitals scheduled to be certified in 2019. In 2016, the company started the exchange of best practices and experience in the company through an energy management committee. Furthermore, it controls its greenhouse gas emissions and plans to reduce them through energy efficiency measures. Helios Spain also uses the ISO 14001 standard for environmental management. By 2018, some hospitals had already been certified, with other hospitals scheduled to be certified in 2019.

Waste and **sewage** in the German and Spanish hospitals are disposed of according to legal requirements, for example the German Recycling and Waste Management Act (Kreislaufwirtschaftsgesetz) or the Spanish Ley 10/1998, RD 952/1997.

[1] On August 15, 2018, Helios Germany established the business area infrastructure. Main responsibilities are construction and project control, industrial engineering, sterilization processes, and authorized representatives units including environmental management at Helios Germany.

Helios Spain uses authorized service providers to manage hazardous waste. Wherever possible, the company encourages the reuse and recycling of waste. In Germany, local municipalities and rural districts also set specifications in wastewater regulations. Proper waste disposal is of great importance to hospitals. Helios views waste disposal management as a process: it starts with avoiding any future waste, and ends with the consistent recycling or environmentally friendly disposal of the same. Requirements pertaining to environmental protection, occupational health and safety, and infection protection and hospital hygiene are taken into account. That relates particularly to major waste groups such as clinical waste, i. e., from the diagnosis and treatment of human diseases.

FRESENIUS VAMED – ENVIRONMENTAL MANAGEMENT

At Fresenius Vamed, the responsibility for the environmental management of the consolidated health facilities is anchored directly to the respective management. In environmental management, the resource-efficient handling of energy sources and fresh water is of particular importance. State-of-the-art construction and installation techniques are used in health care facilities built by Fresenius Vamed, to ensure optimal **resource management**.

Fresenius Vamed's energy management in Austria is certified for companies with a majority stake in accordance with ISO 50001 and is regularly audited. In 2016, an **energy management system** in line with ISO 50001 was introduced in the thermal baths managed by Fresenius Vamed on a voluntary basis. It is certified by Quality Austria. The local units are provided by Fresenius Vamed with the framework conditions for energy management. On this basis, measures to improve energy efficiency are defined and implemented locally.

CARING FOR HUMAN RIGHTS

As a global health care company, we improve access to affordable, high-quality health care in many countries and thereby contribute to respecting human rights.

- Every 0.7 seconds, **Fresenius Medical Care** provides a dialysis treatment somewhere around the globe.
- With a broad range of generic products, **Fresenius Kabi** enables patients with medical needs to access modern therapies and affordable health care.
- In the past five years, **Fresenius Helios** has invested more than €1 billion in the modernization and development of clinical services in Germany and Spain and thereby contributes to comprehensive high-quality health care.
- **Fresenius Vamed** has completed more than 900 projects in around 90 countries, many of these in regions 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.

HOW WE CONTRIBUTE

We are committed to respecting and supporting 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 have adopted a **Group-wide statement regarding human rights**. 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.

[1] ILO Declaration on Fundamental Principles and Rights at Work, adopted June 1, 1998.

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**
  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.

  Taking responsibility for our employees is part of the corporate responsibility of the whole Fresenius Group. Processes in 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, such as the UK Modern Slavery Act, we confirm compliance with these laws on the websites of our local entities.[1]

- **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 quality management handbook and the Code of Conduct 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 page 113.

- **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 to our employees. We report in detail on occupational health and safety on pages 117 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 pages 116 f.

[1] For further information, please see:
www.freseniusmedicalcare.co.uk/about-us/statement-modern-slavery
www.fresenius-kabi.co.uk/7266.htm
www.calea.co.uk/about/compliance/calea-modern-slavery-act-2015-statement

- **Protecting personal data**
  We respect the privacy of every person. We feel accountable for the personal data of our patients, employees, customers, and suppliers. We are aware of our responsibility within the especially trusted relationship with our patients. Our patients expect adequate protection of their data. 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 104 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 legal requirements and to improve the safety of our plants and our performance in the areas of environmental protection, product responsibility, and logistics. You will find additional information on pages 121 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 128.

The statement on human rights 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.

Beyond that, the safety of our products and therapies is our priority. Millions of patients worldwide rely on the quality of our care. Therefore, the following applies for all business segments: when we recognize indications for 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 for deviations, we respond immediately. We keep awareness of our employees and managers for our values and principles of conduct up to date through regular classroom or online training on the respective Code of Conduct.

Operational implementation and assessment of our activities are the responsibility of the respective functions, such as Human Resources and Occupational Health and Safety, 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 109 ff. In addition, sample 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 112. If we have information on potential violations, we take necessary measures.

In case current developments require it, we implement appropriate measures to fulfill our responsibility to respect human rights in our company activities.

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 were recorded in the business year that conflict with our goal of respecting human rights.

RESPONSIBILITY IN THE SUPPLY CHAIN

Our business segments cover a large part of their value chain and thereby ensure the highest quality standards. Beyond that, we work with suppliers and other business partners worldwide to care for our patients.

Thereby, 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 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 these in **Sustainability Principles** for suppliers of the Global Manufacturing and Quality function in the regions EMEA, Latin America, and Asia-Pacific. Fresenius Kabi, Fresenius Vamed, and Fresenius SE & Co. KGaA specify these expectations in the respective Supplier Codes of Conduct. Both the Sustainability Principles and the Supplier Codes of Conduct are used as attachments for procurement contracts in the business segments.

With this, we want to achieve that our partners commit to our standards of conduct. Responsibility for selection and contracting lies within the dedicated responsible functions within the business segments. Basic measures, such as assessments or reporting mechanisms, are supported by the Compliance Management Systems.

We expect from our partners in supply to implement adequate processes, which ensure compliance with relevant standards. If we detect potential misconduct on the part of them, we will react, e. g., with additional control measures, depending on the severity of the misconduct.

In addition, Fresenius Kabi has identified strategic suppliers, which are under dedicated supervision by the global strategic procurement organization. First, a risk-based qualification is conducted according to defined global processes. Afterwards, strategic suppliers are regularly assessed according to criteria such as quality and workplace health and safety, as well as environmental factors and compliance. This process also includes **audits** at suppliers.

To further strengthen and harmonize its commitment to sustainable procurement practices, Fresenius Medical Care has launched an initiative 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.

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") 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, 2018.

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 FSE
- 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 sites Friedberg of Fresenius Kabi Deutschland GmbH, at Helios Klinikum Hildesheim GmbH and at the site of Lyon of the Fresenius Medical Care SMAD, S. A. S., Savigny (France)
- Assessment of the overall presentation of the disclosures

CONCLUSION

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the non-financial group report of Fresenius for the period from January 1 to December 31, 2018 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 EUR 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, 2019

KPMG AG
Wirtschaftsprüfungsgesellschaft

[Original German version signed by:]

Hell

Glöckner
Wirtschaftsprüfer
[German Public Auditor]

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, pursuant to Sections 289f and 315d of the German Commercial Code (HGB), on corporate management and, pursuant to number 3.10 of the German Corporate Governance Code, on the Corporate Governance at the Company (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 145 and in the section "Fresenius share" on page 35.

ANNUAL GENERAL MEETING

Our Annual General Meeting (AGM) was held on May 18, 2018, in Frankfurt/Main. Approximately 73% of the share capital was represented.

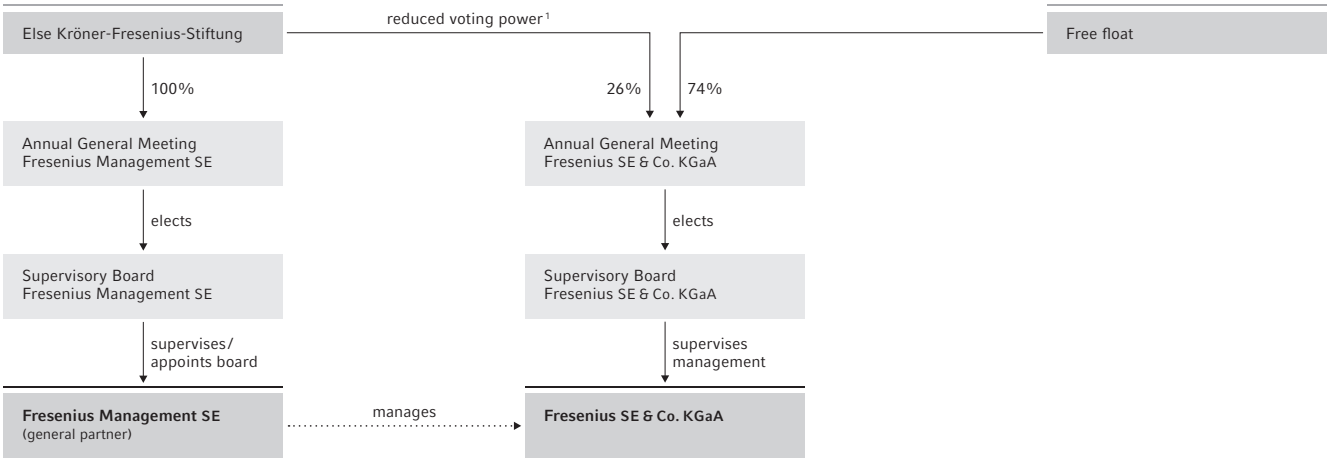
During the AGM, the shareholders approved the proposal made by the general partner and the Supervisory Board to increase the 2017 dividend by 21% to €0.75 per ordinary share with a majority of around 89% of the votes cast. Further, the shareholders voted for the cancellation of the Authorized Capital I and the creation of a new Authorized Capital I. New authorizations to issue convertible bonds, to repurchase own shares, and to use equity derivatives for repurchasing own shares were also approved. In addition, the shareholders approved the revised compensation system for the members of the Management Board of the general partner along with the new Long Term Incentive Plan 2018 (LTIP 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.

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.

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

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. Sustainability is a Group responsibility and directly reported to the CEO. Further information can be found in the Group Non-financial Report on pages 92 ff.

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.

The Management Board generally 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. 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 272 of the Annual Report.

Members of the Management Board are appointed for a maximum period of five years. Following the recommendation of the Code, a first-time appointment period of five years is not the rule. In principle, first-time appointments are rather for a three-year period.

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 by conducting the 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 established its rules of procedure following the recommendation in number 5.1.3 of the Code.

The Supervisory Board members of Fresenius Management SE can be found on page 273 of the Annual Report.

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. It supervises business operations to ensure that corporate decisions are compliant, suitable, and financially sound. The members of the Management Board of the general partner are appointed by the Supervisory Board of Fresenius Management SE, not – as already explained – by the Supervisory Board of Fresenius SE & Co. KGaA.

The Supervisory Board of Fresenius SE & Co. KGaA consists of 12 members. 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**. In 2018, the objectives for the composition and profile of skills and expertise of the Board were met. Further information can be found on pages 137 ff.

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 2018 and are still met. 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. 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. Rainer Stein retired as of August 31, 2018 and his substitute member Bernd Behlert became the new member of the Supervisory Board as of September 1, 2018.

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. The **articles of association** 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.

The Supervisory Board of Fresenius SE & Co. KGaA has established its rules of procedure in accordance with number 5.1.3 of the Code. The Chairman of the Supervisory Board 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 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 Management Board of the general partner Fresenius Management SE continuously informs the Supervisory Board of the corporate development, planning, and strategy. The Supervisory Board supervises the Company's management and, taking into account the auditor's reports, reviews the Group's annual financial statements. 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.

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 number 5.4.5 paragraph 2 of the Code. Various external experts as well as experts from the Company provide information about important developments, for example about the strategic orientation of the Company in growth markets, 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 270 to 271 of the Annual Report. On pages 16 to 23 of the Annual Report, the Supervisory Board reports on the main focuses of its activities and those of its committees in 2018.

Supervisory Board efficiency evaluation

The Supervisory Board of Fresenius SE & Co. KGaA deliberated on the efficiency evaluation in accordance with number 5.6 of the Code at its meeting in March 2018.

It reviewed the efficiency of its activities through an open discussion within the full Supervisory Board. A **company-specific questionnaire** covering the salient points for a self-evaluation served as the basis for the discussion. Among other things, this included the organization and structuring of the meetings, the amount of information, and how this information was provided. The self-evaluation showed that the Supervisory Board assesses its organization as well as its work as efficient.

Cooperation between 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) and Section 13 (2) (old version)). 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 271 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 (since September 1, 2018), as successor of Rainer Stein who left the committee as of August 31, 2018. 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, who were appointed by the general partner. The Joint Committee did not meet in 2018.

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 270 to 273 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 2018, there were no changes with regard to the objectives for the composition and profile of skills and expertise of the Board. Rainer Stein retired and his substitute member Bernd Behlert became the new member of the Supervisory Board of Fresenius SE & Co. KGaA. 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 longstanding 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 Annual General Meeting of Fresenius SE & Co. KGaA.

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 fiscal year 2018, Bernd Behlert, as substitute member of Rainer Stein, became new member of the Supervisory Board of Fresenius SE & Co. KGaA.

In the past fiscal year, the Management Board has 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. Corporate governance practices extending beyond the requirements of law are defined in the **Fresenius Code of Conduct**. This Code of Conduct contains the key principles and rules for our conduct within the Company and in our relations with external partners and with the public. We have published the Fresenius Code of Conduct on our website at www.fresenius.com/compliance. The Code of Conduct is binding for all Company employees and must be complied with regarding any type of business relationship. Our executives regard ensuring compliance with the principles of the Code of Conduct as part of their managerial responsibilities.

COMPLIANCE MANAGEMENT SYSTEM

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. All Fresenius business segments have implemented 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 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.

Each of our business segments has appointed a Chief Compliance Officer who is in charge of developing, implementing, and monitoring the Compliance Management System (CMS) of the business segment. In line with the business structure and organization, the business segments have established compliance responsibilities at the respective organizational levels. The Corporate Compliance department of Fresenius SE & Co. KGaA supports the compliance functions of the business segments with standardized tools, processes, and methodologies and reports to the Chief Compliance Officer of Fresenius SE & Co. KGaA – the member of the Management Board responsible for Legal, Compliance, and Labor Relations.

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. Fresenius SE & Co. KGaA and Fresenius Kabi have opened the whistleblowing system not only to employees, but also to third parties, such as customers, suppliers, and other partners, via the corporate website.

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.

In 2018, the Management Board approved a **Statement on Human Rights** which is published on our website, see www.fresenius.com/compliance. Further information on human rights can be found on pages 125 ff. of our Group Nonfinancial Report.

Further information on Compliance and the Compliance Management Systems can be found on pages 109 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. The control system is 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 16 to 23 in the Annual Report 2018 and on pages 77 to 78 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 last Declaration of Conformity in December 2017, 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 4.2.3 paragraph 2 sentence 6: Compensation caps by specific amount**
  Pursuant to Code number 4.2.3 paragraph 2 sentence 6, the compensation amount for Management Board members shall be capped by a specific amount, both overall and for variable compensation components.

  This recommendation was only partly met with regard to the compensation of the Management Board members guaranteed for the fiscal years through 2017. Until FY 2017, stock options and phantom stocks as compensation components with long-term incentive and therefore the overall compensation have not provided for a cap by specific amount as the setting of these types of caps for equity-based compensation components contradicts the basic idea of letting the Management Board members adequately take part in the economic risks and opportunities of the company. As part of updating the long-term equity-based compensation in 2018, a cap was introduced for this component. Starting 2018, the compensation for Management Board members granted by Fresenius Management SE as indicated in the Management Board contracts will include caps by specific amount for each individual variable compensation component and thus for overall compensation. The compensation promised by the Fresenius Management Board as of FY 2018 will thus fully meet the Code recommendation.

- **Code number 4.2.3 paragraph 4: Severance payment cap**
  Pursuant to Code number 4.2.3 paragraph 4, when contracts are entered into with Management Board members, it shall be ensured that payments, including fringe benefits, made to a Management Board member due to early termination of their contract do not exceed twice the annual remuneration (severance cap) and do not constitute remuneration for more than the remaining term of the employment contract. If the employment contract of a Management Board member is terminated for good cause for which the Management Board member is responsible, no payments will be made to that Management Board member. The severance cap shall be calculated on the basis of the total remuneration paid for the previous financial year and, if appropriate, shall take into account the expected total remuneration for the current fiscal year.

  This recommendation was not complied with until the end of FY 2017 as uniform severance payment arrangements of this kind contradict the concept practiced by Fresenius in accordance with the German Stock Corporation Act (Aktiengesetz), according to which service agreements of the members of the Management Board are, in principle, concluded for the duration of their appointment. The employment contracts of Fresenius Management SE with the Management Board members were adjusted and contain a severance payment cap effective as of FY 2018. The Code recommendation will thus be met as of FY 2018.

- **Code number 4.2.5 paragraph 3: Presentation in the compensation report**
  Pursuant to Code number 4.2.5 paragraph 3, the presentation of the compensation for each individual member of the Management Board in the compensation report shall include information on the maximum and minimum achievable compensation for variable compensation components by using model tables.

  This recommendation was not met in view of the compensation that was promised to the members of the Management Board for the fiscal years through 2017 as until that point in time, no caps by specific amount had been set for the variable compensation components and thus the overall compensation.

  As already explained with regards to Code number 4.2.3 paragraph 2 sentence 6, caps by specific amount exist for compensation granted to the Management Board members by Fresenius Management SE as of FY 2018 for each individual variable compensation component and thus for the overall compensation. This meets the Code recommendation for the compensation granted to the Management Board members by Fresenius Management SE as of FY 2018.

- **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 refrain from specifying an age limit for Management Board members. Following 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 profile of skills and expertise and their 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. Instead, the Supervisory Board should 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.

- **Code number 5.4.6 paragraph 2 sentence 2: A Performance-related compensation of the members of the Supervisory Board oriented toward sustainable growth of the enterprise**
  Pursuant to code number 5.4.6 paragraph 2 sentence 2, a performance-related compensation component, if promised to the Supervisory Board members, shall be oriented toward the sustainable growth of the enterprise.

  For the last time in FY 2017, the members of the Supervisory Board received variable compensation that did not have a multi-year calculation basis and therefore was not oriented toward the sustainable growth of the enterprise within the meaning of the Code. On the contrary, it was linked to the dividend.

  On May 12, 2017 the Annual General Meeting of Fresenius SE & Co. KGaA adopted a Supervisory Board compensation system that meets the recommendation of the Code. This compensation system applied for the first time in FY 2018. This Code recommendation will thus be met as of FY 2018.

Bad Homburg v. d. H., December 2018
Management Board of the General Partner of
Fresenius SE & Co. KGaA, of Fresenius Management SE,
and Supervisory Board of Fresenius SE & Co. KGaA"

In accordance with Section 161 para. 2 AktG and number 3.10 sentence 3 of the Code, 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 1,400 executives was 30.3% as of December 31, 2018.

Further information on diversity as well as personnel development and personnel management are included in the Group Management Report on page 46 f. and in the Group Non-financial Report on pages 113 ff.

LEGAL RELATIONSHIPS WITH MEMBERS OF THE CORPORATE BODIES

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 sideline activities or transactions with the Company by members of the corporate bodies must be reported to, and approved by, the Supervisory Board. The Supervisory Board of Fresenius SE & Co. KGaA reports to the AGM on any conflicts of interest and how they are dealt with.

Fresenius SE & Co. KGaA reports the following relationships existing between Fresenius Group companies and companies in which members of the Supervisory Board of Fresenius SE & Co. KGaA or members of the Supervisory or Management Board of Fresenius Management SE held an executive or other function in 2018:

Prof. Dr. med. D. Michael Albrecht is a member of the Supervisory Board of Fresenius SE & Co. KGaA and medical director and spokesman for the management board of the University Hospital Carl Gustav Carus Dresden, as well as a member of the supervisory board of the University Hospital in Aachen. The Fresenius Group maintains business relations with these hospitals in the ordinary course of business under customary conditions. Klaus-Peter Müller is a member of the Supervisory Boards of Fresenius Management SE and of Fresenius SE & Co. KGaA and was Chairman of the Supervisory

Board of Commerzbank AG until May 8, 2018, with which the Fresenius Group maintains business relationships under customary conditions. Michael Diekmann is a member of the Supervisory Board of Fresenius Management SE and Deputy Chairman of the Supervisory Board of Fresenius SE & Co. KGaA, and is Chairman of the Supervisory Board of Allianz SE. In 2018, the Fresenius Group paid insurance premiums to Allianz under customary conditions.

There are no other consulting or service contracts – neither directly nor indirectly – between Supervisory Board members and the Company.

Fresenius has disclosed the information on related parties in its 2018 quarterly reports and on page 258 of the Annual Report.

DISCLOSURES ON DIRECTORS' DEALINGS/ MANAGERS' TRANSACTIONS AND SHAREHOLDINGS IN 2018

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 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 2018 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 0.30% of the shares of Fresenius SE & Co. KGaA outstanding as of December 31, 2018, in the form of shares or related financial instruments and stock options under the Fresenius SE & Co. KGaA stock option plans. 0.28% 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 under number 6 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 35 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.

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 as well as under consideration of the declaration of conformity of Fresenius SE & Co. KGaA of December 2018, 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%. In this context, the shareholders' suggestions for changes related to the discretionary bonus and the structure of the short-term performance-based compensation (bonus). In response to this, the discretionary bonus – as described in this compensation report – was abolished as of the 2019 fiscal year. The short-term performance-based compensation (bonus) for each future service agreement to be extended or newly concluded for a member of the Management Board of the general partner will be subject to discussion in the Supervisory Board. The next Annual General Meeting vote on the compensation system is planned for the Annual General Meeting in 2020.

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 (instead of stock options and share-based compensation with cash settlement (phantom stocks) granted hitherto), 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

The fixed compensation was generally paid in monthly installments in the fiscal year 2018. 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 2018 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).

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%

Mr. Stephan Sturm has agreed with the Supervisory Board of Fresenius Management SE to acquire shares of the company in the value of the net amount of the one-year variable compensation paid to him and to hold them for at least three years. Thereby, the orientation of his compensation towards sustainable corporate development is enhanced voluntarily.

In order to appropriately take into account the business development of Fresenius Medical Care during the fiscal year, Mr. Rice Powell has agreed to acquire shares in Fresenius Medical Care AG & Co. KGaA for a portion of the bonus and to hold them for at least three years.

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. Furthermore, the Supervisory Board could grant members of the Management Board a discretionary bonus for extraordinary performance. Until fiscal year 2018, the service agreements of the Management Board members with Fresenius Management SE provided that the total compensation granted to a Management Board member including a possible discretionary bonus shall not exceed the sum of the fixed compensation and the maximum amounts for the variable compensation components (one-year variable and multi-year variable compensation). During fiscal year 2018, no discretionary bonus was granted. Starting fiscal year 2019, the service agreements of the Management Board members with Fresenius Management SE no longer provide the granting of a discretionary bonus.

For the fiscal years 2018 and 2017, 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	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
Stephan Sturm	**1,100**	1,100	**102**	79	**1,868**[3]	1,866	**3,070**	3,045
Dr. Francesco De Meo	**630**	630	**25**	24	**1,415**	1,412	**2,070**	2,066
Rachel Empey (since August 1, 2017)	**600**	250	**231**	16	**812**	338	**1,643**	604
Dr. Jürgen Götz	**490**	490	**41**	41	**950**	950	**1,481**	1,481
Mats Henriksson	**660**	630	**107**	157	**1,356**	1,250	**2,123**	2,037
Rice Powell[1]	**1,270**	1,217	**195**	173	**2,376**[4]	2,297	**3,841**	3,687
Dr. Ernst Wastler	**525**	525	**75**	75	**932**	858	**1,532**	1,458
Total	**5,275**	4,842	**776**	565	**9,709**	8,971	**15,760**	14,378

[1] Mr. Rice Powell received his compensation only from Fresenius Medical Care, of which Fresenius SE & Co. KGaA held around 30.75% 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] Mr. Stephan Sturm has agreed with the Supervisory Board of Fresenius Management SE to acquire shares of the company in the value of the net amount of the one-year variable compensation paid to him and to hold them for at least three years. Thereby, the orientation of his compensation towards sustainable corporate development is enhanced voluntarily.

[4] In order to appropriately take into account the business development of Fresenius Medical Care during the fiscal year, Mr. Rice Powell has agreed to acquire shares in Fresenius Medical Care AG & Co. KGaA for a portion of the bonus and to hold them for at least three years.

In the fiscal year 2018, the one-year variable compensation, excluding the payment to Mr. Rice Powell, amounted to €7,333 thousand. This equals 98% of the total one-year variable compensation. The remaining part in an amount of €171 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 noncontrolling 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 2018, as a further component with long-term incentive effect, the Management Board members were granted performance shares under the new Fresenius SE & Co. KGaA Long Term Incentive Plan 2018 (LTIP 2018). Mr. Rice Powell was granted performance shares under the Long Term Incentive Plan 2016 (LTIP 2016) 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.

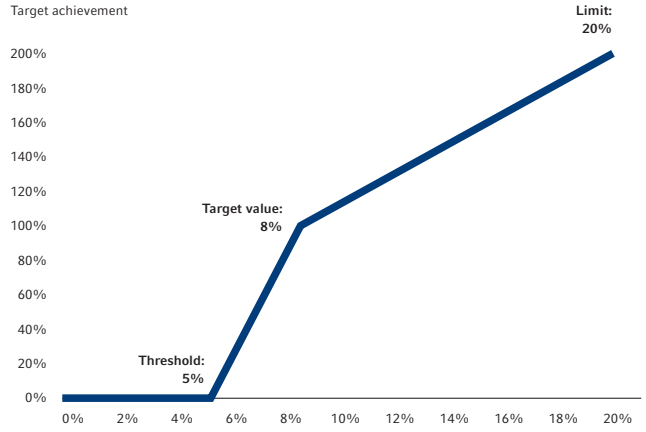
The vesting of the performance shares granted under the LTIP 2018 is subject to several conditions, such as the expiration of a four-year performance period, the absence of a compliance violation, the achievement or exceeding of two performance targets and the continuation of the service or employment 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.

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 following 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.

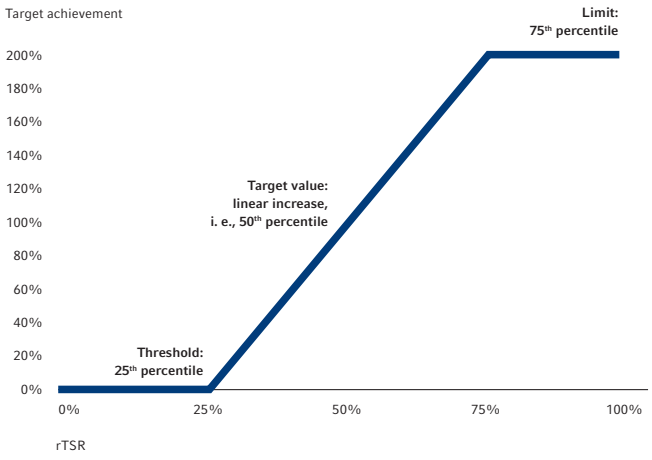
The degree of target achievement between the threshold at the 25th percentile and the limit at the 75th percentile is presented in the following table.

GROWTH RATE OF
ADJUSTED GROUP NET INCOME
ADJUSTED FOR CURRENCY EFFECTS



Growth rate of adjusted Group net income adjusted for currency effects

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 2018 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 LTIP 2016 of Fresenius Medical Care AG & Co. KGaA are described in more detail in note 34 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 2018 and 2017, the value of performance shares issued, i. e., for the year 2017 the value of stock options and phantom stocks issued and the value of the postponed performance-based compensation, is shown in the following table.

The stated values for the year 2018 correspond to the fair value of the performance shares at the time of grant, namely a value of €67.45 per performance share of Fresenius SE & Co. KGaA and a value of US$ 94.11 per performance share of Fresenius Medical Care AG & Co. KGaA (2017: €12.59 per stock option of Fresenius SE & Co. KGaA and €10.61 per stock option granted to Ms. Rachel Empey[1]; exercise price of the granted stock options of Fresenius SE & Co. KGaA was €74.77 and €64.69 for stock options granted to Ms. Rachel Empey; fair value of phantom stocks granted to members of the Management Board in the fiscal year 2017: €68.21, €59.37 with regard to phantom stocks granted to Ms. Rachel Empey, and US$86.39 per performance share of Fresenius Medical Care AG & Co. KGaA).

LONG-TERM INCENTIVE COMPONENTS

	Performance shares[1]		Phantom stocks[2]		Postponed payment of the one-year variable compensation		Stock options[3]		Total	
	Value, € in thousands				Value, € in thousands		Value, € in thousands		Value, € in thousands	
	2018	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
Stephan Sturm	**2,500**	n. a.	**n. a.**	728	**0**	0	**n. a.**	1,700	**2,500**	2,428
Dr. Francesco De Meo	**1,300**	n. a.	**n. a.**	414	**115**	148	**n. a.**	850	**1,415**	1,412
Rachel Empey (since August 1, 2017)	**1,300**	n. a.	**n. a.**	109	**0**	0	**n. a.**	298	**1,300**	407
Dr. Jürgen Götz	**1,300**	n. a.	**n. a.**	414	**0**	0	**n. a.**	850	**1,300**	1,264
Mats Henriksson	**1,300**	n. a.	**n. a.**	414	**56**	0	**n. a.**	850	**1,356**	1,264
Rice Powell	**2,391**	n. a.	**n. a.**	2,247	**0**	0	**n. a.**	0	**2,391**	2,247
Dr. Ernst Wastler	**1,300**	n. a.	**n. a.**	414	**0**	0	**n. a.**	850	**1,300**	1,264
Total	**11,391**	n. a.	**n. a.**	4,740	**171**	148	**n. a.**	5,398	**11,562**	10,286

[1] The amounts comprise all performance shares including performance shares of Fresenius Medical Care AG & Co. KGaA that were granted in 2018.
[2] The amounts comprise all phantom stocks including performance shares of Fresenius Medical Care AG & Co. KGaA that were granted in 2017.
[3] Stock options that were granted in 2017 under the Fresenius SE & Co. KGaA stock option plan.

At the end of the fiscal year 2018, the members of the Management Board held a total of 133,434 performance shares (2017: 0) and 211,302 phantom stocks (2017: 285,057) of Fresenius SE & Co. KGaA and 55,463 performance shares (2017: 37,915) and 15,586 (2017: 16,888) phantom stocks of Fresenius Medical Care AG & Co. KGaA. Furthermore, they held a total of 1,519,515 (2017: 1,612,515) stock options of Fresenius SE & Co. KGaA as well as 256,781 stock options (2017: 284,793) of Fresenius Medical Care AG & Co. KGaA.

[1] As Ms. Rachel Empey was only appointed as Management Board member of Fresenius Management SE effective August 1, 2017, she was granted stock options and phantom stocks only in December 2017 and not in July 2017 like the other Management Board members. The different amounts result from this fact.

The development and the status of the stock options of the Management Board in the fiscal year 2018 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, 2018								
Number	456,390	292,500	28,125	270,000	295,500	284,793	270,000	**1,612,515**
Average exercise price in €	54.52	57.26	64.69	56.97	51.27	64.73	56.97	**55.42**
Options exercised during the fiscal year								
Number	0	45,000	0	0	48,000	28,012	0	**93,000**
Average exercise price in €		33.10			26.11	52.48		**29.49**
Average stock price in €		68.22			68.07	90.53		**68.14**
Options outstanding on December 31, 2018								
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**
Average remaining life in years	4.4	5.2	6.9	4.9	4.8	4.0	4.9	**4.8**
Range of exercise prices in €	26.11 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	**26.11 to 74.77**
Exercisable options on December 31, 2018								
Number	175,140	45,000	0	90,000	90,000	107,381	90,000	**490,140**
Average exercise price in €	30.68	36.92		35.01	35.01	50.86	35.01	**33.64**

[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 2018 and 2017:

	Cash compensation (without long-term incentive components)		Long-term incentive components		Total compensation (including long-term incentive components)	
€ in thousands	**2018**	2017	**2018**	2017	**2018**	2017
Stephan Sturm	**3,070**	3,045	**2,500**	2,428	**5,570**	5,473
Dr. Francesco De Meo	**2,070**	2,066	**1,415**	1,412	**3,485**	3,478
Rachel Empey (since August 1, 2017)	**1,643**	604	**1,300**	407	**2,943**	1,011
Dr. Jürgen Götz	**1,481**	1,481	**1,300**	1,264	**2,781**	2,745
Mats Henriksson	**2,123**	2,037	**1,356**	1,264	**3,479**	3,301
Rice Powell	**3,841**	3,687	**2,391**	2,247	**6,232**	5,934
Dr. Ernst Wastler	**1,532**	1,458	**1,300**	1,264	**2,832**	2,722
Total	**15,760**	14,378	**11,562**	10,286	**27,322**	24,664

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 2018 and 2017 are stated in the following table.

EXPENSES FOR LONG-TERM INCENTIVE COMPONENTS

	Performance shares/ Phantom stocks		Stock options		Total expenses for share-based compensation	
€ in thousands	**2018**	2017	**2018**	2017	**2018**	2017
Stephan Sturm	**-46**	659	**1,033**	917	**987**	1,576
Dr. Francesco De Meo	**-101**	540	**774**	783	**673**	1,323
Rachel Empey (since August 1, 2017)	**52**	2	**75**	6	**127**	8
Dr. Jürgen Götz	**-117**	613	**691**	700	**574**	1,313
Mats Henriksson	**-134**	697	**605**	614	**471**	1,311
Rice Powell	**391**[1]	1,960[1]	**659**	957	**1,050**	2,917
Dr. Ernst Wastler	**-117**	613	**691**	700	**574**	1,313
Total	**-72**	5,084	**4,528**	4,677	**4,456**	9,761

[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 2018, 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 €36,882 thousand as of December 31, 2018 (2017: €31,942 thousand). The additions to pension liability in the fiscal year 2018 amounted to €4,940 thousand (2017: €762 thousand).

The pension commitments are as follows:

€ in thousands	As of January 1, 2018	Additions	**As of December 31, 2018**
Stephan Sturm	5,866	652	**6,518**
Dr. Francesco De Meo	3,271	442	**3,713**
Rachel Empey (since August 1, 2017)	0	0	**0**
Dr. Jürgen Götz	2,796	462	**3,258**
Mats Henriksson	5,048	368	**5,416**
Rice Powell	10,004	2,936	**12,940**
Dr. Ernst Wastler	4,957	80	**5,037**
Total	31,942	4,940	**36,882**

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 2018, 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, €1,101 thousand were paid in the fiscal year 2018 (2017: €1,099 thousand) and €522 thousand (2017: €580 thousand) were paid to Dr. Ben Lipps as a result of a consultancy agreement entered into with Fresenius Medical Care Management AG. The benefit obligation for these persons amounted to €22,319 thousand (2017: €21,848 thousand).

TABLES DISPLAYING THE VALUE OF BENEFITS GRANTED AND ALLOCATIONS

The German Corporate Governance Code 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 of the German Corporate Governance Code. 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			
	2018	2018 min.	2018 max.	2017	**2018**	2018 min.	2018 max.	2017	**2018**	2018 min.	2018 max.	2017
Fixed compensation	**1,100**	1,100	1,100	1,100	**630**	630	630	630	**600**	600	600	250
Fringe benefits	**102**	102	102	79	**25**	25	25	24	**231**	231	231	16
Total non-performance-based compensation	**1,202**	1,202	1,202	1,179	**655**	655	655	654	**831**	831	831	266
One-year variable compensation[1]	**1,868**[2]	1,750	2,300	1,866	**1,415**	1,050	1,750	1,412	**812**	760	1,000	338
Multi-year variable compensation/components with long-term incentive effect	**2,500**	0	6,250	2,428	**1,415**	0	3,250	1,412	**1,300**	0	3,250	407
Thereof postponed one-year variable compensation	**0**	0	n. a.	0	**115**	0	n. a.	148	**0**	0	n. a.	0
Thereof Stock Option Plan 2013 (part of LTIP 2013) (five-year term)	**n. a.**	n. a.	n. a.	1,700	**n. a.**	n. a.	n. a.	850	**n. a.**	n. a.	n. a.	298
Thereof phantom stocks (part of LTIP 2013) (five-year term)	**n. a.**	n. a.	n. a.	628	**n. a.**	n. a.	n. a.	314	**n. a.**	n. a.	n. a.	109
Thereof further phantom stocks	**n. a.**	n. a.	n. a.	100	**n. a.**	n. a.	n. a.	100	**n. a.**	n. a.	n. a.	0
Thereof performance shares (LTIP 2018) (five-year term)	**2,500**	0	6,250	n. a.	**1,300**	0	3,250	n. a.	**1,300**	0	3,250	n. a.
Total non-performance-based and performance-based compensation	**5,570**	2,952	9,752	5,473	**3,485**	1,705	5,655	3,478	**2,943**	1,591	5,081	1,011
Service cost	**455**	455	455	455	**325**	325	325	325	**0**	0	0	0
Value of benefits granted[5]	**6,025**	3,407	10,207	5,928	**3,810**	2,030	5,980	3,803	**2,943**	1,591	5,081	1,011

[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 2018 and 2017.

[2] Mr. Stephan Sturm has agreed with the Supervisory Board of Fresenius Management SE to acquire shares of the company in the value of the net amount of the one-year variable compensation paid to him and to hold them for at least three years. Thereby, the orientation of his compensation towards sustainable corporate development is enhanced voluntarily.

[3] In order to appropriately take into account the business development of Fresenius Medical Care during the fiscal year, Mr. Rice Powell has agreed to acquire shares in Fresenius Medical Care AG & Co. KGaA for a portion of the bonus and to hold them for at least three years.

[4] Mr. Rice Powell was granted stock options, phantom stocks, and performance shares from the program of Fresenius Medical Care as follows:
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,
in 2017: €916 thousand from the Share Based Award – New Incentive Bonus Plan 2010 and €1,331 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.

	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			
	2018	2018 min.	2018 max.	2017	**2018**	2018 min.	2018 max.	2017	**2018**	2018 min.	2018 max.	2017	**2018**	2018 min.	2018 max.	2017
	490	490	490	490	**660**	660	660	630	**1,270**	1,270	1,270	1,217	**525**	525	525	525
	41	41	41	41	**107**	107	107	157	**195**	195	195	173	**75**	75	75	75
	531	531	531	531	**767**	767	767	787	**1,465**	1,465	1,465	1,390	**600**	600	600	600
	950	700	950	950	**1,356**	1,300	1,800	1,250	**2,096**[3]	191	2,515	2,008	**932**	650	950	858
	1,300	0	3,250	1,264	**1,356**	0	3,250	1,264	**2,390**[4]	0	n. a.	2,247[4]	**1,300**	0	3,250	1,264
	0	0	n. a.	0	**56**	0	n. a.	0					**0**	0	n. a.	0
	n. a.	n. a.	n. a.	850	**n. a.**	n. a.	n. a.	850					**n. a.**	n. a.	n. a.	850
	n. a.	n. a.	n. a.	314	**n. a.**	n. a.	n. a.	314					**n. a.**	n. a.	n. a.	314
	n. a.	n. a.	n. a.	100	**n. a.**	n. a.	n. a.	100					**n. a.**	n. a.	n. a.	100
	1,300	0	3,250	n. a.	**1,300**	0	3,250	n. a.					**1,300**	0	3,250	n. a.
	2,781	1,231	4,731	2,745	**3,479**	2,067	5,817	3,301	**5,951**	1,656	n. a.	5,645	**2,832**	1,250	4,800	2,722
	234	234	234	234	**210**	210	210	210	**674**	674	674	773	**153**	153	153	160
	3,015	1,465	4,965	2,979	**3,689**	2,277	6,027	3,511	**6,625**	2,330	n. a.	6,418	**2,985**	1,403	4,953	2,882

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	
	2018	2017	**2018**	2017	**2018**	2017
Fixed compensation	**1,100**	1,100	**630**	630	**600**	250
Fringe benefits	**102**	79	**25**	24	**231**	16
Total non-performance-based compensation	**1,202**	1,179	**655**	654	**831**	266
One-year variable compensation	**1,868**	1,866	**1,415**	1,412	**812**	338
Multi-year variable compensation/components with long-term incentive effect	**965**	317	**2,545**	4,806	**0**	0
Thereof postponed one-year variable compensation	**0**	57	**0**	143	**0**	0
Thereof Stock Option Plan 2008 (five-year term)						
Issue 2011						
Issue 2012				4,403		
Thereof Stock Option Plan 2013 (five-year term)						
Issue 2013			**1,580**			
Thereof Phantom Stock Plan 2013 (five-year term)						
Issue 2013	**765**		**765**			
Thereof further phantom stocks						
Issue 2012		260		260		
Issue 2013	**200**		**200**			
Other	**0**	0	**0**	0	**0**	0
Total non-performance-based and performance-based compensation	**4,035**	3,362	**4,615**	6,872	**1,643**	604
Service cost	**455**	455	**325**	325	**0**	0
Allocation including multi-year variable compensation/components with long-term incentive effect	**4,490**	3,817	**4,940**	7,197	**1,643**	604
Allocation for the year under review (not including multi-year variable compensation/components with long-term incentive effect)	**3,525**	3,500	**2,395**	2,391	**1,643**	604

[1] Mr. Rice Powell had this allocation from stock options from the Fresenius Medical Care Stock Option Program:
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,
in 2017: €205 thousand from the Share Based Award – New Incentive Bonus Plan 2010 issue 2013, €2,506 thousand from the Stock Option Plan 2006 issue 2010, and €76 thousand from the Long Term Incentive Program 2011 – Phantom Stock Plan 2011 issue 2012.

	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	
	2018	2017	**2018**	2017	**2018**	2017	**2018**	2017
	490	490	**660**	630	**1,270**	1,217	**525**	525
	41	41	**107**	157	**195**	173	**75**	75
	531	531	**767**	787	**1,465**	1,390	**600**	600
	950	950	**1,356**	1,250	**2,376**	2,297	**932**	858
	965	260	**2,979**	1,659	**2,777**[1]	2,787[1]	**965**	260
	0	0	**0**	71			**0**	0
				1,588				
			2,014					
	765		**765**				**765**	
		260						260
	200		**200**				**200**	
	0	0	**0**	0	**0**	0	**0**	0
	2,446	1,741	**5,102**	3,696	**6,618**	6,474	**2,497**	1,718
	234	234	**210**	210	**674**	773	**153**	160
	2,680	1,975	**5,312**	3,906	**7,292**	7,247	**2,650**	1,878
	1,715	1,715	**2,333**	2,247	**4,515**	4,460	**1,685**	1,618

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.

Up to the end of the fiscal year 2017, the compensation of the Supervisory Board was calculated according to the then relevant version of the articles of association.

Each member of the Supervisory Board received a fixed compensation of €13 thousand for the full fiscal year 2017.

The members of the Audit Committee of Fresenius SE & Co. KGaA received an additional €10 thousand each and the Chairman of the committee a further €10 thousand. For the full fiscal year 2017, the compensation increases by 10% for each percentage point that three times the dividend paid on each ordinary share for that year (gross dividend according to the resolution of the Annual General Meeting) exceeded 3.6% of the amount equal to the subscribed capital divided by the number of non-par value shares; residual amounts were interpolated. The Chairman received twice this amount and the deputies to the Chairman one and a half times the amount of a Supervisory Board member. All members of the Supervisory Board received appropriate compensation for costs of travel and accommodation incurred in connection with their duties as members of the Supervisory Board, including any applicable value-added tax. Fresenius SE & Co. KGaA provided to the members of the Supervisory Board insurance coverage in an adequate amount (relating to their function) with an excess equal to those of the Management Board.

If a member of the Supervisory Board of Fresenius SE & Co. KGaA was, at the same time, a member of the Supervisory Board of the general partner Fresenius Management SE and received compensation for his service on the Supervisory Board of Fresenius Management SE, the compensation was reduced by half. The same applied with respect to the additional part of the compensation for the Chairman or one of his deputies if they were, at the same time, the Chairman or one of his deputies on the Supervisory Board of Fresenius Management SE. If the deputy of the Chairman of the Supervisory Board of Fresenius SE & Co. KGaA was, at the same time, the Chairman of the Supervisory Board of Fresenius Management SE, he did not receive compensation for his service as Deputy Chairman of the Supervisory Board of Fresenius SE & Co. KGaA. In accordance with Section 7 of the articles of association of Fresenius SE & Co. KGaA, the compensation of the Supervisory Board of Fresenius Management SE was charged to Fresenius SE & Co. KGaA.

For the fiscal years 2018 and 2017, 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	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017[1]	**2018**	2017[1]	**2018**	2017
Dr. Gerd Krick	**225**	13	**225**	13	**20**	10	**20**	20	**75**	288	**75**	288	**640**	632
Michael Diekmann	**150**	13	**75**	6	**0**	0	**0**	0	**75**	288	**75**	144	**375**	451
Dr. Dieter Schenk	**0**	0	**225**	19	**0**	0	**10**	10	**0**	0	**150**	432	**385**	461
Niko Stumpfögger	**225**	19	**0**	0	**7**	0	**0**	0	**150**	432	**0**	0	**382**	451
Prof. Dr. med. D. Michael Albrecht	**150**	13	**0**	0	**0**	0	**0**	0	**150**	288	**0**	0	**300**	301
Bernd Behlert (since September 1, 2018)	**50**	0	**0**	0	**0**	0	**0**	0	**50**	0	**0**	0	**100**	0
Dr. Kurt Bock	**0**	0	**150**	13	**0**	0	**0**	0	**0**	0	**150**	288	**300**	301
Konrad Kölbl	**150**	13	**0**	0	**20**	10	**0**	0	**150**	288	**0**	0	**320**	311
Stefanie Lang	**150**	13	**0**	0	**0**	0	**0**	0	**150**	288	**0**	0	**300**	301
Frauke Lehmann	**150**	13	**0**	0	**0**	0	**0**	0	**150**	288	**0**	0	**300**	301
Prof. Dr. med. Iris Löw-Friedrich	**150**	13	**0**	0	**0**	0	**0**	0	**150**	288	**0**	0	**300**	301
Klaus-Peter Müller	**75**	7	**75**	6	**40**	20	**0**	0	**75**	143	**75**	144	**340**	320
Oscar Romero de Paco	**150**	13	**0**	0	**0**	0	**0**	0	**150**	288	**0**	0	**300**	301
Dr. Karl Schneider	**0**	0	**150**	13	**0**	0	**10**	10	**0**	0	**150**	288	**310**	311
Hauke Stars	**150**	13	**0**	0	**20**	10	**0**	0	**150**	288	**0**	0	**320**	311
Rainer Stein (up to August 31, 2018)	**100**	13	**0**	0	**13**	10	**0**	0	**100**	288	**0**	0	**213**	311
Total	**1,875**	156	**900**	70	**120**	60	**40**	40	**1,575**	3,455	**675**	1,584	**5,185**	5,365

[1] Based on the proposed dividend

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 2019. 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.

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FRESENIUS SE & CO. KGAA
CONSOLIDATED STATEMENT OF INCOME

€ in millions	Note	2018	2017
Sales	4	**33,530**	33,886
Cost of sales		**-23,696**	-23,395
Gross profit		**9,834**	10,491
Selling expenses		**-1,016**	-948
General and administrative expenses	8	**-3,857**	-4,606
Other operating income	9	**441**	367
Other operating expenses	9	**-287**	-183
Gain related to divestitures of Care Coordination activities	2, 3	**809**	26
Research and development expenses	7	**-673**	-558
Operating income (EBIT)		**5,251**	4,589
Interest income	10	**355**	207
Interest expenses	10	**-942**	-874
Income before income taxes		**4,664**	3,922
Income taxes	11	**-950**	-889
Net income		**3,714**	3,033
Noncontrolling interest	12	**1,687**	1,219
Net income attributable to shareholders of Fresenius SE & Co. KGaA		**2,027**	1,814
Earnings per share in €	13	**3.65**	3.27
Fully diluted earnings per share in €	13	**3.63**	3.25

The following notes are an integral part of the consolidated financial statements.

FRESENIUS SE & CO. KGAA
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

€ in millions	Note	2018	2017
Net income		**3,714**	3,033
Other comprehensive income (loss)			
Positions which will be reclassified into net income in subsequent years			
Foreign currency translation	28, 30	**268**	-1,965
Cash flow hedges	28, 30	**15**	44
Change of fair value of debt instruments	28, 30	**0**	0
Income taxes on positions which will be reclassified	28	**-12**	15
Positions which will not be reclassified into net income in subsequent years			
Change of fair value of equity investments	30	**5**	0
Actuarial gains/losses on defined benefit pension plans	25, 28	**-62**	43
Income taxes on positions which will not be reclassified	28	**15**	-35
Other comprehensive income (loss), net		**229**	-1,898
Total comprehensive income		**3,943**	1,135
Comprehensive income attributable to noncontrolling interest		**1,848**	292
Comprehensive income attributable to shareholders of Fresenius SE & Co. KGaA		**2,095**	843

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	2018	2017
Cash and cash equivalents	14	**2,709**	1,636
Trade accounts and other receivables, less allowance for doubtful accounts	15	**6,540**	6,260
Accounts receivable from and loans to related parties		**29**	17
Inventories	16	**3,218**	3,252
Other current assets	17	**2,294**	1,439
I. Total current assets		**14,790**	12,604
Property, plant and equipment	18	**10,366**	9,555
Goodwill	19	**25,713**	25,285
Other intangible assets	19	**3,130**	3,172
Other non-current assets	17	**1,927**	1,773
Deferred taxes	11	**777**	744
II. Total non-current assets		**41,913**	40,529
Total assets		**56,703**	53,133

LIABILITIES AND SHAREHOLDERS' EQUITY

as of December 31, € in millions	Note	2018	2017
Trade accounts payable		**1,823**	1,688
Short-term accounts payable to related parties		**67**	42
Short-term provisions and other short-term liabilities	20, 21	**6,240**	5,869
Short-term debt	22	**2,354**	1,550
Short-term debt from related parties		**–**	–
Current portion of long-term debt and capital lease obligations	22	**353**	618
Current portion of bonds	23	**1,744**	731
Current portion of convertible bonds	24	**493**	0
Short-term accruals for income taxes		**201**	167
A. Total short-term liabilities		**13,275**	10,665
Long-term debt and capital lease obligations, less current portion	22	**5,944**	6,487
Bonds, less current portion	23	**7,246**	8,338
Convertible bonds, less current portion	24	**850**	1,318
Long-term provisions and other long-term liabilities	20, 21	**1,634**	2,138
Pension liabilities	25	**1,235**	1,163
Long-term accruals for income taxes		**227**	194
Deferred taxes	11	**1,284**	1,110
B. Total long-term liabilities		**18,420**	20,748
I. Total liabilities		**31,695**	31,413
A. Noncontrolling interest	26	**9,597**	8,059
Subscribed capital	27	**556**	555
Capital reserve	27	**3,933**	3,848
Other reserves	27	**11,252**	9,656
Accumulated other comprehensive loss	28	**-330**	-398
B. Total Fresenius SE & Co. KGaA shareholders' equity		**15,411**	13,661
II. Total shareholders' equity		**25,008**	21,720
Total liabilities and shareholders' equity		**56,703**	53,133

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	2018	2017
Operating activities			
Net income		**3,714**	3,033
Adjustments to reconcile net income to cash and cash equivalents provided by operating activities			
Depreciation and amortization	17, 18, 19	**1,430**	1,437
Gain on sale of investments and divestitures	2	**-807**	-96
Change in deferred taxes	11	**100**	-230
Gain on sale of fixed assets		**-4**	-3
Changes in assets and liabilities, net of amounts from businesses acquired or disposed of			
Trade accounts and other receivables, net	15	**-556**	-644
Inventories	16	**-279**	-228
Other current and non-current assets	17	**-281**	28
Accounts receivable from/payable to related parties		**12**	-25
Trade accounts payable, provisions and other short-term and long-term liabilities	20, 21	**223**	720
Accruals for income taxes		**190**	-55
Net cash provided by operating activities		**3,742**	3,937
Investing activities			
Purchase of property, plant and equipment	18	**-2,149**	-1,823
Proceeds from sales of property, plant and equipment		**72**	118
Acquisitions and investments, net of cash acquired and net purchases of intangible assets	2, 32	**-1,070**	-6,289
Proceeds from sale of investments and divestitures	2	**1,683**	424
Net cash used in investing activities		**-1,464**	-7,570

January 1 to December 31, € in millions	Note	2018	2017
Financing activities			
Proceeds from short-term debt	22	**1,189**	1,003
Repayments of short-term debt	22	**-427**	-281
Proceeds from long-term debt and capital lease obligations	22	**181**	2,712
Repayments of long-term debt and capital lease obligations	22	**-832**	-1,482
Proceeds from the issuance of bonds	23	**497**	2,600
Repayments of liabilities from bonds	23	**-742**	-436
Proceeds from the issuance of convertible bonds	24	**0**	500
Payments for the share buy-back program of Fresenius Medical Care	27	**-37**	-58
Repayments under the accounts receivable securitization program	22	**-299**	157
Proceeds from the exercise of stock options	34	**92**	81
Dividends paid		**-904**	-924
Change in noncontrolling interest	26	**9**	–
Net cash used in/provided by financing activities		**-1,273**	3,872
Effect of exchange rate changes on cash and cash equivalents		**68**	-182
Net increase in cash and cash equivalents		**1,073**	57
Cash and cash equivalents at the beginning of the reporting period	14	**1,636**	1,579
Cash and cash equivalents at the end of the reporting period	14	**2,709**	1,636

ADDITIONAL INFORMATION ON PAYMENTS THAT ARE INCLUDED IN NET CASH PROVIDED BY OPERATING ACTIVITIES

January 1 to December 31, € in millions	Note	2018	2017
Received interest		**95**	67
Paid interest		**-519**	-569
Income taxes paid		**-918**	-1,186

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, 2016		547,208	547,208	547	3,379	8,165
Issuance of bearer ordinary shares	27	6,108	6,108	6	394	
Proceeds from the exercise of stock options	34	1,394	1,394	2	46	
Compensation expense related to stock options	34				29	
Dividends paid	27					-343
Purchase of noncontrolling interest	26					
Noncontrolling interest subject to put provisions	21, 30					20
Comprehensive income (loss)						
Net income						1,814
Other comprehensive income (loss)						
Cash flow hedges	28, 30					
Foreign currency translation	28, 30					
Actuarial gains/losses on defined benefit pension plans	25, 28					
Comprehensive income (loss)						1,814
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	4, 30	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	34	1,515	1,515	1	58	
Compensation expense related to stock options	34				27	
Dividends paid	27					-416
Purchase of noncontrolling interest	26					
Noncontrolling interest subject to put provisions	21, 30					13
Comprehensive income (loss)						
Net income						2,027
Other comprehensive income (loss)						
Cash flow hedges	28, 30					
Change of fair value of equity investments	28, 30					
Foreign currency translation	28, 30					
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**

Accumulated other comprehensive income (loss)						
Foreign currency translation € in millions	Cash flow hedges € in millions	Pensions € in millions	Equity investments	Total Fresenius SE & Co. KGaA shareholders' equity € in millions	Noncontrolling interest € in millions	Total shareholders' equity € in millions
960	-79	-308	0	12,664	8,185	20,849
				400	0	400
				48	33	81
				29	8	37
				-343	-582	-925
				0	77	77
				20	46	66
				1,814	1,219	3,033
	19			19	14	33
-1,021	–	8		-1,013	-926	-1,939
		23		23	-15	8
-1,021	19	31		843	292	1,135
-61	-60	-277	0	13,661	8,059	21,720
0	0	0	0	-28	-2	-30
-61	-60	-277	0	13,633	8,057	21,690
				59	33	92
				27	5	32
				-416	-488	-904
				0	112	112
				13	30	43
				2,027	1,687	3,714
	-1			-1	12	11
			4	4	0	4
99	–	-2		97	163	260
		-32		-32	-14	-46
99	-1	-34	4	2,095	1,848	3,943
38	**-61**	**-311**	**4**	**15,411**	**9,597**	**25,008**

FRESENIUS SE & CO. KGAA
CONSOLIDATED SEGMENT REPORTING

BY BUSINESS SEGMENT

	Fresenius Medical Care			Fresenius Kabi		
€ in millions	**2018**[1]	2017[2]	Change	**2018**[3]	2017[4]	Change
Sales	**16,547**	17,784	-7%	**6,544**	6,358	3%
thereof contribution to consolidated sales	**16,515**	17,754	-7%	**6,489**	6,301	3%
thereof intercompany sales	**32**	30	7%	**55**	57	-4%
contribution to consolidated sales	**49%**	52%		**19%**	19%	
EBITDA	**3,031**	3,298	-8%	**1,434**	1,483	-3%
Depreciation and amortization	**725**	736	-1%	**295**	306	-4%
EBIT	**2,306**	2,562	-10%	**1,139**	1,177	-3%
Net interest	**-301**	-365	17%	**-108**	-119	9%
Income taxes	**-424**	-679	37%	**-246**	-317	22%
Net income attributable to shareholders of Fresenius SE & Co. KGaA	**1,337**	1,244	7%	**742**	702	6%
Operating cash flow	**2,062**	2,192	-6%	**1,040**	1,010	3%
Cash flow before acquisitions and dividends	**1,059**	1,351	-22%	**487**	590	-17%
Total assets	**26,242**	24,025	9%	**12,638**	11,792	7%
Debt	**7,546**	7,448	1%	**3,867**	4,806	-20%
Other operating liabilities	**5,168**	5,282	-2%	**3,107**	2,879	8%
Capital expenditure, gross	**1,057**	944	12%	**572**	428	34%
Acquisitions, gross/investments	**957**	683	40%	**43**	157	-73%
Research and development expenses	**134**	131	2%	**534**	427	25%
Employees (per capita on balance sheet date)	**120,328**	121,245	-1%	**37,843**	36,380	4%
Key figures						
EBITDA margin	**18.3%**	18.5%		**21.9%**	23.3%	
EBIT margin	**13.9%**	14.4%		**17.4%**	18.5%	
Depreciation and amortization in % of sales	**4.4%**	4.1%		**4.5%**	4.8%	
Operating cash flow in % of sales	**12.5%**	12.3%		**15.9%**	15.9%	
ROOA	**10.0%**	10.9%		**11.1%**	10.8%	

[1] Before transaction-related effects and FCPA provision
[2] Before FCPA provision and book gain from U.S. tax reform
[3] Before transaction-related effects and revaluations of biosimilars contingent liabilities
[4] Before transaction-related effects and book gain from U.S. tax reform
[5] After transaction-related effects, revaluations of biosimilars contingent liabilities and FCPA provision
[6] After transaction-related effects, FCPA provision and book gain from U.S. tax reform
[7] Before transaction-related effects, revaluations of biosimilars contingent liabilities and FCPA provision
[8] The underlying pro forma EBIT does not include transaction-related expenses and FCPA provision.
[9] The underlying pro forma EBIT does not include transaction-related expenses, revaluations of biosimilars contingent liabilities and FCPA provision.

BY REGION

	Europe			North America		
€ in millions	**2018**	2017	Change	**2018**	2017	Change
Sales	**14,484**	13,767	5%	**13,861**	15,093	-8%
contribution to consolidated sales	**43%**	41%		**42%**	45%	
EBIT	**1,029**	1,030	0%	**3,422**	2,762	24%
Depreciation and amortization	**725**	698	4%	**540**	576	-6%
Total assets	**25,963**	24,807	5%	**24,806**	22,772	9%
Capital expenditure, gross	**1,095**	913	20%	**852**	708	20%
Acquisitions, gross/investments	**239**	6,241	-96%	**772**	339	128%
Employees (per capita on balance sheet date)	**158,939**	154,172	3%	**72,672**	75,083	-3%

Fresenius Helios			Fresenius Vamed			Corporate/Other			Fresenius Group		
2018	2017	Change	**2018**	2017	Change	**2018**[5]	2017[6]	Change	**2018**	2017	Change
8,993	8,668	4%	**1,688**	1,228	37%	**-242**	-152	-59%	**33,530**	33,886	-1%
8,983	8,652	4%	**1,541**	1,174	31%	**2**	5	-60%	**33,530**	33,886	-1%
10	16	-38%	**147**	54	172%	**-244**	-157	-55%	**0**	0	
27%	26%		**5%**	3%		**0%**	0%		**100%**	100%	
1,429	1,426	0%	**133**	87	53%	**654**	-268	--	**6,681**	6,026	11%
377	374	1%	**23**	11	109%	**10**	10	0%	**1,430**	1,437	0%
1,052	1,052	0%	**110**	76	45%	**644**	-278	--	**5,251**	4,589	14%
-167	-155	-8%	**-9**	-2	--	**-2**	-26	92%	**-587**	-667	12%
-189	-164	-15%	**-28**	-23	-22%	**-63**	294	-121%	**-950**	-889	-7%
686	728	-6%	**72**	50	44%	**-810**	-910	11%	**2,027**	1,814	12%
554	733	-24%	**106**	42	152%	**-20**	-40	50%	**3,742**	3,937	-5%
120	322	-63%	**77**	35	120%	**-78**	-66	-18%	**1,665**	2,232	-25%
16,504	16,583	0%	**2,160**	1,282	68%	**-841**	-549	-53%	**56,703**	53,133	7%
6,219	6,665	-7%	**535**	245	118%	**817**	-122	--	**18,984**	19,042	0%
2,051	2,027	1%	**912**	621	47%	**189**	452	-58%	**11,427**	11,261	1%
441	415	6%	**44**	16	175%	**49**	25	96%	**2,163**	1,828	18%
60	5,979	-99%	**496**	33	--	**-470**	0		**1,086**	6,852	-84%
-	–	--	**0**	0		**5**	0		**673**	558	21%
100,144	105,927	-5%	**17,299**	8,667	100%	**1,136**	1,030	10%	**276,750**	273,249	1%
15.9%	16.5%		**7.9%**	7.1%					**17.9%**[7]	18.5%[1]	
11.7%	12.1%		**6.5%**	6.2%					**13.6%**[7]	14.3%[1]	
4.2%	4.3%		**1.4%**	0.9%					**4.3%**	4.2%	
6.2%	8.5%		**6.3%**	3.4%					**11.2%**	11.6%	
6.8%	6.9%		**9.1%**	9.8%					**9.0%**[9]	9.4%[8]	

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.

Asia-Pacific			Latin America			Africa			Fresenius Group		
2018	2017	Change	**2018**	2017	Change	**2018**	2017	Change	**2018**	2017	Change
3,366	3,182	6%	**1,387**	1,431	-3%	**432**	413	5%	**33,530**	33,886	-1%
10%	9%		**4%**	4%		**1%**	1%		**100%**	100%	
648	627	3%	**92**	117	-21%	**60**	53	13%	**5,251**	4,589	14%
106	105	1%	**52**	49	6%	**7**	9	-22%	**1,430**	1,437	0%
4,246	3,874	10%	**1,452**	1,464	-1%	**236**	216	9%	**56,703**	53,133	7%
138	113	22%	**67**	82	-18%	**11**	12	-8%	**2,163**	1,828	18%
30	263	-89%	**45**	9	--	**–**	–	--	**1,086**	6,852	-84%
25,575	24,381	5%	**17,610**	17,709	-1%	**1,954**	1,904	3%	**276,750**	273,249	1%

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 2018:

- 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, 2018, Fresenius Medical Care treated 333,331 patients at 3,928 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 is developing 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); both are part of the holding company Helios Health. At the end of 2018, Helios Germany operated a total of 86 hospitals, around 125 outpatient clinics, and 10 prevention centers. Quirónsalud operated 47 hospitals, 57 outpatient centers, and around 300 occupational risk prevention centers at the end of 2018.

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. 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 30.75% of the subscribed capital of Fresenius Medical Care AG & Co. KGaA (FMC-AG & Co. KGaA) at the end of the fiscal year 2018. 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, 2018. 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 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, 2018 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 15, Revenue from Contracts with Customers, and IFRS 9, Financial Instruments, since January 1, 2018. 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 15 and IFRS 9 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, 2017.

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, 2019, 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 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 €123 million in sales in 2018 (2017: €119 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 2018 included, in addition to Fresenius SE & Co. KGaA, 2,594 (2017: 2,733) fully consolidated companies and 49 (2017: 50) companies were accounted for under the equity method. In 2018, 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 2018, 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 Beteiligungs-gesellschaft 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 Digital Lab GmbH	Berlin
Fresenius Kabi Logistik GmbH	Friedberg
MC Medizintechnik GmbH	Alzenau
medi1one medical gmbh	Waiblingen
Fresenius Helios	
Gesundheitsmanagement Elbe-Fläming GmbH	Burg
Helios Agnes-Karll Krankenhaus GmbH	Bad Schwartau
Helios Aukamm-Klinik Wiesbaden GmbH	Wiesbaden
Helios Beteiligungs Aktiengesellschaft	Berlin
Helios Bördeklinik GmbH	Oschersleben
Helios Fachklinik Schleswig GmbH	Schleswig
Helios Fachklinik Vogelsang-Gommern GmbH	Gommern
Helios Fachkliniken Hildburghausen GmbH	Hildburghausen
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-SERVICE GmbH	Wiesbaden
Helios Spital Überlingen GmbH	Überlingen
Helios St. Elisabeth Klinik Oberhausen GmbH	Oberhausen
Helios St. Elisabeth-Krankenhaus Bad Kissingen GmbH	Bad Kissingen
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 2017 have been reclassified to conform with the presentation in 2018.

In the prior year's comparative consolidated financial statements, finance lease receivables in the amount of €58 million have been reclassified from other currents assets (see note 17, Other current and non-current assets) to trade accounts and other receivables (see note 15, Trade accounts and other receivables) to conform to the current year's presentation.

The International Financial Reporting Interpretations Committee (IFRIC) issued an agenda decision in September 2017 relating to the applicability of IAS 12, Income Taxes, to the accounting for interest and penalties related to income taxes. The IFRIC observed in the agenda decision that entities do not have an accounting policy choice between applying IAS 12 and applying IAS 37, Provisions, Contingent Liabilities and Contingent Assets, to interest and penalties. In September 2018, the Accounting Standards Committee of Germany (DRSC) approved this interpretation regarding the accounting for interest and penalties related to German income taxes. The effects identified on the Fresenius Group financial positions are as follows: an increase of interest expense of €26 million, an increase of interest income of €10 million and a decrease of income taxes of €16 million for 2017, an increase of long-term provisions and other long-term liabilities of €44 million, a decrease of long-term accruals for income taxes of €44 million, an increase of short-term provisions and other short-term liabilities of €15 million and a decrease of short-term accruals for income taxes of €15 million as of December 31, 2017.

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 2018, the adoption of IAS 29 resulted in an effect on net income attributable to shareholders of Fresenius SE & Co. KGaA of -€12 million. As of December 31, 2017, this adoption had an effect on Fresenius SE & Co. KGaA shareholders' equity of €15 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 copayment 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 IAS 17 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 IAS 17 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 other noncurrent 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 2018 and 2017, interest of €8 million and €5 million, based on an average interest rate of 3.51% and 4.12%, 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 11 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 2018, 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 2018 and 2017.

p) Leases

Leased assets assigned to the Fresenius Group based on the risk and rewards approach (finance leases) are recognized as property, plant and equipment and measured on receipt date at the present values of lease payments as long as their fair values are not lower. Leased assets are depreciated in straight-line over their useful lives. If there is doubt as to whether title to the asset passes at a later stage and there is no opportune purchase option, the asset is depreciated over the lease term if this is shorter. An impairment loss is recognized if the recoverable amount is lower than the amortized cost of the leased asset. The impairment loss is reversed if the reasons for impairment no longer exist.

Finance lease liabilities are measured at the present value of the future lease payments and are recognized as a financial liability.

Property, plant and equipment that is rented by the Fresenius Group, is accounted for at its purchase cost. Depreciation is calculated using the straight-line method over the leasing time and its expected residual value.

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 30, 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. Additionally, there are put provisions that are valued by an external valuation firm. 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 30, 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 funded status 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 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 2018, 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, 2018	Dec. 31, 2017	**2018**	2017
U.S. dollar per €	**1.145**	1.199	**1.181**	1.130
Chinese renminbi per €	**7.875**	7.804	**7.808**	7.629
Argentinean peso per €	**43.039**	22.639	**32.984**	18.754
Australian dollar per €	**1.622**	1.535	**1.580**	1.473
Brazilian real per €	**4.444**	3.973	**4.308**	3.605
Japanese yen per €	**125.850**	135.010	**130.396**	126.711
Korean won per €	**1,277.930**	1,279.610	**1,299.071**	1,276.738
Pound sterling per €	**0.895**	0.887	**0.885**	0.877
Russian ruble per €	**79.715**	69.392	**74.026**	65.938
Swedish krona per €	**10.255**	9.844	**10.258**	9.635

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 30, 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% and 18% 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 2018 and 2017, respectively.

cc) Recent pronouncements, applied

The Fresenius Group has prepared its consolidated financial statements at December 31, 2018 in conformity with IFRS that have to be applied for fiscal years beginning on January 1, 2018.

In 2018, the Fresenius Group applied the following new standards relevant for its business for the first time:

IFRS 15

In May 2014, the International Accounting Standards Board (IASB) issued **IFRS 15, Revenue from Contracts with Customers**. This new standard specifies how and when companies reporting under IFRS will recognize revenue and provides users of financial statements with more informative and relevant disclosures. IFRS 15 supersedes IAS 18, Revenue, IAS 11, Construction Contracts, and a number of revenue-related interpretations. This standard applies to nearly all contracts with customers, the main exceptions are leases, financial instruments and insurance contracts. In September 2015, the IASB issued the amendment **Effective Date of IFRS 15**, which defers the effective date of IFRS 15 by one year to fiscal years beginning on or after January 1, 2018. The Fresenius Group adopted this standard as of January 1, 2018. In accordance with the transition provisions in IFRS 15, the new principles have been adopted only to those contracts that were not completed contracts as of January 1, 2018 following the cumulative effect method with no restatement of the comparative periods presented.

IFRS 15 requires the consideration of implicit price concessions when determining the transaction price which, upon adoption, resulted in the implicit price concessions in the business segment Fresenius Medical Care directly reducing revenue in the amount of €468 million for the fiscal year 2018. Prior to the adoption of IFRS 15, these price concessions were included in the general and administrative expenses as an allowance for doubtful accounts in the amount of €486 million for the fiscal year 2017. Consequently, there is no effect on net income as the implicit price concessions are merely presented in different lines within the consolidated statement of income.

In the business segment Fresenius Vamed, sales from long-term production contracts are no longer recognized using the percentage of completion method (PoC method) but according to the IFRS 15 guidance for performance obligations satisfied over time, which did not result in any changes

to the consolidated statement of income. In the consolidated statement of financial position, the amounts that were included in inventory under the PoC method will generally be recognized as contract assets according to IFRS 15. Contract assets are included in other current and other non-current assets in the consolidated statement of financial position. At the end of the reporting period, €430 million were included in other current assets that would have been included in inventories according to the former principle.

Other contract assets relate to medical treatments that have been started but not completed at the respective reporting date. They were previously recognized as trade accounts receivable. The reported contract liabilities primarily relate to advance payments from customers and to sales of dialysis machines.

IFRS 9

In July 2014, the IASB issued a new version of **IFRS 9, Financial Instruments**. This IFRS 9 version is considered the final and complete version, thus, mainly replacing IAS 39 as soon as IFRS 9 is applied. It includes all prior guidance on the classification and measurement of financial assets and financial liabilities as well as hedge accounting and introduces requirements for impairment of financial instruments as well as modified requirements for the measurement categories of financial assets. The impairment provisions reflect a model that relies on expected losses (expected loss model). This model comprises a three stage approach: Upon recognition, an entity shall recognize losses that are expected within the next 12 months. If credit risk deteriorates significantly, from that point in time impairment losses shall amount to lifetime expected losses. In case of objective evidence of impairment, there is an assignment to stage 3. The provisions for classification and measurement are amended by introducing an additional third measurement category for certain debt instruments. Such instruments shall be measured at fair value with changes recognized in other comprehensive income (loss) (fair value through other comprehensive income). The standard is accompanied by additional disclosure requirements and is effective for fiscal years beginning on or after January 1, 2018.

In accordance with IAS 39 and IFRS 9, the majority of the non-derivative financial assets are measured at amortized costs. The impact on the measurement of non-derivative financial assets under IFRS 9 has not been significant. For individual equity instruments, the Fresenius Group has opted to present changes in fair value in other comprehensive income (loss). The requirements for the classification and measurement of non-derivative financial liabilities have not changed significantly. Thus, IFRS 9 has a limited impact on the consolidated financial statements. Derivatives not designated as hedging instruments will continue to be classified and measured at fair value through profit and loss.

The Fresenius Group follows the modified retrospective method without restatement of previous periods for adopting IFRS 9.

Differences in the carrying amounts of financial assets and financial liabilities as of December 31, 2017, according to IAS 39 and as of January 1, 2018, according to IFRS 9 are recognized in other reserves in the amount of -€19 million (see note 30, Financial instruments).

IFRS 9 has an impact on the accounting policies for classifying financial instruments, on the methodology to assess the impairment of financial instruments and on the hedge accounting requirements.

dd) Recent pronouncements, not yet applied

The International Accounting Standards Board (IASB) issued the following new standards, which are relevant for the Fresenius Group and mandatory for fiscal years commencing on or after January 1, 2019:

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, 2022. 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.

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 are exempted from balance sheet recognition. Depreciation of the right-of-use asset and interest on the lease liability must be recognized in the income statement for every lease contract. 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. In this regard, no material effects are expected for the Fresenius Group. The standard is effective for fiscal years beginning on or after January 1, 2019. Earlier application is permitted for entities that have also adopted IFRS 15, Revenue from Contracts with Customers. The Fresenius Group decided that IFRS 16 will not be adopted early. The Fresenius Group expects a balance sheet extension due to the on balance sheet recognition of right-of-use assets and liabilities for agreed lease payment obligations, currently classified as operating leases, resulting in particular from leased clinics and buildings. Based on an impact analysis, using certain options and exemptions, the Fresenius Group expects a financial debt increase of approximately €5.5 billion, additional right-of-use assets of approximately €5.2 billion and a reduction of equity by €0.3 billion.

Referring to the consolidated statement of income, the Fresenius Group expects an EBITDA (Earnings before Interest, Taxes, Depreciation and Amortization) improvement of approximately €1.0 billion as well as an operating income improvement of approximately €0.1 billion due to the split of rent expenses of approximately €1.0 billion in depreciation of approximately €0.9 billion and interest expenses of approximately €0.2 billion, by having unchanged cash outflows. The net income attributable to shareholders of Fresenius SE & Co. KGaA is expected to decrease by approximately €30 million. In addition, the Fresenius Group anticipates for Fresenius Medical Care a reduction of sales by €0.1 billion due to changes in the accounting treatment of sale and leaseback transactions.

The Fresenius Group also expects that its Leverage Ratio will increase by about 0.3 to 0.4.

The change in presentation of the repayment component of operate lease payments will result in a corresponding improvement of cash flows from operating activities and a decline in cash flows from financing activities.

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

is 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 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 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 is performed. The right-of-use assets are adjusted for onerous contract provisions, recognized on the consolidated statement of financial position immediately before the date of initial application.

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 obligations are presented separately from property, plant and equipment and other financial debt in the consolidated statement of financial position.

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.

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, 2018 and December 31, 2017, the carrying amount of these was €25,915 million and €25,480 million, respectively. This represented 46% and 48%, 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, 2018: €10,128 million and €4,167 million, respectively) as well as the CGUs of Fresenius Helios in Germany and Spain (carrying amounts of goodwill as of December 31, 2018: €4,443 million and €3,414 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 5.99% and the WACC in the business segment Fresenius Kabi consisted of a basic rate of 5.79% for 2018, 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 2018, WACCs (after tax) for the CGUs of Fresenius Medical Care ranged from 5.99% to 13.52% and WACCs (after tax) for the CGUs of Fresenius Kabi ranged from 6.40% to 12.08%. In the CGU Fresenius Helios (Germany) and the business segment Fresenius Vamed, the WACC (after tax) was 5.79%, country-specific adjustments did not occur. In the CGU Fresenius Helios (Spain), the WACC (after tax) was 7.11%. The WACCs (after tax) of the main CGUs of Fresenius Medical Care and Fresenius Kabi in North America were 5.99% and 6.66%, 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 2018.

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, 2018: €137 million) by 0.27 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, 2018: €146 million) by 1 percentage point would not have led to the recognition of an impairment loss. An increase of the WACC by 3.29 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 €6,540 million and €6,260 million in 2018 and 2017, respectively, net of allowance. Approximately 51% 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 17%, private insurers in the United States with 7% as well as the public health authority of the region of Madrid with 12%, at December 31, 2018. 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 €323 million and €741 million as of December 31, 2018 and December 31, 2017, 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 €1,086 million and €6,852 million in 2018 and 2017, respectively. In 2018, of this amount, €1,070 million was paid in cash and €16 million was assumed obligations.

Fresenius Medical Care

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.

Acquisition of NxStage Medical, Inc.

On August 7, 2017, Fresenius Medical Care announced the acquisition of NxStage Medical, Inc. (NxStage), a U.S.-based medical technology and services company, for a total transaction value of approximately US$2.0 billion (€1.7 billion). On October 27, 2017, the shareholders of NxStage approved the acquisition. The transaction remains subject to regulatory approvals and other customary closing conditions. Fresenius Medical Care expects the closing of the transaction to occur at the beginning of 2019.

In 2017, Fresenius Medical Care spent €683 million on acquisitions, mainly on the purchase of dialysis clinics as well as the acquisition of an operator of day hospitals in Australia.

Fresenius Kabi

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.

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 intends to hold Akorn liable for damages suffered as a result of lost acquisition expenses.

In 2017, Fresenius Kabi spent €157 million on acquisitions, thereof €156 million for the acquisition of the biosimilars business of Merck KGaA.

Acquisition of the biosimilars business of Merck KGaA
On August 31, 2017, Fresenius Kabi has successfully closed the acquisition of Merck KGaA's biosimilars business. The transaction comprises a development pipeline and about 70 employees located in Aubonne and Vevey, Switzerland. The product pipeline has a focus on oncology and autoimmune diseases. The biosimilars business has been consolidated as of September 1, 2017.

The consideration transferred of €748 million is composed of €156 million, which were paid in cash upon closing, and risk-adjusted discounted success-related payments expected for the coming years with a fair value of €592 million, which are strictly tied to achievements of agreed development and sales targets.

The transaction was accounted for as a business combination. The following table comprises the final fair values of assets acquired and liabilities assumed at the date of the acquisition.

€ in millions	
Working capital and other assets	2
Property, plant and equipment and other non-current assets	2
Intangible assets	343
Liabilities	-7
Goodwill	408
Consideration transferred	**748**

The goodwill in the amount of €408 million that was acquired as part of the acquisition will be deductible for tax purposes.

Goodwill mainly represents the value of future opportunities due to the acquisition of biosimilars products and their platform. The platform with highly qualified biosimilars experts will enable Fresenius to develop further products in this market segment and bring them on the market in the future. Furthermore, Fresenius acquired the opportunity to sell biosimilars products in other markets.

Fresenius Helios

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.

In 2017, Fresenius Helios spent €5,979 million on acquisitions, mainly for the acquisition of 100% of the share capital in IDCSalud Holding S.L.U. (Quirónsalud), Spain.

Acquisition of IDCSalud Holding S.L.U. (Quirónsalud)
On January 31, 2017, Fresenius Helios closed the acquisition of 100% of the share capital in IDCSalud Holding S.L.U. (Quirónsalud), Spain's largest private hospital operator. Quirónsalud has been consolidated as of February 1, 2017.

Quirónsalud's network is comprised of 47 hospitals, 57 outpatient centers and around 300 Occupational Risk Prevention centers located in every metropolitan region of Spain. The company offers the full spectrum of inpatient and outpatient care. With the acquisition, Fresenius Helios strengthens its position as Europe's largest private hospital operator.

€5.36 billion of the total purchase price in the amount of €5.76 billion had already been financed by means of different debt instruments and paid in cash on January 31, 2017. The balance of €400 million was paid in the form of 6,108,176 new shares of Fresenius SE & Co. KGaA issued on January 31, 2017 from Authorized Capital excluding subscription rights. In April 2017, a compensation payment in the amount of €174 million was made for working capital taken over.

The transaction was accounted for as a business combination. The following table comprises the final fair values of assets acquired and liabilities assumed at the date of the acquisition.

€ in millions	
Trade accounts receivable	776
Working capital and other assets	74
Property, plant and equipment and other non-current assets	1,775
Intangible assets	1,306
Liabilities	-1,315
Goodwill	3,336
Noncontrolling interest	-21
Consideration transferred	**5,931**

The goodwill in the amount of €3,336 million that was acquired as part of the acquisition is not deductible for tax purposes.

Goodwill mainly represents the market position of the acquired hospitals, health centers and health care facilities, the economies of scale of the significantly grown largest private European hospital operator and the know-how of the employees.

The noncontrolling interests acquired as part of the acquisition are stated at fair value.

Fresenius Vamed

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.

In 2017, Fresenius Vamed spent €33 million on acquisitions for the puchase of a service provider for the decontamination of sterile medical devices in Germany and a post-acute care clinic in Switzerland.

IMPACTS ON FRESENIUS GROUP'S CONSOLIDATED FINANCIAL STATEMENTS RESULTING FROM ACQUISITIONS

In the fiscal year 2018, 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 €777 million and €6,135 million in 2018 and 2017, 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 €495 million and the other intangible assets were €282 million. Of this goodwill, €328 million is attributable to the acquisitions of Fresenius Medical Care, €44 million to Fresenius Kabi's acquisitions, €102 million to the acquisitions of Fresenius Helios and €21 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 2018 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	2018
Sales	370
EBITDA	68
EBIT	46
Net interest	-12
Net income attributable to shareholders of Fresenius SE & Co. KGaA	21

The acquisitions increased the total assets of the Fresenius Group by €466 million.

NOTES ON THE CONSOLIDATED STATEMENT OF INCOME

3. SPECIAL ITEMS

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 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 liabilities	-7	0	-5
Earnings 2018 according to IFRS	**5,251**	**-587**	**2,027**

Net income attributable to shareholders of Fresenius SE & Co. KGaA for the year 2017 in the amount of €1,814 million included special items due to the acquisition of Merck KGaA's biosimilars business and the announced acquisition of shares of Akorn, Inc. Furthermore, the impact of FCPA (Foreign Corrupt Practices Act) related expenses and a book gain from the remeasurement of deferred tax assets and liabilities due to the U.S. tax reform were 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:

€ in millions	EBIT	Interest expenses	Net income attributable to shareholders of Fresenius SE & Co. KGaA
Earnings 2017, before special items	4,830	-652	1,816
Acquisition-related expenses	-41	-15	-43
FCPA related expenses	-200	0	-62
Book gain from U.S. tax reform	0	0	103
Earnings 2017 according to IFRS	**4,589**	**-667**	**1,814**

4. SALES

In the year 2018, sales by activity according to the IFRS 15 categorization were as follows:

€ in millions	2018
Sales from contracts with customers	**33,206**
thereof sales of services	**22,898**
thereof sales of products and related services	**9,590**
thereof sales from long-term production contracts	**710**
thereof further sales from contracts with customers	**8**
Other sales	**324**
Sales	**33,530**

Other sales include sales from insurance and lease contracts.

In the year 2017, sales by activity according to the categorization used until year end 2017 were as follows:

€ in millions	2017
Sales of services	23,792
Sales of products and related goods	9,480
Sales from long-term production contracts	607
Other sales	7
Sales	33,886

The changes in activity classification are due to the first time use of the new IFRS 15 classification in the first quarter of 2018.

As of December 31, 2018 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	2019	2020	2021	2022	2023	thereafter	**Total**
Transaction price of the unsatisfied or partially unsatisfied performance obligations	1,197	953	809	556	348	432	**4,295**

A sales analysis by business segment and region is shown in the segment information on pages 170 to 171.

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	**2018**	2017
Cost of raw materials, supplies and purchased components	**7,899**	7,766
Cost of purchased services	**1,467**	1,266
Cost of materials	**9,366**	9,032

6. PERSONNEL EXPENSES

Cost of sales, selling expenses, general and administrative expenses and research and development expenses included personnel expenses of €13,426 million and €13,496 million in 2018 and 2017, respectively.

Personnel expenses were comprised of the following:

€ in millions	**2018**	2017
Wages and salaries	**10,753**	10,811
Social security contributions, cost of retirement pensions and social assistance	**2,673**	2,685
thereof retirement pensions	**338**	317
Personnel expenses	**13,426**	13,496

Fresenius Group's annual average number of employees by function is shown below:

	2018	2017
Production	**40,825**	39,207
Service	**194,691**	191,706
Administration	**25,973**	24,772
Sales and marketing	**11,587**	10,985
Research and development	**2,927**	2,679
Total employees (per capita)	**276,003**	269,349

7. RESEARCH AND DEVELOPMENT EXPENSES

Research and development expenses of €673 million (2017: €558 million) included expenditures for research and non-capitalizable development costs as well as regular depreciation and amortization expenses relating to capitalized development costs of €16 million (2017: €15 million). Furthermore, in 2018, research and development expenses included impairments on capitalized development expenses 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 €153 million (2017: €59 million).

8. GENERAL AND ADMINISTRATIVE EXPENSES

General and administrative expenses amounted to €3,857 million (2017: €4,606 million) and were related to expenditures for administrative functions not attributable to research and development, production or selling. Furthermore, in 2018, general and administrative expenses included expenses of €77 million (2017: €200 million) in regards to Foreign Corrupt Practices Act (FCPA) investigations.

In 2017, general and administrative expenses included impairment expenses due to implicit price concessions of €486 million. The adoption of IFRS 15 resulted in the implicit price concessions directly reducing revenue as from the fiscal year 2018.

9. OTHER OPERATING INCOME AND EXPENSES

Other operating income and expenses mainly included foreign exchange gains and losses, as well as income from at equity valuations and the release of provisions.

10. NET INTEREST

Net interest of -€587 million included interest expenses of €942 million and interest income of €355 million. The main portion of the interest expenses resulted from Fresenius Group's financial liabilities, which are recognized at amortized cost (see note 30, Financial instruments). 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 (see note 24, Convertible bonds).

11. TAXES

INCOME TAXES

Income before income taxes was attributable to the following geographic regions:

€ in millions	**2018**	2017
Germany	**476**	492
International	**4,188**	3,430
Total	**4,664**	3,922

Income tax expenses (benefits) for 2018 and 2017 consisted of the following:

€ in millions	Current taxes	Deferred taxes	**Income taxes**
2018			
Germany	**153**	**-65**	**88**
International	**697**	**165**	**862**
Total	**850**	**100**	**950**
2017			
Germany	163	-13	150
International	956	-217	739
Total	1,119	-230	889

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 year 2018 (2017: 30.7%).

€ in millions	**2018**	2017
Computed "expected" income tax expense	**1,427**	1,203
Increase (reduction) in income taxes resulting from:		
Items not recognized for tax purposes	**80**	140
Tax rate differential	**-396**	3
Tax rate changes	**-2**	-270
Tax-free income	**-51**	-67
Taxes for prior years	**-88**	-38
Noncontrolling interests	**-62**	-106
Other	**42**	24
Income tax	**950**	889
Effective tax rate	**20.4%**	22.7%

In the United States, the tax reform was enacted by signature of the president of the Tax Cuts and Jobs Act on December 22, 2017. The Act reduces the U.S. corporate income tax rate from 35% to 21% effective from January 1, 2018. Deferred tax assets and liabilities expected to reverse in 2018 and beyond have been remeasured using the corporate income tax rate that was enacted by the balance sheet date and will apply for future fiscal years. For the year ended December 31, 2017, the remeasurement of deferred tax assets and liabilities resulted in a deferred tax benefit of €266 million, which was recognized in tax expense, affecting profit and loss and included in the balance of €270 million in the reconciling item tax rate changes.

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	2018	2017
Deferred tax assets		
Accounts receivable	**50**	42
Inventories	**170**	136
Other current assets	**102**	127
Other non-current assets	**134**	136
Provisions and other liabilities	**262**	278
Benefit obligations	**204**	187
Losses carried forward from prior years	**177**	222
Deferred tax assets	**1,099**	1,128
Deferred tax liabilities		
Accounts receivable	**35**	22
Inventories	**28**	36
Other current assets	**163**	117
Other non-current assets	**857**	779
Provisions and other liabilities	**523**	540
Deferred tax liabilities	**1,606**	1,494
Net deferred taxes	**-507**	-366

In the consolidated statement of financial position, the net amounts of deferred tax assets and liabilities are included as follows:

€ in millions	2018	2017
Deferred tax assets	**777**	744
Deferred tax liabilities	**1,284**	1,110
Net deferred taxes	**-507**	-366

As of December 31, 2018, Fresenius Medical Care has not recognized a deferred tax liability on approximately €8 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
2019	35
2020	36
2021	26
2022	46
2023	38
2024	6
2025	9
2026	10
2027	10
2028 and thereafter	66
Total	**282**

The total remaining operating losses of €1,080 million can mainly be carried forward for an unlimited period. The total amount of the existing operating losses as of December 31, 2018 includes an amount of €860 million (2017: €823 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, 2018.

12. NONCONTROLLING INTEREST

As of December 31, noncontrolling interest in net income in the Fresenius Group was as follows:

€ in millions	2018	2017
Noncontrolling interest in Fresenius Medical Care	**1,372**	889
Noncontrolling interest in Fresenius Vamed	**17**	11
Noncontrolling interest in the business segments		
Fresenius Medical Care	**244**	274
Fresenius Kabi	**43**	39
Fresenius Helios	**10**	5
Fresenius Vamed	**1**	1
Total noncontrolling interest	**1,687**	1,219

In the fiscal year 2018, Fresenius Medical Care AG & Co. KGaA paid dividends to noncontrolling interests in the amount of €225 million (2017: €203 million).

13. EARNINGS PER SHARE

The following table shows the earnings per share including and excluding the dilutive effect from stock options issued:

	2018	2017
Numerators, € in millions		
Net income attributable to shareholders of Fresenius SE & Co. KGaA	**2,027**	1,814
less effect from dilution due to Fresenius Medical Care shares	**2**	1
Income available to all ordinary shares	**2,025**	1,813
Denominators in number of shares		
Weighted-average number of ordinary shares outstanding	**555,543,954**	554,124,656
Potentially dilutive ordinary shares	**1,760,548**	3,382,324
Weighted-average number of ordinary shares outstanding assuming dilution	**557,304,502**	557,506,980
Basic earnings per share in €	**3.65**	3.27
Fully diluted earnings per share in €	**3.63**	3.25

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	2018	2017
Cash	**1,273**	1,139
Time deposits and securities (with a maturity of up to 90 days)	**1,436**	497
Total cash and cash equivalents	**2,709**	1,636

As of December 31, 2018 and December 31, 2017, earmarked funds of €123 million and €183 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, 2018, €134 million (December 31, 2017: €378 million) of the cash balances and the equivalent amount of the overdraft balances were offset. Thereof €122 million related to Fresenius Medical Care.

15. TRADE ACCOUNTS AND OTHER RECEIVABLES

As of December 31, 2018, January 1, 2018 and December 31, 2017, trade accounts and other receivables were as follows:

	Dec. 31, 2018	January 1, 2018			Dec. 31, 2017
€ in millions		Book value according to IFRS 9 and IFRS 15	Adjustment due to the initial application of IFRS 9	Adjustment due to the initial application of IFRS 15	
Trade accounts and other receivables	**6,863**	6,547	-7	-447	7,001
less allowance for doubtful accounts	**323**	312	35	-464	741
Trade accounts and other receivables, net	**6,540**	6,235	-42	17	6,260

Within trade accounts and other receivables, net, as of December 31, 2018, €6,473 million relate to revenue from contracts with customers as defined by IFRS 15. This amount includes €322 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 €18 million (2017: €25 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	2018	2017
Allowance for doubtful accounts at the beginning of the year	**741**	700
Adjustment due to the initial application of IFRS 9 and IFRS 15	**-429**	0
As of January 1, 2018, adjusted	**312**	700
Change in valuation allowances as recorded in the consolidated statement of income	**33**	518
Write-offs and recoveries of amounts previously written-off	**-21**	-416
Foreign currency translation	**-1**	-61
Allowance for doubtful accounts at the end of the year	**323**	741

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, 2018, the Fresenius Group had total allowances for expected credit losses of €372 million (2017: €752 million).

The following table shows the credit risk rating grades of trade accounts receivable and their allowance for doubtful accounts:

	December 31, 2018			January 1, 2018	
€ in millions	Total	thereof overdue	thereof credit impaired	Total	thereof overdue
Trade accounts and other receivables	**6,863**	**2,446**	**671**	7,001	2,657
less allowance for doubtful accounts	**323**	**284**	**253**	741	667
Trade accounts and other receivables, net	**6,540**	**2,162**	**418**	6,260	1,990

16. INVENTORIES

As of December 31, inventories consisted of the following:

€ in millions	2018	2017
Raw materials and purchased components	**761**	653
Work in process	**326**	715
Finished goods	**2,245**	2,024
less reserves	**114**	140
Inventories, net	**3,218**	3,252

In 2018 and in 2017, no reversals of write-downs of inventory were made.

The companies of the Fresenius Group are obliged to purchase approximately €1,030 million of raw materials and purchased components under fixed terms, of which €597 million was committed at December 31, 2018 for 2019. The terms of these agreements run 1 to 11 years. Advance payments from customers of €682 million (2017: €560 million) have been offset against inventories. These exclusively related to long-term construction contracts.

Upon implementation of IFRS 15, €311 million relating to long-term production contracts from Fresenius Vamed have been reclassified from work in process within inventory to contract assets within other current and non-current assets.

17. OTHER CURRENT AND NON-CURRENT ASSETS

As of December 31, other current and non-current assets were comprised of the following:

	2018		2017	
€ in millions		thereof short-term		thereof short-term
At equity investments	**650**	**0**	647	0
Tax receivables	**615**	**586**	418	378
Contract assets	**535**	**535**	0	0
Accounts receivable resulting from German hospital law	**150**	**137**	175	143
Advances made	**102**	**88**	99	86
Prepaid rent and insurance	**86**	**86**	78	78
Prepaid expenses	**76**	**43**	73	43
Other assets	**517**	**381**	595	446
Other non-financial assets, net	**2,731**	**1,856**	2,085	1,174
Debt instruments	**334**	**100**	3	3
Equity investments	**245**	**0**	88	6
Compensation receivable resulting from German hospital law	**154**	**147**	124	121
Leasing receivables	**108**	**0**	79	0
Long-term loans	**92**	**18**	93	19
Deposits	**87**	**31**	78	25
Derivative financial instruments	**77**	**45**	335	22
Discounts	**68**	**68**	49	49
Other assets	**325**	**29**	278	20
Other financial assets, net	**1,490**	**438**	1,127	265
Other assets, net	**4,221**	**2,294**	3,212	1,439
Allowances	**49**	**45**	11	8
Other assets, gross	**4,270**	**2,339**	3,223	1,447

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 2018, income of €73 million (2017: €67 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.

Since the implementation of IFRS 15 on January 1, 2018, other current and non-current assets also include contract assets within non-financial assets. As of December 31, 2018, they amount to €535 million. Thereof, €311 million relating to long-term production contracts from Fresenius Vamed have been reclassified from inventory (work in process) upon the initial application of IFRS 15 as of January 1, 2018.

Contract assets mainly relate to long-term production contracts for which revenue is recognized over time. As of December 31, 2018, they include €0.1 million of allowance for doubtful accounts. Moreover, in the fiscal years 2018 and 2017, 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, 2018	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifications	Disposals	As of Dec. 31, 2018
Land and land facilities	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	Reclassifications	Disposals	As of Dec. 31, 2018
Land and land facilities	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**

ACQUISITION AND MANUFACTURING COSTS

€ in millions	As of Jan. 1, 2017	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifications	Disposals	As of Dec. 31, 2017
Land and land facilities	561	-9	251	5	14	8	**814**
Buildings and improvements	6,068	-351	968	135	457	148	**7,129**
Machinery and equipment	7,396	-424	178	693	279	278	**7,844**
Machinery, equipment and rental equipment under capital leases	192	-8	–	11	-5	3	**187**
Construction in progress	1,184	-77	18	839	-760	6	**1,198**
Property, plant and equipment	15,401	-869	1,415	1,683	-15	443	**17,172**

DEPRECIATION

€ in millions	As of Jan. 1, 2017	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifications	Disposals	As of Dec. 31, 2017
Land and land facilities	13	–	0	1	0	–	**14**
Buildings and improvements	2,722	-188	-1	383	-3	94	**2,819**
Machinery and equipment	4,446	-244	-3	728	2	244	**4,685**
Machinery, equipment and rental equipment under capital leases	77	-4	-3	27	-1	3	**93**
Construction in progress	4	–	0	0	2	0	**6**
Property, plant and equipment	7,262	-436	-7	1,139	–	341	**7,617**

CARRYING AMOUNTS

€ in millions	Dec. 31, 2018	Dec. 31, 2017
Land and land facilities	**807**	800
Buildings and improvements	**4,481**	4,310
Machinery and equipment	**3,375**	3,159
Machinery, equipment and rental equipment under capital leases	**142**	94
Construction in progress	**1,561**	1,192
Property, plant and equipment	**10,366**	9,555

Depreciation on property, plant and equipment for the years 2018 and 2017 was €1,133 million and €1,139 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, 2018 and 2017 included medical devices which Fresenius Medical Care and Fresenius Kabi lease to customers, patients and physicians under operating leases in an amount of €868 million and €788 million, respectively.

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, 2018	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifications	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	Reclassifications	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**

ACQUISITION COST

€ in millions	As of Jan. 1, 2017	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Disposals	**As of Dec. 31, 2017**
Goodwill	22,901	-1,988	4,330	44	0	2	**25,285**
Customer relationships	332	-33	541	0	0	0	**840**
Tradenames with finite useful lives	0	-6	661	–	45	1	**699**
Capitalized development costs	425	-17	343	71	7	1	**828**
Patents, product and distribution rights	748	-79	-1	6	2	2	**674**
Software	474	-27	30	118	15	11	**599**
Technology	462	-44	2	0	0	5	**415**
Tradenames with indefinite useful lives	227	-25	0	–	-10	0	**192**
Non-compete agreements	347	-40	11	0	-2	2	**314**
Management contracts	3	–	0	0	0	0	**3**
Other	469	-45	24	26	-53	3	**418**
Goodwill and other intangible assets	26,388	-2,304	5,941	265	4	27	**30,267**

AMORTIZATION

€ in millions	As of Jan. 1, 2017	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Disposals	**As of Dec. 31, 2017**
Goodwill	0	0	0	0	0	0	**0**
Customer relationships	98	-11	-25	61	0	0	**123**
Tradenames with finite useful lives	0	-2	0	38	12	0	**48**
Capitalized development costs	232	-9	0	15	-9	–	**229**
Patents, product and distribution rights	392	-40	0	34	2	2	**386**
Software	290	-16	–	75	-3	9	**337**
Technology	141	-17	0	30	0	0	**154**
Tradenames with indefinite useful lives	0	0	0	0	0	0	**0**
Non-compete agreements	278	-34	0	22	-2	2	**262**
Management contracts	0	0	0	0	0	0	**0**
Other	293	-31	–	23	-11	3	**271**
Goodwill and other intangible assets	1,724	-160	-25	298	-11	16	**1,810**

CARRYING AMOUNTS

€ in millions	**Dec. 31, 2018**	Dec. 31, 2017
Goodwill	**25,713**	25,285
Customer relationships	**595**	717
Tradenames with finite useful lives	**609**	651
Capitalized development costs	**640**	599
Patents, product and distribution rights	**327**	288
Software	**388**	262
Technology	**193**	261
Tradenames with indefinite useful lives	**199**	192
Non-compete agreements	**47**	52
Management contracts	**3**	3
Other	**129**	147
Goodwill and other intangible assets	**28,843**	28,457

Amortization and impairments on intangible assets amounted to €362 million and €298 million for the years 2018 and 2017, 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, 2018			Dec. 31, 2017		
€ in millions	Acquisition cost	Accumulated amortization	Carrying amount	Acquisition cost	Accumulated amortization	Carrying amount
Customer relationships	**717**	**122**	**595**	840	123	717
Tradenames	**699**	**90**	**609**	699	48	651
Capitalized development costs	**895**	**255**	**640**	828	229	599
Patents, product and distribution rights	**759**	**432**	**327**	674	386	288
Software	**821**	**433**	**388**	599	337	262
Technology	**428**	**235**	**193**	415	154	261
Non-compete agreements	**329**	**282**	**47**	314	262	52
Other	**418**	**289**	**129**	418	271	147
Total	**5,066**	**2,138**	**2,928**	4,787	1,810	2,977

Fresenius Medical Care capitalized development costs in an amount of €2 million for the fiscal year 2018 (2017: €3 million). Capitalized development costs are amortized on a straight-line basis over a useful life of 11 years. The amortization expense for the fiscal year 2018 amounted to €0.3 million (2017: €0.4 million). Moreover, in 2018, technology and other intangible assets contain impairments of €65 million. These are included in the preceding amortization tables in the columns additions. In the case of Fresenius Kabi, development costs capitalized amounted to €638 million at December 31, 2018 (December 31, 2017: €596 million). The amortization is recorded on a straight-line basis over a useful life of 5 to 20 years and amounted to €16 million for the fiscal year 2018 (2017: €15 million). Furthermore, in 2018, research and development expenses included impairments on capitalized development expenses 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

	Dec. 31, 2018			Dec. 31, 2017		
€ in millions	Acquisition cost	Accumulated amortization	Carrying amount	Acquisition cost	Accumulated amortization	Carrying amount
Goodwill	**25,713**	**0**	**25,713**	25,285	0	25,285
Tradenames	**199**	**0**	**199**	192	0	192
Management contracts	**3**	**0**	**3**	3	0	3
Total	**25,915**	**0**	**25,915**	25,480	0	25,480

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, 2017	**12,956**	**5,302**	**4,538**	**99**	**6**	**22,901**
Additions	596	394	3,365	19	0	4,374
Disposals	0	-1	-1	0	0	-2
Foreign currency translation	-1,448	-540	0	0	0	-1,988
Carrying amount as of December 31, 2017	**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**

As of December 31, 2018 and December 31, 2017, the carrying amounts of the other non-amortizable intangible assets were €186 million and €178 million for Fresenius Medical Care as well as €16 million and €17 million, respectively, for Fresenius Kabi.

20. PROVISIONS

As of December 31, provisions consisted of the following:

	2018		2017	
€ in millions		**thereof short-term**		thereof short-term
Self-insurance programs	**323**	**323**	371	329
Personnel expenses	**291**	**127**	322	124
Warranties and complaints	**250**	**247**	156	155
FCPA related expenses	**224**	**224**	211	211
Litigation and other legal risks	**140**	**109**	88	81
Other provisions	**428**	**266**	376	221
Provisions	**1,656**	**1,296**	1,524	1,121

The following table shows the development of provisions in the fiscal year:

€ in millions	As of Jan. 1, 2018	Adjustment due to the initial application of IFRS 15	Foreign currency translation	Changes in entities consolidated	Additions	Reclassifi-cations	Utilized	Reversed	**As of Dec. 31, 2018**
Self-insurance programs	371	0	10	-49	162	-9	-162	–	**323**
Personnel expenses	322	0	1	-4	73	2	-77	-26	**291**
Warranties and complaints	156	108	–	-3	162	–	-141	-32	**250**
FCPA related expenses	211	0	0	0	77	0	-64	0	**224**
Litigation and other legal risks	88	0	-1	5	78	-5	-13	-12	**140**
Other provisions	376	0	-2	37	289	12	-212	-72	**428**
Total	1,524	108	8	-14	841	–	-669	-142	**1,656**

Fresenius Medical Care recorded charges of €200 million in 2017 and €77 million in 2018 in regards to Foreign Corrupt Practices Act (FCPA) investigations. The charges encompass estimates for the government's claims 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 government 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 totals €224 million as of December 31, 2018. 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:

	2018		2017	
€ in millions		thereof short-term		thereof short-term
Tax liabilities	**266**	**251**	304	304
Accounts payable resulting from German hospital law	**143**	**142**	183	180
Contract liabilities	**108**	**108**	0	0
Personnel liabilities	**102**	**10**	98	0
Accounts receivable credit balance	**87**	**36**	126	76
Advance payments from customers	**0**	**0**	53	46
All other liabilities	**827**	**651**	758	602
Other non-financial liabilities	**1,533**	**1,198**	1,522	1,208
Personnel liabilities	**1,208**	**1,200**	1,282	1,275
Noncontrolling interest subject to put provisions	**839**	**495**	854	470
Invoices outstanding	**766**	**766**	717	717
Accrued contingent payments outstanding for acquisitions	**731**	**177**	793	78
Debtors with credit balances	**387**	**387**	331	331
Bonuses and discounts	**217**	**217**	198	198
Interest liabilities	**187**	**187**	200	200
Leasing liabilities	**150**	**150**	118	118
Derivative financial instruments	**74**	**47**	334	25
Legal matters, advisory and audit fees	**57**	**57**	55	55
Compensation payable resulting from German hospital law	**33**	**32**	39	39
Commissions	**31**	**31**	35	34
All other liabilities	**5**	**0**	5	0
Other financial liabilities	**4,685**	**3,746**	4,961	3,540
Other liabilities	**6,218**	**4,944**	6,483	4,748

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.

Since the implementation of IFRS 15 on January 1, 2018, other liabilities include non-financial contract liabilities from contracts with customers. As of December 31, 2018, €108 million contract liabilities are included. Thereof, €46 million have been reclassified from advance payments from customers upon the initial application of IFRS 15.

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 €540 million at December 31, 2018 for the acquisition of the biosimilars business.

At December 31, 2018, the total amount of other long-term liabilities was €1,274 million, thereof €844 million was due between one and five years and €430 million was due after five years. The statement of financial position line item long-term provisions and other long-term liabilities of €1,634 million also included long-term provisions of €360 million as of December 31, 2018.

22. DEBT AND CAPITAL LEASE OBLIGATIONS

SHORT-TERM DEBT

As of December 31, short-term debt consisted of the following:

	Book value	
€ in millions	**2018**	2017
Fresenius SE & Co. KGaA Commercial Paper	**973**	715
Fresenius Medical Care AG & Co. KGaA Commercial Paper	**1,000**	680
Other short-term debt	**381**	155
Short-term debt	**2,354**	1,550

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, 2018 and 2017 were 1.62% and 5.81%, respectively.

LONG-TERM DEBT AND CAPITAL LEASE OBLIGATIONS

As of December 31, long-term debt and capital lease obligations net of debt issuance costs consisted of the following:

€ in millions	**2018**	2017
Fresenius Medical Care Credit Agreement	**1,887**	2,018
Fresenius Credit Agreement	**2,116**	2,238
Schuldschein Loans	**1,629**	1,873
Accounts Receivable Facility of Fresenius Medical Care	**0**	294
Capital lease obligations	**219**	234
Other	**446**	448
Subtotal	**6,297**	7,105
less current portion	**353**	618
Long-term debt and capital lease obligations, less current portion	**5,944**	6,487

Maturities of long-term debt and capital lease obligations including debt issuance costs are shown in the following table:

€ in millions	up to 1 year	1 to 3 years	3 to 5 years	more than 5 years
Fresenius Medical Care Credit Agreement	133	665	1,096	0
Fresenius Credit Agreement	152	1,055	920	0
Schuldschein Loans	0	561	443	628
Accounts Receivable Facility of Fresenius Medical Care	0	0	0	0
Capital lease obligations	22	41	28	128
Other	55	243	45	105
Long-term debt and capital lease obligations	**362**	**2,565**	**2,532**	**861**

Aggregate annual repayments applicable to the above listed long-term debt and capital lease obligations for the years subsequent to December 31, 2018 are:

for the fiscal years	€ in millions
2019	362
2020	1,146
2021	1,419
2022	2,449
2023	83
Subsequent years	861
Total	**6,320**

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.

The following tables show the available and outstanding amounts under the Fresenius Medical Care Credit Agreement at December 31:

	2018			
	Maximum amount available		**Balance outstanding**	
		€ in millions		**€ 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**

	2017			
	Maximum amount available		**Balance outstanding**	
		€ in millions		**€ in millions**
Revolving Credit Facility (in US$) 2017/2022	US$900 million	750	**US$70 million**	**58**
Revolving Credit Facility (in €) 2017/2022	€600 million	600	**€0 million**	**0**
Term Loan (in US$) 2017/2022	US$1,470 million	1,226	**US$1,470 million**	**1,226**
Term Loan (in €) 2017/2020	€400 million	400	**€400 million**	**400**
Term Loan (in €) 2017/2022	€343 million	343	**€343 million**	**343**
Total		3,319		**2,027**
less financing cost				**9**
Total				**2,018**

As of December 31, 2018, 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$1,350 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 €315 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 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, 2018 and 2017, the U.S. dollar denominated tranches outstanding under the Fresenius Medical Care Credit Agreement had a weighted-average interest rate of 3.53% and 2.48%, respectively. As of December 31, 2018 and 2017, the euro denominated tranches had a weighted-average interest rate of 0.81%.

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).

As of December 31, 2018, 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.

The following tables show the available and outstanding amounts under the Fresenius Credit Agreement at December 31:

	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**

	2017			
	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	417	**US$0 million**	**0**
Term Loan (in €) 2017/2021	€750 million	750	**€750 million**	**750**
Term Loan (in €) 2017/2022	€975 million	975	**€975 million**	**975**
Term Loan (in US$) 2017/2022	US$635 million	529	**US$635 million**	**529**
Total		3,671		**2,254**
less financing cost				**16**
Total				**2,238**

As of December 31, 2018, the Fresenius Credit Agreement consisted of:

- Revolving credit facilities of US$500 million and €1,000 million which will be due on September 28, 2022.
- A term loan of US$575 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 €875 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, 2018, 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	**2018**	2017
Fresenius SE & Co. KGaA 2014/2018	€97 million	April 2, 2018	2.09%	**0**	97
Fresenius SE & Co. KGaA 2012/2018	€72 million	April 4, 2018	4.09%	**0**	72
Fresenius SE & Co. KGaA 2015/2018	€91 million	October 8, 2018	1.07%/variable	**0**	91
Fresenius SE & Co. KGaA 2014/2020	€262 million	April 2, 2020	2.67%/variable	**262**	262
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 2017/2024	€421 million	Jan. 31, 2024	1.40%/variable	**420**	420
Fresenius SE & Co. KGaA 2017/2027	€207 million	Jan. 29, 2027	1.96%/variable	**207**	206
Fresenius US Finance II, Inc. 2016/2021	US$342 million	March 10, 2021	2.66%/variable	**297**	284
Fresenius US Finance II, Inc. 2016/2023	US$58 million	March 10, 2023	3.12%/variable	**51**	49
Schuldschein Loans				**1,629**	1,873

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 issued by Fresenius SE & Co. KGaA in the total amount of €125 million which were due on August 22, 2017 were repaid as scheduled.

On December 19, 2016, Fresenius SE & Co. KGaA issued €1,000 million of Schuldschein Loans in tranches of 5, 7 and 10 years with fixed and variable interest rates. The transaction was closed on January 31, 2017. Proceeds were used for general corporate purposes and to finance the acquisition of IDCSalud Holding S.L.U. (Quirónsalud) by Fresenius Helios.

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, 2018 in the amount of €76 million and €65 million have been terminated and prepaid as per April 3, 2017.

The Schuldschein Loans of Fresenius SE & Co. KGaA are guaranteed 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, 2018, 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, 2018, there were no outstanding borrowings under the Accounts Receivable Facility (2017: US$353 million (€294 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$27 million (€23 million) at December 31, 2018 and US$71 million (€59 million) at December 31, 2017. These letters of credit are not included above as part of the balance outstanding at December 31, 2018, 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, 2018, this facility was not utilized. At December 31, 2017, the interest rate on the utilized borrowings was 1.40%. 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, 2018, the additional financial cushion resulting from unutilized credit facilities was approximately €3.8 billion.

Syndicated credit facilities accounted for €2.8 billion. This portion is comprised of the Fresenius Medical Care Credit Agreement in the amount of €1,385 million and the Fresenius Credit Agreement in the amount of €1,437 million. Furthermore, bilateral facilities of approximately €1,000 million 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, 2018, the commercial paper program of Fresenius SE & Co. KGaA was utilized in the amount of €973 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, 2018, 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$27 million (€23 million) as of December 31, 2018.

Bridge Financing Facility

On April 25, 2017, Fresenius SE & Co. KGaA entered into a Bridge Financing Facility in the amount of US$4,200 million with a tenor of 18 months for the purpose of the acquisition of Akorn, Inc. In October 2018, the Bridge Financing Facility was amended and extended until April 2019. On December 10, 2018, the Bridge Financing Facility was prematurely cancelled by Fresenius SE & Co. KGaA without having been utilized.

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	2018	2017
Fresenius Finance Ireland PLC 2017/2022	€700 million	Jan. 31, 2022	0.875%	**697**	695
Fresenius Finance Ireland PLC 2017/2024	€700 million	Jan. 30, 2024	1.50%	**696**	696
Fresenius Finance Ireland PLC 2017/2027	€700 million	Feb. 1, 2027	2.125%	**692**	692
Fresenius Finance Ireland PLC 2017/2032	€500 million	Jan. 30, 2032	3.00%	**494**	494
Fresenius SE & Co. KGaA 2014/2019	€300 million	Feb. 1, 2019	2.375%	**300**	299
Fresenius SE & Co. KGaA 2012/2019	€500 million	Apr. 15, 2019	4.25%	**500**	499
Fresenius SE & Co. KGaA 2013/2020	€500 million	July 15, 2020	2.875%	**499**	498
Fresenius SE & Co. KGaA 2014/2021	€450 million	Feb. 1, 2021	3.00%	**447**	446
Fresenius SE & Co. KGaA 2014/2024	€450 million	Feb. 1, 2024	4.00%	**450**	449
Fresenius US Finance II, Inc. 2014/2021	US$300 million	Feb. 1, 2021	4.25%	**261**	249
Fresenius US Finance II, Inc. 2015/2023	US$300 million	Jan. 15, 2023	4.50%	**260**	248
FMC Finance VII S.A. 2011/2021	€300 million	Feb. 15, 2021	5.25%	**297**	297
FMC Finance VIII S.A. 2011/2018	€400 million	Sept. 15, 2018	6.50%	**0**	399
FMC Finance VIII S.A. 2012/2019	€250 million	July 31, 2019	5.25%	**246**	245
Fresenius Medical Care AG & Co. KGaA 2018/2025	€500 million	July 11, 2025	1.50%	**496**	0
Fresenius Medical Care US Finance, Inc. 2011/2021	US$650 million	Feb. 15, 2021	5.75%	**565**	538
Fresenius Medical Care US Finance II, Inc. 2011/2018	US$400 million	Sept. 15, 2018	6.50%	**0**	332
Fresenius Medical Care US Finance II, Inc. 2012/2019	US$800 million	July 31, 2019	5.625%	**698**	666
Fresenius Medical Care US Finance II, Inc. 2014/2020	US$500 million	Oct. 15, 2020	4.125%	**435**	415
Fresenius Medical Care US Finance II, Inc. 2012/2022	US$700 million	Jan. 31, 2022	5.875%	**610**	581
Fresenius Medical Care US Finance II, Inc. 2014/2024	US$400 million	Oct. 15, 2024	4.75%	**347**	331
Bonds				**8,990**	9,069

FRESENIUS SE & CO. KGAA

As of December 31, 2018, 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 are shown as current portion of bonds in the consolidated statement of financial position. Mainly to refinance these bonds, 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 will be used for general corporate purposes including refinancing of maturing notes.

On January 30, 2017, Fresenius Finance Ireland PLC, a subsidiary of Fresenius SE & Co. KGaA, issued bonds with an aggregate volume of €2.6 billion. The bonds consist of tranches with maturities of 5, 7, 10 and 15 years. The proceeds were used to fund the acquisition of IDCSalud Holding S.L.U. (Quirónsalud) and for general corporate purposes.

All bonds of Fresenius US Finance II, Inc. and of Fresenius Finance Ireland PLC are guaranteed by Fresenius SE & Co. KGaA. The holders 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. 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.

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, 2018, the Fresenius Group was in compliance with all of its covenants.

FRESENIUS MEDICAL CARE AG & CO. KGAA

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, 2018, 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 of US$800, due on July 31, 2019 are shown as current portion of bonds in the consolidated statement of financial position.

The bonds issued by Fresenius Medical Care US Finance, Inc. were redeemed at maturity on July 17, 2017.

The bonds of Fresenius Medical Care US Finance, Inc., Fresenius Medical Care US Finance II, Inc., FMC Finance VII S.A. and FMC Finance VIII 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 holders 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. The issuers may redeem the bonds issued before 2018 at any time at 100% of principal plus accrued interest and a premium calculated pursuant to the terms of the indentures.

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, 2018, 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:

	Notional amount	Maturity	Coupon	Current conversion price	Book value € in millions 2018	2017
Fresenius SE & Co. KGaA 2014/2019	€500 million	Sept. 24, 2019	0.000%	€49.0848	**493**	483
Fresenius SE & Co. KGaA 2017/2024	€500 million	Jan. 31, 2024	0.000%	€106.8947	**457**	448
Fresenius Medical Care AG & Co. KGaA 2014/2020	€400 million	Jan. 31, 2020	1.125%	€73.1980	**393**	387
Convertible bonds					**1,343**	1,318

The fair value of the derivatives embedded in the convertible bonds of Fresenius SE & Co. KGaA was €39 million at December 31, 2018. The derivative embedded in the convertible bonds of Fresenius Medical Care AG & Co. KGaA (FMC-AG & Co. KGaA) was recognized with a fair value of €12 million at December 31, 2018. Fresenius SE & Co. KGaA and FMC-AG & Co. KGaA have purchased stock options (call options) to hedge future fair value fluctuations of these derivatives. As of December 31, 2018, the call options had a corresponding aggregate fair value of €39 million and €12 million, respectively.

The conversions will be cash-settled. Any increase of Fresenius' share price and of Fresenius Medical Care's share price above the conversion price would be offset by a corresponding value increase of the call options.

The derivatives 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 due on September 24, 2019 are shown as current portion of convertible bonds in the consolidated statement of financial position.

On January 31, 2017, Fresenius SE & Co. KGaA issued €500 million of equity-neutral convertible bonds due 2024. The convertible bonds will not bear any interest. The proceeds were used to fund the acquisition of IDCSalud Holding S.L.U. (Quirónsalud) and for general corporate purposes.

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 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 (funded status). 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, 2018, the defined benefit obligation (DBO) of the Fresenius Group of €1,787 million (2017: €1,671 million) included €565 million (2017: €526 million) funded by plan assets and €1,222 million (2017: €1,145 million) covered by pension provisions. Furthermore, the pension liability contains benefit obligations offered by other subsidiaries of Fresenius Medical Care in an amount of €35 million (2017: €37 million). The current portion of the pension liability in an amount of €22 million (2017: €19 million) is recognized in the consolidated statement of financial position within short-term provisions and other short-term liabilities. The non-current portion of €1,235 million (2017: €1,163 million) is recorded as pension liability.

The major part of pension liabilities relates to Germany. At December 31, 2018, 82% of the pension liabilities were recognized in Germany and 16% 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.

74% of the pension liabilities in an amount of €1,257 million relate to the "Versorgungsordnung der Fresenius-Unternehmen" established in 2016 (Pension Plan 2016), which applies for most of the German entities of the Fresenius Group except Fresenius Helios. 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 2018, there was no minimum funding requirement for the defined benefit plan. FMCH voluntarily provided €43 million. Expected funding for 2019 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 €35 million and €37 million at December 31, 2018 and 2017, respectively. The current pension liability of €3 million (2017: €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 €32 million (2017: €34 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 €687 million. Benefit obligations relating to unfunded pension plans were €1,100 million.

The following table shows the changes in benefit obligations, the changes in plan assets, the funded status 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	2018	2017
Benefit obligations at the beginning of the year	**1,671**	1,671
Changes in entities consolidated	**0**	28
Foreign currency translation	**22**	-63
Service cost	**59**	63
Past service cost	**-5**	–
Settlements	**0**	-1
Net interest cost	**42**	40
Contributions by plan participants	**4**	3
Transfer of plan participants	**7**	3
Remeasurements	**31**	-29
Actuarial losses (gains) arising from changes in financial assumptions	**-1**	-33
Actuarial losses (gains) arising from changes in demographic assumptions	**11**	-4
Actuarial losses (gains) arising from experience adjustments	**21**	8
Benefits paid	**-44**	-44
Benefit obligations at the end of the year	**1,787**	1,671
thereof vested	**1,464**	1,392
Fair value of plan assets at the beginning of the year	**526**	532
Changes in entities consolidated	**0**	22
Foreign currency translation	**17**	-47
Actual return (cost) on plan assets	**-16**	31
Interest income from plan assets	**15**	17
Actuarial gains (losses) arising from experience adjustments	**-31**	14
Contributions by the employer	**55**	10
Contributions by plan participants	**4**	3
Settlements	**0**	-1
Transfer of plan participants	**8**	4
Gains from divestitures	**-1**	-1
Benefits paid	**-28**	-27
Fair value of plan assets at the end of the year	**565**	526
Funded status as of December 31	**1,222**	1,145
Benefit plans offered by other subsidiaries	**35**	37
Pension liability as of December 31	**1,257**	1,182

The plan assets are neither invested in the Fresenius Group nor in related parties of the Fresenius Group.

As of December 31, 2018 and 2017, the fair value of plan assets did not exceed the benefit obligations in any

pension plan. Furthermore, for the years 2018 and 2017, 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 %	2018	2017
Discount rate	**2.69**	2.53
Rate of compensation increase	**2.75**	2.80
Rate of pension increase	**1.55**	1.39

Mainly changes in the discount factor, as well as inflation and mortality assumptions used for the actuarial computation resulted in actuarial losses in 2018 which increased the fair value of the defined benefit obligation. Unrecognized actuarial losses were €707 million (2017: €635 million).

Sensitivity analysis

Increases and decreases in principal actuarial assumptions by 0.5 percentage points would affect the pension liability as of December 31, 2018 as follows:

Development of pension liability € in millions	0.5 pp increase	0.5 pp decrease
Discount rate	-151	173
Rate of compensation increase	27	-26
Rate of pension increase	93	-81

The sensitivity analysis was calculated based on the average duration of the pension obligations determined at December 31, 2018. 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 €81 million (2017: €86 million) were comprised of the following components:

€ in millions	2018	2017
Service cost	**54**	63
Net interest cost	**27**	23
Net periodic benefit cost	**81**	86

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 %	2018	2017
Discount rate	**2.53**	2.47
Rate of compensation increase	**2.80**	2.82
Rate of pension increase	**1.39**	1.46

The following table shows the expected benefit payments for the next 10 years:

for the fiscal years	€ in millions
2019	47
2020	50
2021	52
2022	55
2023	60
2024 to 2028	355
Total expected benefit payments	**619**

At December 31, 2018 and at December 31, 2017, the weighted-average duration of the defined benefit obligation was 18 years and 19 years, respectively.

The fair values of plan assets by categories were as follows:

€ in millions	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	December 31, 2017 Quoted prices in active markets for identical assets Level 1	December 31, 2017 Significant observable inputs Level 2	December 31, 2017 Total
Categories of plan assets						
Equity investments	**73**	**76**	**149**	72	72	144
Index funds[1]	**43**	**76**	**119**	47	72	119
Other equity investments	**30**	**0**	**30**	25	0	25
Fixed income investments	**160**	**190**	**350**	117	204	321
Government securities[2]	**16**	**0**	**16**	10	1	11
Corporate bonds[3]	**69**	**187**	**256**	69	199	268
Other fixed income investments[4]	**75**	**3**	**78**	38	4	42
Other[5]	**55**	**11**	**66**	46	15	61
Total	**288**	**277**	**565**	235	291	526

[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 its funded plans.

in %	**Allocation 2018**	Allocation 2017	Target allocation
Equity investments	**26.39**	27.31	27.55
Fixed income investments	**61.89**	60.97	60.90
Other incl. real estate	**11.72**	11.72	11.55
Total	**100.00**	100.00	100.00

Contributions to plan assets for the fiscal year 2019 are expected to amount to €13 million.

DEFINED CONTRIBUTION PLANS

Fresenius Group's total expense under defined contribution plans for 2018 was €157 million (2017: €146 million). Of this amount, €95 million related to contributions by the Fresenius Group to several public supplementary pension funds for employees of Fresenius Helios. Further €54 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 €95 million in 2018 (2017: €90 million). Thereof, €49 million (2017: €48 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 €97 million in 2019.

Under the U.S. savings plan, employees can deposit up to 75% of their pay up to an annual maximum of US$18,500 if under 50 years old (US$24,500 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, 2018 and 2017 was €54 million and €49 million, respectively.

26. NONCONTROLLING INTEREST

As of December 31, noncontrolling interest in the Fresenius Group was as follows:

€ in millions	2018	2017
Noncontrolling interest in Fresenius Medical Care AG & Co. KGaA	**8,143**	6,796
Noncontrolling interest in VAMED AG	**83**	66
Noncontrolling interest in the business segments		
Fresenius Medical Care	**1,144**	1,008
Fresenius Kabi	**102**	89
Fresenius Helios	**113**	92
Fresenius Vamed	**12**	8
Total noncontrolling interest	**9,597**	8,059

For further financial information relating to Fresenius Medical Care see the consolidated segment reporting on pages 170 to 171.

Noncontrolling interest changed as follows:

€ in millions	2018
Noncontrolling interest as of December 31, 2017	**8,059**
Adjustment due to the initial application of IFRS 9 and IFRS 15	-2
As of January 1, 2018, adjusted	**8,057**
Noncontrolling interest in profit	1,687
Purchase of noncontrolling interest	112
Stock options	38
Dividend payments	-488
Currency effects and other changes	191
Noncontrolling interest as of December 31, 2018	**9,597**

27. FRESENIUS SE & CO. KGAA SHAREHOLDERS' EQUITY

SUBSCRIBED CAPITAL

Development of subscribed capital

As of January 1, 2018, the subscribed capital of Fresenius SE & Co. KGaA consisted of 554,710,473 bearer ordinary shares.

During the fiscal year 2018, 1,514,681 stock options were exercised. Consequently, as of December 31, 2018, the subscribed capital of Fresenius SE & Co. KGaA consisted of 556,225,154 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 34, Share-based compensation plans).

The previous authorization to issue option bearer bonds and/or convertible bonds (Conditional Capital III) dated May 16, 2014 was revoked by resolution of the Annual General Meeting of Fresenius SE & Co. KGaA on May 18, 2018. Simultaneously, a new Conditional Capital III with a five-year term was approved.

Accordingly, 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 is increased conditionally by up to €48,971,202 through issuing of up to 48,971,202 new bearer ordinary shares. The conditional capital increase shall only be implemented to the extent that the holders of cash issued convertible bonds or of cash issued warrants from option bonds exercise their conversion or option rights and as long as no other forms of settlement are used. The new bearer ordinary shares shall participate in the profits from the start of the fiscal year in which they are issued.

The new Conditional Capital III became effective upon registration with the commercial register on June 18, 2018.

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	5,141,264
Conditional Capital III option bearer bonds and/or convertible bonds	48,971,202
Conditional Capital IV Fresenius SE & Co. KGaA Stock Option Plan 2013	24,928,200
Total Conditional Capital as of January 1, 2018	**83,775,749**
Fresenius SE Stock Option Plan 2008 – options exercised	-844,450
Fresenius SE & Co. KGaA Stock Option Plan 2013 – options exercised	-670,231
Total Conditional Capital as of December 31, 2018	**82,261,068**

As of December 31, 2018, 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	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 December 31, 2018	**82,261,068**

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 2018, a dividend of €0.75 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 €416 million.

TREASURY STOCK OF FRESENIUS MEDICAL CARE

In 2018, Fresenius Medical Care repurchased 431,000 ordinary shares for an amount of €37 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 2018 and 2017 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	44	-11	33
Change in unrealized gains/losses	6	-1	5
Realized gains/losses due to reclassifications	38	-10	28
Foreign currency translation	-1,965	26	-1,939
Positions which will not be reclassified into net income in subsequent years			
Actuarial gains/losses on defined benefit pension plans	43	-35	8
Total changes 2017	**-1,878**	**-20**	**-1,898**
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**

OTHER NOTES

29. COMMITMENTS AND CONTINGENCIES

OPERATING LEASES AND RENTAL PAYMENTS

Fresenius Group's subsidiaries lease hospitals, office and manufacturing buildings as well as machinery and equipment under various lease agreements. Rental expense recorded for operating leases for the years ended December 31, 2018 and 2017 was €1,060 million and €1,043 million, respectively.

Future minimum rental payments under non-cancellable operating leases for the years subsequent to December 31, 2018 are:

for the fiscal years	€ in millions
2019	995
2020	925
2021	821
2022	710
2023	599
Thereafter	3,339
Total	**7,389**

As of December 31, 2018, future investment commitments existed up to the year 2023 from the acquisition contracts for hospitals at projected costs of up to €255 million. Thereof €113 million relate to the year 2019.

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. For the matters described below in which the Fresenius Group believes a loss is both reasonably possible and estimable, an estimate of the loss or range of loss exposure is provided. 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 has been conducting 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 intends to hold Akorn liable for damages suffered as a result of lost acquisition expenses.

Fresenius Medical Care Holdings – Qui tam complaint (Massachusetts)

On February 15, 2011, a whistleblower (relator) action under the False Claims Act against Fresenius Medical Care Holdings, Inc. (FMCH) was unsealed by order of the United States District Court for the District of Massachusetts and served by the relator. United States ex rel. Chris Drennen v. Fresenius Medical Care Holdings, Inc., 2009 Civ. 10179 (D. Mass.). The relator's complaint, which was first filed under seal in February 2009, alleged that FMCH sought and received reimbursement from government payors for serum ferritin and multiple forms of hepatitis B laboratory tests that were medically unnecessary or not properly ordered by a physician. Discovery on the relator's complaint closed in May 2015. Although the United States initially declined to intervene in the case, the government subsequently changed position. On April 3, 2017, the court allowed the government to intervene with respect only to certain hepatitis B surface antigen tests performed prior to 2011, when Medicare reimbursement rules for such tests changed. The court has subsequently rejected government requests to conduct new discovery and to add counts to its complaint-in-intervention that would expand upon the relator's complaint, but has allowed FMCH to take discovery against the government as if the government had intervened at the outset.

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 or other anti-bribery laws. FMC-AG & Co. KGaA's Supervisory Board, through its Audit and Corporate Governance Committee, conducted investigations with the assistance of independent counsel. In a continuing dialogue, FMC-AG & Co. KGaA voluntarily advised the Securities and Exchange Commission and the United States Department of Justice (collectively and interchangeably the government) about these investigations. The government also conducted its own investigations, in which FMC-AG & Co. KGaA cooperated.

In the course of this dialogue, FMC-AG & Co. KGaA identified and reported to the government, and took remedial actions including employee disciplinary actions with respect to, conduct that resulted in the government seeking monetary penalties and other remedies against FMC-AG & Co. KGaA and

disgorgement of related profits revolving principally around conduct in FMC-AG & Co. KGaA's products business in a limited number of countries outside the United States.

FMC-AG & Co. KGaA recorded charges of €200 million in 2017 and €77 million in 2018 encompassing estimates for the government's claims 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 government 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 totals €224 million as of December 31, 2018.

FMC-AG & Co. KGaA has reached an agreement in principle with the government agencies encompassing the terms understood to be necessary for settlement. FMC-AG & Co. KGaA believes that the previously-recorded charge appropriately accounts for the consequences of the resolution as related to its financial statements. The agreement in principle remains subject to memorialization in fully integrated documents and final approval by authorized officials of the government and FMC-AG & Co. KGaA.

FMC-AG & Co. KGaA continues to implement enhancements to its anti-corruption compliance program, including internal controls related to compliance with international anti-bribery laws. FMC-AG & Co. KGaA continues to be fully committed to compliance with the Foreign Corrupt Practices Act and other applicable anti-bribery laws.

Product liability litigation

Personal injury litigation involving Fresenius Medical Care AG & Co. KGaA's (FMC-AG & Co. KGaA) 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, as previously disclosed. Remaining individual personal injury cases do not present material risk and discussion of them is therefore discontinued.

FMC-AG & Co. KGaA'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 FMC-AG & Co. KGaA's claims for indemnification of defense costs. FMC-AG & Co. KGaA 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, FMC-AG & Co. KGaA's insurers in the AIG group and FMC-AG & Co. KGaA 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 FMC-AG & Co. KGaA for a portion of its US$220 million outlay; FMC-AG & Co. KGaA seeks to confirm the AIG group's US$220 million funding obligation, to recover defense costs already incurred by FMC-AG & Co. KGaA, and to compel the AIG group to honor defense and indemnification obligations, if any, 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 Fresenius Medical Care Holdings, Inc. (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 remedy the repayment of sums paid to FMCH 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. The four plaintiffs are the Attorneys General for the States of Kentucky, Louisiana and Mississippi and the commercial insurance company Blue Cross Blue Shield of Louisiana in its private capacity. State of Mississippi ex rel. Hood, v. Fresenius Medical Care Holdings, Inc., No. 14-cv-152 (Chancery Court, DeSoto County); State of Louisiana ex re. Caldwell and Louisiana Health Service & Indemnity Company v. Fresenius Medical Care Airline, 2016 Civ. 11035 (U.S.D.C. D. Mass.); Commonwealth of Kentucky ex rel. Beshear v. Fresenius Medical Care Holdings, Inc. et al., No. 16-CI-00946 (Circuit Court, Franklin County).

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 February 7, 2019, the Boston court announced that it would not require FMCH to respond to the Pure Bill but allowed plaintiffs to file a pleading satisfying the requirements of a complaint under the Federal Rules of Procedure. Plaintiffs advised the court that they would file a complaint seeking monetary damages for specified payors in the health care system.

The jury trial scheduled to begin in the Kentucky case (Beshear) on January 22, 2019 was postponed. On February 12, 2019, an agreement in principle was reached to settle and resolve the state claims in exchange for FMCH's payment of US$10.3 million.

FMC-AG & Co. KGaA has additionally increased its litigation reserves to account for anticipated settlement of some, but not all, of the remaining payor cases. However, at the present time there are no agreements in principle for resolving the remaining cases and litigation through final adjudication may be required in all of them. The Mississippi case has been set for trial on September 3, 2019. There is no trial date for the Louisiana case.

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, which had been scheduled for April 2019, has been postponed to allow the completion of discovery and remains to be rescheduled.

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. Fresenius 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, utilization and invoicing by Fresenius Medical Care AG & Co. KGaA's (FMC-AG & Co. KGaA) subsidiary Azura Vascular Care, for a period beginning after FMC-AG & Co. KGaA's acquisition of American Access Care, LLC (AAC) in October 2011. FMC-AG & Co. KGaA has cooperated in the Brooklyn United States Attorney's Office (USAO) investigation, which is continuing. Allegations against AAC arising in districts in Connecticut, Florida and Rhode Island relating to utilization and invoicing were settled in 2015.

On October 22, 2018, the United States Attorney for the Southern District of New York (Manhattan) announced a False Claims Act settlement for up to US$18.4 million with Vascular Access Centers LP, a competitor of AAC and Azura. Simultaneously, the 2012 qui tam (whistleblower) complaint that gave rise to the investigation was unsealed. Levine v. Vascular Access Centers, 2012 Civ. 5103 (S.D.N.Y.). That qui tam complaint names as defendants, among others in the dialysis industry, subsidiaries and employees of FMC-AG & Co. KGaA engaged in the vascular access business. The Manhattan USAO did not intervene against non-settling

defendants, allowing the relator to proceed on his own against those defendants. Defendants related to FMC-AG & Co. KGaA have been served and the litigation is proceeding.

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. FMC-AG & Co. KGaA 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 is cooperating 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., 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 Fresenius Medical Care AG & Co. KGaA (FMC-AG & Co. KGaA) to refund overpayments and to pay related penalties under applicable laws, but the monetary value of such payment demands cannot yet be reasonably estimated.

The Brooklyn United States Attorney's Office 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, FMC-AG & Co. KGaA 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 sale agreement, FMC-AG & Co. KGaA retains responsibility for the Brooklyn investigation and its outcome. FMC-AG & Co. KGaA continues to cooperate in the ongoing 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, Fresenius Medical Care AG & Co. KGaA (FMC-AG & Co. KGaA) received a subpoena from the United States Attorney for the District of Massachusetts under the False Claims Act inquiring into FMC-AG & Co. KGaA's interactions and relationships with the AKF, including FMC-AG & Co. KGaA's charitable contributions to the Fund and the Fund's financial assistance to patients for insurance premiums. FMCH is cooperating in the investigation, which is part of a broader investigation into charitable contributions in the medical industry. FMC-AG & Co. KGaA believes that the investigation revolves around conduct alleged to be unlawful in United Healthcare v. American Renal Associates, 2018 Civ. 10622 (D. Mass.), but believes that such unlawful conduct was not undertaken by FMCH. On July 2, 2018, American Renal Associates announced that it had reached a settlement in principle of the United Healthcare litigation. FMC-AG & Co. KGaA lacks information necessary to assess how the American Renal Associates settlement may impact the United States Attorney's investigation.

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 FMC-AG & Co. KGaA'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.

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.

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 Galenica (Vifor) 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 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. Recently, 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 "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 July 2019.

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, 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 authorities 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. FINANCIAL INSTRUMENTS

VALUATION OF FINANCIAL INSTRUMENTS

Carrying amounts of financial instruments as of the initial application of IFRS 9

The impact on the measurement categories and the measurement of financial assets and liabilities according to IFRS 9 has not been significant. The original measurement categories under IAS 39 as of December 31, 2017 and the new measurement categories according to IFRS 9 upon implementation on January 1, 2018 as well as their respective carrying amounts were as follows:

			Dec. 31, 2017	Jan. 1, 2018
€ in millions	Category according to IAS 39	Category according to IFRS 9	Carrying amount according to IAS 39	Carrying amount according to IFRS 9
Financial assets				
Cash and cash equivalents	Relating to no category	Amortized cost	1,152	1,152
	Relating to no category	Fair value through profit and loss	484	484 [3]
Trade accounts and other receivables, less allowance for doubtful accounts	Loans and receivables	Amortized cost	6,157	6,115 [1]
	Loans and receivables	Fair value through other comprehensive income	45	45 [2]
	Relating to no category	Relating to no category	58	58
Receivables from and loans to related parties	Loans and receivables	Amortized cost	17	17
Other financial assets				
Debt instruments	Available for sale financial assets	Fair value through other comprehensive income	3	3 [2]
Equity investments	Available for sale financial assets	Fair value through other comprehensive income	16	16 [2,4]
	Loans and receivables	Fair value through other comprehensive income	54	85 [1,2,4]
	Loans and receivables	Fair value through profit and loss	18	18 [2]
Derivatives designated as cash flow hedging instruments	Relating to no category	Relating to no category	14	14
Derivatives not designated as hedging instruments	Financial assets measured at fair value though profit and loss	Fair value through profit and loss	321	321
Leasing receivables	Relating to no category	Relating to no category	79	79
All other financial assets	Loans and receivables	Amortized cost	622	620 [1]
Financial assets			**9,040**	**9,027**

[1] Changes in the carrying amounts from remeasurements of -€13 million are included in the items of the consolidated statement of financial position as follows: -€42 million trade accounts and other receivables, €31 million equity investments, -€2 million all other financial assets.

[2] Reclassification

[3] The option to measure debt instruments at fair value through profit and loss was not used.

[4] 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 €101 million (included in other financial assets).

€ in millions	Category according to IAS 39	Category according to IFRS 9	Dec. 31, 2017 Carrying amount according to IAS 39	Jan. 1, 2018 Carrying amount according to IFRS 9
Financial liabilities				
Trade accounts payable	Financial liabilities measured at amortized cost	Amortized cost	1,688	1,688
Short-term accounts payable to related parties	Financial liabilities measured at amortized cost	Amortized cost	42	42
Short-term debt	Financial liabilities measured at amortized cost	Amortized cost	1,550	1,550
Short-term debt from related parties	Financial liabilities measured at amortized cost	Amortized cost	–	–
Long-term debt and capital lease obligations	Financial liabilities measured at amortized cost	Amortized cost	6,871	6,871
	Relating to no category	Relating to no category	234	234
Bonds	Financial liabilities measured at amortized cost	Amortized cost	9,069	9,069
Convertible bonds	Financial liabilities measured at amortized cost	Amortized cost	1,318	1,318
Other financial liabilities				
Noncontrolling interest subject to put provisions	Relating to no category	Relating to no category	854	854
Derivatives in cash flow hedging relationships	Relating to no category	Relating to no category	9	9
Derivatives not designated as hedging instruments	Liabilities measured at fair value through profit and loss	Fair value through profit and loss	325	325
Accrued contingent payments outstanding for acquisitions	Liabilities measured at fair value through profit and loss	Fair value through profit and loss	793	793
All other financial liabilities	Financial liabilities measured at amortized cost	Amortized cost	2,965	2,965
Financial liabilities			**25,718**	**25,718**

As of January 1, 2018, the adjustments due to the initial application of IFRS 9 on the components of shareholders' equity were as follows:

€ in millions	Other reserves	Noncontrolling interest	Total
Remeasurement of equity investments due to reclassification	24	7	31
Remeasurement of the allowance for bad debt for trade accounts and other receivables and other financial assets	-39	-5	-44
Deferred tax on adjustments	-4	-2	-6
Total	**-19**	**–**	**-19**

Carrying amounts of financial instruments as of December 31, 2018

As of December 31, 2018, the carrying amounts of financial instruments by item of the statement of financial position and structured according to IFRS 9 categories were as follows:

					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	6,540	6,445	4	41			50
Accounts receivable from and loans to related parties	29	29					
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.

During the fiscal year 2018, no material reclassifications of financial instruments were required.

Fair value of financial instruments

The following table shows the carrying amounts and the fair value hierarchy levels according to IFRS 13 as of December 31, 2018 and as of January 1, 2018:

	December 31, 2018				January 1, 2018			
		Fair value				Fair value		
€ in millions	Carrying amount	Level 1	Level 2	Level 3	Carrying amount	Level 1	Level 2	Level 3
Financial assets								
Cash and cash equivalents [1]	**1,418**	**1,418**			484	484		
Trade accounts and other receivables, less allowance for doubtful accounts [1]	**45**		**45**		45		45	
Other financial assets [1]								
Debt instruments	**334**	**330**	**4**		3		3	
Equity investments	**245**	**14**	**231**		119	16	103	
Derivatives designated as cash flow hedging instruments	**19**		**19**		14		14	
Derivatives not designated as hedging instruments	**58**		**58**		321		321	
Financial liabilities								
Long-term debt and capital lease obligations	**6,297**		**6,294**		7,105		7,154	
Bonds	**8,990**	**9,245**			9,069	9,707		
Convertible bonds	**1,343**	**1,416**			1,318	1,716		
Other financial liabilities [1]								
Noncontrolling interest subject to put provisions	**839**			**839**	854			854
Accrued contingent payments outstanding for acquisitions	**731**			**731**	793			793
Derivatives designated as cash flow hedging instruments	**12**		**12**		9		9	
Derivatives not designated as hedging instruments	**62**		**62**		325		325	

[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).

The fair values of major long-term financial instruments are calculated on the basis of market information. Financial instruments 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). The method for calculating the fair value is described in note 1. III. q, Financial instruments. 97.6% of noncontrolling interest subject to put provisions applied to Fresenius Medical Care at December 31, 2018.

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 2018:

€ in millions	Accrued contingent payments outstanding for acquisitions	Noncontrolling interest subject to put provisions
As of January 1, 2018	**793**	**854**
Additions	35	54
Disposals	-81	-51
Gain/loss recognized in profit or loss	-27	142
Gain/loss recognized in equity	12	-50
Dividend payments	0	-140
Currency effects and other changes	-1	30
As of December 31, 2018	**731**	**839**

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, 2018		December 31, 2017	
€ in millions	**Assets**	**Liabilities**	Assets	Liabilities
Interest rate contracts (current)	**0**	**–**	0	0
Interest rate contracts (non-current)	**5**	**0**	5	1
Foreign exchange contracts (current)	**14**	**12**	9	8
Foreign exchange contracts (non-current)	**–**	**0**	–	–
Derivatives in cash flow hedging relationships	**19**	**12**	14	9
Interest rate contracts (current)	**0**	**0**	0	–
Interest rate contracts (non-current)	**0**	**–**	0	–
Foreign exchange contracts (current)	**7**	**11**	13	17
Foreign exchange contracts (non-current)	**–**	**–**	–	0
Derivatives embedded in the convertible bonds	**0**	**51**	0	308
Call options to secure the convertible bonds	**51**	**0**	308	0
Derivatives not designated as hedging instruments	**58**	**62**	321	325

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, 2018 and December 31, 2017, the Fresenius Group had €25 million and €27 million of derivative financial assets subject to netting arrangements and €22 million and €25 million of derivative financial liabilities subject to netting arrangements. Offsetting these derivative financial instruments would have resulted in net assets of €15 million and €17 million as well as net liabilities of €12 million and €15 million at December 31, 2018 and December 31, 2017, 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	2	3	0	0
Foreign exchange contracts	3	–	0	0
Derivatives in cash flow hedging relationships	**5**	**3**	**0**	**0**
Interest rate contracts	–	–	–	0
Foreign exchange contracts	-5	–	0	0
Derivatives not designated as hedging instruments	**-5**	**–**	**–**	**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 €33 million and foreign currency transactions of -€23 million. Interest income of €355 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, trade accounts and other receivables and loans to related parties. Interest expense of €942 million resulted mainly from financial liabilities, which are not recognized at fair value in the consolidated statement of income.

Income and expense from financial instruments recorded in other comprehensive income (loss) related solely to derivatives in cash flow hedging relationships. The changes of cash flow hedges on the consolidated statement of comprehensive income (loss) before tax for the years 2018 and 2017 are as follows:

EFFECT OF DERIVATIVES ON THE CUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

	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.

	2017		
€ in millions	Gain or loss recognized in other comprehensive income (loss) (effective portion)	Gain or loss reclassified from accumulated other comprehensive income (loss) (effective portion)[2]	Affected line item in the consolidated statement of income
Interest rate contracts	–	36	Interest income/expense
Foreign exchange contracts	6	2	
thereof		1	Cost of sales
		1	Selling expenses, general and administrative expenses
Derivatives in cash flow hedging relationships[1]	**6**	**38**	

[1] In the consolidated statement of income, no gains or losses from ineffectiveness or from a hedged underlying transaction, that is no longer expected to occur, are recognized.
[2] Gains are shown with a negative sign, losses with a positive sign.

In accordance with IFRS 9, both the fair value of the spot element and the forward points are recorded within other comprehensive income (loss). According to IAS 39, the fair value of the spot element and the forward points were recorded together in other comprehensive income (loss). This results in the different schematic presentations above.

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 forecast 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 forecast 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

	Gain or loss recognized in the consolidated statement of income		
€ in millions	**2018**	2017	Affected line item in the consolidated statement of income
Interest rate contracts	**–**	–	Interest income/expense
Foreign exchange contracts	**41**	-21	Other operating income/expense
Foreign exchange contracts	**–**	-6	Interest income/expense
Derivatives embedded in the convertible bonds	**257**	116	Interest income/expense
Call options to secure the convertible bonds	**-257**	-116	Interest income/expense
Derivatives not designated as hedging instruments	**41**	-27	

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 -€2 million and in relation with loans in foreign currencies €5 million.

As of December 31, 2018, the notional amounts of foreign exchange contracts totaled €3,301 million. Thereof €3,299 million were due in less than 12 months. As of December 31, 2018, the Fresenius Group was party to foreign exchange contracts with a maximum maturity of 18 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, 2018, the Fresenius Group's cash flow at risk amounted to €66 million based on a net exposure of €1,882 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 €66 million.

The following table shows the average hedging rates and nominal amounts of foreign exchange contracts for material currency pairs at December 31, 2018.

	Nominal amount in € millions	Average hedging rate
Euro/U.S. dollar	750	1.1847
Euro/Australian dollar	188	1.6149
Euro/Chinese renminbi	158	7.9792

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, 2018, euro denominated interest rate swaps had a notional volume of €206 million. Thereof €204 million were due in less than 12 months. The fair value was -€0.6 thousand. The euro interest rate swaps expire in the years 2019 to 2022. They bear an average interest rate of 0.37%. Furthermore, the Fresenius Group had U.S. dollar denominated interest rate swaps in the amount of US$200 million (€175 million) with a fair value of US$6 million (€5 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, 2018 and December 31, 2017, the Fresenius Group had a loss of €3 million and €19 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 1.0% 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 €21 million for foreign exchange derivatives. The maximum credit exposure from interest rate derivatives was €5 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 the aging analysis 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 and capital lease obligations).

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 and capital lease obligations (including accounts receivable securitization program) [1]	483	2,759	2,615	938
Short-term debt	2,367	0	0	0
Bonds	2,057	2,931	1,780	3,445
Convertible bonds	505	402	0	500
Trade accounts payable	1,823	0	0	0
Other financial liabilities	3,094	7	1	5
Contingent payments outstanding for acquisitions	178	256	124	218
Noncontrolling interest subject to put provisions	494	204	66	108
Derivative financial instruments – designated as cash flow hedge	12	0	0	0
Derivative financial instruments – not designated as hedging instruments	35	12	–	15
Total	**11,048**	**6,571**	**4,586**	**5,229**

[1] Future interest payments for financial liabilities with variable interest rates were calculated using the latest interest rates fixed prior to December 31, 2018.

31. 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, 2018	Dec. 31, 2017
Shareholders' equity	**25,008**	21,720
Total assets	**56,703**	53,133
Equity ratio	**44.1%**	40.9%

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 34, Share-based compensation plans).

DEBT

€ in millions	Dec. 31, 2018	Dec. 31, 2017
Debt	**18,984**	19,042
Total assets	**56,703**	53,133
Debt ratio	**33.5%**	35.8%

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, 2018, the leverage ratio (before special items) was 2.7.

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, 2018	Dec. 31, 2017
Standard & Poor's		
Corporate Credit Rating	**BBB-**	BBB-
Outlook	**positive**	positive
Moody's		
Corporate Credit Rating	**Baa3**	Baa3
Outlook	**stable**	stable
Fitch		
Corporate Credit Rating	**BBB-**	BBB-
Outlook	**stable**	stable

32. SUPPLEMENTARY INFORMATION ON THE CONSOLIDATED STATEMENT OF CASH FLOWS

The consolidated statements of cash flows of the Fresenius Group for the fiscal years 2018 and 2017 are shown on pages 166 and 167.

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 2018, Fresenius Helios has used subsidies for investments in property, plant and equipment in the amount of €133 million (2017: €114 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	2018	2017
Assets acquired	**513**	8,220
Liabilities assumed	**-39**	-1,287
Noncontrolling interest	**-57**	-103
Notes assumed in connection with acquisitions	**-17**	-163
Issuance of shares	**0**	-400
Cash paid	**400**	6,267
Cash acquired	**-5**	-22
Cash paid for acquisitions, net	**395**	6,245
Cash paid for investments, net of cash acquired	**590**	18
Cash paid for intangible assets, net	**85**	26
Total cash paid for acquisitions and investments, net of cash acquired, and net purchases of intangible assets	**1,070**	6,289

In 2018, €480 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 €1,533 million in 2018 (2017: €153 million).

The following table shows a reconciliation of debt to cash flow from financing activities in 2018 and 2017:

		cash-effective changes	non-cash-effective changes					
€ in millions	Jan. 1, 2018	Cash flow	Assumed as part of acquisitions	Foreign currency translation	Depreciation on financing costs	New lease contracts	Other	**Dec. 31, 2018**
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**

		cash-effective changes	non-cash-effective changes					
€ in millions	Jan. 1, 2017	Cash flow	Assumed as part of acquisitions	Foreign currency translation	Depreciation on financing costs	New lease contracts	Other	**Dec. 31, 2017**
Short-term debt	847	722	-5	-13	0	0	-1	**1,550**
Long-term debt and capital lease obligations, less accounts receivable securitization program	5,494	1,230	303	-405	9	12	168	**6,811**
Bonds	7,414	2,164	0	-463	18	0	-64	**9,069**
Convertible bonds	854	500	0	0	24	0	-60	**1,318**
Accounts receivable securitization program	165	157	0	-28	0	0	0	**294**

33. NOTES ON THE CONSOLIDATED SEGMENT REPORTING

GENERAL

The consolidated segment reporting tables shown on pages 170 to 171 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, 2018.

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.

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 173 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, capital lease obligations, 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	2018	2017
Total EBIT of reporting segments	**4,607**	4,867
Special items	**690**	-241
General corporate expenses Corporate/Other (EBIT)	**-46**	-37
Group EBIT	**5,251**	4,589
Interest expenses	**-942**	-874
Interest income	**355**	207
Income before income taxes	**4,664**	3,922

RECONCILIATION OF NET DEBT WITH THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

€ in millions	Dec. 31, 2018	Dec. 31, 2017
Short-term debt	**2,354**	1,550
Short-term debt from related parties	**–**	–
Current portion of long-term debt and capital lease obligations	**353**	618
Current portion of bonds	**1,744**	731
Current portion of convertible bonds	**493**	0
Long-term debt and capital lease obligations, less current portion	**5,944**	6,487
Bonds, less current portion	**7,246**	8,338
Convertible bonds, less current portion	**850**	1,318
Debt	**18,984**	19,042
less cash and cash equivalents	**2,709**	1,636
Net debt	**16,275**	17,406

The following table shows the non-current assets by geographical region:

€ in millions	Dec. 31, 2018	Dec. 31, 2017
Germany	**9,212**	8,922
Spain	**6,225**	6,086
Europe (excluding Germany and Spain)	**2,914**	2,872
North America	**19,033**	18,452
Asia-Pacific	**1,951**	1,893
Latin America	**701**	648
Africa	**48**	50
Total non-current assets[1]	**40,084**	38,923

[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 2018, the Fresenius Group generated sales of €7,359 million (2017: €7,192 million) in Germany. Sales in the United States were €13,652 million at actual rates (2017: €14,894 million) and €14,272 million in constant currency in 2018.

In 2018, the segment Fresenius Medical Care generated other sales in the amount of €314 million, Fresenius Kabi €5 million and Fresenius Vamed €5 million. All other sales are sales from contracts with customers.

34. SHARE-BASED COMPENSATION PLANS

COMPENSATION COST IN CONNECTION WITH THE SHARE-BASED COMPENSATION PLANS OF THE FRESENIUS GROUP

In 2018, the Fresenius Group recognized compensation cost in an amount of €35 million for stock options granted since 2014. 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 2018, the Fresenius Group recognized expenses of -€7 million (income) 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 weighted-average assumptions for the calculation of the fair value of grants of the Fresenius SE & Co. KGaA Stock Option Plan 2013 made during 2017 are as follows:

	2017	
€ in millions	July Grant	December Grant
Expected dividend yield	1.25%	1.39%
Risk-free interest rate	0.26%	0.13%
Expected volatility	21.91%	21.69%
Life of options	8 years	8 years
Exercise price per option in €	74.77	64.69

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, 2018, Fresenius SE & Co. KGaA had three share-based compensation plans in place: the stock option based Fresenius SE Stock Option Plan 2008 (2008 Plan), 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. On June 30, 2017, the term of the options granted under the Fresenius AG Stock Option Plan 2003 expired. 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 (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. 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 have 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 2013, 2014, 2015, 2016, 2017 and 2018 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 were 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 2013, 2014, 2015, 2016, 2017 and 2018 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 are now 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 have a seven-year term but can be exercised only after a three-year vesting period. The vesting of options granted is mandatorily subject to the condition, in each case, that the annual success target within the three-year vesting period is achieved. For each such year, the success target is achieved if the consolidated net income attributable to shareholders of Fresenius SE & Co. KGaA, adjusted for extraordinary effects, has 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. For each year in which the success target has not been met, one-third of the options granted shall forfeit. 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 are fulfilled, stock options may 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.

Transactions during 2018

In 2018, Fresenius SE & Co. KGaA awarded 554,416 performance shares under the LTIP 2018, the total fair value at the grant date being €37 million, including 133,434 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 €67.45.

During the fiscal year 2018, Fresenius SE & Co. KGaA received cash of €44 million from the exercise of 1,514,681 stock options. The average stock price of the ordinary share at the exercise date was €67.72.

At December 31, 2018, out of 849,127 outstanding and exercisable stock options issued under the 2008 Plan, 85,140 were held by the members of the Fresenius Management SE Management Board. Out of 9,083,216 outstanding stock options issued under the 2013 LTIP, 2,685,854 were exercisable at December 31, 2018. The members of the Fresenius Management SE Management Board held 1,434,375 stock options. 930,998 phantom stocks issued under the 2013 LTIP were outstanding at December 31, 2018. The members of the Fresenius Management SE Management Board held 173,052 phantom stocks. At December 31, 2018, the Management Board members of Fresenius Management SE held 133,434 performance shares and employees of Fresenius SE & Co. KGaA held 417,347 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 2016	**10,900,276**	**43.42**	**2,844,263**
Granted	2,401,984	74.64	
Exercised	1,393,926	23.95	
Forfeited	145,185	50.32	
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**

The following table provides a summary of fully vested options outstanding and exercisable for ordinary shares at December 31, 2018:

OPTIONS FOR ORDINARY SHARES

Range of exercise price in €	Options outstanding			Options exercisable		
	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 €
25.01 – 30.00	849,127	0.52	26.24	849,127	0.52	26.24
30.01 – 35.00	1,138,820	2.63	32.27	1,138,820	2.63	32.27
35.01 – 40.00	1,547,034	3.58	36.92	1,547,034	3.58	36.92
60.01 – 65.00	1,989,090	4.62	60.70	0		
65.01 – 70.00	2,143,413	5.57	66.05	0		
70.01 – 75.00	2,264,859	6.58	74.77	0		
	9,932,343	**4.53**	**55.15**	**3,534,981**	**2.54**	**32.86**

At December 31, 2018, the aggregate intrinsic value of exercisable options for ordinary shares was €34 million.

At December 31, 2018, total unrecognized compensation cost related to non-vested options granted under the 2013 LTIP was €34 million. This cost is expected to be recognized over a weighted-average period of 2.0 years.

FRESENIUS MEDICAL CARE AG & CO. KGAA SHARE-BASED COMPENSATION PLANS

At December 31, 2018, 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 Plan 2016

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. 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, the Management Board and the Supervisory Board of Fresenius Medical Care Management AG have approved and adopted the FMC-AG & Co. KGaA Long-Term Incentive Plan 2016 (LTIP 2016) as a successor program effective January 1, 2016.

The LTIP 2016 is a variable compensation program with long-term incentive effects. Pursuant to the LTIP 2016, the plan participants may be granted so-called performance shares annually or semiannually during 2016 to 2018. 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 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 their base salary at the time of grant. In order to determine the number of performance shares each plan participant receives, their 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, (ii) growth in net income attributable to shareholders of FMC-AG & Co. KGaA (net income growth) and (iii) return on invested capital (ROIC) improvement.

Revenue, net income and ROIC are determined according to IFRS in euro based on full year results. Revenue growth and net income growth, for the purpose of this 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 the 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 the 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 improvement, an annual target achievement level of 100% will be reached if the target ROIC as defined for the respective year is reached. In 2016, the target ROIC was 7.3% and will increase by 0.2% each subsequent 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%.

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.

The final number of performance shares is generally deemed earned four years after the day of a respective grant (the 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 are subject to a four-year vesting period. Vesting of the awards granted is subject to achievement of predefined 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, each of which can be exercised to obtain one ordinary 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 share 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 2018

During 2018, under the LTIP 2016, FMC-AG & Co. KGaA awarded 632,804 performance shares, including 73,315 performance shares awarded to the members of the Management Board of FMC Management AG at a measurement date weighted-average fair value of €51.99 each and a total fair value of €33 million, which will be revalued if the fair value changes. The total fair value will be amortized over the four-year vesting period.

During 2018, FMC-AG & Co. KGaA received cash of €44 million from the exercise of stock options. The intrinsic value of stock options exercised in 2018 was €29 million. In connection with cash-settled share-based payment transactions under the LTIP 2011 and the LTIP 2016, FMC-AG & Co. KGaA recognized compensation expense of -€5 million (income) and €60 million for the years ending December 31, 2018 and 2017, respectively.

At December 31, 2018, the Management Board members of FMC Management AG held 602,389 stock options and employees of FMC-AG & Co. KGaA held 3,294,189 stock options under the various stock-based compensation plans of Fresenius Medical Care.

At December 31, 2018, the Management Board members of FMC Management AG held 54,711 phantom stocks and employees of FMC-AG & Co. KGaA held 581,816 phantom stocks under the LTIP 2011.

At December 31, 2018, the Management Board members of FMC Management AG held 204,693 performance shares and employees of FMC-AG & Co. KGaA held 1,570,813 performance shares under the LTIP 2016.

The table below provides reconciliations for options outstanding at December 31, 2018 as compared to December 31, 2017:

	Number of options in thousands	Weighted-average exercise price in €
Balance at December 31, 2017 (options for ordinary shares)	**4,827**	**65.67**
Exercised	859	50.67
Forfeited	72	72.45
Balance at December 31, 2018 (options for ordinary shares)	**3,896**	**68.85**

At December 31, 2018, total unrecognized compensation cost related to non-vested options granted under all plans was €3 million. This cost is expected to be recognized over a weighted-average period of one year.

35. RELATED PARTY TRANSACTIONS

Until December 31, 2017, Dr. Dieter Schenk, deputy chairman of the Supervisory Board of Fresenius Management SE, was a partner in the international law firm Noerr LLP, which provides legal services to the Fresenius Group. In 2017, after discussion and approval of each mandate by the Supervisory Board of Fresenius Management SE, the Fresenius Group paid about €2.9 million to this law firm for legal services rendered.

In 2018, €12 million (2017: €13 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, 2018, there were outstanding liabilities payable to Fresenius Management SE in the amount of €38 million (December 31, 2017: €40 million), consisting mainly of pension obligations and Management Board compensation.

The aforementioned payments are net amounts. In addition, VAT and insurance tax were 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 a certain unconditional purchase agreement, Fresenius Medical Care is obligated to purchase approximately €2.2 billion of pharmaceuticals, of which €305 million is committed at December 31, 2018 for 2019. The term of this agreement runs until 2025.

36. SUBSEQUENT EVENTS

There have been no significant changes in the Fresenius Group's operating environment following the end of the fiscal year 2018 until February 19, 2019. 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)

37. 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 146 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 €15,760 thousand (2017: €14,378 thousand). Thereof, €6,051 thousand (2017: €5,407 thousand) is not performance-based and €9,709 thousand (2017: €8,971 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 €11,391 thousand.

The total compensation of the Management Board was €27,322 thousand (2017: €24,664 thousand).

The total compensation paid to the Supervisory Boards of Fresenius SE & Co. KGaA and Fresenius Management SE and their committees was €5,185 thousand in 2018 (2017: €5,365 thousand). Of this amount, €2,775 thousand was fixed compensation (2017: €226 thousand), €160 thousand was compensation for committees services (2017: €100 thousand), and €2,250 thousand was variable compensation (2017: €5,039 thousand).

In 2018, based on pension commitments to former members of the Management Board, €1,101 thousand (2017: €1,099 thousand) was paid. The pension obligation for these persons amounted to €22,319 thousand in 2018 (2017: €21,848 thousand).

In the fiscal years 2018 and 2017, no loans or advance payments of future compensation components were made to members of the Management Board of Fresenius Management SE.

38. AUDITOR'S FEES

In 2018 and 2017, fees for the auditor KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin (KPMG), and its affiliates were expensed as follows:

	2018		2017	
€ in millions	**Total**	**Germany**	Total	Germany
Audit fees	**18**	**7**	19	7
Audit-related fees	**3**	**3**	2	2
Tax consulting fees	**1**	**–**	1	–
Other fees	**2**	**0**	1	1
Total auditor's fees	**24**	**10**	24	10

The leading auditor has been responsible for the audit of the consolidated financial statements since 2018.

In the fiscal year 2018, 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.

39. 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).

40. 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 2018 of Fresenius SE & Co. KGaA are distributed as follows:

in €	
Payment of a dividend of €0.80 per bearer ordinary share on the 556,225,154 ordinary shares entitled to dividend	444,980,123.20
Balance to be carried forward	936,346.29
Retained earnings	**445,916,469.49**

41. 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, 2019

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, 2018, 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, 2018 to December 31, 2018, 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, 2018 to December 31, 2018.

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, 2018, and of its financial performance for the financial year from January 1, 2018 to December 31, 2018, 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.

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, 2018 to December 31, 2018. 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, 2018, at €25.7 billion, represents around 45% 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 approach during the audit

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 2019 – 2021 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 IIIa) 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 April 20, 2018 Fresenius Medical Care concluded an agreement for the sale of the shares in Sound Inpatient Physicians Holdings, LLC ("Sound") to a consortium involving Summit Partners L.P. The transaction proceeds less the tax payments relating to the transaction amount to USD 1,771 million (EUR 1,531 million). Closing of the transaction was on June 28, 2018. The pre-tax income resulting from this combined with the income from other disposals is presented in the consolidated statement of income in the item "(Gain) loss related to divestiture of Care Coordination activities".

The calculation of the gain on disposal is of a complex nature. Furthermore, the disclosure requirements in the notes to the consolidated financial statements in respect of the transaction are complex.

There is a risk for the consolidated financial statements that the assets and liabilities sold were not appropriately identified as such and thus the gain on disposal presented in the consolidated statement of income is incorrect. As regards the explanatory disclosures on the transaction in the notes to the consolidated financial statements, there is a risk that the explanatory notes are not sufficiently detailed and insofar not appropriate.

On April 24, 2017, Fresenius announced the conclusion of a merger agreement with Akorn Inc. ('Akorn'), which stipulated a purchase price of USD 4.3 billion plus the net financial liabilities existing at the time the transaction was concluded. Fresenius decided on April 22, 2018 to terminate the merger agreement with Akorn, due to Akorn's failure to fulfill several closing conditions. Following this, Akorn filed a lawsuit on April 23, 2018, purporting to enforce the merger agreement. Fresenius filed a counterclaim on April 30, 2018. On December 7, 2018, Akorn's lawsuit against Fresenius to enforce the merger agreement was dismissed by the Delaware Supreme Court in the final instance.

The explanatory disclosures in the notes to the consolidated financial statements and the group management report on the planned merger agreement with Akorn, which was terminated in financial year 2018, are complex. There is a risk that the explanations are not appropriate.

Our approach during the audit

With regard to the sale of Sound we initially assessed whether the outgoing assets and liabilities were correctly determined. This also included a review of the related group entries. We verified the determination of the gain on disposal and assessed whether this determination is appropriate in respect of the requirements of IFRS 10.

We assessed whether the explanatory notes in the notes to the consolidated financial statements concerning the transaction were sufficiently detailed and appropriate.

We assessed whether the explanatory notes in the notes to the consolidated financial statements and the group management report on the planned merger agreement with Akorn, which was terminated in financial year 2018, are appropriate.

Our observations

The determination of the sold assets and liabilities and of the gain on disposal and the related consolidation entries related to the sale of Sound is appropriate as a whole and consistent with the requirements to be applied.

The explanatory notes in the notes to the consolidated financial statements concerning the sale of Sound are sufficiently detailed and appropriate.

The disclosures in the notes to the consolidated financial statements and the group management report on the planned merger agreement with Akorn, which was terminated in financial year 2018, are appropriate.

Measurement of the provision relating to the U.S. Foreign Corrupt Practices Act investigations

Please refer to note 1 IIIs) to the consolidated financial statements for information on the accounting policies applied. For the provision please refer to the note 20 to the consolidated financial statements. Explanatory notes on the proceedings and investigations can be found in note 29 to the consolidated financial statements and in the group management report in the section "Legal risks".

The financial statement risk

Some aspects of the Company's business involve competing for contracts with customers that are directly or indirectly related to government. This type of business and the tender processes that typically accompany it entail risks of non-compliance with legal requirements. The Company also operates in a number of countries where it is normal business practice to deploy external sales representatives.

Beginning in 2012, the division Fresenius Medical Care (FMC) received certain communications alleging conduct in countries outside the United States that might violate the U.S. Foreign Corrupt Practices Act (FCPA) or other anti-bribery laws. FMC's Supervisory Board, through its Audit & Corporate Governance Committee, conducted investigations with the assistance of independent counsel. In a continuing dialogue, FMC advised the Securities and Exchange Commission and the United States Department of Justice (collectively and interchangeably the "government") about these investigations. The government also conducted its own investigations. In the course of this dialogue, FMC identified and reported to the government, and took remedial actions with respect to, conduct that resulted in the government seeking monetary penalties and other remedies against FMC and disgorgement of related profits revolving principally around conduct in FMC's products business in a limited number of countries outside the United States.

FMC reached an agreement in principle with the government agencies encompassing the terms understood to be necessary for settlement.

FMC recorded charges of EUR200 million in 2017 and EUR77 million in 2018 encompassing estimates for the government's claims 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 government 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 totals EUR224 million as of December 31, 2018.

Measurement of this provision is based on estimates of FMC's management that require judgment. There is the risk for the financial statements that the provision recognized for this purpose is insufficient or excessive.

There is also the risk that the required disclosures in the notes are not appropriate.

Our audit approach

We received regular updates on the findings of the internal investigations and on the progress of the meetings with the government. For this purpose, we mainly consulted the client representatives of Global Legal and Global Compliance and obtained information from the lawyers who had carried out the investigation for FMC. Moreover, FMC provided us with written confirmation of the current state of affairs.

We also held discussions with the Chairman of the Supervisory Board of FMC, the Chairman of the Audit & Corporate Governance Committee of FMC, members of the Management

Board of FMC and contact persons at FMC from Corporate Accounting, Global Compliance and Global Legal. We assessed written correspondence with relevant authorities with the involvement of external lawyers and evaluated underlying documents and minutes.

On the basis of this information, we assessed the assumptions made by FMC overall to determine the provision and reviewed the calculation of the provision for computational accuracy.

We also assessed the appropriateness of the disclosures in the notes relating to the matter.

Our observations

The provision amount has been accurately calculated and the assumptions of FMC underlying this calculation are appropriate.

The required disclosures in the notes are appropriate.

OTHER INFORMATION

Management is responsible for the other information. The Other information includes the other parts of the annual report, with the exception of the audited consolidated financial statements and the group management report as well as our auditor's report.

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

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

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

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, 2019, 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 18, 2018. We were engaged by the Supervisory Board on December 6, 2018. 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, February 19, 2019

KPMG AG
Wirtschaftsprüfungsgesellschaft

[Original German version signed by:]

Rodemer	Walter
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

BOARDS

SUPERVISORY BOARD FRESENIUS SE & CO. KGAA

Dr. Gerd Krick

Chairman of the Supervisory Board of Fresenius SE & Co. KGaA

Chair

Statutory supervisory boards
Fresenius Group mandate
Fresenius Management SE (Chair)
Fresenius Medical Care AG & Co. KGaA [1]
(until May 17, 2018; Chair)
Fresenius Medical Care Management AG

Comparable German or foreign supervisory bodies
Fresenius Group mandate
VAMED AG, Austria (Chair)

Prof. Dr. med. D. Michael Albrecht

Medical Director and Spokesman of the Management Board of the Universitätsklinikum Carl Gustav Carus Dresden

Statutory supervisory boards
Dresden International University (DIU)
GÖK Consulting AG
Universitätsklinikum Aachen

Bernd Behlert (since Sept. 1, 2018)

Full-time Works Council Member Helios Vogtland-Klinikum Plauen GmbH

Statutory supervisory boards
Fresenius Group mandate
Helios Vogtland-Klinikum Plauen GmbH

Michael Diekmann

Member of various Supervisory Boards

Deputy Chair

Statutory supervisory boards
Allianz SE [1] (Chair)
BASF SE [1] (Deputy Chair)
Fresenius Management SE (Fresenius Group mandate)
Siemens AG [1]

Konrad Kölbl

Full-time Works Council Member VAMED-KMB Krankenhausmanagement und Betriebsführungsges. m.b.H.

Comparable German or foreign supervisory bodies
Fresenius Group mandate
VAMED-KMB Krankenhausmanagement und Betriebsführungsges. m.b.H., Austria

Stefanie Lang

Full-time Works Council Member Fresenius Medical Care Deutschland GmbH

Frauke Lehmann

Full-time Works Council Member Helios Kliniken Schwerin GmbH

Statutory supervisory boards
Fresenius Group mandate
Helios Kliniken Schwerin GmbH (Deputy Chair)

Prof. Dr. med. Iris Löw-Friedrich

Chief Medical Officer and Executive Vice President, Head of Development and Medical Patient Value Practices, UCB S.A.

Statutory supervisory boards
Evotec AG [1]

Klaus-Peter Müller

Honorary Chairman of the Supervisory Board of Commerzbank AG

Statutory supervisory boards
Commerzbank AG (until May 8, 2018; Chair)
Fresenius Management SE (Fresenius Group mandate)

Comparable German or foreign supervisory bodies
Parker Hannifin Corporation, USA [1]
(until October 24, 2018)

Oscar Romero de Paco

Production staff member Fresenius Kabi España S.A.U.

[1] Stock listed company

SUPERVISORY BOARD FRESENIUS SE & CO. KGAA

Hauke Stars

Member of the Executive Board
Deutsche Börse AG

Statutory supervisory boards
Eurex Frankfurt AG (Deutsche Börse AG Group mandate)

Comparable German or foreign supervisory bodies
Clearstream International S.A. (Deutsche Börse AG Group mandate)
Eurex Zürich AG (Deutsche Börse AG Group mandate)
Kühne + Nagel International AG [1]

Rainer Stein (until August 31, 2018)

Full-time Works Council Member
Helios Klinikum Berlin-Buch GmbH
(until August 31, 2018)

Statutory supervisory boards
Fresenius Group mandate
Helios Klinikum Berlin-Buch GmbH (until August 31, 2018)

Niko Stumpfögger

Secretary of the Trade Union ver.di,
Head of Company and Industry Politics
in Health Care and Social Affairs

Deputy Chair

COMMITTEES OF THE SUPERVISORY BOARD

Nomination Committee

Dr. Gerd Krick (Chair)
Michael Diekmann
Klaus-Peter Müller

Audit Committee

Klaus-Peter Müller (Chair)
Konrad Kölbl
Dr. Gerd Krick
Hauke Stars
Rainer Stein (until Aug. 31, 2018)
Niko Stumpfögger (as of Sept. 1, 2018)

Joint Committee [2]

Dr. Dieter Schenk (Chair)
Michael Diekmann
Dr. Gerd Krick
Dr. Karl Schneider

[1] Stock listed company
[2] The committee consists equally of two members each of the Supervisory Board of Fresenius SE & Co. KGaA and of Fresenius Management SE.

MANAGEMENT BOARD FRESENIUS MANAGEMENT SE

(General partner of Fresenius SE & Co. KGaA)

Stephan Sturm

Chairman

Statutory supervisory boards
Deutsche Lufthansa AG[1]

Fresenius Group mandate
Fresenius Kabi AG (Chair)
Fresenius Medical Care Management AG (Chair)

Comparable German or foreign supervisory bodies
Fresenius Group mandate
VAMED AG, Austria (Deputy Chair)

Dr. Francesco De Meo

Business Segment Fresenius Helios

Statutory supervisory boards
Fresenius Group mandate
Helios Beteiligungs AG (until June 15, 2018; Chair)
Helios Kliniken Schwerin GmbH
(until May 8, 2018; Chair)

Rachel Empey

Chief Financial Officer

Statutory supervisory boards
Fresenius Group mandate
Fresenius Kabi AG (Deputy Chair)
Fresenius Medical Care Management AG

Comparable German or foreign supervisory bodies
Inchcape plc[1] (Non-Executive Director)

Dr. Jürgen Götz

Chief Legal and Compliance Officer,
and Labor Relations Director

Mats Henriksson

Business Segment Fresenius Kabi

Comparable German or foreign supervisory bodies
Fresenius Group mandate
Fenwal, Inc., USA
FHC (Holdings) Ltd., Great Britain
Fresenius Kabi, LLC, USA
Fresenius Kabi Austria GmbH, Austria (Chair)
Fresenius Kabi España S.A.U., Spain
Fresenius Kabi Pharmaceuticals Holding, Inc., USA
Fresenius Kabi Sino-Swed Pharmaceutical Corp. Ltd.,
China (until November 1, 2018)
Fresenius Kabi USA, Inc., USA
Labesfal – Laboratórios Almiro, S.A., Portugal
Quercus Acquisition, Inc., USA

Rice Powell

Business Segment
Fresenius Medical Care

Comparable German or foreign supervisory bodies
Fresenius Group mandate
Fresenius Medical Care Holdings, Inc., USA (Chair)
Vifor Fresenius Medical Care Renal Pharma Ltd.,
Switzerland[1] (Vice Chair)

Dr. Ernst Wastler

Business Segment Fresenius Vamed

Statutory supervisory boards
Fresenius Group mandate
Charité CFM Facility Management GmbH (Deputy Chair)

Comparable German or foreign supervisory bodies
Fresenius Group mandate
VAMED-KMB Krankenhausmanagement und
Betriebsführungsges. m.b.H., Austria (Chair)

[1] Stock listed company

SUPERVISORY BOARD FRESENIUS MANAGEMENT SE

(General partner of Fresenius SE & Co. KGaA)

Dr. Gerd Krick

Chairman of the Supervisory Board of Fresenius SE & Co. KGaA

Chair

Statutory supervisory boards
Fresenius Group mandate
Fresenius SE & Co. KGaA[1] (Chair)
Fresenius Medical Care AG & Co. KGaA[1] (until May 17, 2018; Chair)
Fresenius Medical Care Management AG

Comparable German or foreign supervisory bodies
Fresenius Group mandate
VAMED AG, Austria (Chair)

Dr. Kurt Bock

Former Chief Executive Officer BASF SE

Statutory supervisory boards
BMW Group[1] (since May 17, 2018)
Münchener Rückversicherungs-Gesellschaft[1] (since April 25, 2018)

Michael Diekmann

Member of various Supervisory Boards

Statutory supervisory boards
Supervisory Board
Allianz SE[1] (Chair)
BASF SE[1] (Deputy Chair)
Fresenius SE & Co. KGaA[1] (Deputy Chair; Fresenius Group mandate)
Siemens AG[1]

Klaus-Peter Müller

Honorary Chairman of the Supervisory Board of Commerzbank AG

Statutory supervisory boards
Commerzbank AG (until May 8, 2018; Chair)
Fresenius SE & Co. KGaA[1] (Fresenius Group mandate)

Comparable German or foreign supervisory bodies
Parker Hannifin Corporation, USA[1] (until October 24, 2018)

Dr. Dieter Schenk

Lawyer and Tax Consultant

Deputy Chair

Statutory supervisory boards
Bank Schilling & Co. AG (Chair)
Fresenius Medical Care AG & Co. KGaA[1] (Chair; Deputy Chair until May 17, 2018; Fresenius Group mandate)
Fresenius Medical Care Management AG (Deputy Chair; (Fresenius Group mandate)
Gabor Shoes AG (Chair)
TOPTICA Photonics AG (Chair)

Foundation Board
Else Kröner-Fresenius-Stiftung (Chair)

Dr. Karl Schneider

Former Spokesman of Südzucker AG

Foundation Board
Else Kröner-Fresenius-Stiftung (Deputy Chair)

[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.

Health care terms/Products and services

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), which 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.

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.

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 twelve 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

[1] Integral part of Group Management Report

Financial terms[1]

RECONCILIATION OF AVERAGE INVESTED CAPITAL AND ROIC

€ in millions, except for ROIC	December 31, 2018	December 31, 2017	December 31, 2016
Total assets	**56,703**	53,133	46,697
Plus: Cumulative goodwill amortization	**520**	501	553
Minus: Cash and cash equivalents	**-2,709**	-1,636	-1,579
Minus: Loans to related parties	**-60**	-56	-51
Minus: Deferred tax assets	**-777**	-744	-627
Minus: Accounts payable	**-1,823**	-1,688	-1,315
Minus: Accounts payable to related parties	**-67**	-42	-57
Minus: Provisions and other current liabilities[1]	**-7,141**	-6,921	-6,006
Minus: Income tax payable	**-428**	-420	-478
Invested capital	**44,218**	42,127	37,137
Average invested capital as of December 31, 2018/2017[2]	**42,769**	43,129	36,271
Operating income[3,4]	**4,547**	4,783	4,291
Income tax expense[5]	**-1,000**	-1,349	-1,206
NOPAT[3,4]	**3,547**	3,434	3,085
ROIC in %	**8.3%**	8.0%	8.5%

[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 (2018: €-808 million; 2017: €6,993 million; 2016: €378 million).
[3] Includes adjustments for acquisitions in the respective reporting period with a purchase price above a certain level (2018: €-14 million; 2017: €-47 million; 2016: €-11 million).
[4] Before special items
[5] Before book gain from US tax reform (2017)

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58–61.

RECONCILIATION OF AVERAGE OPERATING ASSETS AND ROOA

€ in millions, except for ROOA	December 31, 2018	December 31, 2017	December 31, 2016
Total assets	**56,703**	53,133	46,697
Minus: Contract liabilities	**-108**	0	-87
Minus: Payments received on account	**0**	-53	0
Minus: Cash held in trust	**-123**	-183	-61
Minus: Loans to related parties	**-60**	-56	-51
Minus: Deferred tax assets	**-777**	-744	-627
Minus: Accounts payable	**-1,823**	-1,688	-1,315
Minus: Accounts payable to related parties	**-67**	-42	-57
Minus: Approved subsidies due to Hospital Funding Act ("Krankenhausfinanzierungsgesetz", KHG)	**-150**	-175	-180
Operating assets	**53,595**	50,192	44,319
Average operating assets as of December 31, 2018/2017[1]	**50,722**	50,717	42,821
Operating income[2,3]	**4,547**	4,783	4,291
ROOA in %	**9.0%**	9.4%	10.0%

[1] Includes adjustments for acquisitions in the respective reporting period with a purchase price above a certain level (2018: €-2,343 million; 2017: €6,923 million; 2016: €421 million).
[2] Includes adjustments for acquisitions in the respective reporting period with a purchase price above a certain level (2018: €-14 million; 2017: €-47 million; 2016: €-11 million).
[3] Before special items

For a detailed overview of special items and adjustments please see the reconciliation tables on pages 58–61.

[1] Integral part of Group Management Report

Financial terms[1]

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

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 14, 2019, and it was published on March 20, 2019. 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

Due to changes in shareholders' preferences and environmental aspects, we have decided to make the Annual Report available exclusively as a digital version from 2018.

FINANCIAL CALENDAR

Report on 1st quarter 2019 Conference call, live webcast	May 2, 2019
Annual General Meeting, Frankfurt am Main, Germany	May 17, 2019
Payment of dividend[1]	May 22, 2019
Report on 2nd quarter 2019 Conference call, live webcast	July 30, 2019
Report on 3rd quarter 2019 Conference call, live webcast	October 29, 2019

[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

CONTACT

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