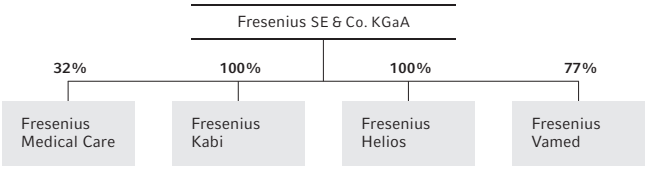
# GROUP MANAGEMENT REPORT. In 2019, Fresenius made significant investments in all business segments to lay the foundation for future growth. We achieved our targets for both Group sales and earnings in 2019.

## FUNDAMENTAL INFORMATION ABOUT THE GROUP

### THE GROUP'S BUSINESS MODEL

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

GROUP STRUCTURE




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

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

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

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

## IMPORTANT MARKETS AND COMPETITIVE POSITION

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

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

## EXTERNAL FACTORS

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

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

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

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

## MANAGEMENT AND CONTROL

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

The **general partner**, represented by its **Management Board**, conducts the business and represents the Company in dealings with third parties. The Management Board generally has seven members. According to the Management Board's rules of procedure, each member is accountable for his or her own area of responsibility. However, the members have

joint responsibility for the management of the Group. In addition to the Supervisory Board of Fresenius SE & Co. KGaA, Fresenius Management SE has its own Supervisory Board. The Management Board is required to report to the Supervisory Board of Fresenius Management SE regularly, in particular on its corporate policy and strategies, business profitability, current operations, and any other matters that could be of significance for the Company's profitability and liquidity. The Supervisory Board of Fresenius Management SE also advises and supervises the Management Board in its management of the Company. It is prohibited from managing the Company directly. However, the Management Board's rules of procedure require it to obtain the approval of the Supervisory Board of Fresenius Management SE for specific activities.

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

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

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

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

## CAPITAL, SHAREHOLDERS, ARTICLES OF ASSOCIATION

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

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

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

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

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

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

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

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

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

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

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

## GOALS AND STRATEGIES

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

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

## OUR STRATEGIC FOCUS

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

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

[1] WHO 2018: "Ageing and health"

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

## OUR CORE COMPETENCIES

### QUALITY

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

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

### INNOVATION

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

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

### IMPROVE PROFITABILITY

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

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

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

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

### DRIVE INTERNATIONALIZATION

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

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

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

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

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

### EMPLOYEES

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

## CORPORATE PERFORMANCE CRITERIA

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

### GROWTH

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

### PROFITABILITY

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

## LIQUIDITY

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

## CAPITAL EFFICIENCY

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

## CAPITAL MANAGEMENT

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

FINANCIAL PERFORMANCE INDICATORS

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

## INVESTMENT AND ACQUISITION PROCESS

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

## RESEARCH AND DEVELOPMENT

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

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

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

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

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

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

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

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

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

## FRESENIUS MEDICAL CARE

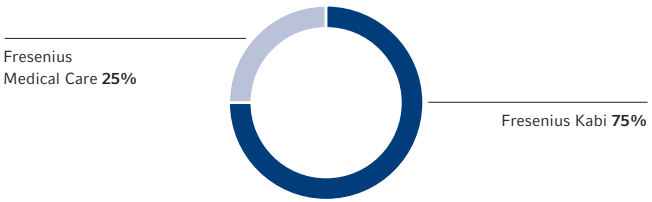
Health care systems face major financial challenges not only at present, but also in the long term. With regard to our R & D activities, this confirms our intention to develop innovative products that both meet high quality standards and are also affordable. From our experience in operating our own dialysis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

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

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

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

R & D EXPENSES BY SEGMENT[1]




2019: €677 million

KEY FIGURES RESEARCH AND DEVELOPMENT

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

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

[1] Before revaluations of biosimilars contingent purchase price liabilities

## FRESENIUS KABI

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## EMPLOYEES

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

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

**Personnel expenses** for the Fresenius Group were €14,355 million in 2019 (2018: €13,426 million), equivalent to 40.5% of sales (2018: 40.0%). Personnel expenses are above the previous year's level. Personnel expenses per

employee were at €49.5 thousand (2018: €48.6 thousand) and at €48.7 thousand in constant currency. In Germany, Fresenius companies have signed tariff agreements with IG BCE, Marburger Bund, and ver.di (labor union for services). There were no significant structural changes to compensation or employment agreements in 2019.

PERSONNEL EXPENDITURE

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

## HUMAN RESOURCES MANAGEMENT

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

## EMPLOYEE RECRUITMENT AND PERSONNEL DEVELOPMENT

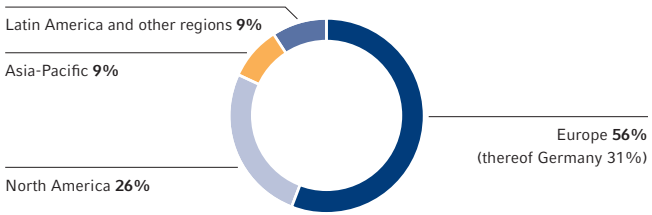
In order to ensure that our long-term needs for **highly qualified employees** are met, and to recruit new employees, we make use of online personnel marketing, regularly participate in recruiting events and careers fairs, and organize our own recruiting events. In addition, we try to encourage long-term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

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

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

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

EMPLOYEES BY REGION




2019: 294,134

NUMBER OF EMPLOYEES

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

## CHANGES TO THE MANAGEMENT BOARD

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

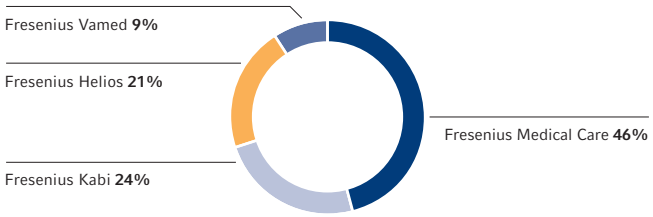
## PROCUREMENT

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

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

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

COST OF MATERIAL BY BUSINESS SEGMENT [1]




**2019: €9,073 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 page 81 f. as well as our Group Non-financial Report on pages 94 ff. of our Annual Report.

## RESPONSIBILITY, ENVIRONMENTAL MANAGEMENT, SUSTAINABILITY

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

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