UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 20-F/A

(Amendment No.1)

(Mark One)

- REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE \square **ACT OF 1934**
- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT \times **OF 1934**

For the fiscal year ended December 31, 2018

- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT \square OF 1934
- SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE **ACT OF 1934**

Date of event requiring this shell company report

Commission file number 001-32749

FRESENIUS MEDICAL CARE AG & Co. KGaA (Exact name of Registrant as specified in its charter)

FRESENIUS MEDICAL CARE AG & Co. KGaA (Translation of Registrant's name into English)

Germany

(Jurisdiction of incorporation or organization)

Else-Kröner Strasse 1, 61352 Bad Homburg, Germany (Address of principal executive offices)

Josef Dinger, +49 6172 608 2522, Josef.Dinger@FMC-AG.com,

Else-Kröner Strasse 1, 61352 Bad Homburg, Germany (Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
American Depositary Shares representing Ordinary Shares	FMS	New York Stock Exchange
Ordinary Shares, no par value	N/A	New York Stock Exchange ⁽¹⁾

(1)Not for trading, but only in connection with the registration of American Depositary Shares representing such shares.

Securities registered or to be registered pursuant to Section 12(g) of the Act: None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

Indicate the number of outstanding shares of each of the issuer's class in the period covered by the annual report:

Ordinary Shares, no par value: 306,878,701

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Security Act. 🖂 Yes 🗌 No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.
Yes Xo

Note - Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. 🖂 Yes 🗌 No

Indicate by check mark whether the registrant has submitted electronically every Interactive Date File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). 🛛 Yes 🗌 No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or an emerging growth company. See definition of "large accelerated filer, "accelerated filer" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer X

Accelerated filer

Non-accelerated filer Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act [

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing: \Box U.S. GAAP \boxtimes International Financial Reporting Standards as issued by \Box Other the International Accounting Standards Board

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow: 🗌 Ítem 17 □ Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). 🖂 Ño Yes

Table of contents

Page

Introduction	I Contraction of the second	
Explanatory	Note	1
Part II		
Item 15A.	Disclosure controls and procedures	2
Item 15B.	Management's annual report on internal control over financial reporting	2
Item 15C.	Attestation report of the registered public accounting firm	3
Item 15D.	Changes in internal control over financial reporting	3
Part III		
Item 18.	Financial statements	5

EXPLANATORY NOTE

This Amendment No. 1 on Form 20-F/A (this "Amendment No. 1") amends FRESENIUS MEDICAL CARE AG & Co. KGaA's Annual Report on Form 20-F for the fiscal year ended December 31, 2018 (the "Original Filing"). The purpose of this Amendment No. 1 is to (i) revise Part II, Items 15A, through 15D to the Original Filing to reflect management's conclusion that our internal control over financial reporting and disclosure controls and procedures were not effective at December 31, 2018 due to a material weakness in our internal control over financial reporting identified subsequent to the issuance of the Original Filing, to revise the reference in Item 15C of the Original Filing to the Report of Independent Registered Public Accounting Firm KPMG AG Wirtschaftsprüfungsgesellschaft ("the Auditors' Report") contained in Part III, Item 18 of the Original Filing regarding the effectiveness of our internal control over financial reporting to disclose that the Auditors' Report expresses an adverse opinion on the effectiveness of our internal control over financial reporting, and to disclose the remediation efforts undertaken by management as of the date of this filing, and (ii) include the revised Auditors' Report contained in Part III, Item 18 of the Original Filing regarding the effectiveness of our internal control over financial reporting and include the revised Report of Independent Registered Public Accounting Firm of KPMG AG Wirtschaftsprüfungsgesellschaft ("KPMG") on our consolidated financial statements contained in Part III, Item 18 Auditors' Report.

Pursuant to Rule 12b-15 promulgated under the Securities Exchange Act of 1934, as amended, we have included the entire text of Part III, Item 18 the Original Filing in this Amendment No. 1. However, there have been no changes to the text of such item other than the changes stated in clauses (ii) and (iii) of the immediately preceding paragraph. Furthermore, there have been no changes to the XBRL data filed in Exhibit 101 of the Original Filing. Other than as described above and the inclusion with this Amendment No.1 of new certifications by management, a new consent of KPMG, and related amendments to the List of Exhibits contained in Part III, Item 19 of the Original Filing, this Amendment No.1 speaks only as of the date of the Original Filing and does not amend, supplement or update any information contained in the Original Filing to give effect to any subsequent events. Accordingly, this Amendment No.1 should be read in conjunction with the Original Filing and our reports filed with the U.S. Securities and Exchange Commission ("SEC") subsequent to the Original Filing.

Item 15A. Disclosure controls and procedures

The Company's management, including the members of the Management Board of our general partner performing the functions Chief Executive Officer and Chief Financial Officer, has conducted an evaluation of the effectiveness of the Company's disclosure controls and procedures as of December 31, 2018, as contemplated by Exchange Act Rule 13a-15. Based on that evaluation, at February 20, 2019, the date of the Original Filing, the persons performing the functions of Chief Executive Officer and Chief Financial Officer had concluded that the disclosure controls and procedures were designed to ensure that the information the Company is required to disclose in the reports filed or furnished under the Exchange Act was recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms and were effective to ensure that the information the Company is required to disclose in its reports is accumulated and communicated to the general partner's Management Board, including the general partner's Chief Executive Officer and the Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Subsequent to that evaluation, as a result of the material weakness in the Company's internal control over financial reporting described in Item 15B below, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were not effective as of December 31, 2018. The Company is amending Items 15A through 15D, as well as the information set forth under the heading "Controls and Procedures" within its reports on Form 6-K filed May 2, 2019 and July 30, 2019, respectively, containing its unaudited consolidated financial statements as of and for the three-month period ended March 31, 2019 and 2018 and for the three- and six-month periods ended June 30, 2019 and 2018, to reflect the conclusion by the Company's management that there was a material weakness in internal control over financial reporting as of the end of the periods covered by these reports. The Company's report on Form 6-K, being filed contemporaneously with this amendment on Form 20-F/A, discloses that the material weakness continues to exist as of the date of this filing.

Item 15B. Management's annual report on internal control over financial reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f). The Company's internal control over financial reporting is a process designed by or under the supervision of the Chief Executive Officer of our general partner and Chief Financial Officer of our general partner, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external reporting purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

As of December 31, 2018, management conducted an assessment of the effectiveness of the Company's internal control over financial reporting based on the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). In Management's Annual Report on Internal Control over Financial Reporting included in the Company's Original Filing, management, under the supervision of our Chief Executive Offices and Chief Financial Officer, concluded that the Company maintained effective internal control over financial reporting as of December 31, 2018. The Company has subsequently concluded that the material weakness described below existed as of December 31, 2018. As a result, management has concluded that the Company did not maintain effective internal control over financial reporting as of December 31, 2018, Based on the COSO criteria described above. The Company therefore has amended Management's Annual Report on Internal Control Over Financial Reporting. A material weakness in internal control over financial reporting is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

Company's management did not design and maintain effective internal control relating to revenue recognition, specifically for estimating the transaction price and constraining the variable consideration of the transaction price for certain fee-for-service revenue arrangements under legal consideration and timely adjusting the constraint of variable consideration when new information arises. Multiple sources of information are utilized in assessing the appropriateness of variable consideration and the related estimate of transaction price under IFRS 15, however the Company did not have effective oversight controls in assessing the weighting of such information as an input into revenue recognition. As such, the Company did not appropriately constrain certain fee-for-service revenue arrangements under IFRS 15 resulting in immaterial errors to accounts receivable and revenue from specific fee-for-service arrangements in the

Company's consolidated financial statements for the year ended December 31, 2018. These errors did not, individually or in the aggregate, result in a material misstatement of the Company's consolidated financial statements and disclosures for any periods through and including the fiscal year ended December 31, 2018. However, this control deficiency could have resulted in a material misstatement to our annual or interim consolidated financial statements that would not be prevented or detected. Accordingly, the Company has determined that this control deficiency constitutes a material weakness.

KPMG, the Company's independent registered public accounting firm, for the fiscal year ended December 31, 2018, has issued an Attestation report expressing an adverse opinion on the effectiveness of internal control over financial reporting which is elsewhere in this Form 20-F/A.

The Company's internal control over financial reporting includes policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of our assets; (2) provide reasonable assurances that the Company's transactions are recorded as necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and that the Company's receipts and expenditures are being made only in accordance with authorizations of management; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the Company's financial statements.

Because of its inherent limitation, internal control over financial reporting, no matter how well designed, cannot provide absolute assurance of achieving financial reporting objectives and may not prevent or detect misstatements. Therefore, even if the internal control over financial reporting is determined to be effective it can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Item 15C. Attestation report of the registered public accounting firm

KPMG, an independent registered public accounting firm, has issued an attestation report expressing an adverse opinion on the effectiveness of the Company's internal control over financial reporting in their report included on page 12.

Item 15D. Changes in internal control over financial reporting

There have been no changes in the Company's internal control over financial reporting that occurred during fiscal year 2018, which have materially affected or are reasonably likely to materially affect the Company's internal control over financial reporting.

As discussed in Item 15B, subsequent to the issuance of the Company's consolidated financial statements as of and for the fiscal year ended December 31, 2018, Management determined that there was a material weakness in controls relating to revenue recognition, specifically for estimating the transaction price and constraining the variable consideration of the transaction price for certain fee-for-service revenue arrangements under legal consideration and timely adjusting the constraint of variable consideration when new information arises. This material weakness existed as of December 31, 2018 and the material weakness continues to exist as of the date of this filing.

As at the date of this filing, remediation efforts have begun and Management are undertaking steps to strengthen the Company's controls relating to revenue recognition, specifically for estimating the transaction price and constraining the variable consideration of the transaction price for certain fee-for-service revenue arrangements under legal consideration and its related accounts receivable, including:

- Increasing oversight by management over revenue recognition and the accounting and reporting of the related receivable balances;
- Enhancing policies and procedures;
- Strengthening communication and information flows between the legal and finance departments; and

• Increasing the role of the finance function in its oversight of revenue recognition specific to fee-for-service matters in legal consideration and their related accounts receivable balances, including responsibility for the final estimation and reporting.

Management is committed to maintaining a strong internal control environment and believe the above noted remediation efforts will represent significant improvements to the internal control environment. The identified material weakness in internal control will not be considered fully remediated until the applicable controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively.

Beginning in 2012, the Company received certain communications alleging conduct in countries outside the United States that might violate the Foreign Corrupt Practices Act or other anti-bribery laws. The Company's Supervisory Board, through its Audit and Corporate Governance Committee, conducted investigations with the assistance of independent counsel. In a continuing dialogue, the Company 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 the Company cooperated.

In the course of this dialogue, the Company 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 the Company and disgorgement of related profits revolving principally around conduct in the Company's products business in a limited number of countries outside the United States.

The Company recorded charges of \notin 200 M in 2017 and \notin 77 M 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 \notin 224 M as of December 31, 2018.

On March 29, 2019, the Company entered into a non-prosecution agreement with the DOJ and a separate agreement with the SEC intended to resolve fully and finally the government's claims against the Company arising from the investigations. The Company paid a combined total in penalties and disgorgement of approximately \$231,700 to the government in connection with these agreements. As part of the settlement, the Company agreed to retain an independent compliance monitor for a period of two years and to an additional year of self-reporting. As of July 26, 2019, the monitor was appointed and the two-year monitorship period commenced. Company continues to cooperate with government authorities in Germany in their review of the issues resolved in the U.S. settlement.

The Company continues to implement enhancements to its anti-corruption compliance program, including internal controls related to compliance with international anti-bribery laws. The Company continues to be fully committed to compliance with the Foreign Corrupt Practices Act and other applicable anti-bribery laws.

Item 18. Financial statements

The information called for by this item commences on Page 14.

Item 19. Exhibits

Pursuant to the provisions of the Instructions for the filings of Exhibits to Annual Reports on Form 20-F, Fresenius Medical Care AG & Co. KGaA (the "Registrant") is filing the following exhibits:

- 1.1 Articles of Association (Satzung) of the Registrant (incorporated by reference to Exhibit 1.1 to the Registrant's Report on Form 6-K for the month of August 2016, furnished August 2, 2016).
- 2.1 Amended and Restated Deposit Agreement dated as of April 30, 2018 between The Bank of New York Mellon and the Registrant relating to ordinary share ADSs (incorporated by reference to Exhibit 2.1 to the Registrant's Report on Form 6-K for the month of May 2018, furnished May 3, 2018).
- 2.2 Form of American Depositary Receipt for American Depositary Shares representing ordinary shares (incorporated by reference to Exhibit A to the Amended and Restated Deposit Agreement dated as of April 30, 2018 furnished on May 3, 2018).
- 2.3 Pooling Agreement dated February 13, 2006 by and between Fresenius AG, Fresenius Medical Care Management AG and the individuals acting from time to time as Independent Directors. (incorporated by reference to Exhibit 2.3 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2005, filed March 2, 2006).
- 2.4 Amendment to the Pooling Agreement dated September 28, 2016 by and between Fresenius AG, Fresenius Medical Care Management AG acting for itself and in its capacity as general partner of Fresenius Medical Care AG & Co. KGaA, Mr. William P. Johnston in his capacity as a GP Independent Director and Mr. Rolf A. Classon in his capacity as a GP Independent Director. (incorporated by reference to Exhibit 2.3 to the Registrant's Report on Form 6-K for the month of October 2016, furnished October 27, 2016).
- 2.5 Indenture (euro denominated) dated as of February 2, 2011 by and among FMC Finance VII S.A., the Registrant and the other Guarantors party thereto and U.S. Bank National Association, as Trustee, and Deutsche Bank Aktiengesellschaft, as Paying Agent, related to the 5.25% Senior Notes due 2021 of FMC Finance VII S.A. (incorporated by reference to Exhibit 2.20 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010, filed February 23, 2011).
- 2.6 Form of Note Guarantee for 5.25% Senior Notes due 2021 (included in Exhibit 2.5) (incorporated by reference to Exhibit 2.21 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010, filed February 23, 2011).
- 2.7 Indenture (dollar denominated) dated as of February 2, 2011 by and among Fresenius Medical Care US Finance, Inc., the Registrant and the other Guarantors party thereto and U.S. Bank National Association, as Trustee, related to the 5.75% Senior Notes due 2021 of Fresenius Medical Care US Finance, Inc. (incorporated by reference to Exhibit 2.22 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010, filed February 23, 2011).
- 2.8 Form of Note Guarantee for 5.75% Senior Notes due 2021 (included in Exhibit 2.7) (incorporated by reference to Exhibit 2.23 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010, filed February 23, 2011).
- 2.9 Indenture (dollar-denominated) dated as of January 26, 2012 by and among Fresenius Medical Care US Finance II, Inc., the Registrant and the other Guarantors party thereto and U.S. Bank National Association, as Trustee, related to the 5¹/₈% Senior Notes due 2019 of Fresenius Medical Care US Finance II, Inc. (incorporated by reference to Exhibit 2.19 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011, filed February 23, 2012).
- 2.10 Form of Note Guarantee for 55% Senior Notes due 2019 (included in Exhibit 2.13) (incorporated by reference to Exhibit 2.20 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011, filed February 23, 2012).

- 2.11 Indenture (dollar-denominated) dated as of January 26, 2012 by and among Fresenius Medical Care US Finance II, Inc., the Registrant and the other Guarantors party thereto and U.S. Bank National Association, as Trustee, related to the 51/8% Senior Notes due 2022 of Fresenius Medical Care US Finance II, Inc. (incorporated by reference to Exhibit 2.21 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011, filed February 23, 2012).
- 2.12 Form of Note Guarantee for 57% Senior Notes due 2022 (included in Exhibit 2.15) (incorporated by reference to Exhibit 2.22 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011, filed February 23, 2012).
- 2.13 Indenture (euro-denominated) dated as of January 26, 2012 by and among FMC Finance VIII S.A., the Registrant and the other Guarantors party thereto and U.S. Bank National Association, as Trustee, and Deutsche Bank Aktiengesellschaft, as Paying Agent, related to the 5.25% euro-denominated Senior Notes due 2019 of FMC Finance VIII S.A. (incorporated by reference to Exhibit 2.23 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011, filed February 23, 2012).
- 2.14 Form of Note Guarantee for 5.25% euro-denominated Senior Notes due 2019 (included in Exhibit 2.17) (incorporated by reference to Exhibit 2.24 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011, filed February 23, 2012).
- 2.15 Indenture dated as of October 29, 2014 by and among Fresenius Medical Care US Finance II, Inc., the Company and the other Guarantors party thereto and U.S. Bank National Association, as Trustee, related to the 4.125% Senior Notes due 2020 of Fresenius Medical Care US Finance II, Inc. (incorporated by reference to Exhibit 10.1 to the Registrant's Report on Form 6-K for the month of November 2014, furnished November 4, 2014).
- 2.16 Form of Note Guarantee for 4.125% Senior Notes due 2020 (included in Exhibit 2.19) (incorporated by reference to Exhibit 10.2 to the Registrant's Report on Form 6-K for the month of November 2014, furnished November 4, 2014).
- 2.17 Indenture dated as of October 29, 2014 by and among Fresenius Medical Care US Finance II, Inc., the Company and the other Guarantors party thereto and U.S. Bank National Association, as Trustee, related to the 4.75% Senior Notes due 2024 of Fresenius Medical Care US Finance II, Inc. (incorporated by reference to Exhibit 10.3 to the Registrant's Report on Form 6-K for the month of November 2014, furnished November 4, 2014).
- 2.18 Form of Note Guarantee for 4.75% Senior Notes due 2024 (included in Exhibit 2.21) ((incorporated by reference to Exhibit 10.4 to the Registrant's Report on Form 6-K for the month of November 2014, furnished November 4, 2014).
- 2.19 Terms & Conditions (euro-denominated) dated as of September 16, 2014 by and among Fresenius Medical Care AG & Co. KGaA, the Issuer, and Merrill Lynch International, Commerzbank Aktiengesellschaft, and Société Générale, as Joint Bookrunners, related to the 1.125% Equity-neutral Convertible Senior Notes due 2020 of Fresenius Medical AG & Co. KGaA (incorporated by reference to Exhibit 10.5 to the Registrant's Report on Form 6-K for the month of November 2014, furnished November 4, 2014).
- 2.20 Final Terms dated July 9, 2018 for EUR 500,000,000 Fixed Rate Euro-Denominated Bonds due 2025 (incorporated by reference to Exhibit 2.24 to the Registrant's Report on Form 6-K for the month of October 2018, furnished October 30, 2018).
- 2.21 Credit Agreement dated as of October 30, 2012 among the Registrant, Fresenius Medical Care Holdings, Inc., and certain subsidiaries of the Registrant as borrowers and guarantors, Bank of America N.A., as administrative agent, Deutsche Bank AG New York Branch, as sole syndication agent, Commerzbank AG, New York Branch, JPMorgan Chase Bank, National Association, The Bank of Nova Scotia, Suntrust Bank, Unicredit Bank AG, New York Branch, and Wells Fargo Bank, National Association, as co-documentation agents, and the lenders named therein (incorporated by reference to Exhibit 2.25 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2012, filed February 26, 2013).
- 2.22 Amendment No. 1 dated November 25, 2014 to Credit Agreement (incorporated by reference to Exhibit 2.31 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2014, filed February 25, 2015).

- 2.23 Amendment No. 2 dated July 11, 2017 to the 2012 Credit Agreement (incorporated by reference to Exhibit 2.34 to the Registrant's Report on Form 6-K for the month of November 2017, furnished November 2, 2017).
- 2.24 Seventh Amended and Restated Transfer and Administration Agreement dated as of November 24, 2014 by and among NMC Funding Corporation, as Transferor, National Medical Care, Inc., as initial collection agent, Liberty Street Funding LLC, and other conduit investors party thereto, the financial institutions party thereto, The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, Barclays Bank PLC, Credit Agricole Corporate and Investment Bank, New York, PNC Bank, National Association, Royal Bank of Canada, as administrative agents, and The Bank of Nova Scotia, as an administrative agent and as agent (incorporated by reference to Exhibit 2.33 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2014, filed February 25, 2015).
- 2.25 Amendment No. 1 dated December 6, 2016 to Seventh Amended and Restated Transfer and Administration Agreement (incorporated by reference to Exhibit 2.30 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2016, filed February 22, 2017).
- 2.26 Second Amended and Restated Receivables Purchase Agreement dated January 17, 2013 between National Medical Care, Inc. and NMC Funding Corporation (incorporated by reference to Exhibit 2.39 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2012, filed February 26, 2013).
- 2.27 Amendment No. 1 dated November 24, 2014 to Second Amended and Restated Receivables Purchase Agreement (incorporated by reference to Exhibit 2.35 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2014, filed February 25, 2015).
- 2.28 Amendment No. 2 dated December 6, 2016 to Second Amended and Restated Receivables Purchase Agreement (incorporated by reference to Exhibit 2.33 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2016, filed February 22, 2017).
- 2.29** Amendment No. 2 dated December 20, 2018 to Seventh Amended and Restated Transfer and Administration Agreement.
- 2.30** Amendment No. 3 dated December 20, 2018 to Second Amended and Restated Receivables Purchase Agreement.
- 4.1 Lease Agreement for Manufacturing Facilities dated January 1, 2017 by and between Fresenius Immobilien-Verwaltungs-GmbH & Co. Objekt Schweinfurt KG and Fresenius Medical Care Deutschland GmbH (incorporated by reference to Exhibit 4.4 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2016, filed February 22, 2017).
- 4.2 Lease Agreement for Manufacturing Facilities dated January 1, 2017 by and between Fresenius Immobilien-Verwaltungs-GmbH & Co. Objekt St. Wendel KG and Fresenius Medical Care Deutschland GmbH (incorporated by reference to Exhibit 4.5 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2016, filed February 22, 2017).
- 4.3 Trademark License Agreement dated September 27, 1996 by and between Fresenius AG and FMC-AG. (Incorporated by reference to Exhibit 10.8 to FMC-AG's Registration Statement on Form F-1, Registration No. 333-05922, filed November 16, 1996).
- 4.4 Technology License Agreement (Biofine) dated September 27, 1996 by and between Fresenius AG and FMC-AG (incorporated by reference to Exhibit 10.9 to the Registration Statement on Form F-1 of FMC-AG, Registration No. 333-05922, filed November 16, 1996).
- 4.5 Cross-License Agreement dated September 27, 1996 by and between Fresenius AG and FMC-AG (incorporated by reference to Exhibit 10.10 to the Registration Statement on Form F-1 of FMC-AG, Registration No. 333-05922, filed November 16, 1996).
- 4.6 English convenience translation of the Stock Option Plan 2011 of Fresenius Medical Care AG & Co. KGaA (incorporated by reference to Exhibit 10.2 to the Registrant's Report on Form 6-K for the month of August 2011, furnished August 2, 2011).
- 4.7 English convenience translation of the Phantom Stock Plan 2011 of Fresenius Medical Care AG & Co. KGaA (incorporated by reference to Exhibit 10.5 to the Registrant's Report on Form 6-K for the month of August 2011, furnished August 2, 2011).

- 4.8 English convenience translation of the Fresenius Medical Care & Co. KGaA Long Term Incentive Plan 2016 (incorporated by reference to Exhibit 4.25 of the Registrant's Report on Form 6-K for the month of October, furnished October 27, 2016).
- 4.09 Agreement and Plan of Merger by and among Bio-Medical Applications Management Company, Inc., PB Merger Sub, Inc., Liberty Dialysis Holdings, Inc., certain stockholders of Liberty Dialysis Holdings, Inc., LD Stockholder Representative, LLC, and Fresenius Medical Care Holdings, Inc. dated as of August 1, 2011(incorporated by reference to Exhibit 10.5 to the Registrant's Report of Form 6 K for the month of November 2011, furnished November 3, 2011).⁽¹⁾
- 4.10 General Agreement 2013 (mainly related to information technology services) dated May 8, 2013 by and between FMC-AG and Fresenius Netcare GmbH. (incorporated by reference to Exhibit 4.32 to the Registrant's Report on Form 6-K for the month of July 2013, filed July 30, 2013).
- 4.11 Second Amended and Restated Loan Note dated November 30, 2017, among the Registrant and certain of its U.S. subsidiaries as borrowers and Fresenius SE & Co. KGaA or its specified subsidiary as lender (incorporated by reference to Exhibit 4.16 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2017, filed February 27, 2018).
- 4.12 Stock Purchase and Contribution Agreement dated as of June 13, 2014 by and among Sound Inpatient Physicians, Inc., of Sound Inpatient Holdings, LLC, Sound Inpatient Physicians Holdings, LLC and the Registrant (incorporated by reference to Exhibit 4.28 to the Registrant's Report on Form 6-K for the month of July 2014, furnished July 31, 2014).⁽¹⁾⁽²⁾
- 4.13 Agreement and Plan of Merger dated April 20, 2018 by and among Ironman Holdco, Inc., Ironman Intermediate Holdco, LLC, Ironman Merger Sub, LLC, Ironman Holdco II, LLC, Ironman Merger Sub II, Inc., Sound Inpatient Physicians Holdings, LLC, Fresenius Medical Care Holdings, Inc., for itself and in its capacity as sellers' representative, and certain managers and joinder parties party thereto (incorporated by reference to Exhibit 4.19 to the Registrant's Report on Form 6-K for the month of May 2018, furnished May 3, 2018).⁽³⁾
- 4.14 Agreement and Plan of Merger, dated as of August 7, 2017, by and among Fresenius Medical Care Holdings, Inc., Broadway Renal Services, Inc., and NxStage Medical, Inc. ("NxStage") (incorporated by reference to Exhibit 2.21 to NxStage's Current Report on Form 8-K dated August 5, 2017, filed August 7, 2017).*
- 8.1** List of Significant Subsidiaries. Our significant subsidiaries are identified in "Item 4.C. Information on the Company Organizational structure."
- 11.1 Code of Business Conduct. A copy of the Registrant's Code of Business Conduct is available on the Registrant's web site at: https://www.freseniusmedicalcare.com/fileadmin/data/com/pdf/ About_us/Br_Code_of_Ethics_240x175mm_GB_w.pdf
- 12.1 Certification of Chief Executive Officer of the general partner of the Registrant Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
- 12.2 Certification of Chief Financial Officer of the general partner of the Registrant Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
- 13.1 Certification of Chief Executive Officer and Chief Financial Officer of the general partner of the Registrant Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith). (This Exhibit is furnished herewith, but not deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to liability under that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act, except to the extent that we explicitly incorporate it by reference.)
- 14.1 Revised Consent of KPMG, independent registered public accounting firm (filed herewith).

- 101** The following financial statements as of and for the twelve-month period ended December 31, 2018 from the Company's Annual Report on Form 20-F for the fiscal year ended December 31, 2018, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Statements of Income, (ii) Consolidated Statements of Comprehensive Income, (iii) Consolidated Balance Sheets, (iv) Consolidated Statements of Cash Flows, (v) Consolidated Statements of Shareholders' Equity and (vi) notes to consolidated financial statements.
- (1) Confidential treatment has been granted as to certain portions of this document in accordance with the applicable rules of the Securities and Exchange Commission.
- (2) Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Registrant hereby undertakes to furnish supplemental copies of any of the omitted schedules and exhibits upon request by the Securities and Exchange Commission.
- * The schedules to the Merger Agreement have been omitted from this filing pursuant to Item 601(b)(2) of Regulation S-K. Copies of such schedules will be furnished to the SEC upon its request; provided, however, that confidential treatment may be requested pursuant to Rule 24b-2 of the Exchange Act for any schedule so furnished.
- (3) Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Registrant hereby undertakes to furnish supplemental copies of any of the omitted schedules and exhibits upon request by the Securities and Exchange Commission; provided, however, that confidential treatment may be requested pursuant to Rule 24b-2 of the Exchange Act for any schedule or exhibit so furnished.
- ** Previously filed with the Annual Report on Form 20-F originally filed on February 20, 2019

Index of financial statements

Audited consolidated financial statements

Report of independent registered public accounting firm	11
Report of independent registered public accounting firm on internal control over financial	
reporting	12
Consolidated statements of income for the years ended December 31, 2018, 2017 and 2016	14
Consolidated statements of comprehensive income for the years ended December 31, 2018, 2017	
and 2016	15
Consolidated balance sheets as of December 31, 2018 and 2017	16
Consolidated statements of cash flows for the years ended December 31, 2018, 2017 and 2016	17
Consolidated statements of shareholders' equity for the years ended December 31, 2018, 2017	
and 2016	18
Notes to consolidated financial statements	19

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Supervisory Board of Fresenius Medical Care AG & Co. KGaA:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Fresenius Medical Care AG & Co. KGaA and subsidiaries ("Fresenius Medical Care" or the "Company") as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Years in the three-year period ended December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 20, 2019, except for the restatement as to the effectiveness of internal control over financial reporting for the material weakness related to revenue recognition specific to estimating the transaction price on certain fee-for-service revenue arrangements, as to which the date is October 31, 2019, expressed an adverse opinion on the effectiveness of the Company's internal control over financial reporting.

Change in Accounting Principles

As discussed in Note 1 x) to the consolidated financial statements, the Company has changed its method of accounting for revenue from contracts with customers and financial instruments in fiscal year 2018 due to the adoption of IFRS 15, *Revenue From Contracts With Customers*, and IFRS 9, *Financial Instruments*, respectively. The Company adopted the new revenue standard retrospectively using the cumulative effect method and adopted the new financial instruments standard using the modified retrospective approach.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG AG Wirtschaftsprüfungsgesellschaft

We have served as the Company's auditor since 1996.

Frankfurt am Main, Germany

February 20, 2019, except for the restatement as to the effectiveness of internal control over financial reporting for the material weaknesses related to revenue recognition specific to estimating the transaction price on certain fee-for-service revenue arrangements, as to which the date is October 31, 2019.

Report of Independent Registered Public Accounting Firm

To the Shareholders and Supervisory Board of Fresenius Medical Care AG & Co. KGaA:

Opinion on Internal Control Over Financial Reporting

We have audited Fresenius Medical Care AG & Co. KGaA's and subsidiaries' ("Fresenius Medical Care" or the "Company") internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, because of the effect of the material weakness, described below, on the achievement of the objectives of the control criteria, the Company has not maintained effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the "consolidated financial statements"), and our report dated February 20, 2019, except for the restatement as to the effectiveness of internal control over financial reporting for the material weakness related to revenue recognition specific to estimating the transaction price on certain fee-for-service revenue arrangements, as to which the date is October 31, 2019, expressed an unqualified opinion on those consolidated financial statements.

In our report dated February 20, 2019, we expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting. As described below, the Company subsequently identified a material weakness in its internal control over financial reporting. Accordingly, management has revised its assessment about the effectiveness of the Company's internal control over financial reporting, and our present opinion on the effectiveness of the Company's internal control over financial reporting, as of December 31, 2018, as presented herein, is different from that expressed in our previous report.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. A material weakness related to revenue recognition specific to estimating the transaction price on certain fee-for-service revenue arrangements, has been identified and included in management's assessment. The material weakness was considered in determining the nature, timing, and extent of audit tests applied in our audit of the 2018 consolidated financial statements, and this report does not affect our report on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG AG Wirtschaftsprüfungsgesellschaft

Frankfurt am Main, Germany

February 20, 2019, except for the restatement as to the effectiveness of internal control over financial reporting for the material weaknesses related to revenue recognition specific to estimating the transaction price on certain fee-for-service revenue arrangements, as to which the date is October 31, 2019.

Consolidated statements of income in € thousands ("THOUS"), except per share data

	Note	2018	2017	2016
Revenue:				
Health care services		13,264,289	14,531,636	13,505,363
Health care products		3,282,584	3,251,936	3,064,352
	4a, 26	16,546,873	17,783,572	16,569,715
Costs of revenue:				
Health care services		9,899,714	10,347,512	9,631,341
Health care products		1,492,416	1,417,806	1,322,428
		11,392,130	11,765,318	10,953,769
Gross profit		5,154,743	6,018,254	5,615,946
Operating (income) expenses:				
Selling, general and administrative	4b	2,865,679	3,618,073	3,132,715
(Gain) loss related to divestitures of Care				
Coordination activities	4c	(809,003)	(25,763)	(13,543)
Research and development	4d	133,615	130,704	146,511
Income from equity method investees	26	(73,346)	(67,199)	(58,639)
Operating income		3,037,798	2,362,439	2,408,902
Other (income) expense:				
Interest income	4g	(147,409)	(51,375)	(63,401)
Interest expense	4g	448,471	416,199	426,809
Income before income taxes		2,736,736	1,997,615	2,045,494
Income tax expense	4h	511,079	443,081	625,442
Net income		2,225,657	1,554,534	1,420,052
Net income attributable to noncontrolling interests		243,733	274,746	276,072
Net income attributable to shareholders of				
FMC-AG &Co. KGaA		1,981,924	1,279,788	1,143,980
Basic earnings per share	19	6.47	4.17	3.74
Fully diluted earnings per share	19	6.45	4.16	3.73

Consolidated statements of comprehensive income in € THOUS

	Note	2018	2017	2016
Net income		2,225,657	1,554,534	1,420,052
Components that will not be reclassified to profit or loss: Actuarial gains (losses) on defined benefit pension plans Income tax (expense) benefit related to components of	16,24	(28,070)	6,840	(31,423)
other comprehensive income not reclassified	16,24	7,713	(27,393)	7,085
		(20,357)	(20,553)	(24,338)
Components that may be reclassified subsequently to profit or loss:				
Gain (loss) related to foreign currency translation	24	327,317	(1,284,173)	368,429
Gain (loss) related to cash flow hedges ⁽¹⁾ Income tax (expense) benefit related to components of	23,24	23,560	27,983	25,111
other comprehensive income that may be reclassified	23,24	(6,734)	(8,407)	(7,039)
		344,143	(1,264,597)	386,501
Other comprehensive income (loss), net of tax		323,786	(1,285,150)	362,163
Total comprehensive income		2,549,443	269,384	1,782,215
Comprehensive income attributable to noncontrolling interests		285,691	150,611	310,580
Comprehensive income attributable to shareholders of FMC-AG & Co. KGaA		2,263,752	118,773	1,471,635

(1) Including cost of hedging in the amount of €(1,335) for the twelve months ended December 31, 2018.

Consolidated balance sheets in € THOUS, except share data

	Note	2018	2017
AssetsCash and cash equivalentsTrade accounts and other receivablesAccounts receivable from related partiesAccounts receivable from related partiesInventoriesOther current assetsOther current assetsProperty, plant and equipmentIntangible assetsGoodwillDeferred taxes	6 7 5 8 9 10 11 11 4h	2,145,632 3,337,706 92,662 1,466,803 804,083 7,846,886 3,836,010 681,331 12,209,606 345,686	978,109 3,389,326 111,643 1,290,779 604,450 6,374,307 3,491,771 683,058 12,103,921 315,168
Investment in equity method investees Other non-current assets	26	649,780 672,969	647,009 409,981
Total non-current assets		18,395,382	17,650,908
Total assets		26,242,268	24,025,215
Liabilities Accounts payable Accounts payable to related parties Current provisions and other current liabilities Short-term debt Short-term debt from related parties Current portion of long-term debt and capital lease obligations Income tax payable	5 12 13 13 14	641,271 153,781 2,904,288 1,205,294 188,900 1,106,519 68,229	590,493 147,349 2,858,730 760,279 9,000 883,535 50,507
Total current liabilities		6,268,282	5,299,893
Long-term debt and capital lease obligations, less current portion Non-current provisions and other non-current liabilities	14 15 16 4h	5,045,515 750,738 551,930 97,324 626,521	5,794,872 1,004,672 530,559 99,493 467,540
Total non-current liabilities		7,072,028	7,897,136
Total liabilities		13,340,310	13,197,029
Shareholders' equity			
Ordinary shares, no par value, €1.00 nominal value, 384,822,972 shares authorized, 307,878,652 issued and 306,878,701 outstanding as of December 31, 2018 and 385,913,972 shares authorized, 308,111,000 issued and 306,451,049 outstanding as of December 31, 2017 respectively Treasury stock, at cost Additional paid-in capital Retained earnings Accumulated other comprehensive income (loss)	17 17 17 17 24	307,879 (50,993) 3,873,345 8,831,930 (1,203,750)	308,111 (108,931) 3,969,245 7,137,255 (1,485,578)
Total FMC-AG & Co. KGaA shareholders' equity Noncontrolling interests	17	11,758,411 1,143,547	9,820,102 1,008,084
Total equity		12,901,958	10,828,186
Total liabilities and equity		26,242,268	24,025,215

Consolidated statements of cash flows in € THOUS

	Note	2018	2017	2016
Operating activities				
Net income Adjustments to reconcile net income to net cash provided by operating activities:		2,225,657	1,554,534	1,420,052
Depreciation and amortization	10,11,26	724,847	735,479	701,536
Change in deferred taxes, net		89,171	(203,046)	232
(Gain) loss on sale of fixed assets, investments and			(0,1,1,2,2)	(5.001)
divestitures	20	(807,106)	(94,123)	(5,381)
Compensation expense related to share-based plans Investments in equity method investees, net	20	10,745 (28,369)	46,811 (57,009)	27,433 (52,948)
Changes in assets and liabilities, net of amounts from		(20,505)	(37,007)	(32,940)
businesses acquired:				
Trade accounts and other receivables		(188,866)	(194,087)	(246,926)
Inventories		(157,092)	(62,692)	(60,230)
Other current and non-current assets		(95,251)	176,115	47,314
Accounts receivable from related parties		18,376	95,025	(71,773)
Accounts payable to related parties Accounts payable, provisions and other current and		4,480	(110,375)	120,745
non-current liabilities		363,910	638,501	347,073
Paid interest		(311,971)	(340,632)	(354,246)
Received interest		56,809	37,601	44,602
Income tax payable		514,957	644,866	565,396
Paid income taxes		(358,386)	(675,157)	(550,906)
Net cash provided by (used in) operating activities		2,061,911	2,191,811	1,931,973
Investing activities				
Purchases of property, plant and equipment		(1,057,276)	(944,460)	(930,520)
Proceeds from sale of property, plant and equipment		54,529	103,225	15,957
Acquisitions and investments, net of cash acquired, and				
purchases of intangible assets	3,25	(925,267)	(565,694)	(521,800)
Proceeds from divestitures	3,25	1,682,975	415,388	190,247
Net cash provided by (used in) investing activities		(245,039)	(991,541)	(1,246,116)
Financing activities				
Proceeds from short-term debt		650,634	443,996	805,191
Repayments of short-term debt		(205,790)	(241,309)	(342,505)
Proceeds from short-term debt from related parties Repayments of short-term debt from related parties		217,646 (37,746)	122,079 (116,079)	124,300 (138,800)
Proceeds from long-term debt		612,388	582,311	2,071
Repayments of long-term debt and capital lease		012,000	002,011	2,071
obligations		(1,076,204)	(1,099,329)	(662,823)
program		(298,912)	157,564	112,025
Proceeds from exercise of stock options		47,404	47,591	47,467
Purchase of treasury stock	17	(37,221)	(57,938)	(211.251)
Dividends paid	17	(324,838)	(293,973)	(244,251)
Distributions to noncontrolling interests		(296,293) 67,196	(386,340) 42,797	(294,302) 71,910
C C				
Net cash provided by (used in) financing activities		(681,736)	(798,630)	(519,717)
Effect of exchange rate changes on cash and cash		22.207	(122,412)	29.012
equivalents		32,387	(132,413)	38,012
Net increase (decrease) in cash and cash equivalents		1,167,523	269,227	204,152
Cash and cash equivalents at beginning of period		978,109	708,882	504,730
Cash and cash equivalents at end of period	6	2,145,632	978,109	708,882
A 1				

Consolidated statements of shareholders' equity in € THOUS, except share data

							Accumulated other comprehensive income (loss)			isive Total FMC-AG &			
		Ordinary		Treasury	stock	Additional		Foreign			Co. KGaA		
	Note	Number of shares	No par value	Number of shares	Amount	paid in capital	Retained earnings	currency translation	Cash flow hedges	Pensions	shareholders' equity	Noncontrolling interests	Total equity
Balance at December 31, 2015		312,863,071	312,863	(7,548,951)	(384,966)	4,224,395	5,369,493	(364,636)	(55,271)	(232,311)	8,869,567	936,024	9,805,591
Proceeds from exercise of options and related tax effects	20	907,720	908			41,029			_		41,937		41,937
Compensation expense related to stock options		((540.000)	((540)	C 540.000	222.072	23,210	—	—	—	—	23,210	—	23,210
Withdrawal of treasury stock		(6,549,000)	(6,549)	6,549,000	333,973	(327,424)	(244,251)	_	_	_	(244,251)	_	(244,251)
Purchase/ sale of noncontrolling interests		—	—	—	—	(1,095)	_	—	—	—	(1,095)	63,974	62,879
Contributions from/ to noncontrolling interests	23	_	_	_	_	_	(183,346)	_	_	_	(183,346)	(237,103)	(237,103) (183,346)
Net Income	20	_	_	_	_	_	1,143,980	_	_	_	1,143,980	276,072	1,420,052
Other comprehensive income (loss) related to: Foreign currency translation	24							338.617	(908)	(3,788)	333,921	34,508	368,429
Cash flow hedges, net of related tax effects		_	_	_	_	_	_		18,072		18,072		18,072
Pensions, net of related tax effects	16	—	—	—	—	—	—	—	—	(24,338)	(24,338)	_	(24,338)
Comprehensive income											1,471,635	310,580	1,782,215
Balance at December 31, 2016		307,221,791	307,222	(999,951)	(50,993)	3,960,115	6,085,876	(26,019)	(38,107)	(260,437)	9,977,657	1,073,475	11,051,132
Proceeds from exercise of options and related tax effects		889,209	889	—	—	42,944	—	—	—	—	43,833	—	43,833
Compensation expense related to stock options		_	_	(660,000)	(57,938)	11,736	_	_	_	_	11,736 (57,938)	_	11,736 (57,938)
Dividends paid		_	_	(000,000)	(37,550)	_	(293,973)	_	_	_	(293,973)	_	(293,973)
Purchase/ sale of noncontrolling interests		_	_	_	_	(45,550)	_	_	_	_	(45,550)	28,421 (244,423)	(17,129) (244,423)
Noncontrolling interests subject to put provisions	23	_	_	_	_	_	65,564	_	_	_	65,564	(244,425)	65,564
Net Income		—	—	—	—	—	1,279,788	—	—	—	1,279,788	274,746	1,554,534
Other comprehensive income (loss) related to: Foreign currency translation	24	_	_	_			_	(1.177.885)	195	17.652	(1.160.038)	(124,135)	(1,284,173)
Cash flow hedges, net of related tax effects	24	_	_	_	_	_	_	(1,17,,000)	19,576	_	19,576	(121,100)	19,576
Pensions, net of related tax effects	16	_	_	-	_	-	-	-	-	(20,553)	(20,553)		(20,553)
Comprehensive income											118,773	150,611	269,384
Balance at December 31, 2017		308,111,000	308,111	(1,659,951)	(108,931)	3,969,245	7,137,255	(1,203,904)	(18,336)	(263,338)	9,820,102	1,008,084	10,828,186
Adjustment due to initial application of IFRS 9				(1 (50 051)	(100.021)	-	(5,076)	(1 202 00 0		(2(2,220)	(5,076)		(5,076)
Adjusted balance at December 31, 2017		308,111,000 858,652	308,111 859	(1,659,951)	(108,931)	3,969,245 37,918	7,132,179	(1,203,904)	(18,336)	(263,338)	9,815,026 38,777	1,008,084	10,823,110 38,777
Compensation expense related to stock options	20		_	_	_	6,713	_	_	_	_	6,713	_	6,713
Purchase of treasury stock		(1,091,000)	(1,091)	(431,000) 1,091,000	(37,221) 95,159	(94,068)	_	_	_	_	(37,221)	—	(37,221)
Withdrawal of treasury stock		(1,091,000)	(1,091)	1,091,000	93,139	(94,008)	(324,838)	_	_	_	(324,838)	_	(324,838)
Purchase/ sale of noncontrolling interests		—	—	—	—	(46,463)	_	—	—	—	(46,463)	63,939	17,476
Contributions from/ to noncontrolling interests	23	_	_	_	_	_	42,665	_	_	_	42,665	(214,167)	(214,167) 42,665
Net Income	25	_	_	_	_	_	1,981,924	_	_	_	1,981,924	243,733	2,225,657
Other comprehensive income (loss) related to:	24							292,431	(10)	(7.054)	285,359	41.059	227 217
Foreign currency translation		_	_	_	_	_	_	292,431	(18) 16,826	(7,054)	285,359 16,826	41,958	327,317 16,826
Pensions, net of related tax effects		_	_	_	—	—	_	—		(20,357)	(20,357)	—	(20,357)
Comprehensive income											2,263,752	285,691	2,549,443
Balance at December 31, 2018		307,878,652	307,879	(999,951)	(50,993)	3,873,345	8,831,930	(911,473)	(1,528)	(290,749)	11,758,411	1,143,547	12,901,958

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (in THOUS, except share and per share data)

1. The Company, basis of presentation and significant accounting policies

The Company

Fresenius Medical Care AG & Co. KGaA ("FMC-AG & Co. KGaA" or the "Company"), a German partnership limited by shares (Kommanditgesellschaft auf Aktien) registered in the commercial registry of Hof an der Saale under HRB 4019, with its business address at Else-Kröner-Str. 1, 61352 Bad Homburg v. d. Höhe, is the world's largest kidney dialysis company, based on publicly reported sales and number of patients treated. The Company provides dialysis treatment and related dialysis care services to persons who suffer from end-stage renal disease ("ESRD"), as well as other health care services. The Company also develops and manufactures a wide variety of health care products, which includes dialysis and non-dialysis products. The Company's dialysis products include hemodialysis machines, peritoneal cyclers, dialyzers, peritoneal solutions, hemodialysis concentrates, solutions and granulates, bloodlines, renal pharmaceuticals and systems for water treatment. The Company's non-dialysis products include acute cardiopulmonary and apheresis products. The Company supplies dialysis clinics it owns, operates or manages with a broad range of products and also sells dialysis products to other dialysis service providers. The Company describes certain of its other health care services as "Care Coordination." Care Coordination currently includes, but is not limited to, the coordinated delivery of pharmacy services, vascular, cardiovascular and endovascular specialty services as well as ambulatory surgery center services, physician nephrology and cardiology services, health plan services, urgent care services and ambulant treatment services. Until June 28, 2018, Care Coordination also included the coordinated delivery of emergency, intensivist and hospitalist physician services as well as transitional care which the Company refers to as "hospital related physician services." All of these Care Coordination services together with dialysis care and related services represent the Company's health care services.

In these notes, "FMC-AG & Co. KGaA," the "Company" or the "Group" refers to the Company or the Company and its subsidiaries on a consolidated basis, as the context requires. "Fresenius SE" and "Fresenius SE & Co. KGaA" refer to Fresenius SE & Co. KGaA. "Management AG" and the "General Partner" refer to Fresenius Medical Care Management AG which is FMC-AG & Co. KGaA's general partner and is wholly owned by Fresenius SE. "Management Board" refers to the members of the management board of Management AG and, except as otherwise specified, "Supervisory Board" refers to the supervisory board of FMC-AG & Co. KGaA. The term "North America Segment" refers to the North America operating segment, the term "EMEA Segment" refers to the Europe, Middle East and Africa operating segment, the term "Asia-Pacific Segment" refers to the Asia-Pacific operating segment, and the term "Latin America Segment" refers to the Latin America operating segment. For further discussion of the Company's operating segments, see note 26.

Basis of presentation

As of January 1, 2017, the consolidated financial statements and other financial information included in the Company's quarterly reports on Form 6-K and the Annual Reports on Form 20-F are prepared solely in accordance with IFRS as issued by the International Accounting Standards Board ("IASB"), using the euro as the Company's reporting currency. At December 31, 2018, there were no International Financial Reporting Standards ("IFRS") or International Financial Reporting Interpretations Committee ("IFRIC") interpretations as endorsed by the European Union relevant for reporting that differed from IFRS as issued by the IASB.

The Company is included in the IFRS consolidated financial statements of Fresenius SE & Co. KGaA, Bad Homburg v. d. Höhe, pursuant to Section 315e of the German Commercial Code ("HGB"), published in the Federal Gazette and drawn up for the smallest circle of companies. The consolidated financial statements for the largest circle of companies are drawn up by Fresenius Management SE, Bad Homburg v. d. Höhe, and also published in the Federal Gazette.

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 and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

estimates. Such financial statements reflect all adjustments that, in the opinion of management, are necessary for a fair presentation of the results of the periods presented. All such adjustments are of a normal recurring nature. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in all future periods affected.

In order to improve clarity of presentation, various items are aggregated in the consolidated balance sheets and consolidated statements of income. These items are analyzed separately in the notes where this provides useful information to the users of the consolidated financial statements.

The consolidated balance sheets contain all information required to be disclosed by IAS 1 (Presentation of Financial Statements) and are in accordance with Accounting Interpretation 1 ("AIC 1", Balance Sheet Classification according to current/ non-current Distinction in compliance with IAS 1) classified on the basis of the liquidity of assets and liabilities following the consolidated balance sheets. The consolidated statements of income are classified using the cost-of-sales accounting format.

Starting on July 1, 2018, the Company's subsidiaries in Argentina applied IAS 29, Financial Reporting in Hyperinflationary Economies, due to the inflation in Argentina. Pursuant to IAS 29, the Company recorded a loss on its net monetary position of \notin 12,297 for the year ended December 31, 2018. While IAS 29 requires that comparative financial statements be restated in the current measuring unit as of the reporting date, the Company's presentation currency is not hyperinflationary and therefore IAS 21, The Effects of Changes in Foreign Exchange Rates, requires the comparative amounts to be disclosed as current year amounts in the prior year financial statements. The Company did not restate the prior year statement of comprehensive income and consolidated balance sheet, but recorded \notin 34,616 as an adjustment to equity as of December 31, 2017. The Company calculated the loss and the adjustment to prior year equity with the use of the Consumer Price Index (Índice de precios al consumidor) as published by the Argentine Statistics and Census Institute for year ended December 31, 2018, which lists the level at 184 index points, a 48% increase since January 1, 2018.

As a result of the implementation of IFRS 15, Revenue from Contracts with Customers ("IFRS 15") and IFRS 9, Financial Instruments ("IFRS 9"), the Company has updated its accounting policies accordingly. Please refer to note 1 x) below for further details on the updated policies.

Finance lease receivables in the amount of \notin 58,336 in the prior years' comparative consolidated financial statements have been reclassified from other currents assets to trade accounts and other receivables to conform to the current year's presentation.

The IFRIC issued an agenda decision in September 2017 relating to the applicability of IAS 12, Income Taxes ("IAS 12") 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 ("IAS 37"), to interest and penalties. In September 2018 the Accounting Standards Committee of Germany (ASCG) approved an interpretation regarding the accounting for interest and penalties related to German income taxes. As a result, the Company restated the consolidated financial statements. The effects identified on the Group financial positions are as follows: an increase of interest expense of €19,012 and €18,301, an increase of interest income of €8,078 and €21,262 and a decrease of income tax expense of €10,934 and €2,961 for 2017 and 2016, respectively, an increase of non-current provisions and other non-current liabilities of €29,027, an increase of current provisions and other current liabilities of €14,970, and a decrease of income tax payable non-current portion of €28,940, an increase of current provisions and other current liabilities of €14,970, and a decrease of income tax payable current portion of €14,970 as of December 31, 2017.

In 2018, the Company divested its controlling interest in Sound Inpatient Physicians, Inc. ("Sound") (see note 4 c) for more information). The related gain is shown in a separate line on the consolidated statements of income in the line item "(Gain) loss related to divestitures of Care Coordination activities." To conform to the current presentation on the consolidated statements of income for 2017, the costs of revenue for health care services was reduced for a loss of $\in 14,534$ and selling general and administrative expenses was increased for a gain of $\in 40,297$. The net effect of this shift in line items was a gain of $\in 25,763$ shown in "(Gain) loss related to divestitures for Care Coordination." To conform to the current

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

presentation on the consolidated statements of income for 2016, a gain of €13,543 that was previously in selling, general and administrative expenses is now presented separately in the new line item on the consolidated statements of income.

At February 19, 2019, the Management Board authorized the consolidated financial statements for issue and passed it through to the Supervisory Board for review and authorization.

Significant accounting policies

a) Principles of consolidation and composition of the group

The financial statements of consolidated entities have been prepared using uniform accounting methods in accordance with IFRS 10, Consolidated Financial Statements ("IFRS 10"). The acquisitions of companies are accounted for under the purchase method.

Besides FMC-AG & Co. KGaA, the consolidated financial statements include all material subsidiaries according to IFRS 10 and IFRS 11, Joint Arrangements ("IFRS 11"), over which the Company has control. FMC-AG & Co. KGaA controls an entity if it has power over the entity through existing rights that give the Company the current ability to direct the activities that significantly affect the Company's return. In addition, the Company is exposed to, or has rights to, variable returns from the involvement with the entity and the Company has the ability to use its power over the entity to affect the amount of the Company's return.

The equity method is applied in accordance with IAS 28, Investments in Associates and Joint Ventures ("IAS 28"). Generally, equity method investees are entities in which FMC-AG & Co. KGaA, directly or indirectly, holds 50% or less of the voting power and can exercise significant influence over their financial and operating policies.

The disclosure of business acquisitions is performed according to IFRS 3, Business Combinations ("IFRS 3") 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 interests are recognized at their fair values. Any remaining debit balance is recognized as goodwill and is tested at least once a year for impairment. Any excess of the net fair value of identifiable assets and liabilities over cost still existing after reassessing the purchase price allocation is recognized immediately in profit or loss.

All significant intercompany revenues, 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 ("NCI") is the portion of equity in a subsidiary not attributable, directly or indirectly, to a parent and is recognized at its fair value at the date of first consolidation. Profits and losses attributable to the noncontrolling interests are separately disclosed in the consolidated statements of income.

The Company writes put options on NCI mainly for dialysis clinics in which nephrologists or nephrology groups own an equity interest. While in certain of the dialysis clinics the Company is generally the majority owner, other non-affiliated parties, such as groups of nephrologists or a single nephrologist, hold an NCI position. Generally, the put options associated with this business model are valid for an unlimited time. Accordingly, they do not constrain a long-term investment into a dialysis clinic by the NCI holder. The put options provide for settlement in cash. For these put options, IAS 32, Financial Instruments: Presentation ("IAS 32") paragraph 23 requires the Company to recognize a liability for the present value of the exercise price of the option. The potential purchase price liability is recorded in other current provisions and other non-current provisions and other non-current liabilities at fair value at the balance sheet date. The exercise price of the option is generally based on fair value which is approximated by a multiple of earnings, e.g. a multiple of the proportionate earnings before interest, taxes, depreciation and amortization of the dialysis clinic, and is therefore affected by the periodic changes in the profitability

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

of such a clinic. The Company believes the accounting treatment of the change in fair value of the put liability under IFRS to this date has not been finally clarified. In the absence of an IFRS that specifically applies to the accounting for put options on NCI, the Company, in line with IAS 8, Accounting Policies, Changes in Accounting Estimates and Errors ("IAS 8") paragraph 10, applied the present access method. According to the present access method, NCI are further recorded in equity as "noncontrolling interests". The initial recognition of the purchase price liability, as well as valuation differences, is recorded neutral to profit or loss by reclassification from equity (see note 1 g). This presentation results in information that is relevant to the economic decision-making needs of users and to provide reliable financial information as the Company sees these NCI with written put options as equity holders and accordingly attributes net income to NCI.

The consolidated financial statements for 2018 include FMC-AG & Co. KGaA as well as 2,036 companies. In 2018, 49 companies were accounted for by the equity method. Since beginning of 2018, 134 companies were first-time consolidations and 278 companies were deconsolidated.

The complete list of investments of FMC-AG & Co. KGaA will be submitted to the electronic Federal Gazette and the electronic companies register.

For 2018, the following fully consolidated German subsidiaries of the Company will apply the exemption provided in Section 264 (3) or Section 264b of the HGB and therefore will be exempt from applying certain legal requirements to prepare notes to the statutory standalone financial statements and a management report as well as the requirements of an independent audit and public disclosure.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Companies exempt from applying certain legal requirements

companies exempt from apprying certain legal requirements	
Name of the company	Registered office of the company
Ärztliches Versorgungszentrum Ludwigshafen GmbH im	
Lusanum	Ludwigshafen am Rhein, Germany
DiZ München Nephrocare GmbH	Munich, Germany
ET Software Developments GmbH	Sandhausen, Germany
Fresenius Medical Care Beteiligungsgesellschaft mbH	Bad Homburg v. d. Höhe, Germany
Fresenius Medical Care Deutschland GmbH	Bad Homburg v. d. Höhe, Germany
Fresenius Medical Care EMEA Management GmbH	Bad Homburg v. d. Höhe, Germany
Fresenius Medical Care Frankfurt am Main GmbH	Frankfurt am Main, Germany
Fresenius Medical Care GmbH	Bad Homburg v. d. Höhe, Germany
Fresenius Medical Care Investment GmbH	Bad Homburg v. d. Höhe, Germany
Fresenius Medical Care US Beteiligungsgesellschaft mbH	Bad Homburg v. d. Höhe, Germany
Fresenius Medical Care US	
Vermögensverwaltungs GmbH & Co. KG	Bad Homburg v. d. Höhe, Germany
Fresenius Medical Care US Zwei	
Vermögensverwaltungs GmbH & Co. KG	Bad Homburg v. d. Höhe, Germany
Fresenius Medical Care Ventures GmbH	Bad Homburg v. d. Höhe, Germany
Haas Medizintechnik GmbH	Beelitz, Germany
Medizinisches Versorgungszentrum Berchtesgaden GmbH	Berchtesgaden, Germany
MVZ Gelsenkirchen-Buer GmbH	Gelsenkirchen, Germany
Nephrocare Ahrensburg GmbH Nephrocare Augsburg GmbH	Ahrensburg, Germany
Nephrocare Berlin-Weißensee GmbH	Augsburg, Germany Berlin, Germany
Nephrocare Betzdorf GmbH	Betzdorf, Germany
Nephrocare Bielefeld GmbH	Bielefeld, Germany
Nephrocare Buchholz GmbH	Buchholz, Germany
Nephrocare Daun GmbH	Daun, Germany
Nephrocare Deutschland GmbH	Bad Homburg v. d. Höhe, Germany
Nephrocare Döbeln GmbH	Döbeln, Germany
Nephrocare Dortmund, GmbH	Dortmund, Germany
Nephrocare Friedberg GmbH	Friedberg, Germany
Nephrocare Grevenbroich GmbH	Grevenbroich, Germany
Nephrocare Hagen GmbH	Hagen, Germany
Nephrocare Hamburg-Altona GmbH	Hamburg, Germany
Nephrocare Hamburg-Barmbek GmbH	Hamburg, Germany
Nephrocare Hamburg-Süderelbe GmbH	Hamburg, Germany
Nephrocare Ingolstadt GmbH	Ingolstadt, Germany
Nephrocare Kaufering GmbH	Kaufering, Germany
Nephrocare Krefeld GmbH	Krefeld, Germany
Nephrocare Lahr GmbH	Lahr, Germany
Nephrocare Leverkusen GmbH	Leverkusen, Germany
Nephrocare Ludwigshafen GmbH	Ludwigshafen am Rhein, Germany
Nephrocare Mannheim GmbH	Mannheim, Germany Mönchengladbach, Germany
Nephrocare Mühlhausen GmbH	Mühlhausen, Germany
Nephrocare München-Ost GmbH	Munich, Germany
Nephrocare Münster GmbH	Münster, Germany
Nephrocare Oberhausen GmbH	Oberhausen, Germany
Nephrocare Papenburg GmbH	Papenburg, Germany
Nephrocare Pirmasens GmbH	Pirmasens, Germany
Nephrocare Püttlingen GmbH	Püttlingen, Germany
Nephrocare Recklinghausen GmbH	Recklinghausen, Germany
Nephrocare Rostock GmbH	Rostock, Germany
Nephrocare Salzgitter GmbH	Salzgitter, Germany
Nephrocare Schrobenhausen GmbH	Schrobenhausen, Germany
Nephrocare Starnberg GmbH	Starnberg, Germany
Nephrocare Wetzlar GmbH	Wetzlar, Germany
Nephrocare Witten GmbH	Witten, Germany
Nephrologisch-Internistische Versorgung Ingolstadt GmbH	Ingolstadt, Germany
Nova Med GmbH Vertriebsgesellschaft für	
medizinischtechnische Geräte und Verbrauchsartikel	Bad Homburg v. d. Höhe, Germany
VIVONIC GmbH	Sailauf, Germany
Zentrum für Nieren- und Hochdruckkrankheiten	Develoire Comment
Bensheim GmbH	Bensheim, Germany

b) Cash and cash equivalents

Cash and cash equivalents comprise cash funds and all short-term investments with original 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

c) Trade accounts and other receivables

Trade accounts and other receivables are posted at the nominal value less individual allowances for doubtful accounts. For information regarding allowance for doubtful accounts see note 2 c).

d) Inventories

Inventories are stated at the lower of cost (determined by using the average or first-in, first-out method) or net realizable value (see note 8). Costs included in inventories are based on invoiced costs and/or production costs as applicable. Included in production costs are material, direct labor and production overhead, including depreciation charges.

e) Property, plant and equipment

Property, plant, and equipment are stated at cost less accumulated depreciation (see note 10). Maintenance and repair costs (day-to-day servicing) are expensed as incurred. The Company recognizes in the carrying amount of an item of property, plant and equipment the cost of replacing parts and major inspections if it is probable that the future economic benefits associated with the item will flow to the Company and the cost can be measured reliably. Property and equipment under capital leases are stated at the present value of future minimum lease payments at the inception of the lease, less accumulated depreciation. Depreciation on property, plant and equipment is calculated using the straight-line method over the estimated useful lives of the assets ranging from 4 to 50 years for buildings and improvements with a weighted average life of 14 years and 3 to 19 years for machinery and equipment with a weighted average life of 11 years. Equipment held under capital leases and leasehold improvements are amortized using the straight-line method over the shorter of the lease term or the estimated useful life of the asset. Internal use platform software that is integral to the computer equipment it supports is included in property, plant and equipment.

f) Intangible assets and goodwill

Intangible assets such as non-compete agreements, technology, distribution rights, patents, licenses to treat, licenses to manufacture, distribute and sell pharmaceutical drugs, exclusive contracts and exclusive licenses, trade names, management contracts, application software, acute care agreements, customer relationships and lease agreements are recognized and reported apart from goodwill (see note 11). Patient relationships however are not reported as separate intangible assets due to the missing contractual basis but are part of goodwill.

Goodwill and identifiable intangibles with indefinite useful lives are not amortized but tested for impairment annually or when an event becomes known that could trigger an impairment. The Company identified trade names and certain qualified management contracts as intangible assets with indefinite useful lives because, there is no foreseeable limit to the period over which those assets are expected to generate net cash inflows for the Company.

Intangible assets with finite useful lives are amortized over their respective useful lives to their residual values. The Company amortizes non-compete agreements over their useful life which on average is 8 years. Technology is amortized over its useful life of 16 years. Internally developed intangibles are amortized on a straight-line basis over a useful life of 9 years. Licenses to manufacture, distribute and sell pharmaceutical drugs, exclusive contracts and exclusive licenses are amortized over their useful life which on average is 11 years. Customer relationships are amortized over their useful life of 9 years. All other intangible assets are amortized over their weighted average useful lives of 7 years. The weighted average useful life of all amortizable intangible assets is 9 years. Intangible assets with finite useful lives are evaluated for impairment when events have occurred that may give rise to an impairment (see note 1 n).

To perform the annual impairment test of goodwill, the Company identified its groups of cash generating units (CGUs) and determined their carrying value by assigning the assets and liabilities, including the existing goodwill and intangible assets, to those CGUs. CGUs reflect the lowest level on which goodwill is monitored for internal management purposes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

One CGU was identified in the North America Segment, in the EMEA Segment, in the Asia-Pacific Segment and in the Latin America Segment. For the purpose of goodwill impairment testing, all corporate assets and liabilities are allocated to the CGUs. At least once a year, the Company compares the recoverable amount of each CGU to the CGU's carrying amount. The recoverable amount (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 intangible assets with indefinite useful lives, the Company compares the fair values of intangible assets with their carrying values. An intangible asset's fair value is determined using a discounted cash flow approach or other methods, if appropriate.

For further information see note 2 a).

g) Financial instruments

Effective January 1, 2018, the Company classifies its financial instruments in accordance with IFRS 9 in the following measurement categories: at amortized cost, at fair value through profit and loss ("FVPL") and at fair value through other comprehensive income ("FVOCI").

Financial assets are classified depending on the business model in which the financial assets are held and the contractual terms of the cash flows. Financial assets are only reclassified when the business model for managing those assets changes. During the reporting period no financial instruments were reclassified. Purchases and sales of financial assets are accounted for on the trading day. The Company does not make use of the fair value option, which allows financial liabilities to be classified at FVPL upon initial recognition. At initial recognition financial asset and financial liabilities are measured at fair value. Subsequent measurement is either at cost, FVPL or FVOCI.

In general, financial liabilities are classified and subsequently measured at amortized cost, with the exception of contingent considerations resulting from a business combination, noncontrolling interests subject to put provisions as well as derivative financial liabilities.

Investments in equity instruments are recognized and subsequently measured at fair value. The Company's equity investments are not held for trading. In general, changes in the fair value of equity investments are recognized in the income statement. However, at initial recognition the Company elected, on an instrument-by-instrument basis, to represent subsequent changes in the fair value of individual strategic equity investments in other comprehensive income (loss) ("OCI").

The Company invested in several debt securities, with the objective to achieve both collecting contractual cash flows and selling the financial assets. All debt securities are consequently measured at fair value. Some of these securities give rise on specified dates to cash flows that are solely payments of principle and interest. These securities are subsequently measured at FVOCI. Other securities are measured at FVPL.

The Company, as option writer on behalf of existing put options, can be obligated to purchase the noncontrolling interests held by third parties. The obligations are in the form of put provisions and are exercisable at the third-party owners' discretion within specified periods as outlined in each specific put provision. If these put provisions were exercised, the Company would be required to purchase all or part of third-party owners' noncontrolling interests at the appraised fair value at the time of exercise. The initial recognition and subsequent measurement is recognized in equity. For further information related to the estimation of these fair values, see note 23.

Derivative financial instruments which primarily include foreign currency forward contracts and interest rate swaps are recognized as assets or liabilities at fair value in the balance sheet (see note 23). From time to time, the Company may enter into other types of derivative instruments which are dealt with on a transaction by transaction basis.

Changes in the fair value of derivative financial instruments classified as cash flow hedges are recognized in accumulated OCI ("AOCI") in shareholders' equity. The Company only designated the change in fair value of the spot element of foreign exchange forward contracts as the hedging instrument in cash flow

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

hedging relationships. The forward elements are separately accounted for as cost of hedging in a separate component within AOCI. The ineffective portion of cash flow hedge is recognized in the income statement. The change in fair value of derivatives that do not qualify for hedge accounting is recorded in the income statement and usually offsets the changes in value recorded in the income statement for the underlying asset or liability.

Derivatives embedded in host contracts 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.

Before January 1, 2018 the following categories according to IAS 39, Financial Instruments: Recognition and Measurement ("IAS 39") were relevant for the Company: loans and receivables, financial liabilities measured at amortized cost, available for sale financial assets as well as financial assets/liabilities measured at fair value through profit or loss. All other categories were immaterial or not existing.

The Company regularly reviewed if objective substantial evidence occurred that would indicate an impairment of a financial asset or a portfolio of financial assets. After testing the recoverability of these assets, a possible impairment loss was recorded in the consolidated statement of income. Gains and losses of available for sale financial assets were recognized in AOCI in shareholders' equity until the financial asset was disposed of or if it was considered to be impaired. In these cases the accumulated net loss recorded in AOCI was transferred to the income statement.

Changes in the fair value of derivative financial instruments classified as fair value hedges and in the corresponding underlying assets and liabilities were recognized periodically in earnings, while the effective portion of changes in fair value of derivative financial instruments classified as cash flow hedges were recognized in AOCI in shareholders' equity. All amounts recorded in AOCI were subsequently reclassified and recorded in the consolidated statement of income.

h) Impairment of financial assets

The impairment of financial assets is based on the expected credit loss approach, as introduced by IFRS 9. Prior to the introduction of IFRS 9, the incurred loss model of IAS 39 required the recognition of an allowance once a loss event occurred. An additional allowance was recorded based on individual country risk for receivables overdue by more than one year. IFRS 9 replaces the incurred loss model under IAS 39 with an expected credit loss approach.

The expected credit loss approach requires that all impacted financial assets will carry a loss allowance based on their expected credit losses. Expected credit losses are a probability-weighted estimate of credit losses over the contractual life of the financial assets. This model comprises a three-stage approach. Upon recognition, the Company shall recognize losses that are expected within the next 12 months. If credit risk deteriorates significantly, from that time, impairment losses shall amount to lifetime expected losses. When assessing for significant increases in credit risk, the Company shall compare the risk of a default occurring on the financial instrument at the reporting date with the risk of a default occurring on the financial instrument at the date of initial recognition. The Company should consider reasonable and supportable information including historic loss rates, present developments such as liquidity issues and information about future economic conditions, to ensure foreseeable changes in the customer-specific or macroeconomic environment are considered. Separately, there is the rebuttable presumption, that the credit risk has increased significantly since the initial recognition when contractual payments are overdue by more than 30 days.

In case of objective evidence of impairment there is an assignment to stage 3. The assignment of a financial asset to stage 3 should rely on qualitative knowledge on the customers' unfavorable financial position (for example bankruptcy, lawsuits with private or public payers), or quantitative criteria, based on an individual maturity analysis. Independently, there is an assignment to stage 3, if the contractual payments are overdue by more than 360 days. 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The Company recognizes a loss allowance for expected credit losses on financial assets measured at amortized cost, contract assets and lease receivables as well as in investments in debt securities measured at fair value through other comprehensive income. The financial assets mainly comprise trade accounts and other receivables as well as 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. Financial assets whose expected credit loss is not assessed individually are grouped on the basis of geographical regions and the impairment is generally assessed on the basis of macroeconomic indicators such as credit default swaps.

For trade accounts receivable, the Company uses the simplified method which requires recognizing lifetime expected credit losses at inception. However, 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.

Based on the external credit ratings of the counterparties the Company considers that its cash and cash equivalents have a low credit risk.

i) Foreign currency translation

For purposes of these consolidated financial statements, the euro is the reporting currency. The requirement to report in euro arises from Section 315e and Section 244 HGB. Substantially all assets and liabilities of foreign subsidiaries, that use a functional currency other than the euro, are translated at year-end exchange rates, while revenues and expenses are translated at average exchange rates. Adjustments for foreign currency translation fluctuations are excluded from net earnings and are reported in AOCI. In addition, the translation adjustments of certain intercompany borrowings, which are of a long-term nature, are reported in AOCI.

The exchange rates of the U.S. dollar affecting foreign currency translation developed as follows:

Exchange rates

	December 31,	December 31,	2018	2017	2016
	2018	2017	average	average	average
	spot exchange	spot exchange	exchange	exchange	exchange
	rate in €	rate in €	rate in €	rate in €	rate in €
1 U.S. dollar	0.87336	0.83382	0.84678	0.88519	0.90342

j) Revenue recognition

The Company has adopted IFRS 15 as issued in May 2014, which resulted in changes in accounting policies. In accordance with the transition provisions in IFRS 15 the new rules have been adopted only to those contracts that are not considered completed contracts as of January 1, 2018 following the cumulative effect method with no restatement of the comparative periods presented.

For both health care services revenue and health care products revenue, patients, third party payors and customers are billed at our standard rates net of contractual allowances, discounts or rebates to reflect the estimated amounts to be receivable from these payors.

Health care services

Health care services revenue, other than the hospitalist and insurance revenues discussed below, are recognized on the date the patient receives treatment and includes amounts related to certain services, products and supplies utilized in providing such treatment. The patient is obligated to pay for health care services at amounts estimated to be receivable based upon the Company's standard rates or at rates determined under reimbursement arrangements. In the U.S., these arrangements are generally with third party payors, such as Medicare, Medicaid or commercial insurers. Outside the U.S., the reimbursement is usually made through national or local government programs with reimbursement rates established by statute or regulation.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

In the U.S., hospitalist revenues are reported at the estimated net realizable amount from third-party payors, client hospitals, and others at the time services are provided. Third-party payors include federal and state agencies (under the Medicare and Medicaid programs), managed care health plans, and commercial insurance companies. Inpatient acute care services rendered to Medicare and Medicaid program beneficiaries are paid according to a fee-for-service schedule. These rates vary according to a patient classification system that is based on clinical, diagnostic and other factors. Inpatient acute services generated through payment arrangements with managed care health plans and commercial insurance companies are recorded on an accrual basis in the period in which services are provided at established rates.

For services performed for patients where the collection of the billed amount or a portion of the billed amount cannot be determined at the time services are performed the Company 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, whereas prior to the adoption of IFRS 15 it was recorded as part of selling, general and administrative expenses as an allowance for doubtful accounts. Implicit price concessions include such items as amounts due from patients without adequate insurance coverage, patient co-payment and deductible amounts due from patients with health care coverage. The Company determines implicit price concessions primarily upon past collection history.

In the U.S., the Company generates revenue from insurance contracts in accordance with IFRS 4, Insurance Contracts ("IFRS 4"). Insurance premium revenue is recognized as earned each month and risk adjustments are offset against revenue. In the U.S the Company provides Medicare Advantage ESRD Chronic Conditions Special Needs Plan products. These are Medicare Advantage health plans offered by the Company that contract with the Centers for Medicare and Medicaid Services ("CMS") to provide patients with Medicare benefits and receive capitated payments from CMS. Furthermore, the Company has also entered into sub-capitation and other shared savings arrangements with certain payors.

Revenue from insurance contracts is disclosed as part of "Other revenue" separately from "Revenue from contracts with customers" in the notes to the consolidated financial statements.

Health care products

In the health care product business, major revenues are generated from the sale of dialysis machines and water treatment systems, disposable products and maintenance agreements for the Company's health care products. Revenues from the sale of dialysis machines and water treatment system are typically recognized upon installation and provision of the necessary technical instructions as only thereafter the customer obtains control of the medical device whereas prior to the adoption of IFRS 15 revenues were recorded upon transfer of title to the customer, either at the time of shipment, upon receipt or upon any other terms that clearly define passage of title. A small portion of the Company's revenue is recognized from sales of dialysis machines to distributors. When the distributor is the principal in the contract, the revenue allocated to the machine will be recognized upon transfer of title to the installation, revenue allocated to the installation would be recorded separately upon installation of the machine at the end-customers' premises. In case the distributor is only an agent in the contract, revenue for sale of the machine would be recorded upon installation.

Under consignment arrangements revenue is recognized upon withdrawal of the products by the customer.

Maintenance is provided over time, and as such revenue is typically recognized on a straight-line basis.

All other dialysis and non-dialysis product revenues are recognized upon transfer of title to the customer. Product revenues are normally based upon pre-determined rates that are established by contractual arrangement.

A portion of dialysis product revenues is generated from arrangements which give the customer, typically a healthcare provider, the right to use dialysis machines. In the same contract the customer agrees to purchase the related treatment disposables at a price marked up from the standard price list. If the right to use the machine is conveyed through an operating lease and the customer agrees to purchase a minimum

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

number of related treatment disposables, FMC-AG & Co. KGaA does not recognize revenue upon delivery of the dialysis machine but recognizes revenue on the sale of disposables upon transfer of control with revenue for the use of dialysis machines recognized straight-line over the term of the lease contract. When there is no such agreement that the customer purchases a minimum number of related treatment disposables, revenue is recognized only on the sale of disposables unless the timing of the first purchase order of related treatment disposables justifies a combination of contracts according to IFRS 15.

If the lease of the machines is a finance lease, ownership of the dialysis machine is transferred to the user upon installation of the dialysis machine at the customer site. In this type of contract, revenue is recognized in accordance with the accounting principles for finance leases.

IFRS 15 specifically excludes leases from the scope of the revenue standard. Therefore, 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.

Revenue from lease contracts is disclosed as part of "Other revenue" separately from "Revenue from contracts with customers" in the notes to the consolidated financial statements.

k) Capitalized interest

The Company 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, 2017 and 2016, interest of \notin 5,724, \notin 4,758 and \notin 4,475, based on an average interest rate of 4.03%, 4.19% and 4.64%, respectively, was recognized as a component of the cost of assets.

I) Research and development expenses

Research is the original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge. Development is the technical and commercial implementation of research results and takes place before the start of commercial production or use. Research costs are expensed as incurred. Development costs that fully meet the criteria for the recognition of an intangible asset set out in IAS 38, Intangible Assets ("IAS 38") are capitalized as intangible asset.

m) Income taxes

Current taxes are calculated based on the profit (loss) 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 tax consequences attributable to temporary differences between the single entity's financial statement carrying amounts of existing assets and liabilities and their respective tax basis, tax credits and tax loss carryforwards which are probable to be utilized. 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.

Deferred tax liabilities are not recognized if they arise from the initial recognition of goodwill. In addition, deferred tax assets and liabilities are not recognized if they arise from the initial recognition of an asset or a liability in a transaction other than a business combination that at the time of the transaction affects neither accounting profit nor taxable profit or loss.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The carrying amount of a deferred tax asset is reviewed at each balance sheet date. A deferred tax asset is recognized to the extent that the utilization of parts or all of it is probable because sufficient taxable profit will be available (see note 4 h). The determination of future taxable income is based on assumptions on future market conditions and future profits of FMC-AG & Co. KGaA and considers all currently available information as well as the level of historical taxable income. In addition, the determination of the recoverable amount of deferred tax assets considers implemented tax strategies.

The Company 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.

In North America and Germany, interest and penalties related to income taxes, including uncertain tax treatments, do not meet the definition of income taxes, and therefore are accounted for under IAS 37. All other jurisdictions account for interest and penalties related to income taxes in accordance with local tax rules of the respective tax jurisdiction either under IAS 37 or as income tax expense under IAS 12.

n) Impairment

The Company reviews the carrying amount of its property, plant and equipment, its intangible assets with definite useful lives as well as other non-current assets for impairment whenever events or changes in circumstances indicate that the carrying amount is higher than the asset's net realizable value or its value in use in accordance with IAS 36, Impairment of Assets ("IAS 36"). 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 CGUs.

Impairment losses, except impairment losses recognized on goodwill, are reversed up to the amount of the amortised acquisition cost, as soon as the reasons for impairment no longer exist.

Long-lived assets to be disposed of by sale are reported at the lower of carrying value or fair value less cost to sell and depreciation is ceased. Long-lived assets to be disposed of other than by sale are considered to be held and used until disposal.

o) Debt issuance costs

Debt issuance costs related to a recognized debt liability are presented on the balance sheet as a direct deduction from the carrying amount of that debt liability. These costs are amortized over the term of the related obligation (see note 14).

p) Self-insurance programs

See note 2 d).

q) Concentration of risk

The Company is engaged in the manufacture and sale of products for all forms of kidney dialysis, principally to healthcare providers throughout the world, and in providing kidney dialysis treatment. The Company also provides additional health care services under Care Coordination. The Company performs ongoing evaluations of its customers' financial condition and, generally, requires no collateral.

Revenues which were earned and subject to regulations under Medicare and Medicaid, governmental healthcare programs administered by the United States government, were approximately 33%, 34%, and 33% of the Company's worldwide revenues in 2018, 2017 and 2016, respectively.

See note 2 c) for concentration risks of debtors or group of debtors as well as note 8 for discussion of suppliers with long-term purchase commitments.

r) Legal contingencies

See note 2 b).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

s) Other provisions

In accordance with IAS 12 and IAS 37, 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 required amount can be reliably estimated. Provisions by their nature are more uncertain than most other items in the statement of financial position.

Tax accruals include obligations for the current year and for prior periods.

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.

t) Earnings per share

Basic earnings per share is calculated in accordance with IAS 33, Earnings per Share ("IAS 33"). Basic earnings per share is calculated by dividing net income attributable to shareholders by the weighted average number of shares outstanding during the year. Diluted earnings per share include the effect of all potentially dilutive instruments on shares that would have been outstanding during the years presented had the dilutive instruments been issued.

Equity-settled awards granted under the Company's stock incentive plans (see note 20), are potentially dilutive equity instruments.

u) Treasury stock

The Company may, from time to time, acquire its own shares ("Treasury Stock") as approved by its shareholders. The acquisition, sale or retirement of its Treasury Stock is recorded separately in equity. For the calculation of basic earnings per share, treasury stock is not considered outstanding and is therefore deducted from the number of shares outstanding with the value of such Treasury Stock shown as a reduction of the Company's equity.

v) Employee benefit plans

Pension obligations for post-employment benefits are measured in accordance with IAS 19 (revised 2011), Employee Benefits ("IAS 19"), using the projected unit credit method, taking into account future salary and trends for pension increase.

The Company uses December 31 as the measurement date when measuring the funded status of all plans.

For the Company's funded benefit plans the defined benefit obligation is offset against the fair value of plan assets (funded status). A pension liability is recognized in the consolidated balance sheet if the defined benefit obligation exceeds the fair value of plan assets. A pension asset is recognized (and reported under "Other non-current assets" in the consolidated balance sheet) if the fair value of plan assets exceeds the defined benefit obligation and if the Company has a right of reimbursement against the fund or a right to reduce future payments to the fund.

Net interest costs are calculated by multiplying the benefit obligation (fair value of plan assets) at beginning of the year with the discount rate utilized in determining the benefit obligation.

Remeasurements include actuarial gains and losses resulting from the evaluation of the defined benefit obligation as well as from the difference between actual investment returns and the return implied by the net interest cost. 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 AOCI 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

w) Share-based plans

The grant date fair value of stock options and convertible equity instruments that are settled by delivering equity-instruments granted to the Management Board and executive employees of the Group entities by FMC-AG & Co. KGaA is measured in accordance with IFRS 2, Share-based Payments ("IFRS 2") using the binominal option pricing model and recognized as expense over the vesting period of the stock option plans. For certain exceptions a shorter vesting period may apply after which the stock options will not forfeit in any way. In such cases the vesting period is shortened accordingly.

The balance sheet date fair value of cash-settled phantom stocks granted to the Management Board and executive employees of the Company is calculated in accordance with IFRS 2 using the binominal option pricing model. The corresponding liability based on the balance sheet date fair value is accrued over the vesting period of the phantom stock plans. For certain exceptions a shorter vesting period may apply after which the phantom stocks will not forfeit in any way. In such cases the vesting period is shortened accordingly.

The balance sheet date fair value of cash-settled performance shares granted to the Management Board and executive employees of the Company is calculated using the Monte Carlo pricing model in accordance with IFRS 2. The corresponding liability based on the balance sheet date fair value is accrued over the vesting period of the performance share plan. For certain exceptions a shorter vesting period may apply after which the performance shares will not forfeit in any way. In such cases the vesting period is shortened accordingly.

x) Recent pronouncements

Recently implemented accounting pronouncements

The Company 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 Company applied the following new standard relevant for its business for the first time:

- IFRS 15
- IFRS 9

IFRS 15

The Company adopted IFRS 15, as issued in May 2014, with the effective date of January 1, 2018. While this standard applies to nearly all contracts with customers, the main exceptions are leases, financial instruments and insurance contracts. In accordance with the transition provisions in IFRS 15 the new rules were only adopted for those contracts that are not completed contracts as of January 1, 2018 following the cumulative effect method with no restatement of the comparative periods presented.

The major changes in the Company's accounting policies resulting from the implementation of IFRS 15 are summarized below:

Health care services

For services performed for patients where the collection of the billed amount or a portion of the billed amount cannot be determined at the time services are performed, the Company 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, whereas prior to the adoption of IFRS 15 it was recorded as part of selling, general and administrative expenses as an allowance for doubtful accounts. Implicit price concessions include such items as amounts due from patients without adequate insurance coverage, patient co-payment and deductible amounts due from patients with health care coverage. The Company determines implicit price concessions primarily upon past collection history.

IFRS 15 requires the consideration of implicit price concessions when determining the transaction price which, through adoption, resulted in the implicit price concessions directly reducing revenue in the amount

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

of \notin 468,214 in 2018. Prior to the adoption of IFRS 15, implicit price concessions were included as part of selling, general and administrative expenses as an allowance for doubtful accounts in the amount of \notin 486,140 in 2017. There is no effect on net income as the implicit price concessions are merely presented in different lines within the consolidated statements of income.

Health care products

In the health care product business, major revenues are generated from the sale of dialysis machines and water treatment systems, disposable products and maintenance agreements for the Company's health care products. With the adoption of IFRS 15, revenues from the sale of dialysis machines and water treatment systems are typically recognized upon installation and provision of the necessary technical instructions as only thereafter does the customer obtain control of the medical device. Prior to the adoption of IFRS 15 revenues were recorded upon transfer of title to the customer, either at the time of shipment, upon receipt or upon any other terms that clearly define passage of title.

A portion of dialysis product revenues is generated from arrangements which give the customer, typically a health care provider, the right to use dialysis machines. IFRS 15 specifically excludes leases from the scope of the revenue standard. As a result, 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.

As of December 31, 2018, there are no contract assets and an immaterial amount of contract liabilities resulting from the implementation of IFRS 15. Contract liabilities are shown in the consolidated balance sheet in line item "Current provisions and other current liabilities".

See note 1 j) for more information on revenue recognition.

IFRS 9

The Company has adopted IFRS 9, with the effective date of January 1, 2018. IFRS 9 was issued in July 2014 and mainly replaced IAS 39. Additionally, the Company has adopted the related amendments to IFRS 7, Financial instruments: disclosures ("IFRS 7").

The major changes in the Company's accounting policies resulting from the implementation of IFRS 9 are summarised below:

Classification and measurement of financial assets and financial liabilities

IFRS 9 defined the following three categories for financial assets: measured at amortized cost, measured at FVOCI and measured at FVPL. The classification depends on the business model that the financial assets are managed in and the contractual terms of the cash flows of the financial assets. IFRS 9 eliminated the following categories that were applicable for the Company under IAS 39: loans and receivables and available for sale financial assets.

The requirements for the classification and measurement of financial liabilities have not changed significantly. Consequently, the implementation of IFRS 9 does not have a material impact on the Company's accounting policies for financial liabilities. See note 1 g) for more information on financial assets and financial liabilities.

Impairment of financial assets

Under the incurred loss model of IAS 39, an allowance was recorded once a loss event occurred. An additional allowance was recorded based on individual country risk for receivables overdue by more than one year. IFRS 9 replaces the incurred loss model under IAS 39 with an expected credit loss approach. Under IFRS 9, generally all impacted financial assets will carry a loss allowance based on their expected credit losses. See Note 1 h) for more information on the expected credit loss approach.

FRESENIUS MEDICAL CARE AG & Co. KGaA NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Hedge accounting

The Company implemented the IFRS 9 hedge accounting model. The new model allows for improved alignment of hedge accounting with risk management strategies and objectives. The Company applies cash flow hedge accounting mainly for the purpose of hedging forecasted transactions relating to inventory purchases and sales. To hedge the resulting foreign currency exposure, the Company generally enters into foreign exchange forward contracts. With the application of IFRS 9, only the effective fair value changes of the spot component of these contracts are designated as hedging instruments and accounted for in OCI. Forward points are recognized and accumulated in a separate component within OCI. Under IAS 39, the fair value changes of both the spot and forward component were designated as hedging instrument, and recognized in AOCI. Under IAS 39 accumulated amounts related to cash flow hedges were reclassified to profit or loss in the same period as the hedged forecasted transaction affected profit or loss. Under IFRS 9, accumulated amounts in OCI for cash flow hedges of foreign exchange risk in relation to hedged forecasted product purchases from third party are directly included in the initial cost of the asset when it is recognized.

Recent accounting pronouncements not yet adopted

The IASB issued the following new standards which are relevant for the Company:

- IFRS 16, Leases ("IFRS 16")
- IFRS 17, Insurance Contracts ("IFRS 17")

IFRS 16

In January 2016, the IASB issued IFRS 16, which supersedes the current standard on lease-accounting, IAS 17, as well as the interpretations IFRIC 4, Determining whether an arrangement contains a lease, Standing Interpretations Committee ("SIC")-15, Operating leases - incentives and SIC-27, Evaluating the substance of transactions in the legal form of a lease. 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 twelve 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. 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. The Company decided that IFRS 16 will not be adopted early. The Company 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 analysis conducted as part of the group-wide project on initial application, applying the options and exemptions detailed below, the Company expects that as of January 1, 2019 right-of-use assets of approximately \notin 4,200,000 and additional lease liabilities of approximately \notin 4,500,000 will be presented on the consolidated balance sheet. The company expects an improvement of approximately \notin 130,000 in operating income excluding effects related to changes in the accounting treatment of sale-leaseback transactions.

The Company also expects that its net leverage ratio (debt less cash and cash equivalents (net debt) as compared to EBITDA, adjusted for acquisitions and divestitures made during the year with a purchase price above a €50,000 threshold as defined in the Amended 2012 Credit Agreement and non-cash charges) as of January 1, 2019 will increase by about approximately 0.8.

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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The Company 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 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 Company 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 Company 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 balance sheet immediately before the date of initial application.

Right-of-use assets from lease contracts are classified in accordance with the 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 balance sheet.

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.

IFRS 17

In May 2017, the IASB issued IFRS 17. IFRS 17 establishes principles for the recognition, measurement, presentation and disclosure related to the issuance of insurance contracts. IFRS 17 replaces IFRS 4, which was brought in as an interim standard in 2004. IFRS 4 permitted the use of national accounting standards for the accounting of insurance contracts under IFRS. As a result of the varied application for insurance contracts there was a lack of comparability among peer groups. IFRS 17 eliminates this diversity in practice by requiring all insurance contracts to be accounted for using current values. The frequent updates to the insurance values are expected to provide more useful information to users of financial statements. IFRS 17 is effective for fiscal years beginning on or after January 1, 2021. Earlier adoption is permitted for entities

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

that have also adopted IFRS 9 and IFRS 15. The Company is evaluating the impact of IFRS 17 on the consolidated financial statements.

In the Company's view, all other pronouncements issued by the IASB do not have a material impact on the consolidated financial statements, as expected.

2. Discretionary decisions and sources of estimation uncertainties

The Company's reported results of operations, financial position and net assets are sensitive to discretionary decisions, assumptions and estimates that are the basis for its financial statements. The critical accounting policies, the judgements made in the creation and application of these policies and the sensitivities of reported results to changes in accounting policies, discretionary decisions and estimates are factors to be considered along with the Company's financial statements. In the opinion of the Management of the Company, the following accounting policies, discretionary decisions and sources of estimation uncertainties are critical for the consolidated financial statements in the present economic environment.

a) Recoverability of goodwill and intangible assets

The growth of the business through acquisitions has created a significant amount of intangible assets, including goodwill, trade names, management contracts, non-compete agreements, customer relationships and distribution agreements. At December 31, 2018, the carrying amount of goodwill and non-amortizable intangible assets amounted to $\notin 12,395,641$ ($\notin 12,281,648$ at December 31, 2017) representing approximately 47% and 51% of the Company's total assets at December 31, 2018 and 2017, respectively.

In accordance with IAS 36, the Company performs an impairment test of goodwill and non-amortizable intangible assets at least once a year for each cash-generating unit or more frequently if the Company becomes aware of events that occur or if circumstances change that would indicate the carrying value may not be recoverable (see also note 1 f).

To comply with IFRS to determine possible impairments of these assets, the value in use of the CGUs is first compared to the CGUs' 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 future cash flows involves significant assumptions, especially regarding future reimbursement rates and sales prices, number of treatments, sales volumes and costs. The key assumptions represent management's assessment of future trends and have been based on historical data from both external and internal sources. In determining discounted cash flows, the Company utilizes for every CGU its three-year budget, projections for years four to ten and a representative growth rate for all remaining years. Projections for up to ten years are possible due to the non-discretionary nature of the health care services the Company provides, the need for health care products utilized to provide such services and the availability of government reimbursement for a substantial portion of its services.

The CGU's average revenue growth for the ten-year planning period is within a mid-single-digit range for the North America Segment, EMEA Segment and the Latin America Segment, whereas for the Asia-Pacific Segment the average revenue growth is in the high single-digits.

A substantial portion of the Company's profit is generated in North America. The Company expects a stable operating income margin with a higher margin in dialysis business compensating a lower margin in Care Coordination.

The CGU's expected growth rates for the period beyond ten years are: North America 1.0%, EMEA 1.0%, Asia-Pacific 4.0% and Latin America 3.45%. The discount factor is determined by the WACC of the respective CGU. The Company's WACC consists of a basic rate adjusted by a weighted average country risk rate and, if appropriate, by a factor to reflect higher risks associated with the cash flows from recent material acquisitions within each CGU, until they are appropriately integrated. In 2018, the pre-tax WACC, for the respective CGU is 7.42% (2017: 7.30%) for North America, 9.46% (2017: 9.43%) for EMEA, 7.81% (2017: 7.58%) for Asia Pacific and 16.75% (2017: 18.31%) for Latin America. An overview

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

of the carrying amounts of goodwill and intangibles with indefinite useful life for each CGU is shown in note 11.

To evaluate the recoverability of intangible assets with indefinite useful lives, the Company compares the fair values of intangible assets with their carrying values and intangible asset's fair value is determined using a discounted cash flow approach or other methods, if appropriate.

A prolonged downturn in the health care industry with lower than expected increases in reimbursement rates and/or higher than expected costs for providing health care services and for procuring and selling health care products could adversely affect the Company's estimated future cash flows. Future adverse changes in a cash-generating unit's economic environment of a CGU could affect the country specific risk rate and therefore the discount rate. Equally an increase of the general interest rate level could affect the base rate and therefore the discount rate. A decrease in the estimated future cash flows and/or a decline in the cash-generating units economic environment could result in impairment charges to goodwill and other intangible assets with indefinite useful life which could materially and adversely affect the Company's future financial position and operating results.

In 2018, the recoverable amount of Latin America exceeds the carrying amount by €23,985. Sensitivity analysis showed that a rise in the pre-tax WACC by 0.27 percentage points, that could be caused by an increase in the Company's beta factor or an increase in the risk-free interest rate, would lead to a recoverable amount of the CGU Latin America to be equal to the carrying amount. The operating income margin of the CGU Latin America must decrease by 0.32 percentage points each year in order for the recoverable amount of Latin America to be equal to the carrying amount. The growth rate of the residual value of the CGU Latin America must decrease by 0.47 percentage points in order for the recoverable amount of Latin America to be equal to the carrying amount.

b) Legal contingencies

From time to time, during the ordinary course of operations, the Company is party to litigation and arbitration and is subject to investigations relating to various aspects of its business (see note 22). The Company 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 Company utilizes its internal legal department as well as external resources for these assessments. In making the decision regarding the need for loss accrual, the Company 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.

The outcome of these matters may have a material effect on the results of operations, financial position and net assets of the Company.

c) Trade accounts and other receivables and allowance for doubtful accounts

Trade accounts and other receivables are a substantial asset of the Company and the allowance for doubtful accounts is based upon a significant estimate made by management. Trade accounts and other receivables were $\in 3,337,706$ and $\in 3,389,326$ at December 31, 2018 and 2017, respectively, net of allowances for doubtful accounts of $\notin 118,015$ at December 31, 2018 and $\notin 474,891$ at December 31, 2017.

The Company sells health care products directly or through distributors in around 150 countries and provide health care services in around 50 countries. Most payors are government institutions or government-sponsored programs with significant variations between the countries and even between payors within one country in local payment and collection practices.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Receivables resulting from health care services are recognized and billed at amounts estimated to be collectable under government reimbursement programs and reimbursement arrangements with third party payors. U.S. Medicare and Medicaid government programs are billed at pre-determined net realizable rates per treatment that are established by statute or regulation. Revenues for non-governmental payors with which the Company has contracts or letters of agreement in place are recognized at the prevailing contract rates. The remaining non-governmental payors are billed at the Company's standard rates for services and, in the Company's North America segment, a contractual adjustment is recorded to recognize revenues based on historic reimbursement. The contractual adjustment and the allowance for doubtful accounts are reviewed quarterly for their adequacy. No material changes in estimates were recorded for the contractual allowance in the periods presented. The collectability of receivables is reviewed locally on a regular basis, generally monthly.

In the Company's North America Segment operations, the collection process is usually initiated 30 days after service is provided or upon the expiration of the time provided by contract. For Medicare and Medicaid, once the services are approved for payment, the collection process begins upon the expiration of a period of time based upon experience with Medicare and Medicaid. In all cases where co-payment is required the collection process usually begins within 30 days after service has been provided. In those cases where claims are approved for amounts less than anticipated or if claims are denied, the collection process usually begins upon notice of approval of the lesser amounts or upon denial of the claim. The collection process can be confined to internal efforts, including the accounting and sales staffs and, where appropriate, local management staff. If appropriate, external collection agencies may be engaged.

Public health institutions in a number of countries outside the U.S. require a significant amount of time until payment is made because a substantial number of payors are government entities whose payments are often determined by local laws and regulations and budget constraints. Depending on local facts and circumstances, the period of time to collect can be quite lengthy. In those instances where there are commercial payors, the same type of collection process is initiated as in the North America Segment.

Due to the number of subsidiaries and different countries that the Company operates in, the Company's policy of determining when an individual allowance is required considers the appropriate individual local facts and circumstances that apply to an account. While payment and collection practices vary significantly between countries and even agencies within one country, government payors usually represent low to moderate credit risks. It is the Company's policy to determine when receivables should be classified as bad debt on a local basis taking into account local payment practices and local collection experience. An individual allowance is calculated locally if specific circumstances indicate that amounts will not be collectible.

Receivables where the expected credit loss are not assessed individually are grouped based on geographical regions and the impairment is assessed based on macroeconomic indicators such as credit default swaps. For more information regarding the impairment on trade accounts and other receivables please refer to note 1 h).

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.

Write offs are taken on a claim-by-claim basis. Due to the fact that a large portion of its reimbursement is provided by public health care organizations and private insurers, the Company expects that most of its accounts receivables will be collectible, albeit potentially more slowly outside the North America Segment. A significant change in the Company's collection experience, deterioration in the aging of receivables and collection difficulties could require that the Company increases its estimate of the allowance for doubtful accounts. Any such additional bad debt charges could materially and adversely affect the Company's future operating results.

If, in addition to the Company's existing allowances, 1% of the gross amount of the Company's trade accounts receivable as of December 31, 2018 were uncollectible through either a change in the Company's

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

estimated contractual adjustment or revised estimate of the collectability, the Company's operating income for 2018 would have been reduced by approximately 1.1%.

The following table shows the portion of major debtors or debtor groups of trade accounts and other receivables as at December 31, 2018 and 2017. No single debtor, other than U.S. Medicare and Medicaid, accounted for more than 5% of total trade accounts and other receivables in any of these years. Amounts pending approval from third party payors represented less than 3% of the accounts receivable at December 31, 2018.

Composition of trade accounts and other receivables

	December 31,	
	2018	2017
U.S. Government health care programs	33%	28%
U.S. commercial payors	14%	14%
U.S. hospitals	5%	11%
Self-pay of U.S. patients	2%	1%
Other North America segment payors	3%	2%
Product customers and health care payors outside the North America Segment	43%	44%
Total	100%	100%

d) Self-insurance programs

Under the Company's insurance programs for professional, product and general liability, auto liability, worker's compensation and medical malpractice claims, the Company's largest subsidiary which is located in the U.S. is partially self-insured for professional liability claims. For all other coverages, the Company 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.

e) Noncontrolling interests subject to put provisions

The noncontrolling interests subject to put provisions are recognized at their fair value. For further information related to the estimation of these fair values, see notes 1 g) and 23.

f) Variable payments outstanding for acquisitions

Variable payments outstanding for acquisitions are recognized at their fair value. For further information related to the estimation of these fair values, see note 23.

g) Income taxes

The Company is subject to ongoing and future tax audits in the U.S., 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 provisions 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 revised in the period in which there is sufficient evidence to revise the assumption. For further information to estimates related to the recoverability of deferred taxes, see note 1 m).

3. Acquisitions, investments, purchases of intangible assets and divestitures

The Company completed acquisitions, investments and the purchase of intangible assets in the amount of €956,803, €682,676 and €774,277 in 2018, 2017 and 2016, respectively. In 2018, €925,267 was paid in cash and €31,536 were assumed obligations and non-cash consideration. In 2017, €565,694 was paid in cash and

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

€116,982 were assumed obligations and non-cash consideration. In 2016, €521,800 was paid in cash and €252,477 were assumed obligations and non-cash consideration.

Acquisitions

The Company made acquisitions of $\notin 280,643$, $\notin 638,307$ and $\notin 632,342$ in 2018, 2017 and 2016, respectively in order to expand the scope of its services and to increase its market shares in the respective countries. In 2018, $\notin 249,965$ was paid in cash and $\notin 30,678$ were assumed obligations and non-cash consideration. In 2017, $\notin 521,325$ was paid in cash and $\notin 116,982$ were assumed obligations and non-cash consideration. In 2016, $\notin 379,865$ was paid in cash and $\notin 252,477$ were assumed obligations and non-cash consideration.

The Company's acquisition spending was driven primarily by the purchase of dialysis clinics in the normal course of its operations in 2018, 2017 and 2016 as well as the acquisition of an operator of day hospitals in Australia in 2017 and the purchase of a medical technology company focusing on the treatment of lung and cardiac failure in 2016.

Impacts on consolidated financial statements from acquisitions

The assets and liabilities of all acquisitions were recorded at their estimated fair value at the date of the acquisition and are included in the Company's financial statements and operating results from the effective date of acquisition. The previous year's acquisitions did not have a significant impact on the consolidated financial statements in 2018.

The excess of the total acquisition costs over the fair value of the net assets acquired resulted in goodwill of €328,702 and €651,491 at December 31, 2018 and 2017, respectively.

The purchase price allocations for all collectively and individually non-material acquisitions for 2018 are not yet finalized. The Company is in the process of obtaining and evaluating the information necessary for the purchase price allocations, primarily related to property, plant and equipment, intangible assets, accounts receivable and other liabilities. In 2018, based on preliminary purchase price allocations, the Company recorded €328,702 of goodwill and €12,368 of intangible assets, which represent the share of both controlling and noncontrolling interests. Goodwill arose principally due to the fair value of the established streams of future cash flows for these acquisitions versus building similar franchises.

Business combinations during 2018 increased the Company's net income (net income attributable to shareholders of FMC-AG & Co. KGaA) by €2,434, excluding the costs of the acquisitions, and revenue increased by €59,452. Total assets increased €360,375 due to business combinations.

Investments and purchases of intangible assets

Investments and purchases of intangible assets were $\notin 676,160, \notin 44,369$ and $\notin 141,935$ in 2018, 2017 and 2016, respectively. These amounts were primarily driven by investments in securities and an equity investment in Humacyte, a medical research, discovery and development company, to gain a 19% fully diluted ownership stake as well as a related exclusive global distribution right to Humacyte's bioengineered human acellular vessels in 2018, as well as purchases of intangible assets and an investment in securities in 2017, and an investment in securities and notes receivables related to an equity method investee in 2016. Of this amount $\notin 675,302, \notin 44,369$ and $\notin 141,935$ were paid in cash in 2018, 2017 and 2016, respectively.

Divestitures

Proceeds from divestitures were $\notin 1,683,292, \notin 437,031$ and $\notin 193,893$ in 2018, 2017 and 2016, respectively. These amounts mainly related to the divestiture of the controlling interest in Sound Inpatient Physicians, Inc. ("Sound") (see notes 4 c) and 25) as well as divestitures of securities in 2018, the sale of a provider of non-dialysis laboratory testing services and a provider of outsourced clinical services in the North America Segment, divestitures of securities in 2017, a divestment of securities and the repayment of notes receivables related to an equity method investee in 2016. In 2018, $\notin 1,682,975$ was received in cash and $\notin 317$ were non-cash components. In 2017, $\notin 415,388$ was received in cash and $\notin 21,643$ were non-cash components. In 2016, $\notin 190,247$ was received in cash and $\notin 3,646$ were non-cash components.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

4. Notes to the consolidated statements of income

a) Revenue

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The Company has recognized the following revenue in the consolidated statement of income for the year ended December 31, 2018:

Revenue in € THOUS			
In € THOUS		2018	
	Revenue from contracts with customers	Other revenue	Total
Health care services			
Dialysis services	11,420,415		11,420,415
Care Coordination	1,622,862	221,012	1,843,874
	13,043,277	221,012	13,264,289
Health care products			
Dialysis products	3,115,753	93,068	3,208,821
Non-dialysis products	73,763	, <u> </u>	73,763
	3,189,516	93,068	3,282,584
Total	16,232,793	314,080	16,546,873

The Company has recognized the following amounts as receivables and contract liabilities relating to contracts with customers for the year ended December 31, 2018:

Trade accounts receivables and contract liabilities

in € THOUS	
	2018
Trade accounts receivables	3,284,712
Contract liabilities	37,632

Impairment losses in the amount of €16,981 relate to receivables arising from contracts with customers.

Contract liabilities primarily relate to advance payments from customers and to sales of dialysis machines where revenue is recognized upon installation and provision of the necessary technical instructions whereas a receivable is recognized once the machine is billed to the customer.

Contract liabilities are shown in the consolidated balance sheet in line item "Current provisions and other current liabilities".

At December 31, 2018, performance obligations of €1,157,314 are unsatisfied (or partially unsatisfied).

Expected recognition of the transaction price allocated to unsatisfied performance obligations as revenue for the next five years and in the aggregate for the five years thereafter are as follows:

in € THOUS	
1 year	286,003
1 - 3 years	435,325
3 - 5 years	
5 - 10 years	
Total	1,157,314

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

b) Selling, general and administrative expenses

Selling, general and administrative expenses are generated in the administrative, logistic and selling functions which are not attributable to production or research and development. In addition, general and administrative expenses included realized and unrealized foreign exchange gains and losses. In 2018, general and administrative expenses included a Foreign Corrupt Practices Act ("FCPA") related charge of \notin 77,200 (see note 22), an impairment loss on intangible assets and goodwill of \notin 64,719, a net gain from the revaluation of variable payments outstanding for acquisitions of \notin 36,327, a net gain from the sale of fixed assets of \notin 6,041 and a net loss from the sale of investments of \notin 7,938. In 2017, general and administrative expenses included a FCPA related charge of \notin 200,000 (see note 22), a net gain from the sale of fixed assets of \notin 31,959, a net gain from the sale of investments of \notin 36,402 and a net gain from the revaluation of variable payments outstanding for acquisitions of \notin 2,685. In 2016, general and administrative expenses included a net loss from the sale of fixed assets of \notin 11,074, a net gain from the sale of investments of \notin 2,912 and a net loss from the revaluation of variable payments outstanding for acquisitions of \notin 2,085. In 2016, general and administrative expenses included a net loss from the sale of fixed assets of \notin 11,074, a net gain from the sale of investments of \notin 2,912 and a net loss from the revaluation of variable payments outstanding for acquisitions of \notin 2,912 and a net loss from the revaluation of variable payments outstanding for acquisitions of #2,912.

c) (Gain) loss related to divestitures of Care Coordination activities

On April 20, 2018, the Company signed a definitive agreement to divest its controlling interest in Sound to an investment consortium led by Summit Partners, L.P., ("Summit Consortium"). Upon receipt of the required regulatory approvals under the Hart-Scott-Rodino Antitrust Improvements Acts of 1976, as amended, and the satisfaction of customary closing conditions, the divestiture was consummated on June 28, 2018. The total transaction proceeds were 1,770,516 (1,531,109), net of related tax payments. The pre-tax gain related to divestitures for Care Coordination activities was 809,003, 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. Sound was included in Care Coordination within the North America Segment. The Company's history with Sound, prior to divestment, includes the following milestones:

- In July 2014, the Company made an investment for a majority interest in Sound, a physician services organization focused on hospitalist, emergency, intensivist and post-acute care services, furthering its strategic investments and expanding the health care services we offer.
- In November 2014, Sound acquired Cogent Healthcare, expanding Sound to serve over 180 hospitals in 35 states with more than 1,750 providers.
- In 2017, the Company increased its interest in Sound raising the Company majority interest to almost 100% during the first half of 2017.

d) Research and development expenses

Research and development expenses of $\in 133,615$ (2017: $\in 130,704$ and 2016: $\in 146,511$) included research and non-capitalizable development costs as well as depreciation and amortization expenses related to capitalized development costs of $\in 341$ (2017: $\notin 432$ and 2016: $\notin 724$).

e) Cost of materials

The cost of materials for the year ended December 31, 2018, 2017 and 2016 consisted of the following:

Cost of materials			
in € THOUS	2018	2017	2016
Cost of raw materials, supplies and purchased components Cost of purchased services		4,305,683 450,417	3,696,528 414,289
Cost of materials		4,756,100	4,110,817

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

f) Personnel expenses

Included within costs of revenue, selling, general and administrative expenses and research and development expenses are personnel expenses in the amount of $\notin 6,439,653$, $\notin 6,900,023$ and $\notin 6,290,504$ for the year ended December 31, 2018, 2017 and 2016, respectively. Personnel expenses consisted of the following:

2018	2017	2016
5,025,128	5,396,339	4,940,931
1,414,525	1,503,684	1,349,573
156,581	147,332	134,572
6,439,653	6,900,023	6,290,504
	5,025,128 1,414,525 156,581	5,025,128 5,396,339 1,414,525 1,503,684 156,581 147,332

The Company employed the following personnel on a full-time equivalents basis, on average, for the following years:

Employees by function

	2018	2017	2016
Production and Services	97,971	98,547	94,201
Administration	10,510	9,962	9,318
Sales and Marketing	3,360	3,272	3,099
Research and Development	881	804	736
Total employees	112,722	112,585	107,354

g) Net interest

Net interest in the amount of $\notin 301,062$ (2017: $\notin 364,824$ and 2016: $\notin 363,408$) included interest expense of $\notin 448,471$ (2017: $\notin 416,199$ and 2016: $\notin 426,809$) and interest income of $\notin 147,409$ (2017: $\notin 51,375$ and 2016: $\notin 63,401$). Interest expenses resulted mainly from the Company's financial liabilities which are not accounted for at fair value through profit and loss (see note 13 and note 14) and interest expense related to uncertain tax treatments. In 2018, interest income primarily results from the valuation of the derivatives embedded in the equity-neutral convertible bonds ("Convertible Bonds"), interest on overdue receivables and lease receivables as well as interest related to uncertain tax treatments. In 2017, interest income vas mainly attributable to the valuation of the Share Options, interest on overdue receivables and lease receivables as well as interest income related to uncertain tax treatment. In 2016, a large part of interest income vas attributable to interest income related to uncertain tax treatment as well as the valuation of the derivatives embedded in the Convertible Bonds (see note 23).

h) Income taxes

Income before income taxes is attributable to the following geographic locations:

Income before income taxes			
in € THOUS	2018	2017	2016
Germany	161,861	(20,363)	194,068
United Štates	2,191,834	1,589,501	1,491,059
Other	383,041	428,477	360,367
Total	2,736,736	1,997,615	2,045,494

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Income tax expense (benefit) for the years ended December 31, 2018, 2017 and 2016 consisted of the following:

Income tax expense (benefit)			
in € THOUS	2018	2017	2016
Current			
Germany	45,136	77,934	53,316
United States	261,211	437,201	454,718
Other	115,561	130,992	128,320
	421,908	646,127	636,354
Deferred			
Germany	(34,685)	(36,022)	(23,703)
United States	145,700	(156,704)	27,570
Other	(21,844)	(10,320)	(14,779)
	89,171	(203,046)	(10,912)
Total	511,079	443,081	625,442

A reconciliation between the expected and actual income tax expense is shown below. The expected corporate income tax expense is computed by applying the German corporation tax rate (including the solidarity surcharge) and the trade tax rate on income before income taxes. The German combined statutory tax rates were 30,18%, 29.90% and 29.69% for the fiscal years ended December 31, 2018, 2017 and 2016, respectively.

Reconciliation of income taxes

in € THOUS	2018	2017	2016
Expected corporate income tax expense	825,810	597,187	607,206
Tax free income	(50,747)	(44,302)	(37,495)
Income from equity method investees	(18,185)	(18,706)	(15,642)
Tax rate differentials	(106,258)	139,122	133,550
Non-deductible expenses	60,721	106,125	32,080
Taxes for prior years	(91,138)	(20,573)	(10,077)
Noncontrolling partnership interests	(61,936)	(105,832)	(105,536)
Tax on divestitures	(74,560)		
Tax rate changes	(219)	(238, 130)	(120)
Change in realizability of deferred tax assets and tax credits	3,211	7,254	5,945
Withholding taxes	4,564	6,606	7,909
Other	19,816	14,330	7,624
Income tax expense	511,079	443,081	625,442
Effective tax rate	18.7%	22.2%	30.5%

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The tax effects of the temporary differences and net operating losses that give rise to deferred tax assets and liabilities at December 31, 2018 and 2017, are presented below:

Deferred income tax assets and li	iabilities
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in € THOUS	2010	2017
	2018	2017
Deferred tax assets		
Trade accounts receivable	25,090	19,821
Inventories	70,223	56,672
Intangible assets	6,980	6,925
Property, plant and equipment and other non-current assets	62,124	60,186
Provisions and other liabilities	93,637	116,045
Pension liabilities	98,278	80,868
Net operating loss carryforwards, tax credit carryforwards and interest		
carryforwards	93,890	118,994
Derivatives	2,160	2,215
Compensation expense related to stock options	3,732	16,933
Other	15,390	11,894
Total deferred tax assets	471,504	490,553
Deferred tax liabilities		
Trade accounts receivable	29,596	18,171
Inventories	12,598	7,401
Intangible assets	433,228	410,941
Property, plant and equipment and other non-current assets	136,392	97,779
Provisions and other liabilities	14,678	6,714
Derivatives	1,978	2,480
Other	123,870	99,439
Total deferred tax liabilities	752,340	642,925
Net deferred tax liabilities	(280,836)	(152,372)

In the consolidated balance sheets, the accumulated amounts of deferred tax assets and liabilities are shown as follows:

Net deferred income tax assets and liabilities

in € THOUS	2018	2017
Deferred tax assets))
Deferred tax liabilities	626,521	467,540
Net deferred tax liabilities	(280,836)	(152,372)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued) (in THOUS, except share and per share data)

The net operating losses included in the table below reflect U.S. federal tax, German corporate income tax, and other tax loss carryforwards in the various countries in which the Company operates, and expire as follows:

Net operating loss carryforwards	
in € THOUS	
2019	12,65
2020	5,88
2021	7,18
2022	9,43
2023	10,73
2024	3,39
2025	3,27
2026	6,11
2027	9,38
2028 and thereafter	47,99
	81,47
Total	97,53

Included in the balance of net operating loss carryforwards at December 31, 2018 are €166,313 not expected to be absorbed. Deferred tax assets regarding this portion are not recognized.

In assessing the realizability of deferred tax assets, 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. Management considers the expected reversal of deferred tax liabilities and projected future taxable income in making this assessment. Based upon the level of historical taxable income and projections for future taxable income over the periods in which the deferred tax assets are deductible, management believes it is probable the Company will realize the benefits of these deferred tax assets at December 31, 2018.

The Company provides for income taxes and foreign withholding taxes on the cumulative earnings of foreign subsidiaries and foreign subsidiaries in which the Company has ownership of less than 100% that will not be reinvested. At December 31, 2018, the Company provided for €10,656 (2017: €11,744) of deferred tax liabilities associated with earnings that are likely to be distributed in 2019 and the following years. Provision has not been made for additional taxes on €8,240,031 (2017: €5,978,278) undistributed earnings of foreign subsidiaries as these earnings are considered indefinitely reinvested. The earnings could become subject to additional tax if remitted or deemed remitted as dividends; however, calculation of such additional tax is not practicable. These taxes would predominantly comprise foreign withholding tax on dividends of foreign subsidiaries, and German income tax; however, those dividends and capital gains would generally be 95% tax free for German tax purposes.

In the U.S., the tax reform was enacted by signature of the president of the Tax Cuts and Jobs Act on December 22, 2017. The Act reduced 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, were remeasured using the corporate income tax rate that was enacted by the balance sheet date and will apply for future financial years. For the year ended December 31, 2017, the remeasurement of deferred tax assets and liabilities resulted in a deferred tax benefit of €235,692 which was recognized in tax expense affecting profit and loss and included in the balance of €238,130 in the reconciling item "tax rate changes" in the table "reconciliation of income taxes" above.

Related party transactions 5.

Fresenius SE is the Company's largest shareholder and owns 30.75% of the Company's outstanding shares, excluding treasury shares held by the Company, at December 31, 2018. The Company has entered into certain arrangements for services, leases and products with Fresenius SE or its subsidiaries and with certain of the Company's equity method investees as described in item a) below. The Company's terms related to

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

the receivables or payables for these services, leases and products are generally consistent with the normal terms of the Company's ordinary course of business transactions with unrelated parties and the Company believes that these arrangements reflect fair market terms. The Company utilizes various methods to verify the commercial reasonableness of its related party arrangements. Financing arrangements as described in item b) below have agreed upon terms which are determined at the time such financing transactions occur and reflect market rates at the time of the transaction. The relationship between the Company and its key management personnel who are considered to be related parties is described in item c) below. Our related party transactions are settled through Fresenius SE's cash management system where appropriate.

a) Service agreements, lease agreements and products

The Company is party to service agreements with Fresenius SE and certain of its affiliates (collectively the "Fresenius SE Companies") to receive services, including, but not limited to: administrative services, management information services, employee benefit administration, insurance, information technology services, tax services and treasury management services. The Company also provides central purchasing services to the Fresenius SE Companies. These related party agreements generally have a duration of 1 to 5 years and are renegotiated on an as needed basis when the agreement comes due. The Company provides administrative services to one of its equity method investees.

The Company is a party to real estate operating lease agreements with the Fresenius SE Companies, which mainly include leases for the Company's corporate headquarters in Bad Homburg, Germany and production sites in Schweinfurt and St. Wendel, Germany. The majority of the leases expire at the end of 2026. As of December 31, 2018 and 2017, future minimum rental payments under non-cancelable operating leases with Fresenius SE were \notin 40,316 and \notin 53,374 as well as \notin 107,797 and \notin 118,962 with other Fresenius SE affiliates, respectively. These minimum rental payments are included within the amounts disclosed in note 21.

In addition to the above mentioned service and lease agreements, the Company sold products to the Fresenius SE Companies and made purchases from the Fresenius SE Companies and equity method investees. In addition, Fresenius Medical Care Holdings, Inc. ("FMCH") purchases heparin supplied by Fresenius Kabi USA, Inc. ("Kabi USA"), through an independent group purchasing organization ("GPO"). Kabi USA is an indirect, wholly-owned subsidiary of Fresenius SE. The Company has no direct supply agreement with Kabi USA and does not submit purchase orders directly to Kabi USA. FMCH acquires heparin from Kabi USA, through the GPO contract, which was negotiated by the GPO at arm's length on behalf of all members of the GPO.

The Company entered into an agreement with a Fresenius SE company for the manufacturing of infusion bags. In order to establish the new production line, the Company purchased machinery from the Fresenius SE company in the amount of \notin 4,497 during the year ended December 31, 2018.

In December 2010, the Company and Galenica Ltd. (now known as Vifor Pharma Ltd.) formed the renal pharmaceutical company Vifor Fresenius Medical Care Renal Pharma Ltd., ("VFMCRP"), an equity method investee of which the Company owns 45%. The Company has entered into exclusive supply agreements to purchase certain pharmaceuticals from VFMCRP. Under the terms of a certain unconditional purchase agreement, the Company is obligated to purchase approximately \notin 2,206,742 of pharmaceuticals, of which \notin 305,188 is committed at December 31, 2018 for 2019. The term of this agreement runs until 2025.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Below is a summary, including the Company's receivables from and payables to the indicated parties resulting from the above described transactions with related parties.

Service	agreements,	lease	agreements	and	products

in € THOUS	2	2018	2	2017		2016	December	31 2018	December	31 2017
							Detember 51, 2010		Detember 51, 2017	
	Sales of goods and services	Purchases of goods and services	Sales of goods and services	Purchases of goods and services	Sales of goods and services	Purchases of goods and services	Accounts receivable	Accounts payable	Accounts receivable	Accounts payable
Service agreements ⁽¹⁾										
Fresenius SE	445	24,456	381	21,704	389	20,220	378	4,019	40	2,948
Fresenius SE affiliates	3,819	101,590	11,111	81,491	4,866	74,083	681	8,470	9,445	4,696
Equity method investees	20,043		17,797		17,578		2,449		1,738	
Total	24,307	126,046	29,289	103,195	22,833	94,303	3,508	12,489	11,223	7,644
Lease agreements										
Fresenius SE	_	8,745		8,456	_	9,475	_	_	_	
Fresenius SE affiliates	_	15,852	_	13,676	_	13,717	_	_	_	_
Total	_	24,597	_	22,132	_	23,192	_	_	_	_
Des Late										
Products			1		2					
Fresenius SE	22 5 6 4	20 101	20.520	40.467	26.040	42 200	0.750	2 (50	0.149	2.070
Fresenius SE affiliates Equity method investees	33,564	39,181 425,430	30,529	40,467 399,180	26,049	43,390 371,241	8,750	3,658 57,975	9,148	3,976 36,550
Total	33,564	464,611	30,530	439,647	26,051	414,631	8,750	61,633	9,148	40,526

 In addition to the above shown accounts payable, accrued expenses for service agreements with related parties amounted to €9,376 and €6,397 at December 31, 2018 and 2017.

b) Financing

The Company receives short-term financing from and provides short-term financing to Fresenius SE. The Company also utilizes Fresenius SE's cash management system for the settlement of certain intercompany receivables and payables with its subsidiaries and other related parties. As of December 31, 2018 and December 31, 2017, the Company had accounts receivable from Fresenius SE related to short-term financing in the amount of €80,228 and €91,026, respectively. As of December 31, 2018 and December 31, 2017, the Company had accounts payable to Fresenius SE related to short-term financing in the amount of €32,454 and €76,159, respectively. The interest rates for these cash management arrangements are set on a daily basis and are based on the then-prevailing overnight reference rate, with a floor of zero, for the respective currencies.

At August 19, 2009, the Company borrowed €1,500 from the General Partner on an unsecured basis at 1.335%. The loan repayment has been extended periodically and is currently due August 22, 2019 with an interest rate of 0.825%. At November 28, 2013, the Company borrowed an additional €1,500 with an interest rate of 1.875% from the General Partner. The loan repayment has been extended periodically and is currently due on November 23, 2019 with an interest rate of 0.825%.

The Company provided unsecured term loans to one of its equity method investees during 2015 and 2016 in the amount of CHF 78,416 (\notin 71,928 based upon the average exchange rate for the twelve months ended December 31, 2016). These loans were repaid in full during the first half of 2016. The loans were entered into in order to fund the 2015 sale of European marketing rights for certain renal pharmaceuticals to the same equity method investee as well as to finance the investee's payments for license and distribution agreements. These marketing rights were sold to this equity method investee in 2015 which resulted in a gain of approximately \notin 10,058, after tax.

At December 31, 2018 and December 31, 2017, a subsidiary of Fresenius SE held unsecured bonds issued by the Company in the amount of $\notin 6,000$ and $\notin 6,000$, respectively. The bonds were issued in 2011 and 2012, mature in 2021 and 2019, respectively, and each has a coupon rate of 5.25% with interest payable semiannually. For further information on these bonds, see note 14.

At December 31, 2018 and December 31, 2017, the Company borrowed from Fresenius SE in the amount of \notin 185,900 at an interest rate of 0.825% and \notin 6,000 at an interest rate of 0.825%, respectively. For further information on this loan agreement, see note 13.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

c) Key management personnel

Due to the Company's legal form of a German partnership limited by shares, the General Partner holds a key management position within the Company. In addition, as key management personnel, members of the Management Board and the Supervisory Board, as well as their close relatives, are considered related parties.

The Company's Articles of Association provide that the General Partner shall be reimbursed for any and all expenses in connection with management of the Company's business, including remuneration of the members of the General Partner's supervisory board and the members of the Management Board. The aggregate amount reimbursed to the General Partner was $\notin 14,612, \notin 25,995$ and $\notin 18,153$, respectively, for its management services during 2018, 2017 and 2016 and included an annual fee of $\notin 120$ as compensation for assuming liability as general partner. The annual fee is set at 4% of the amount of the General Partner's share capital ($\notin 3,000$ as of December 31, 2018). As of December 31, 2018 and December 31, 2017, the Company had accounts receivable from the General Partner in the amount of $\notin 176$ and $\notin 246$, respectively. As of December 31, 2017, the Company had accounts payable to the General Partner in the amount of $\notin 47,205$ and $\notin 23,020$, respectively.

Effective May 17, 2018, Dr. Gerd Krick, resigned from the position of Chairman of the Company's Supervisory Board. Dr. Gerd Krick retains his positions as Chairman of the supervisory board of Fresenius SE and of the general partner of Fresenius SE. He is also a member of the supervisory board of the Company's General Partner.

Effective May 17, 2018, Dr. Dieter Schenk assumed the position of Chairman of the Company's Supervisory Board. Dr. Dieter Schenk retains his positions as the Vice Chairman of the supervisory board of the general partner of Fresenius SE as well as the Vice Chairman of the supervisory board of the Company's General Partner. He is also Chairman of the Advisory Board of a charitable foundation that is the sole shareholder of the general partner of Fresenius SE. He was also a partner in a law firm which provided services to the Company and certain of its subsidiaries until December 31, 2017. While Dr. Dieter Schenk was a partner in the law firm, the Company incurred expenses in the amount of ϵ 2,337 and ϵ 1,258 for services during 2017 and 2016, respectively. Three of the five members of the Company's Supervisory Board, including the Chairman Dr. Dieter Schenk and the Vice Chairman Rolf A. Classon, are also members of the supervisory board of the Company's General Partner.

The Chairman of the supervisory board of the Company's General Partner, Stephan Sturm, is also the Chairman of the management board of the general partner of Fresenius SE. Rachel Empey is a member of the supervisory board of the Company's General Partner as well as a member of the management board of the general partner of Fresenius SE. Additionally, the Chairman and Chief Executive Officer of the Management Board of the Company's General Partner, Rice Powell, is a member of the Management Board of the general partner of Fresenius SE.

For information regarding compensation of the Management Board and the Supervisory Board of the Company see note 28.

6. Cash and cash equivalents

Cash and cash equivalents

As of December 31, 2018 and 2017, cash and cash equivalents are as follows:

in € THOUS	2018	2017
Cash)) -
Securities and time deposits	1,313,747	357,964
Cash and cash equivalents	2,145,632	978,109

The cash and cash equivalents disclosed in the table above, and respectively in the consolidated statement of cash flows, include at December 31, 2018 an amount of \notin 5,002 (2017: \notin 53,694) from collateral requirements towards an insurance company in North America that are not available for use.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

7. Trade accounts and other receivables

As of December 31, 2018, the allowance on trade accounts and other receivables includes the impact from the implementation of IFRS 9 which resulted in an increase of €3,490 in the allowance.

Due to the implementation of IFRS 15 the implicit price concessions in North America are deducted from the trade accounts and other receivables and are no longer part of the corresponding allowance. This isolated impact of \notin 366,010 as of December 31, 2018 was recorded against trade accounts receivable and the allowance.

As of December 31, 2018 and December 31, 2017, trade accounts and other receivables are as follows:

Trade accounts and other receivables in € THOUS			
in e frious		mber 31, 2018	December 31, 2017
		thereof Credit- Impaired	
Trade accounts and other receivables, gross	3,455,721 28,726	325,240	3,864,217 <i>58,336</i>
less allowances	(118,015)	(85,775)	(474,891)
Trade accounts and other receivables	3,337,706	239,465	3,389,326

The other receivables in the amount of €66,496 include receivables from finance leases, operating leases and insurance contracts.

All trade accounts and other receivables are due within one year. A small portion of the trade account receivables are subject to factoring agreements.

Trade accounts receivables and finance lease receivables with a term of more than one year in the amount of $\notin 120,668$ (December 31, 2017: $\notin 90,344$) are included in the balance sheet item "Other non-current assets". For these trade accounts receivables and finance leases, the implementation of IFRS 9 results in an increase of the allowance, which amounts to $\notin 278$.

The following table shows the development of the allowance for doubtful accounts in the fiscal years 2018, 2017 and 2016:

Development of allowance for doubtful accounts

in € THOUS	2018	2017	2016
Allowance for doubtful accounts as of January 1		482,461	427.841
Change in valuation allowances as recorded in the consolidated		,	
statements of income	19,112	549,631	430,974
Write-offs and recoveries of amounts previously written-off	(378,201)	(501,229)	(391,827)
Foreign currency translation	2,213	(55,972)	15,473
Allowance for doubtful accounts as of December 31	118,015	474,891	482,461

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The following tables show the ageing analysis of trade accounts and other receivables and the allowance for doubtful accounts as of December 31, 2018 and as of December 31, 2017:

Aging analysis of trade accounts and other receivables 2018

	not overdue	up to 3 months overdue	3 to 6 months overdue	6 to 12 months overdue	more than 12 months overdue	Total
Trade accounts and other receivables . less allowance for doubtful accounts	1,949,665 (8,043)	848,092 (4,711)	217,024 (5,209)	194,769 (5,946)	246,171 (94,106)	3,455,721 (118,015)
Trade accounts and other receivables, net	1,941,622	843,381	211,815	188,823	152,065	3,337,706
Aging analysis of trade accounts and other receiv	ables 2017					
in € THOUS	not overdue	up to 3 months overdue	3 to 6 months overdue	6 to 12 months overdue	more than 12 months overdue	Total

8. Inventories

At December 31, 2018 and December 31, 2017, inventories consisted of the following:

Inventories		
in € THOUS	2018	2017
Finished goods	774,133	672,851
Health care supplies	391,593	343,351
Raw materials and purchased components	224,054	193,295
Work in process	77,023	81,282
Inventories	1,466,803	1,290,779

Under the terms of certain unconditional purchase agreements, the Company is obligated to purchase approximately \notin 492,062 of materials, of which \notin 262,362 is committed at December 31, 2018 for 2019. The terms of these agreements run 1 to 5 years. Another unconditional purchase agreement exists with an equity method investee of the Company. For further information on this agreement, see note 5.

Allowances on Inventories amounted to €62,990 and €47,329 for the years ended December 31, 2018 and 2017, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

9. Other current assets

At December 31, 2018 and 2017, other current assets consisted of the following:

Other current assets	
in ETHOUS	

in € THOUS	2018	2017
Income taxes receivable	159,290	56,153
Other taxes receivable	107,708	90,808
Debt securities	99,592	
Receivables for supplier rebates	68,203	48,222
Prepaid rent	57,319	52,251
Payments on account	54,778	51,282
Prepaid insurance	23,632	20,629
Deposit / Guarantee / Security	19,915	15,465
Derivatives	7,837	11,810
Other	205,809	257,830
Other current assets	804,083	604,450

The item "Other" in the table above primarily includes loans to customers, receivables from employees and notes receivables.

10. Property, plant and equipment

At December 31, 2018 and 2017, the acquisition or manufacturing costs and the accumulated depreciation of property, plant and equipment consisted of the following:

Acquisition or manufacturing costs	Acquisition	or	manufacturing	costs
------------------------------------	-------------	----	---------------	-------

in € THOUS	January 1, 2018	Foreign currency translation	Changes in consolidation group	Additions	Reclassi- fications	Disposals	December 31, 2018
Land	56,540	2,299	358	605	490	(1,405)	58,887
Buildings and improvements	2,881,688	108,998	692	67,272	328,718	(75,664)	3,311,704
Machinery and equipment	4,174,027	96,766	(2,576)	465,117	29,325	(220,753)	4,541,906
Machinery, equipment and							
rental equipment under							
capitalized leases	80,916	3,880	(98)	6,259	665	(1,888)	89,734
Construction in progress	462,226	6,759	4,519	419,347	(387,131)	(552)	505,168
Property, plant and equipment	7,655,397	218,702	2,895	958,600	(27,933)	(300,262)	8,507,399

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Acquisition or manufacturing costs							
in € THOUS	January 1, 2017	Foreign currency translation	Changes in consolidation group	Additions	Reclassi- fications	Disposals	December 31, 2017
Land	65,041	(4,528)	198	1,748	298	(6,217)	56,540
Buildings and improvements	2,997,533	(311,782)	8,971	40,577	276,435	(130,046)	2,881,688
Machinery and equipment	4,156,542	(314,568)	20,057	463,516	47,169	(198,689)	4,174,027
Machinery, equipment and rental equipment under							
capitalized leases	83,558	(6,825)	(3,082)	8,799	(195)	(1,339)	80,916
Construction in progress	442,289	(43,012)	781	390,909	(326,565)	(2,176)	462,226
Property, plant and equipment	7,744,963	(680,715)	26,925	905,549	(2,858)	(338,467)	7,655,397

Depreciation							
in € THOUS	January 1, 2018	Foreign currency translation	Changes in consolidation group	Additions	Reclassi- fications	Disposals	December 31, 2018
Land	1,239	38	_			18	1,295
Buildings and improvements	1,580,103	65,251	(1, 484)	221,866	(786)	(46,897)	1,818,053
Machinery and equipment	2,538,436	58,817	(4,278)	400,439	(13,986)	(180,719)	2,798,709
Machinery, equipment and rental equipment under							
capitalized leases	43,848	2,485	(289)	9,118	30	(1,860)	53,332
Construction in progress							
Property, plant and equipment .	4,163,626	126,591	(6,051)	631,423	(14,742)	(229,458)	4,671,389

Depreciation							
in € THOUS	January 1, 2017	Foreign currency translation	Changes in consolidation group	Additions	Reclassi- fications	Disposals	December 31, 2017
Land	1,270	(47)				16	1,239
Buildings and improvements	1,624,145	(174,475)	(426)	216,458	(2,350)	(83,249)	1,580,103
Machinery and equipment	2,498,941	(184,907)	(3,024)	395,570	2,147	(170,291)	2,538,436
Machinery, equipment and rental equipment under							
capitalized leases	40,981	(3,407)	(2,995)	10,678	(481)	(928)	43,848
Construction in progress							
Property, plant and equipment .	4,165,337	(362,836)	(6,445)	622,706	(684)	(254,452)	4,163,626

Book value

in € THOUS	December 31, 2018	December 31, 2017
Land	57,592	55,301
Buildings and improvements	1,493,651	1,301,585
Machinery and equipment	1,743,197	1,635,591
Machinery, equipment and rental equipment under capitalized leases	36,402	37,068
Construction in progress	505,168	462,226
Property, plant and equipment	3,836,010	3,491,771

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Depreciation expense for property, plant and equipment amounted to $\notin 631,423, \notin 622,706$ and $\notin 594,019$ for the years ended December 31, 2018, 2017, and 2016, respectively. These expenses are allocated within costs of revenue, selling, general and administrative and research and development expenses depending upon the area in which the asset is used.

Included in machinery and equipment at December 31, 2018 and 2017 were \notin 731,427 and \notin 657,618, respectively, of peritoneal dialysis cycler machines which the Company leases to customers with end-stage renal disease on a month-to-month basis and hemodialysis machines which the Company leases to physicians under operating leases.

At December 31, 2018, the hyperinflationary effects on property, plant and equipment consisted of the following:

Effect of hyperinflation in Argentina

in € THOUS	Acquisition or manufacturing costs	Accumulated depreciation	December 31, 2018
Land	1,581		1,581
Buildings and improvements	13,575	5,454	8,121
Machinery and equipment	21,821	15,321	6,500
Machinery, equipment and rental equipment under			
capitalized leases	_		
Construction in progress	656		656
Property, plant and equipment	37,633	20,775	16,858

11. Intangible assets and goodwill

At December 31, 2018 and 2017, the acquisition or manufacturing costs and the accumulated amortization of intangible assets and goodwill consisted of the following:

Acquisition or manufacturing costs

in € THOUS	January 1, 2018	Foreign currency translation	Changes in consolidation group	Additions	Reclassi- fications	Disposals	December 31, 2018
Amortizable intangible assets							
Non-compete agreements	310,163	12,427	6,339	720	(2)	(4,737)	324,910
Technology	149,191	3,973			_		153,164
Licenses and distribution agreements	173,713	3,049	_	61,166	(3)	(2,300)	235,625
Customer relationships	147,096	2,015	(125, 264)		_	_	23,847
Construction in progress	78,757	2,785		107,097	(23,050)	(17,587)	148,002
Internally developed intangibles	169,095	2,158	(9,763)	17,501	38,643	(601)	217,033
Other	358,092	9,490	(3,368)	9,881	12,883	(5,588)	381,390
	1,386,107	35,897	(132,056)	196,365	28,471	(30,813)	1,483,971
Non-amortizable intangible assets							
Tradename	174,689	8,212	_		_	_	182,901
Management contracts	3,038	96	—	_		_	3,134
	177,727	8,308					186,035
Intangible assets	1,563,834	44,205	(132,056)	196,365	28,471	(30,813)	1,670,006
Goodwill	12,103,921	441,972	(336,287)				12,209,606

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Acquisition or manufacturing costs

in € THOUS		Famign	Changes in				
	January 1, 2017	Foreign currency translation	Changes in consolidation group	Additions	Reclassi- fications	Disposals	December 31, 2017
Amortizable intangible assets							
Non-compete agreements	342,157	(39,132)	11,046		(1,541)	(2,367)	310,163
Technology	167,814	(11,924)	(1,370)		_	(5,329)	149,191
Licenses and distribution agreements	182,855	(11,079)	(535)	4,119	(398)	(1,249)	173,713
Customer relationships	247,428	(23,852)	(76,480)	·			147,096
Construction in progress	17,904	(2,689)	16,600	56,718	(9,776)		78,757
Internally developed intangibles	164,396	(13,244)	_	13,878	6,668	(2,603)	169,095
Other	375,355	(31,215)	6,036	12,693	796	(5,573)	358,092
	1,497,909	(133,135)	(44,703)	87,408	(4,251)	(17,121)	1,386,107
Non-amortizable intangible assets							
Tradename	198,692	(24,003)	_		_		174,689
Management contracts	3,318	(280)					3,038
	202,010	(24,283)					177,727
Intangible assets	1,699,919	(157,418)	(44,703)	87,408	(4,251)	(17,121)	1,563,834
Goodwill	12,955,574	(1,448,071)	596,418				12,103,921

Amortization

ın	ŧ	THOUS
	÷	111000

in e mous	January 1, 2018	Foreign currency translation	Changes in consolidation group	Additions	Impairment loss		Disposals	December 31, 2018
Amortizable intangible								
assets								
Non-compete agreements	262,381	11,338	(1,468)	14,675	_	17	(4,647)	282,296
Technology	64,563	2,995	(356)	10,740	46,663	_		124,605
Licenses and distribution								
agreements	119,819	577	_	12,673	726	(3)	(2,300)	131,492
Customer relationships	50,572	727	(53,247)	9,226	_		(33)	7,245
Construction in progress		_	_		16,750	_	(16,750)	_
Internally developed								
intangibles	108,906	2,927	(2,475)	20,357		9,202	(574)	138,343
Other	274,535	8,003	(6,375)	25,753	580	6,064	(3,866)	304,694
	880,776	26,567	(63,921)	93,424	64,719	15,280	(28,170)	988,675

Amortization

in € THOUS	January 1, 2017	Foreign currency translation	Changes in consolidation group	Additions	Impairment loss		Disposals	December 31, 2017
Amortizable intangible								
assets	270 102	(22 (57)		21 700		(1.555)	(2,200)	2(2,201
Non-compete agreements	278,102	(33,657)	—	21,790	—	(1,555)	(2,299)	262,381
Technology	61,133	(7,742)	_	11,172	_	_	_	64,563
Licenses and distribution								
agreements	114,934	(6,502)	_	12,646	_	(10)	(1, 249)	119,819
Customer relationships	59,576	(6,795)	(24,977)	22,768		_	_	50,572
Construction in progress		—	_	_				
Internally developed								
intangibles	102,024	(8,125)	_	16,051	_	780	(1,824)	108,906
Other	281,030	(24,193)	58	28,346	_	(5,640)	(5,066)	274,535
	896,799	(87,014)	(24,919)	112,773	_	(6,425)	(10,438)	880,776

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Book value		
in € THOUS	December 31, 2018	December 31, 2017
Amortizable intangible assets		
Non-compete agreements	42,614	47,782
Technology	28,559	84,628
Licenses and distribution agreements	104,133	53,894
Customer relationships	16,602	96,524
Construction in progress	148,002	78,757
Internally developed intangibles	78,690	60,189
Other	76,696	83,557
	495,296	505,331
Non-amortizable intangible assets		
Tradename	182,901	174,689
Management contracts	3,134	3,038
	186,035	177,727
Intangible assets	681,331	683,058
Goodwill	12,209,606	12,103,921

The amortization of intangible assets amounted to $\notin 93,424$, $\notin 112,773$ and $\notin 107,517$ for the years ended December 31, 2018, 2017, and 2016, respectively. These expenses are allocated within costs of revenue, selling, general and administrative and research and development expenses depending upon the area in which the asset is used.

At December 31, 2018, the hyperinflationary effects on intangible assets and goodwill consisted of the following:

Effect of hyperinflation in Argentina

in € THOUS	Acquisition or manufacturing costs	Accumulated depreciation	December 31, 2018
Amortizable intangible assets			
Internally developed intangibles	142	129	13
Other	1,889	1,209	680
Intangible assets	2,031	1,338	693
Goodwill	20,197	2,118	18,079

Goodwill and intangible assets with indefinite useful lives

The increase in the carrying amount of goodwill is mainly a result of the impact of foreign currency translations and acquisitions, partially offset by the divestiture of Sound. The Company's acquisitions consisted primarily of the purchase of clinics in the normal course of operations in 2018 and 2017 and the acquisition of an operator of day hospitals in Australia in 2017.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The carrying amount of goodwill and intangibles with indefinite useful life is allocated to the CGUs at December 31, 2018 and 2017 as follows:

Allocation	of the	carrying	amount	to	CGUs
------------	--------	----------	--------	----	------

in € THOUS	North A	America	EM	IEA	Asia-l	Pacific	Latin America		
	2018	2017	2018	2017	2018	2017	2018	2017	
Goodwill	10,128,309	10,152,243	1,282,632	1,226,983	662,097	641,271	136,568	83,424	
Management contracts with indefinite useful life	_	_			3,134	3,038			
Trade name with indefinite useful life	182,329	174,074					572	615	

The recoverability of goodwill and other separable intangible assets with indefinite useful lives recorded in the Company's consolidated balance sheets was verified. As a result, the Company did not record any impairment losses in 2018 and 2017.

12. Current provisions and other current liabilities

Current provisions

The following table shows a reconciliation of the current provisions for 2018:

Development of current	provisions							
in € THOUS	January 1, 2018	Foreign currency translation	Changes in consolidation group	Utilized	Reversed	Additions	Reclassifications	December 31, 2018
FCPA related charge Self-insurance	210,616	—	—	(63,836)	_	77,200	_	223,980
programs	223,536	9,510	(582)	(154,958)		120,801	_	198,307
Personnel expenses .	28,786	142	220	(15,939)	(7,807)	11,134	25,894	42,430
Risk of lawsuit Other current	14,918	(345)	—	(6,513)	(5)	24,249		32,304
provisions	25,056	495	327	(8,922)	(3,027)	13,566	_	27,495
Current provisions .	502,912	9,802	(35)	(250,168)	(10,839)	246,950	25,894	524,516

FCPA related charge

The Company recorded charges of €200,000 in 2017 and €77,200 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 €223,980 as of December 31, 2018. For further information on these investigations see note 22.

Self-insurance programs

See note 2 d).

Personnel expenses

Personnel expenses mainly refer to provisions for share-based plans, the current portion of the provisions for accrued severance payments and provisions for jubilee payments. As at December 31, 2018 and 2017 the provisions for share-based plans amounted to \notin 15,479 and \notin 6,845 respectively. See note 20.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Risk of lawsuit

See note 22.

Other current provisions

The item "Other current provisions" in the table above includes provisions for warranties, physician compensation and return of goods.

Other current liabilities

As at December 31, 2018 and 2017 other current liabilities consisted of the following:

Other current liabilities		
in € THOUS	2018	2017
Personnel liabilities	654,457	705,534
Noncontrolling interests subject to put provisions	494,576	469,549
Unapplied cash and receivable credits	364,657	311,925
Invoices outstanding	150,754	160,196
Rent and lease obligations	138,210	111,196
Withholding tax and VAT	100,086	100,327
Interest liabilities	92,961	99,493
Variable payments outstanding for acquisitions	57,217	14,712
Legal matters, advisory and audit fees	38,778	38,553
Contract liabilities	37,628	
Bonuses, commissions	26,831	26,800
Liabilities for insurance premiums	16,375	7,733
Derivatives	8,216	11,702
Subsidiary Stock Incentive Plan	26	30,697
Other liabilities	199,000	267,401
Other current liabilities	2,379,772	2,355,818

Personnel liabilities

The personnel liabilities mainly refer to liabilities for wages and salaries, bonuses and vacation payments.

Contract liabilities

Contract liabilities primarily relate to advance payments from customers and to sales of dialysis machines where revenue is recognized upon installation and provision of the necessary technical instructions whereas a receivable is recognized once the machine is billed to the customer.

Other liabilities

The item "Other liabilities" in the table above includes deferred income and the current portion of pension liabilities.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

13. Short-term debt and short-term debt from related parties

At December 31, 2018 and December 31, 2017, short-term debt and short-term debt from related parties consisted of the following:

Short-term debt and short-term debt from related parties

in € THOUS	2018	2017
Commercial paper program	999,873	679,886
Borrowings under lines of credit	204,491	79,313
Other	930	1,080
Short-term debt	1,205,294	760,279
Short-term debt from related parties (see note 5 b)	188,900	9,000
Short-term debt and short-term debt from related parties	1,394,194	769,279

Commercial paper program

The Company maintains a commercial paper program under which short-term notes of up to \notin 1,000,000 can be issued. At December 31, 2018 and 2017, the outstanding commercial paper amounted to \notin 1,000,000 and \notin 680,000, respectively.

Borrowings under lines of credit and further availabilities

Borrowings under lines of credit in the amount of \notin 204,491 and \notin 79,313 at December 31, 2018 and 2017, respectively, represented amounts borrowed by the Company and its subsidiaries under lines of credit with commercial banks. The average interest rates on these borrowings at December 31, 2018 and 2017 were 1.21% and 6.72%, respectively.

Excluding amounts available under the Amended 2012 Credit Agreement (see note 14 below), at December 31, 2018 and 2017, the Company had €386,619 and €258,066 available under other commercial bank agreements. In some instances, lines of credit are secured by assets of the Company's subsidiary that is party to the agreement or may require the Company's guarantee. In certain circumstances, the subsidiary may be required to meet certain covenants.

The Company and certain consolidated entities operate a multi-currency notional pooling cash management system. The Company met the conditions to offset balances within this cash pool for reporting purposes. At December 31, 2018 and 2017, cash and borrowings under lines of credit in the amount of \notin 122,256 and \notin 318,654 were offset under this cash management system.

Other

At December 31, 2018 and 2017, the Company had €930 and €1,080 of other debt outstanding related to fixed payments outstanding for acquisitions.

Short-term debt from related parties

The Company is party to an unsecured loan agreement with Fresenius SE under which the Company or FMCH may request and receive one or more short-term advances up to an aggregate amount of \$400,000 until maturity on July 31, 2022. For further information on short-term debt from related parties, see note 5 b).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

14. Long-term debt and capital lease obligations

As of December 31, 2018 and 2017, long-term debt and capital lease obligations consisted of the following:

Long-term debt and capital lease obligations		
in € THOUS	2018	2017
Amended 2012 Credit Agreement	1,887,357	2,017,952
Bonds	3,700,446	3,810,483
Convertible Bonds	393,232	386,984
Accounts Receivable Facility		293,673
Capital lease obligations	36,144	37,704
Other	134,855	131,611
Long-term debt and capital lease obligations	6,152,034	6,678,407
Less current portion	(1,106,519)	(883,535)
Long-term debt and capital lease obligations, less current portion	5,045,515	5,794,872

As of December 31, 2018 and December 31, 2017, long-term debt and capital lease obligations have the following maturities:

Maturity of long-term debt and capital lease obligations

in € THOUS

	Less than 1 year	1 - 3 years	3 - 5 years	Over 5 years	Total
2018					
Amended 2012 Credit Agreement	132,803	665,607	1,095,629	_	1,894,039
Bonds	948,690	1,304,367	611,354	849,345	3,713,756
Convertible Bonds		400,000		_	400,000
Accounts Receivable Facility				_	
Capital lease obligations	9,387	14,529	3,094	9,134	36,144
Other	15,931	52,603	15,261	51,060	134,855
Total	1,106,811	2,437,106	1,725,338	909,539	6,178,794
2017					
Amended 2012 Credit Agreement	128,058	656,117	1,242,907		2,027,082
Bonds	733,528	1,333,966	1,425,657	333,528	3,826,679
Convertible Bonds		400,000			400,000
Accounts Receivable Facility		294,338		_	294,338
Capital lease obligations	8,831	14,948	4,860	9,065	37,704
Other	15,220	22,111	41,378	52,933	131,642
Total	885,637	2,721,480	2,714,802	395,526	6,717,445

The Company's long-term debt as of December 31, 2018, all of which ranks equally in rights of payment, are described as follows:

Amended 2012 credit agreement

The Company originally entered into a syndicated credit facility of \$3,850,000 and a 5 year tenor (the "2012 Credit Agreement") on October 30, 2012. On November 26, 2014, the 2012 Credit Agreement was amended to increase the total credit facility to approximately \$4,400,000 and extend the term for an additional two years until October 30, 2019 ("Amended 2012 Credit Agreement"). On July 11, 2017, the Company further amended and extended the Amended 2012 Credit Agreement.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

As of December 31, 2018, the Amended 2012 Credit Agreement consists of:

- Revolving credit facilities of \$900,000 and €600,000 which will be due and payable on July 31, 2022.
- A term loan of \$1,350,000, also scheduled to mature on July 31, 2022. Quarterly repayments of \$30,000 began on October 31, 2017 with the remaining balance outstanding due on the maturity date.
- A term loan of €315,000 scheduled to mature on July 31, 2022. Quarterly repayments of €7,000 began on October 31, 2017 with the remaining balance outstanding due on the maturity date.
- A non-amortizing term loan of €400,000 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 the Company'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 Amended 2012 Credit Agreement). At December 31, 2018 and 2017, the dollar-denominated tranches outstanding under the Amended 2012 Credit Agreement had a weighted average interest rate of 3.53% and 2.48%, respectively. At December 31, 2018 and 2017, the euro-denominated tranches had a weighted average interest rate of 0.81% and 0.81%, respectively.

The Amended 2012 Credit Agreement contains affirmative and negative covenants with respect to the Company and its subsidiaries. Under certain circumstances these covenants limit indebtedness and restrict the creation of liens. Under the Amended 2012 Credit Agreement the Company is required to comply with a maximum consolidated leverage ratio (ratio of consolidated funded debt less cash and cash equivalents to consolidated EBITDA).

The following table shows the available and outstanding amounts under the Amended 2012 Credit Agreement at December 31, 2018 and 2017:

in THOUS	Maximum amount available 2018			Balance outstanding 2018 ⁽¹⁾			
Revolving credit USD 2017 / 2022	\$ 900,000	€ 786,026	\$		€		
Revolving credit EUR 2017 / 2022	€ 600,000	€ 600,000	€		€		
USD term loan 2017 / 2022	\$1,350,000	€1,179,039	\$1	,350,000	€1	,179,039	
EUR term loan 2017 / 2022	€ 315,000	€ 315,000	€	315,000	€	315,000	
EUR term loan 2017 / 2020	€ 400,000	€ 400,000	€	400,000	€	400,000	
		€3,280,065			€1	,894,039	
))	
		ount available		Balance or 201	utsta		
Revolving credit USD 2017 / 2022		ount available	\$	Balance or 201 70,000	utsta		
Revolving credit USD 2017 / 2022	20	ount available 17	\$ €	201	utsta 7 ⁽¹⁾	nding	
	20 \$ 900,000	ount available 117 € 750,438	€	201	utsta 7 ⁽¹⁾ € €	nding	
Revolving credit EUR 2017 / 2022	20 \$ 900,000 € 600,000	ount available 017 € 750,438 € 600,000	€ \$1	201 70,000 	utsta 7 ⁽¹⁾ € € €1	nding 58,367	
Revolving credit EUR 2017 / 2022 USD term loan 2017 / 2022	20 \$ 900,000 € 600,000 \$1,470,000	e 750,438 € 600,000 €1,225,715	€ \$1,	201 70,000 	\mathbb{E} \mathbb{E} \mathbb{E}	nding 58,367 	

Amended 2012 Credit Agreement - Maximum amount available and balance outstanding

(1) Amounts shown are excluding debt issuance costs.

At December 31, 2018 and 2017, the Company had letters of credit outstanding in the amount of \$1,690 and \$1,690 (€1,476 and €1,409), respectively, under the USD revolving credit facility, which are not

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

included above as part of the balance outstanding at those dates but which reduce available borrowings under the applicable revolving credit facility.

Bonds

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At December 31, 2018 and 2017, the Company's bonds consisted of the following:

Bonds in THOUS					
Issuer/Transaction	Face amount	Maturity	Coupon	Book value 2018 in €	Book value 2017 in €
FMC Finance VIII S.A. 2011	€400,000	September 15, 2018	6.50%	_	398,838
FMC US Finance II, Inc. 2011	\$400,000	September 15, 2018	6.50%	_	332,588
FMC US Finance II, Inc. 2012	\$800,000	July 31, 2019	5.625%	698,167	665,637
FMC Finance VIII S.A. 2012	€250,000	July 31, 2019	5.25%	249,773	249,383
FMC US Finance II, Inc. 2014	\$500,000	October 15, 2020	4.125%	435,376	414,952
FMC US Finance, Inc. 2011	\$650,000	February 15, 2021	5.75%	564,882	538,021
FMC Finance VII S.A. 2011	€300,000	February 15, 2021	5.25%	299,035	298,571
FMC US Finance II, Inc. 2012	\$700,000	January 31, 2022	5.875%	609,532	581,261
FMC US Finance II, Inc. 2014	\$400,000	October 15, 2024	4.75%	347,297	331,232
Fresenius Medical Care AG & Co. KGaA,					
2018	€500,000	July 11, 2025	1.50%	496,384	
				3,700,446	3,810,483

All bonds issued before 2018 are guaranteed by the Company and by FMCH. 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 of the Company followed by a decline in the ratings of the respective bonds. The bonds issued prior to 2018 may be redeemed at the option of the issuers at any time at 100% of principal plus accrued interest and a premium calculated pursuant to the terms of the indenture.

For the bonds issued prior to 2018, the Company has agreed to a number of covenants to provide protection to the holders which, under certain circumstances, limit the ability of the Company and its subsidiaries to, among other things, incur debt, incur liens, engage in sale-leaseback transactions and merge or consolidate with other companies or sell assets. Some of these restrictions were suspended automatically as the rating of the respective bonds reached investment grade status. At December 31, 2018, the Company was in compliance with all of its covenants under the bonds.

Convertible bonds

On September 19, 2014, the Company issued €400,000 principal amount of equity-neutral convertible bonds which have a coupon of 1.125% and are due on January 31, 2020. The bonds were issued at par. The current conversion price is €73.1980. Since November 2017, bond holders can exercise the conversion rights embedded in the bonds at certain dates. In order to fully offset the economic exposure from the conversion feature, the Company purchased call options on its shares ("Share Options"). Any increase of the Company's share price above the conversion price would be offset by a corresponding value increase of the Share Options. The Company amortizes the remaining cost of these options and various other offering costs over the life of these bonds in the amount of €6,768, effectively increasing the total interest rate to 2.611%. The Convertible Bonds are guaranteed by FMCH.

Accounts Receivable Facility

The Company refinanced the Accounts Receivable Facility on December 20, 2018 increasing the facility to \$900,000 and extending it until December 20, 2021.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The following table shows the available and outstanding amounts under the Accounts Receivable Facility at December 31, 2018 and December 31, 2017:

Accounts Receivable Facility - Maximum amount available and balance outstanding

in THOUS		n amount e 2018 ⁽¹⁾		utstanding 8 ⁽²⁾
Accounts Receivable Facility	\$900,000	€786,026	\$	€
		n amount e 2017 ⁽¹⁾		utstanding 7 ⁽²⁾
Accounts Receivable Facility	\$800,000	€667,056	\$353,000	€294,338
	., .			

(1) Subject to availability of sufficient accounts receivable meeting funding criteria.

(2) Amounts shown are excluding debt issuance costs.

The Company also had letters of credit outstanding under the Accounts Receivable Facility in the amount of \$26,631 at December 31, 2018 and \$71,244 at December 31, 2017 (\notin 23,259 and \notin 59,404). These letters of credit are not included above as part of the balance outstanding at December 31, 2018 and 2017; however, they reduce available borrowings under the Accounts Receivable Facility.

Under the Accounts Receivable Facility, certain receivables are sold to NMC Funding Corporation ("NMC Funding"), a wholly-owned subsidiary. 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 Company's consolidated balance sheet 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 by the Company. 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.

Other

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At December 31, 2018 and 2017, in conjunction with certain acquisitions and investments, the Company had fixed payments outstanding for acquisitions totaling approximately \notin 16,713 and \notin 14,199, respectively, of which \notin 7,621 and \notin 4,453, respectively, were classified as the current portion of long-term debt.

15. Non-current provisions and other non-current liabilities

Of the total amount of non-current provisions and other non-current liabilities amounting to \notin 750,738 at December 31, 2018 (2017: \notin 1,004,672), \notin 457,382 (2017: \notin 631,158) are due in between more than one and three years, \notin 107,080 (2017: \notin 195,490) are due in between three to five years and \notin 186,276 (2017: \notin 178,024) are due after five years.

The item "Other non-current liabilities" in the amount of $\notin 622,291$ at December 31, 2018 (2017: $\notin 821,838$) includes, among others, noncontrolling interests subject to put provisions of $\notin 324,295$ (2017: $\notin 361,224$), variable payments outstanding for acquisitions of $\notin 115,061$ (2017: $\notin 191,080$) and derivatives of $\notin 11,820$ (2017: $\notin 103,461$).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The following table shows the development of non-current provisions in the fiscal year:

in € THOUS	January 1, 2018	Foreign currency translation	Changes in consolidation group	Utilized	Reversed	Additions	Reclassifications	December 31, 2018
Personnel expenses Interest payable related	100,474	2,339	—	(688)	(566)	8,774	(25,894)	84,439
to income taxes	29,027	208		_	(5,413)	5,409	_	29,231
Medical malpractice Other non-current	42,325	658	(47,715)	(140)	_	4,872	—	
provisions	11,008	314	889	(439)	(154)	3,159		14,777
Non-current provisions	182,834	3,519	(46,826)	(1,267)	(6,133)	22,214	(25,894)	128,447

Personnel expenses mainly refer to provisions for share-based plans and provisions for severance payments. As at December 31, 2018, the provisions for share-based plans amounted to €71,784 (2017: €87,967). See note 20.

The item "Other non-current provisions" in the table above includes provisions for asset retirement obligations.

The increase during the period in the discounted amount arising from the passage over time and the effect of any change in the discount rate is not material.

16. Employee benefit plans

General

FMC-AG & Co. KGaA recognizes pension costs and related pension liabilities for current and future benefits to qualified current and former employees of the Company. The Company's pension plans are structured in accordance with the differing legal, economic and fiscal circumstances in each country. The Company 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 Company is required to pay defined benefits to former employees when the defined benefits become due. Defined benefit plans may be funded or unfunded. The Company has five major defined benefit plans, one funded plan in the U.S. and one in France as well as one unfunded plan in Germany and two in 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 the Company'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. The Company's pension liability is impacted by these actuarial gains or losses.

Under defined contribution plans, the Company 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 Company to the employee. The employee retains all rights to the contributions made by the employee and to the vested portion of the Company paid contributions upon leaving the Company. The Company has a defined contribution plan in the U.S.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Defined benefit pension plans

During the first quarter of 2002 FMCH, the Company's U.S. subsidiary, curtailed its defined benefit and supplemental executive retirement 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. The Company has retained all employee benefit obligations as of the curtailment date. Each year FMCH contributes at least the minimum amount required by the Employee Retirement Income Security Act of 1974, as amended. In 2018, FMCH did not have a minimum funding requirement. The Company voluntarily provided €43,393 to the defined benefit plan. Expected funding for 2019 is €1,083.

The benefit obligation for all defined benefit plans at December 31, 2018, was \in 842,601 (2017: \in 792,739) which consists of the gross benefit obligation of \in 388,518 (2017: \in 394,677) for the U.S. plan and of \in 4,626 (2017: \in 3,995) for the French plan, which are funded by plan assets, and the benefit obligation of \in 439,677 (2017: \in 385,835) for the German unfunded plan and the benefit obligation of \in 9,780 (2017: \in 8,232) for the two French unfunded plans.

Related to defined benefit plans the Company is exposed to certain risks. Besides general actuarial risks, e.g. the longevity risk and the interest rate risk, the Company is exposed to market risk as well as to investment risk.

The following table shows the changes in benefit obligations, the changes in plan assets and the funded status of the pension plans. Benefits paid as shown in the changes in benefit obligations represent

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

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 the Company's funded benefit plan.

Funded status		
in € THOUS		
	2018	2017
Change in benefit obligation:		
Benefit obligation at beginning of year	792,739	811,935
Foreign currency translation (gains) losses	17,957	(52,135)
Changes in consolidation group	123	_
Current service cost	25,467	28,463
Past service cost (incl. curtailments and settlements)		144
Interest cost	24,364	24,328
Transfer of plan participants	80	4
Actuarial (gains) losses arising from changes in financial assumptions	(9,760)	(1,038)
Actuarial (gains) losses arising from changes in demographic assumptions	3,497	(2,490)
Actuarial (gains) losses arising from experience adjustments	11,117	7,006
Remeasurements	4,854	3,478
Benefits paid	(22,983)	(23,478)
Benefit obligation at end of year	842,601	792,739
Change in plan assets:		
Fair value of plan assets at beginning of year	291,256	326,663
Foreign currency translation gains (losses)	14,189	(39,792)
Interest income from plan assets	11,308	13,241
Actuarial gains (losses) arising from experience adjustments	(23,216)	10,318
Actual return on plan assets	(11,908)	23,559
Employer contributions	43,393	1,107
Benefits paid	(19,345)	(20,281)
Fair value of plan assets at end of year	317,585	291,256
Funded status at end of year	525,016	501,483

For the years 2018 and 2017, there were no effects from the asset ceiling.

At December 31, 2018, the weighted average duration of the defined benefit obligation was 18 years (2017: 18 years).

The net pension liability as of December 31, 2018 and 2017 is calculated as follows:

Net pension liability in € THOUS

	2018	2017
Funded status at end of year	525,016	501,483
Benefit plans offered by other subsidiaries	35,424	36,304
Net pension liability	560,440	537,787

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Benefit plans offered by the U.S., Germany and France contain a pension liability of €525,016 and €501,483 at December 31, 2018 and 2017, respectively. The pension liability consists of a current portion of €5,384 (2017: €4,695) which is recorded in the line item "Current provisions and other current liabilities" in the consolidated balance sheets. The non-current portion of €519,632 (2017: €496,788) is recorded in non-current liabilities" in the consolidated balance sheets.

As of December 31, 2018, \notin 71,031 related to the U.S. pension plan, \notin 439,677 related to the German plan and \notin 14,308 related to the French plans. At December 31, 2017, \notin 103,519 related to the U.S. pension plan, \notin 385,835 related to the German plan and \notin 12,129 related to the French plans. Approximately 68% of the beneficiaries are located in the U.S. and 7% in France with the majority of the remaining 25% located in Germany.

Benefit plans offered by other subsidiaries outside of the U.S., Germany and France contain separate benefit obligations. The total net pension liability for these other plans was $\{35,424 \text{ and } \{36,304 \text{ at December } 31, 2018 \text{ and } 2017 \text{ and consists of a current pension liability of } \{3,126 (2017: \{2,533\}), which is recognized in the line item "Current provisions and other current liabilities." The non-current pension liability of <math>\{32,298 (2017: \{33,771\}) \text{ for these plans is recorded in non-current liabilities as "Pension liabilities" in the consolidated balance sheets.$

The discount rates for all plans are based upon yields of portfolios of highly rated debt instruments with maturities that mirror each plan's benefit obligation. The Company's discount rates at December 31, 2018 and 2017 are the weighted average of these plans based upon their benefit obligations.

The following weighted-average assumptions were utilized in determining benefit obligations at December 31, 2018 and 2017:

Weighted average assumptions

in %	2010	2017
	2018	2017
Discount rate	3.27	3.08
Rate of compensation increase	3.21	3.22
Rate of pension increase	1.69	1.45

Sensitivity analysis

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Increases and decreases in principal actuarial assumptions by 0.5 percentage points would affect the pension liability at December 31, 2018 as follows:

in € THOUS	0.5% increase	0.5% decrease
Discount rate	(69,634)	80,345
Rate of compensation increase	12,405	(11,923)
Rate of pension increase	32,412	(29,184)

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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The defined benefit pension plans' net periodic benefit costs are comprised of the following components for the years ended December 31, 2018, 2017 and 2016:

Components of net periodic benefit cost

in € THOUS	2018	2017	2016
Service cost	25,467	28,607	23,777
Net interest cost	13,056	11,087	16,333
Net periodic benefit costs	38,523	39,694	40,110

Net periodic benefit cost is allocated as personnel expense within costs of revenues; selling, general and administrative expense; or research and development expense. This is depending upon the area in which the beneficiary is employed.

The following weighted-average assumptions were used in determining net periodic benefit cost for the years ended December 31, 2018, 2017 and 2016:

Weighted average assumptions

in %	2018	2017	2016
Discount rate	3.08	3.25	3.67
Rate of compensation increase	3.22	3.23	3.27
Rate of pension increase	1.45	1.45	1.69

Expected benefit payments are as follows:

Defined benefit pension plans: cash outflows		
in € THOUS	2018	2017
1 year	24,111	21,301
1 - 3 years	53,662	47,560
3 - 5 years	61,415	55,223
5 - 10 years	184,929	168,459
Total	324,117	292,543

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Plan Assets

The following table presents the fair values of the Company's pension plan assets at December 31, 2018 and 2017:

Fair values of plan assets

in € THOUS

Asset category	Total	Quoted prices in active markets for identical assets	Significant observable inputs	Total	Quoted prices in active markets for identical assets	Significant observable inputs
		(Level 1)	(Level 2)		(Level 1)	(Level 2)
		2018			2017	
Equity investments						
Index funds ⁽¹⁾	77,718	1,972	75,746	71,805	(332)	72,137
Fixed income investments						
Government securities ⁽²⁾	9,241	8,880	361	5,318	4,903	415
Corporate bonds ⁽³⁾	186,500	_	186,500	199,232	_	199,232
Other bonds ⁽⁴⁾ \ldots \ldots \ldots	3,518	_	3,518	3,865	_	3,865
U.S. treasury money market funds ⁽⁵⁾	40,510	40,510	—	10,938	10,938	—
Other types of investments						
Cash, money market and mutual						
funds ⁽⁶⁾	98	98		98	98	
Total	317,585	51,460	266,125	291,256	15,607	275,649

(1) This category comprises low-cost equity index funds not actively managed that track the S&P 500, S&P 400, Russell 2000, MSCI Emerging Markets Index and the Morgan Stanley International EAFE Index.

(2) This Category comprises 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 comprises private placement bonds as well as collateralized mortgage obligations.

(5) This Category represents funds that invest in U.S. treasury obligations directly or in U.S. treasury backed obligations.

(6) This Category 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 at the balance sheet date are as follows:

- Common stocks are valued at their market prices.
- Index funds are valued based on market quotes.
- Government bonds are valued based on both market prices and market quotes.
- Corporate bonds and other bonds are valued based on market quotes.
- 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 price.

Plan investment policy and strategy in the U.S.

The Company periodically reviews the assumption 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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

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 Company's overall investment strategy 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 5 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 the Company 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.

Defined contribution plans

Most FMCH employees are eligible to join a 401(k) savings plan. Employees can deposit up to 75% of their pay up to a maximum of \$18.5 if under 50 years old (\$24.5 if 50 or over) under this savings plan. The Company will match 50% of the employee deposit up to a maximum Company contribution of 3% of the employee's pay. The Company's total expense under this defined contribution plan for the years ended December 31, 2018, 2017, and 2016, was \notin 53,872, \notin 48,746 and \notin 43,778 respectively.

Additionally, the Company contributed for the years ended December 31, 2018, 2017, and 2016 €24,721, €24,329 and €20,938 to state pension plans.

17. Shareholders' equity

Capital stock

At December 31, 2018, the Company's share capital consists of 307,878,652 bearer shares without par value (*Stückaktien*) and a nominal value of $\notin 1.00$ each. The Company's share capital has been fully paid in.

The General Partner of FMC-AG & Co. KGaA, Fresenius Medical Care Management AG, Hof an der Saale, is not obliged to make a capital contribution and has not made a capital contribution. It does not participate in the profits and losses or in the assets of the Company. The General Partner receives for the assumption of the management of the Company and the liability an annual remuneration independent of profit and loss in the amount of 4% of its share capital (see note 5 c). The General Partner shall be reimbursed for any and all expenses in connection with management of the Company's business, which includes remuneration of the members of its Management Board and its Supervisory Board.

Pursuant to Sections 33 and 34 of the German Securities Trading Act ("WpHG") any party subject to the notification requirement shall notify the Company when certain mandatory reportable thresholds for voting rights, also by taking account the attribution provisions, are reached, exceeded or fallen below. Section 38 WpHG also stipulates a notification requirement when certain thresholds are reached, exceeded or have fallen below through directly or indirectly held instruments and also, according to Section 39 WpHG when certain thresholds are reached, exceeded or have fallen below through the addition of voting rights according to Section 33 WpHG and instruments according to Section 38 WpHG. Notifications received by the Company subject to the notification requirements were published in accordance with the applicable legal provisions, including publication in the Investors section of the Company's website at www.freseniusmedicalcare.com.

In a notification dated February 8, 2011, Fresenius SE disclosed to the Company pursuant to Section 33 of the WpHG that it held 35.74% of the voting rights in FMC-AG & Co. KGaA. At December 31, 2018, Fresenius SE holds 30.66% of the Company's voting rights. Net of treasury shares held by FMC-AG & Co. KGaA in accordance with Section 16 (2) sentence 2 of the German Stock Corporation Act (AktG), Fresenius SE holds 30.75% of the Company's voting rights. In addition, Fresenius SE is the sole stockholder of the General Partner.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

On December 20, 2018, the Ministry of Finance on behalf of the Kingdom of Norway including attributed subsidiaries, disclosed by means of a notification pursuant to Section 33, 34 of the WpHG, that 2.97% of the voting rights of FMC-AG & Co. KGaA were held as of December 19, 2018. Furthermore, on December 12, 2018, BlackRock, Inc., Wilmington, DE, U.S., including attributed subsidiaries disclosed pursuant to Section 33, 34 of the WpHG that 5.93% of the voting rights of FMC-AG & Co. KGaA and instruments relating to 0.09% of the voting rights of FMC-AG & Co. KGaA were held as of December 7, 2018.

The general meeting of a partnership limited by shares may approve Authorized Capital (*genehmigtes Kapital*). The resolution creating Authorized Capital requires the affirmative vote of a majority of three quarters of the capital represented at the vote and may authorize the General Partner and its Management Board to issue new shares up to a stated amount for a period of up to five years. The nominal value of any proposed increase of the Authorized Capital may not exceed half of the issued capital stock at the time of the authorization.

In addition, the general meeting of a partnership limited by shares may create Conditional Capital (*bedingtes Kapital*) for the purpose of issuing (i) new shares to holders of convertible bonds or other securities which grant a right to shares, (ii) new shares as the consideration in a merger with another company, or (iii) new shares offered to management or employees. In each case, the authorizing resolution requires the affirmative vote of a majority of three quarters of the capital represented at the vote. The nominal value for any proposed increase of the Conditional Capital may not exceed half or, in the case of Conditional Capital created for the purpose of issuing shares to management and employees, 10% of the Company's issued capital at the time of the resolution.

All resolutions increasing the capital of a partnership limited by shares also require the consent of the General Partner in order for the resolutions to go into effect.

The subscribed capital comprised solely ordinary shares due to the conversion of all outstanding preference shares into ordinary shares (approved at FMC-AG & Co. KGaA's Annual General Meeting and Preference Shareholder Meeting held on May 16, 2013) as well as the options associated with the preference shares on a 1:1 basis.

Authorized capital

By resolution of the Company's Annual General Meeting ("AGM") on May 19, 2015, the General Partner was authorized, with the approval of the Supervisory Board, to increase, on one or more occasions, the Company's share capital until May 18, 2020 up to a total of €35,000 through issue of new bearer ordinary shares for cash contributions, "Authorized Capital 2015/I". Additionally, the newly issued shares may be taken up by a credit and/or financial institution or a consortium of such credit and/or financial institutions retained by the General Partner with the obligation to offer them to the shareholders of the Company. The General Partner is entitled, subject to the approval of the supervisory board, to exclude the pre-emption rights of the shareholders. However, such an exclusion of pre-emption rights will be permissible only for fractional amounts. No Authorized Capital 2015/I has been issued at December 31, 2018.

In addition, by resolution of the AGM of shareholders on May 19, 2015, the General Partner was authorized, with the approval of the Supervisory Board, to increase, on one or more occasions, the share capital of the Company until May 18, 2020 up to a total of \pounds 25,000 through the issue of new bearer ordinary shares for cash contributions or contributions in kind, "Authorized Capital 2015/II". The new shares can also be obtained by a credit and/or financial institution or a consortium of such credit and/or financial institutions retained by the General Partner with the obligation to offer the shares to the Company's shareholders for subscription. The General Partner is entitled, subject to the approval of the Supervisory Board, to exclude the pre-emption rights of the shareholders. However, such exclusion of pre-emption rights will be permissible only if (i) in case of a capital increase against cash contributions, the nominal value of the issue shares does not exceed 10% of the nominal share value of the Company's share capital and the issue price for the new shares is at the time of the determination by the General Partner not significantly lower than the stock price of the existing listed shares of the same class and with the same rights or, (ii) in case of a capital increase against contributions by the general Partner of the same class and with the same rights or, (ii) in case of a capital increase against contribution in kind, the purpose of such

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

increase is to acquire an enterprise, parts of an enterprise or an interest in an enterprise. No Authorized Capital 2015/II has been issued at December 31, 2018.

Authorized Capital 2015/I and Authorized Capital 2015/II became effective upon registration with the commercial register of the local court in Hof an der Saale on June 10, 2015.

Conditional capital

By resolution of the Company's AGM on May 9, 2006, as amended by the resolution of the Company's AGM on May 15, 2007, resolving a three-for-one share split, the Company's share capital was conditionally increased by up to $\notin 15,000$ corresponding to 15 million ordinary shares with no par value and a calculated proportionate value of $\notin 1.00$ each, "Conditional Capital 2006/I," (see note 20). The Conditional Capital increase is only executed to the extent subscription rights were awarded under the Stock Option Plan 2006, the holders of the subscription rights exercise their right and the Company does not use Treasury Shares to fulfill the subscription rights with each stock option awarded exercisable for one ordinary share (see note 20). The Company has the right to deliver ordinary shares that it owns or purchases in the market in lieu of increasing capital by issuing new shares.

By resolution of the Company's AGM on May 12, 2011, the Company's share capital was conditionally increased with regards to the Stock Option Plan 2011 ("2011 SOP") by up to \notin 12,000 subject to the issue of up to 12 million no par value bearer ordinary shares with a calculated proportionate value of \notin 1.00 each ("Conditional Capital 2011/I"), (see note 20). The Conditional Capital increase is only executed to the extent subscription rights were awarded under the 2011 SOP, the holders of the subscription rights with each stock option awarded exercisable for one ordinary share (see note 20). The Company has the right to deliver ordinary shares that it owns or purchases in the market in lieu of increasing capital by issuing new shares.

Through the Company's other employee participation programs, the Company has issued stock option/ subscription rights (*Bezugsrechte*) to employees and the members of the Management Board of the General Partner and employees and members of management of affiliated companies that entitle these persons to receive shares. At December 31, 2018, options 3,896,578 remained outstanding with a remaining average term of 3.95 years under these programs. For the year ending December 31, 2018, 858,652 options had been exercised under these employee participation plans (see note 20).

Conditional capital at December 31, 2018 was $\notin 16,944$ in total. Thereof, for all programs, $\notin 13,570$ was available, which included $\notin 10,057$ for the 2011 SOP and $\notin 3,513$ for the 2006 Plan (see note 20).

A total of 858,652 shares (2017: 889,209 shares) were issued out of Conditional Capital 2011/I during 2018, increasing the Company's capital stock by €859 (2017: €889).

Treasury stock

On the basis of the authorization granted by the Company's AGM on May 12, 2011 to conduct a share buy-back program, the Company repurchased 7,548,951 shares in 2013 for an average weighted stock price of €51.00 per share. The Company redeemed 6,549,000 of these repurchased shares on February 16, 2016 in order to decrease its share capital.

By resolution of the Company's AGM on May 12, 2016, the General Partner is authorized to purchase treasury shares up to a maximum amount of 10% of the registered share capital existing at the time of this resolution until May 11, 2021. The shares acquired, together with other treasury shares held by the Company or attributable to the Company pursuant to sections 71a et seqq. AktG, must at no time exceed 10% of the registered share capital. The purchase will be made through the stock exchange, by way of a public tender offer, or a public invitation to shareholders to submit an offer for sale. This authorization is not applicable for the purpose of trading in treasury shares. The General Partner is authorized to use treasury shares purchased on the basis of this authorization or any other earlier authorization for any legally permissible purpose, in particular (i) to redeem shares without requiring any further resolution by the General Meeting, (ii) to sell treasury shares to third parties against contributions in kind, (iii) to award treasury shares, in lieu of the utilization of conditional capital of the Company, to employees of the

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Company and companies affiliated with the Company, including members of the management of affiliated companies, and use them to service options or obligations to purchase shares of the Company, and (iv) to use treasury shares to service bonds carrying warrant and/or conversion rights or conversion obligations issued by the Company or companies affiliated with the Company pursuant to section 17 AktG.

On the basis of the authorization granted by the Company's Annual General Meeting on May 12, 2016 to conduct a share buy-back program, between December 11, 2017 and December 21, 2017, the Company repurchased 660,000 shares for an average weighted stock price of \notin 87.79. On the basis of the authorization granted by the Company's AGM on May 12, 2016 to conduct a share buy-back program, the Company repurchased further 431,000 shares, between May 28, 2018, and June 8, 2018, for an average weighted stock price of \notin 86.37.

On December 12, 2018, the Company redeemed the 1,091,000 shares repurchased in the period from December 11, 2017 until December 21, 2017 (including) and in the period from May 28, 2018 until June 8, 2018 (including) for the purpose of capital reduction at an average weighted price of \notin 87.23 per share.

As of December 31, 2018, the Company held 999,951 treasury shares. These shares will be used solely to either reduce the registered share capital of the Company by cancellation of the acquired shares, or to fulfill employee participation programs of the Company.

The following tabular disclosure provides the number of shares acquired in the context of the share buy-back programs as well as the repurchased treasury stock:

Treasury Stock

	Average price paid per share	Total number of shares purchased and retired as part of publicly announced plans or	Total value of shares ⁽¹⁾
Period	in €	programs	in € THOUS
Purchase of Treasury Stock			
May 2013	52.96	1,078,255	57,107
June 2013	53.05	2,502,552	132,769
July 2013	49.42	2,972,770	146,916
August 2013	48.40	995,374	48,174
Repurchased Treasury Stock	51.00	7,548,951	384,966
Retirement of repurchased Treasury Stock	51.00	6 5 40 000	222 072
February 2016	51.00	6,549,000	333,973
December 31, 2016	51.00	999,951	50,993
Purchase of Treasury Stock			
December 2017	87.79	660,000	57,938
December 31, 2017	65.63	1,659,951	108,931
Purchase of Treasury Stock			
May 2018	86.69	173,274	15,020
June 2018	86.14	257,726	22,201
Repurchased Treasury Stock	86.37	431,000	37,221
Retirement of repurchased Treasury Stock			
December 2018	87.23	1,091,000	95,159
Total	51.00	999,951	50,993

(1) The value of shares repurchased in 2013, 2017 and 2018 is inclusive of fees (net of taxes) paid in the amount of approximately €81, €12 and €8, respectively, for services rendered.

Additional paid-in capital

Additional paid-in capital is comprised of the premium paid on the issue of shares and stock options, the tax effects from stock options, the compensation expense from stock options, which is recognized

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

according to IFRS 2 as well as changes in ownership interest in a subsidiary that does not result in a loss of control.

Retained earnings

Retained earnings is comprised of earnings generated by group entities in prior years to the extent that they have not been distributed as well as changes of the noncontrolling interests subject to put provisions.

Dividends

Under German law, the amount of dividends available for distribution to shareholders is based upon the unconsolidated retained earnings of the Company as reported in its balance sheet determined in accordance with the German Commercial Code (*Handelsgesetzbuch*).

Cash dividends of €324,838 for 2017 in the amount of €1.06 per share were paid on May 23, 2018.

Cash dividends of €293,973 for 2016 in the amount of €0.96 per share were paid on May 16, 2017.

Cash dividends of €244,251 for 2015 in the amount of €0.80 per share were paid on May 13, 2016.

Noncontrolling interests

Noncontrolling interests represent the proportion of the net assets of consolidated subsidiaries owned by minority shareholders. The Company has purchase obligations under options held by the holders of noncontrolling interests in certain of its subsidiaries. These obligations result from contractual put options and are exercisable by the owners of the noncontrolling interests. In addition to noncontrolling interests the potential obligations under these put options are recognized at fair value in other current or non-current liabilities by profit or loss neutral reclassification from equity.

18. Supplementary information on capital management

The principle objectives of the Company's capital management strategy are to optimize the weighted average cost of capital and to achieve a balanced mix of total equity and debt. The dialysis industry, in which the Company has a strong market position in global, growing and largely non-cyclical markets, is characterized by stable cash flows. Due to the Company's payors' mostly high credit quality, it is able to generate high, stable, predictable and sustainable cash flows. These generated cash flows allow a reasonable proportion of debt, through the employment of an extensive mix of debt.

As of December 31, 2018 and December 31, 2017, total equity and debt were as follows:

in € THOUS	2018	2017
Total equity including noncontrolling interests	12,901,958	10,828,186
Debt	, ,	7,447,686
Total assets	26,242,268	24,025,215
Debt in % of total assets	28.8%	31.0%
Total equity in % of total assets (equity ratio)	49.2%	45.1%

The Company is not subject to any capital requirements provided for in its Articles of Association. The Company has obligations to issue shares out of the conditional capital relating to the exercise of stock options on the basis of the existing 2011 SOP stock option plan (see note 20).

Assuring financial flexibility is a top priority in the Company's financing strategy. This flexibility is achieved through a wide range of financing instruments and a high degree of diversification of investors. The Company's maturity profile displays a broad spread of maturities with a high proportion of medium and long-term financings. In the choice of financing instruments market capacity, investor diversification, flexibility, credit conditions and the existing maturity profile are taken into account (see note 14).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The Company's financing structure and business model are reflected in the investment grade ratings. The Company is covered and rated investment grade by the three leading rating agencies, Moody's, Standard & Poor's and Fitch.

Standard & Poor's	Moody's	Fitch
BBB-	Baa3	BBB-
positive	stable	stable
	BBB-	

(1) A rating is not a recommendation to buy, sell or hold securities of the Company, and may be subject to suspension, change or withdrawal at any time by the assigning rating agency.

19. Earnings per share

The following table contains reconciliations of the numerators and denominators of the basic and fully diluted earnings per share computations for 2018, 2017 and 2016:

Reconciliation of basic and fully diluted earnings per share

in € THOUS, except share and per share data	2018	2017	2016
Numerators:			
Net income attributable to shareholders of FMC-AG & Co.			
KGaA	1,981,924	1,279,788	1,143,980
Denominators:			
Weighted average number of shares outstanding	306,541,706	306,563,400	305,748,381
Potentially dilutive shares	684,681	719,912	580,313
Basic earnings per share	6.47	4.17	3.74
Fully diluted earnings per share	6.45	4.16	3.73

20. Share-based plans

The Company accounts for its share-based plans in accordance with IFRS 2.

Fresenius Medical Care AG & Co. KGaA share-based plans

At December 31, 2018, the Company 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 the Company, the Management Board and the supervisory board of Management AG have approved and adopted the FMC-AG & Co. KGaA Long-Term Incentive Program 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 the Company'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,

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

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 the 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 the Company's shares over a period of thirty 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 Company share price over a period of thirty 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.

During 2018, the Company awarded 632,804 Performance Shares under the LTIP 2016 including 73,315 Performance Shares to the members of the Management Board at a measurement date weighted average fair value of \notin 51.99 each and a total fair value of \notin 32,900, which will be revalued if the fair value changes. The total fair value will be amortized over the four-year vesting period.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

During 2017, the Company awarded 614,985 Performance Shares under the LTIP 2016 including 73,746 Performance Shares to the members of the Management Board at a measurement date weighted average fair value of \notin 83.40 each and a total fair value of \notin 51,290, which will be revalued if the fair value changes. The total fair value will be amortized over the four-year vesting period.

During 2016, the Company awarded 642,349 Performance Shares under the LTIP 2016 including 79,888 Performance Shares to the members of the Management Board at a measurement date weighted average fair value of \notin 76.19 each and a total fair value of \notin 48,941, which will be revalued if the fair value changes. The total fair value will be amortized over the four-year vesting period.

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 the Company's AGM. The 2011 SOP, together with the Phantom Stock Plan 2011, which was established by resolution of the General Partner's Management and supervisory boards, forms the Company's 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 pre-defined performance targets. The 2011 SOP was established with a conditional capital increase up to $\notin 12,000$ subject to the issue of up to twelve million non-par value bearer ordinary shares with a nominal value of $\notin 1.00$, 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 the Company'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 transferred, pledged, assigned, or disposed of otherwise.

Phantom stock awards under the LTIP 2011 entitle the holders to receive payment in euro from the Company 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 the Company'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. taxpayers, the phantom stock is deemed to be exercised in any event in the month of March following the end of the vesting period.

New incentive bonus plan

In 2018, the Management Board was eligible for performance – related compensation that depended upon achievement of pre-defined targets. The targets are measured based on the operating income margin, net income growth and free cash flow (net cash provided by operating activities after capital expenditures before acquisitions and investments) in percentage of revenue, and are derived from the comparison of targeted and actually achieved current year figures. Targets are divided into Group level targets and those to be achieved in individual regions and areas of responsibility.

Performance-related bonuses for fiscal year 2018 consist proportionately of a cash component and a sharebased component which will be paid in cash. Upon meeting the annual targets, the cash component for the year 2018 will be paid in the following year, after the consolidated financial statements for 2018 have been approved. The share-based component is subject to a three-year vesting period, although a shorter period may apply in special cases (e.g. occupational disability, retirement and employment contracts which were not extended by the Company). The amount of cash for the payment relating to the share-based component shall be based on the share price of Fresenius Medical Care AG & Co. KGaA ordinary shares upon exercise. For each of the members of the Management Board, the amount of the achievable pay component as well as of the allocation value of the cash-settled share-based compensation is capped.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Share-based compensation related to this plan for years ending 2018, 2017 and 2016 was €3,414, €3,418 and €3,281, respectively.

Information on holdings under share-based plans

At December 31, 2018, the Management Board held 602,389 stock options and employees of the Company held 3,294,189 stock options under the various share-based compensation plans of the Company.

At December 31, 2018, the Management Board held 54,711 phantom shares and employees of the Company held 581,816 phantom shares under the 2011 Incentive Plan.

At December 31, 2018, the Management Board held 204,693 Performance Shares and employees of the Company held 1,570,813 Performance Shares under the LTIP 2016.

Additional information on stock options

The table below provides reconciliations for stock options outstanding at December 31, 2018, as compared to December 31, 2017.

Transactions

Share Options

	Options (in THOUS)	Weighted Average Exercise Price in €
Stock options for shares		
Balance at December 31, 2017	4,827	65.67
Granted		
Exercised ⁽¹⁾	859	50.67
Forfeited	72	72.45
Balance at December 31, 2018	3,896	68.85

(1) The average share price at the date of exercise of the options was $\notin 84.96$.

The following table provides a summary of fully vested options outstanding and exercisable at December 31, 2018:

		Outstanding		Exercis	sable
Range of exercise prices in €	Number of options	Weighted average remaining contractual life	Weighted average exercise price in €	Number of options	Weighted average exercise price in €
45.01 - 50.00	937,423	3.30	49.90	937,423	49.90
50.01 - 55.00	126,696	0.51	52.44	126,696	52.44
55.01 - 60.00	173,119	2.00	57.60	173,119	57.60
60.01 - 65.00	_	_	_	_	_
65.01 - 70.00	_	_	_	_	_
70.01 - 75.00	_	_	_		_
75.01 - 80.00	2,659,340	4.47	77.04		
	3,896,578	3.95	68.85	1,237,238	51.23

At December 31, 2018, there was €3,146 total unrecognized compensation costs related to non-vested options granted under all plans. These costs are expected to be recognized over a weighted average period of one year.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued) (in THOUS, except share and per share data)

During the years ended December 31, 2018, 2017, and 2016, the Company received cash of €43,508, €42,234 and €39,438, respectively, from the exercise of stock options (see note 17). The intrinsic value of stock options exercised for the twelve-month periods ending December 31, 2018, 2017, and 2016 was €29,440, €31,580 and €31,410, respectively.

The compensation expenses related to equity-settled stock option programs are determined based upon the fair value on the grant date and the number of stock options granted which will be recognized over the four year vesting period. In connection with its equity-settled stock option programs, the Company incurred compensation expense of €6,713, €11,736 and €23,210 for the years ending December 31, 2018, 2017 and 2016, respectively.

The compensation expenses related to cash-settled share based payment transactions are determined based upon the fair value at the measurement date and the number of phantom shares or Performance Shares granted which will be recognized over the four-year vesting period. In connection with cash-settled share based payment transactions, the Company recognized compensation expense of -€8.799, €21.576 and €15,509 related to phantom shares for the years ending December 31, 2018, 2017 and 2016, respectively, and €4,152, €38,882 and €19,513, related to Performance Shares for the year ended December 31, 2018, 2017 and 2016.

Subsidiary stock incentive plans

In 2014, the Company established two subsidiary stock incentive plans for the acquisitions of Sound and National Cardiovascular Partners. The Company divested its controlling interest in Sound on June 28, 2018, see note 4 c) for information. Compensation expense associated with the Sound subsidiary stock incentive plan was €87,157, €35,250 and €6,984 for the years ended December 31, 2018, 2017 and 2016, respectively. The remaining subsidiary stock incentive plan related to National Cardiovascular Partners is immaterial to the Company.

21. Operating leases and rental payments

The Company leases buildings and machinery and equipment under various lease agreements. Rental expense recorded for operating leases for the years ended December 31, 2018, 2017 and 2016 was €831,793, €823,446 and €756,393, respectively. For information regarding operating leases with related parties, see note 5 a).

Future minimum rental payments under non-cancelable operating leases for the five years succeeding December 31, 2018 and 2017 and thereafter are:

Future minimum rental payments		
in € THOUS	2018	2017
1 year	822,331	728,312
1 - 3 years	1,450,399	1,246,719
3 - 5 years	1,096,837	934,725
Over 5 years	2,158,071	1,595,270
Total	5,527,638	4,505,026

22. Commitments and contingencies

Legal and regulatory matters

The Company 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 Company currently deems to be material or noteworthy are described below. For the matters described below in which the Company 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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

described below, the Company 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 the Company's view of the merits can occur. The Company 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.

On February 15, 2011, a whistleblower (relator) action under the False Claims Act against 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.

Beginning in 2012, the Company received certain communications alleging conduct in countries outside the United States that might violate the Foreign Corrupt Practices Act or other anti-bribery laws. The Company's Supervisory Board, through its Audit and Corporate Governance Committee, conducted investigations with the assistance of independent counsel. In a continuing dialogue, the Company 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 the Company cooperated.

In the course of this dialogue, the Company 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 the Company and disgorgement of related profits revolving principally around conduct in the Company's products business in a limited number of countries outside the United States.

The Company recorded charges of $\notin 200,000$ in 2017 and $\notin 77,200$ 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 $\notin 223,980$ as of December 31, 2018.

The Company has reached an agreement in principle with the government agencies encompassing the terms understood to be necessary for settlement. The Company 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 the Company.

The Company continues to implement enhancements to its anti-corruption compliance program, including internal controls related to compliance with international anti-bribery laws. The Company continues to be fully committed to compliance with the Foreign Corrupt Practices Act and other applicable anti-bribery laws.

Personal injury litigation involving the Company's acid concentrate product, labeled as Granuflo[®] or Naturalyte[®], first arose in 2012 and was substantially resolved by settlement agreed in principle in February

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

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.

The Company's affected insurers agreed to the settlement of the acid concentrate personal injury litigation and funded \$220,000 of the settlement fund under a reciprocal reservation of rights encompassing certain coverage issues raised by insurers and the Company's claims for indemnification of defense costs. The Company accrued a net expense of \$60,000 in connection with the settlement, including legal fees and other anticipated costs.

Following entry into the settlement, the Company's insurers in the AIG group and the Company 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 the Company for a portion of its \$220,000 outlay; the Company seeks to confirm the AIG group's \$220,000 funding obligation, to recover defense costs already incurred by the Company, 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 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, et al* 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 \$10,300.

The Company 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.

In August 2014, 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

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 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 \$8,000, 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.

On August 31, 2015, FMCH received a subpoena under the False Claims Act from the United States Attorney for the District of Colorado (Denver) inquiring into FMCH's participation in and management of dialysis facility joint ventures in which physicians are partners. FMCH continues to cooperate in the Denver United States Attorney's Office ("USAO") investigation, which has come to focus on purchases and sales of minority interests in ongoing outpatient facilities between FMCH and physician groups.

On November 25, 2015, FMCH received a subpoena under the False Claims Act from the United States Attorney for the Eastern District of New York (Brooklyn) also inquiring into FMCH's involvement in certain dialysis facility joint ventures in New York. On September 26, 2018, the Brooklyn USAO declined to intervene on the qui tam complaint filed under seal in 2014 that gave rise to this investigation. *CKD Project LLC v. Fresenius Medical Care*, 2014 Civ. 6646 (E.D.N.Y. November 12, 2014). The court unsealed the complaint, allowing the relator to serve and proceed on its own. The relator – a special-purpose entity formed by law firms to pursue qui tam proceedings – has served its complaint and litigation is proceeding.

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 the Company's subsidiary Azura Vascular Care for a period beginning after the Company's acquisition of American Access Care LLC ("AAC") in October 2011. The Company has cooperated in the Brooklyn 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 \$18,400 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 the Company 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 the Company have been served and the litigation is proceeding.

On June 30, 2016, 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. The Company understands that this investigation is substantively independent of the \$63,700 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

On November 18, 2016, 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 the Company 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 USAO continues to investigate a range of issues involving Shiel, including allegations of improper compensation (kickbacks) to physicians, and has disclosed that multiple sealed qui tam complaints underlie the investigation.

On December 12, 2017, the Company 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, the Company retains responsibility for the Brooklyn investigation and its outcome. The Company continues to cooperate in the ongoing investigation.

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 FMCH and would have effectively enabled insurers to reject premium payments made by or on behalf of patients who received grants for individual market coverage from the American Kidney Fund ("AKF" or "the Fund"). The IFR could thus have resulted in those patients losing individual insurance market coverage. The loss of coverage for these patients would have had a material and adverse impact on the operating results of FMCH.

On January 25, 2017, a federal district court in Texas responsible for litigation initiated by a patient advocacy group and dialysis providers including FMCH preliminarily enjoined CMS from implementing the IFR. *Dialysis Patient Citizens v. Burwell*, 2017 Civ. 0016 (E.D. Texas, Sherman Div.). The preliminary injunction was based on CMS' failure to follow appropriate notice-and-comment procedures in adopting the IFR. The injunction remains in place and the court retains jurisdiction over the dispute.

On June 22, 2017, CMS requested a stay of proceedings in the litigation pending further rulemaking concerning the IFR. CMS stated, in support of its request, that it expects to publish a Notice of Proposed Rulemaking in the Federal Register and otherwise pursue a notice-and-comment process. Plaintiffs in the litigation, including FMCH, consented to the stay, which was granted by the court on June 27, 2017.

On January 3, 2017, FMCH received a subpoena from the United States Attorney for the District of Massachusetts under the False Claims Act inquiring into FMCH's interactions and relationships with the AKF, including FMCH's charitable contributions to the Fund and the Fund's financial assistance to patients for insurance premiums. FMCH is cooperating in the investigation, which is part of a broader investigation into charitable contributions in the medical industry. The Company 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 the Company. On July 2, 2018, American Renal Associates announced that it had reached a settlement in principle of the *United Healthcare* litigation. The Company 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 the Company'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 \$63,700 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

On December 17, 2018, 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.

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 FMC-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.

From time to time, the Company 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 Company's defenses and insurance coverage and, as necessary, provides accruals for probable liabilities for the eventual disposition of these matters.

The Company, like other healthcare 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 Company could be subject to significant adverse regulatory actions by the U.S. Food and Drug Administration ("FDA") and comparable regulatory authorities outside the U.S. These regulatory actions could include warning letters or other enforcement notices from the FDA, and/or comparable foreign regulatory authority which may require the Company to expend significant time and resources in order to implement appropriate corrective actions. If the Company 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 U.S., 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 Company's products and/or criminal prosecution. FMCH is currently engaged in remediation efforts with respect to one pending FDA warning letter. The Company 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 Company'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 Company'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 Company's compliance with applicable laws and regulations. The Company 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The Company 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 Company 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 Company 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 Company must comply with applicable breach notification requirements.

The Company 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 Company may identify instances where employees or other agents deliberately, recklessly or inadvertently contravene the Company's policies or violate applicable law. The actions of such persons may subject the Company 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 healthcare 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 Company 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 Company 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 Company 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 Company's reputation and business.

The Company 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 Company has, when appropriate, asserted its own claims, and claims for indemnification. A successful claim against the Company 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 Company's reputation and business.

In Germany, the tax audits for the years 2006 through 2009 have been substantially completed. The German tax authorities have indicated a re-qualification of dividends received in connection with intercompany mandatorily redeemable preferred shares into fully taxable interest payments for these and subsequent years until 2013. The Company has defended its position and will avail itself of appropriate remedies. An adverse determination with respect to fully taxable interest payments related to intercompany mandatorily redeemable preferred shares and the disallowance of certain other tax deductions could have a material adverse effect on the Company's financial condition and results of operations.

The Company is also subject to ongoing and future tax audits in the U.S., Germany and other jurisdictions in the ordinary course of business. Tax authorities routinely pursue adjustments to the Company's tax returns and disallowances of claimed tax deductions. When appropriate, the Company defends these adjustments and disallowances and asserts its own claims. A successful tax related claim against the Company or any of its subsidiaries could have a material adverse effect upon its business, financial condition and results of operations. Any claims, regardless of their merit or eventual outcome, could have a material adverse effect on the Company's reputation and business.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Other than those individual contingent liabilities mentioned above, as well as in note 8 and note 21, the current estimated amount of the Company's other known individual contingent liabilities is immaterial.

23. Financial instruments

Transition from IAS 39 to IFRS 9

The Company applied IFRS 9 using the modified retrospective method. Comparative periods have not been restated. Differences in the carrying amounts of financial instruments resulting from the adoption of IFRS 9 are recognized in retained earnings as at January 1, 2018. Information presented for 2017 does not reflect the requirements of IFRS 9 and consequently is not comparable to the information presented for 2018 under IFRS 9. See note 1 g) for further details on the accounting policy under IAS 39 and IFRS 9. The Company only discloses details on the accounting policy before January 1, 2018, if it is different from those under IFRS 9.

At the date of initial application, the Company determined the business model within which a financial asset is held. Further, certain equity investments have been designated at FVOCI. Changes to the hedge accounting policy are applied prospectively. The existing hedging relationships designated under IAS 39 at December 31, 2017 met the criteria for hedge accounting under IFRS 9 as well and are regarded as continuing hedging relationships.

The following table shows the measurement categories under IAS 39 at December 31, 2017 and the new classification of financial assets under IFRS 9 at January 1, 2018:

Financial asset classification under IFRS 9

in € THOUS

	Categories under IAS 39	New classification under IFRS 9	Carrying amount under IAS 39 December 31, 2017	Adjusted carrying amount under IFRS 9 December 31, 2017
~				
Cash and cash equivalents	Not assigned to a category	Amortized cost	620,145	620,145
Cash and cash equivalents Trade accounts and other	Not assigned to a category	FVPL	357,964	357,964
receivables	Loans and receivables	Amortized cost	3,330,990	3,327,692
Trade accounts and other				
receivables	Not assigned to a category	Not classified	58,336	58,144
Accounts receivable from				
related parties	Loans and receivables	Amortized cost	111,643	111,643
Derivatives – cash flow				
hedging instruments ⁽¹⁾	Not assigned to a category	Not classified	561	561
Derivatives – not designated				
as hedging instruments ⁽¹⁾	FVPL	FVPL	113,713	113,713
Equity investments ⁽¹⁾	Available for sale	FVOCI	16,010	16,010
Equity investments ⁽¹⁾	Not assigned to a category	FVOCI	10,537	10,537
Equity investments ⁽¹⁾	Not assigned to a category	FVPL	7,259	7,259
Debt securities ^{(1)}	Available for sale	FVOCI	2,650	2,650
Debt securities ⁽¹⁾	Available for sale	Not classified	833	833
Other financial assets ⁽¹⁾ \ldots	Loans and receivables	Amortized cost	131,279	129,929
Other financial assets ⁽¹⁾ \ldots	Not assigned to a category	Not classified	78,368	78,132
Financial assets			4,840,288	4,835,212

(1) Included in Other current assets or Other non-current assets in the consolidated balance sheets.

Financial liabilities measured at amortized cost under IAS 39 are also classified as measured at amortized cost under IFRS 9, with no change to the carrying amounts of the liabilities. This is also applicable for

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

financial liabilities measured at FVPL under IAS 39 and IFRS 9 as well as financial liabilities not assigned to a category under IAS 39 and not classified under IFRS 9.

The transition to IFRS 9 had an impact on retained earnings at January 1, 2018 in the amount of \notin 5,076. This impact results from the recognition of expected credit losses under IFRS 9. For further details on Trade accounts and other receivables, see note 7.

Financial instruments in accordance with IFRS 9

The following tables show the carrying amounts and fair values of the Company's financial instruments at December 31, 2018 and December 31, 2017:

Carrying amount and fair value of financial instruments

in € THOUS	Carrying amount					Fair value		
	Amortized	Cur	i jing uni	Not			tun vulue	
December 31, 2018	cost	FVPL	FVOCI	classified	Total	Level 1	Level 2	Level 3
Cash and cash equivalents ⁽¹⁾	831,885	1,313,747			2,145,632		1,313,747	
Trade accounts and other receivables	3,288,258	—	_	49,448	3,337,706	_	_	_
Accounts receivable from related parties Derivatives – cash flow hedging	92,662	_	_	_	92,662	—	_	_
instruments Derivatives – not designated as hedging	_	_	_	1,492	1,492	—	1,492	
instruments	—	18,222	—	—	18,222	—	18,222	—
Equity investments	_	106,350	34,377	_	140,727	13,869	126,858	_
Debt securities	_	83,213	250,822	—	334,035	329,821	4,214	_
Other financial assets	144,838			107,125	251,963	—	—	—
Other current and non-current assets	144,838	207,785	285,199	108,617	746,439	—	—	_
Financial assets	4,357,643	1,521,532	285,199	158,065	6,322,439	_	_	_
Accounts payable	641,271	_			641,271	_	_	_
Accounts payable to related parties Short-term debt and short-term debt from	153,781	—	—	_	153,781	—	—	—
related parties	1,394,194	—	—	—	1,394,194	—	—	_
Long-term debt and capital lease obligations Derivatives – cash flow hedging	6,115,890	_	_	36,144	6,152,034	4,227,684	2,022,057	—
instruments Derivatives – not designated as hedging	_	_	_	1,125	1,125	_	1,125	_
instruments	_	18,911	—	_	18,911	—	18,911	_
acquisitions	—	172,278	—	_	172,278	—	—	172,278
provisions	_	_		818,871	818,871	_	_	818,871
Other financial liabilities	1,467,767	—	—	_	1,467,767	_	—	_
Other current and non-current liabilities	1,467,767	191,189		819,996	2,478,952	_	_	_
Financial liabilities	9,772,903	191,189	_	856,140	10,820,232	_	_	_

(1) Highly liquid short-term investments are categorized in level 2 of the fair value hierarchy. Other cash and cash equivalents is not categorized.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Carrying amount and fair value of financial instruments

in € THOUS			Carryi	ng amount	ł		I	Fair value	
December 31, 2017	Loans and receivables	Amortized cost		0	Not assigned to a category	Total	Level 1	Level 2	Level 3
Cash and cash equivalents ^{(1)}					978,109	978,109		357,964	_
Trade accounts and other receivables .	3,330,990	—	—	—	58,336	3,389,326	—	—	—
Accounts receivable from related parties	111,643	_	_	_	_	111,643	_	_	_
Derivatives – cash flow hedging									
instruments	—	_	_	_	561	561	_	561	_
hedging instruments		_	113,713	_	—	113,713	—	113,713	_
Equity investments		—	—	16,010	17,796	33,806	16,010	17,796	_
Debt securities		—	—	3,483	—	3,483	—	3,483	—
Other financial assets	131,279				78,368	209,647	—	—	—
Other current and non-current assets .	131,279		113,713	19,493	96,725	361,210	_	_	—
Financial assets	3,573,912	_	113,713	19,493	1,133,170	4,840,288	_	_	_
Accounts payable	_	590,493	_		_	590,493	_	_	_
Accounts payable to related parties Short-term debt and short-term debt	_	147,349	_	_		147,349	_	_	
from related parties	_	769,279	_	—	—	769,279	_	_	_
obligations	_	6,640,703	_	—	37,704	6,678,407	4,603,770	2,481,216	—
instruments	—	—	—	—	3,209	3,209	—	3,209	—
hedging instruments	_	—	111,953	—	_	111,953	—	111,953	
acquisitions	—	_	205,792	_	—	205,792	_	_	205,792
put provisions	_	_	_	_	830,773	830,773	_	_	830,773
Other financial liabilities		1,461,439				1,461,439	_	_	_
Other current and non-current									
liabilities		1,461,439	317,745		833,982	2,613,166	—	_	—
Financial liabilities	_	9,609,263	317,745	_	871,686	10,798,694	_	_	_

(1) Highly liquid short-term investments are categorized in level 2 of the fair value hierarchy. Other cash and cash equivalents is not categorized.

Derivative and non-derivative financial instruments are categorised in the following three-tier fair value hierarchy that reflects the significance of the inputs in making the measurements. 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. Fair value information is not provided for financial instruments, if the carrying amount is a reasonable estimate of fair value due to the relatively short period of maturity of these instruments. Transfers between levels of the fair value hierarchy have not occurred as of December 31, 2018 and December 31, 2017. The Company accounts for possible transfers at the end of the reporting period.

Non-derivative financial instruments

The significant methods and assumptions used for the classification and measurement of non-derivative financial instruments are as follows:

The Company assessed its business models and the cash flow characteristics of its financial assets. The vast majority of the non-derivative financial assets are held in order to collect the contractual cash flows. The contractual terms of the financial assets allow the conclusion that the cash flows represent payment of principle and interest only. Trade accounts and other receivables, Accounts receivable from related parties and Other financial assets are consequently measured at amortized cost.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Cash and cash equivalents are comprised of cash funds and other short-term investments. Cash funds are measured at amortized cost. Short-term investments are highly liquid and readily convertible to known amounts of cash. Short-term investments are measured at FVPL. The risk of changes in fair value is insignificant.

Equity investments are not held for trading. At initial recognition the Company elected, on an instrument-by-instrument basis, to represent subsequent changes in the fair value of individual strategic investments in OCI. If equity instruments are quoted in an active market, the fair value is based on price quotations at the period-end-date.

The majority of the debt securities are held within a business model whose objective is achieving both contractual cash flows and sell the securities. The standard coupon bonds give rise on specified dates to cash flows that are solely payments of principal and interest on the outstanding principal amount. Subsequently these financial assets have been classified as FVOCI. The smaller part of debt securities do not give rise to cash flows that are solely payments of principle and interest. Consequently, these securities are measured at FVPL. In general most of the debt securities are quoted in an active market.

Long-term debt is recognized at its carrying amount. The fair values of major long-term debt are calculated on the basis of market information. Liabilities for which market quotes are available are measured using these quotes. The fair values of the other long-term debt are calculated at the present value of the respective future cash flows. To determine these present values, the prevailing interest rates and credit spreads for the Company as of the balance sheet date are used.

Variable 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 Company's expectation of these factors. The Company assesses the likelihood and timing of achieving the relevant objectives. The underlying assumptions are reviewed regularly.

Noncontrolling interests subject to put provisions are recognized at their fair value. The methodology the Company uses to estimate the fair values assumes the greater of net book value or a multiple of earnings, based on historical earnings, 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 that reflects current market assessments of the time value of money and the risks specific to the liability. The estimated fair values of the noncontrolling interests subject to these put provisions can also fluctuate, and the discounted cash flows as well as the implicit multiple of earnings and/or revenue at which these noncontrolling interest obligations may ultimately be settled could vary significantly from the Company's current estimates depending upon market conditions.

At December 31, 2018, 2017 and 2016 the Company's potential obligations under these put provisions, which are recorded in other current liabilities and other non-current liabilities, were \notin 818,871, \notin 830,773 and \notin 1,007,733, respectively. At December 31, 2018, 2017 and 2016, put provisions with an aggregate purchase obligation of \notin 408,525, \notin 324,814 and \notin 287,953, respectively, were exercisable. In the last three fiscal years ending December 31, 2018, 29 such put provisions have been exercised for a total consideration of \notin 139,219.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Following is a roll forward of variable payments outstanding for acquisitions and noncontrolling interests subject to put provisions at December 31, 2018, 2017 and 2016:

in € THOUS		2018		2017	2016		
	Variable payments outstanding for acquisitions	Noncontrolling interests subject to put provisions	Variable payments outstanding for acquisitions	Noncontrolling interests subject to put provisions	Variable payments outstanding for acquisitions	Noncontrolling interests subject to put provisions	
Beginning balance at							
January 1,	205,792	830,773	223,504	1,007,733	51,125	791,075	
Increase	19,051	53,731	21,128	85,322	195,701	83,063	
Decrease	(15,734)	(50,706)	(32,764)	(121,057)	(25,826)	(1,785)	
(Gain) Loss recognized in							
profit or loss	(36,327)	142,279	(2,685)	160,916	613	164,515	
(Gain) Loss recognized in							
equity	—	(50,612)	—	(20,012)		115,627	
Dividends	—	(139,742)	—	(164, 404)	—	(169,260)	
Foreign currency							
translation and other							
changes	(504)	33,148	(3,391)	(117,725)	1,891	24,498	
Ending balance at							
December 31,	172,278	818,871	205,792	830,773	223,504	1,007,733	

Derivative financial instruments

Derivative financial risks

The Company 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 Company issues bonds and enters mainly into long-term credit agreements with banks. Due to these financing activities, the Company is exposed to changes in the interest rate as well as to price risks of balance sheet items with a fixed interest rate.

In order to manage the risk of currency exchange rate and interest rate fluctuations, the Company enters into various hedging transactions by means of derivative instruments with highly rated financial institutions as authorized by the Company's General Partner. On a quarterly basis, the Company performs an assessment of its counterparty credit risk. The Company currently considers this risk to be low. The Company's policy, which has been consistently followed, is that financial derivatives be used only for the purpose of hedging foreign currency and interest rate exposure.

In certain instances, the Company enters into derivative contracts that do not qualify for hedge accounting but are utilized for economic purposes ("economic hedges"). The Company does not use financial instruments for trading purposes. The Company established guidelines for risk assessment procedures and controls for the use of financial instruments. They include a clear segregation of duties with regard to execution on one side and administration, accounting and controlling on the other.

To reduce the credit risk arising from derivatives the Company entered into 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 statement of financial position as the offsetting criteria under IFRS are not satisfied.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

At December 31, 2018 and December 31, 2017, the Company had $\notin 7,547$ and $\notin 11,574$ of derivative financial assets subject to netting arrangements and $\notin 8,111$ and $\notin 12,730$ of derivative financial liabilities subject to netting arrangements. Offsetting these derivative financial instruments would have resulted in net assets of $\notin 4,048$ and $\notin 5,505$ as well as net liabilities of $\notin 4,612$ and $\notin 6,661$ at December 31, 2018 and December 31, 2017, respectively.

The Company calculates benchmarks for individual exposures in order to quantify interest and foreign exchange risks. The benchmarks are derived from achievable and reasonable market rates. Depending on the individual benchmarks, hedging strategies are agreed on and implemented.

In connection with the issuance of the Convertible Bonds in September 2014, the Company purchased Share Options. Any change in the Company's share price above the conversion price would be offset by a corresponding value change in the Share Options.

Market risk

Foreign exchange risk management

The Company conducts business on a global basis in various currencies, though a majority of its operations are in Germany and the United States. For financial reporting purposes in accordance with Section 315e of the German Commercial Code ("HGB") the Company has chosen the euro as its reporting currency. Therefore, changes in the rate of exchange between the euro and the local currencies in which the financial statements of the Company's international operations are maintained, affect its results of operations and financial position as reported in its consolidated financial statements.

Additionally, individual subsidiaries are exposed to transactional risks mainly resulting from intercompany purchases between production sites and other subsidiaries with different functional currencies. This exposes the subsidiaries to fluctuations in the rate of exchange between the invoicing currencies and the currency in which their local operations are conducted. For the purpose of hedging existing and foreseeable foreign exchange transaction exposures the Company enters into foreign exchange forward contracts.

Changes in the fair value of the effective portion of foreign exchange forward contracts designated and qualifying as cash flow hedges of forecasted product purchases and sales are reported in AOCI. Additionally, in connection with intercompany loans in foreign currency, the Company uses foreign exchange swaps to assure that no foreign exchange risks arise from those loans, which, if they qualify for cash flow hedge accounting, are also reported in AOCI. The Company only designates the change in fair value of the spot element of foreign exchange forward contracts as the hedging instrument in cash flow hedging relationships and uses a hedge ratio for designated risks of 1:1. The forward elements are separately accounted for as cost of hedging in a separate component within AOCI.

The amounts recorded in AOCI are subsequently reclassified into earnings as a component of revenue for those contracts that hedge sales or as an adjustment of cost of revenue for those contracts that hedge intercompany product purchases. Foreign exchange forward contracts that hedge loans are subsequently reclassified from AOCI to interest income/expense. The amounts recorded in AOCI are reclassified in the same period in which the hedged transaction affects earnings. Amounts recorded in AOCI for cash flow hedges related to product purchases from third parties are removed from AOCI and included directly in the carrying amount of the asset at initial recognition. Product purchases and sales designated in a cash flow hedging relationship are expected to affect profit and loss in the same period in which the cash flows occur.

The critical terms of the forward exchange contracts generally align with the hedged item. The economic relationship between forward exchange contracts and the hedged forecast transaction is based on the timing, currency and amount of the hedged cash flows. Ineffectiveness could arise in case the timing of the hedged transaction or the credit default risk changes. Earnings of the Company were not materially affected by hedge ineffectiveness in the reporting period since the critical terms of the interest and foreign exchange derivatives matched mainly the critical terms of the underlying exposures. The notional amounts of foreign exchange contracts in place that are designated and qualify as cash flow hedges totalled €129,153

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

and €91,068 at December 31, 2018 and December 31, 2017, respectively. At December 31, 2018, the Company had foreign exchange derivatives with maturities of up to 14 months.

The Company also enters into derivative contracts for forecasted product purchases and sales and for intercompany loans in foreign currencies which do not qualify for hedge accounting but are utilized for economic hedges as defined above. In these two cases, the change in value of the economic hedge is recorded in the income statement and usually offsets the change in value recorded in the income statement for the underlying asset or liability. The notional amounts of economic hedges that do not qualify for hedge accounting totalled \notin 913,683 and \notin 665,108 at December 31, 2018 and December 31, 2017, respectively.

The Company uses a Cash-Flow-at-Risk (CFaR) model in order to estimate and quantify 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 twelve 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. Based on a net exposure of \notin 1,094,060, the Company's CFaR amounts to \notin 52,318 at December 31, 2018, this means with a probability of 95% a potential loss in relation to the forecasted foreign exchange cash flows of the next twelve months will be not higher than \notin 52,318.

The following table shows the average hedging rate and the nominal amount of the foreign exchange forward contracts for the currencies with highest hedging volume at December 31, 2018:

Significant currency pairs

in € THOUS	Nominal amount	Average hedging rate
EUR/AUD	156,950	1.6108
EUR/USD	60,269	1.1836
EUR/ILS	40,084	4.3208

Interest rate risk management

The Company's interest rate risks mainly arise from money market and capital market transactions of the group for financing its business activities.

The Company enters into derivatives, particularly interest rate swaps and to a certain extent, interest rate options, to protect against the risk of rising interest rates. These interest rate derivatives are designated as cash flow hedges and have been entered into in order to effectively convert payments based on variable interest rates into payments at a fixed interest rate. The Company determines the existence of an economic relationship between the hedging instrument and hedged item based on the reference interest rates, maturities and the notional amounts. The effective portion of gains and losses of derivatives designated as cash flow hedges is deferred in AOCI; the amount of gains and losses reclassified from AOCI are recorded in interest income and interest expenses.

The euro-denominated interest rate swaps expire in 2019 and have a weighted average interest rate of 0.32%. Interest payable and receivable under the swap agreements is accrued and recorded as an adjustment to interest expense.

For purposes of analysing the impact of changes in the relevant reference interest rates on the Company's results of operations, the Company calculates the portion of financial debt which bears variable interest rate 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 Company assumes an increase in the reference rates of 0.5% compared to the actual rates as of the balance sheet date. The corresponding additional annual interest expense is then compared to the Company's net income. This analysis shows that an increase of 0.5% in

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

the relevant reference rates would have an effect of approximately 1% on the consolidated net income and less than 1% on the shareholder's equity of the Company.

At December 31, 2018 and December 31, 2017, the notional amount of the euro-denominated interest rate swaps in place was \notin 204,000 and \notin 228,000. At December 31, 2018, the Company had interest rate swaps with maturities of up to 10 months.

In addition, the Company also enters into interest rate hedges ("pre-hedges") in anticipation of future long-term debt issuance. These 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 were settled at the issuance date of the corresponding long-term debt with the settlement amount recorded in AOCI amortized to interest expense over the life of the debt. At December 31, 2018 and December 31, 2017, the Company had \in 1,131 and \in 16,495, respectively, related to settlements of pre-hedges deferred in AOCI, net of tax.

Derivative financial instruments valuation

The following table shows the carrying amounts of the Company's derivatives at December 31, 2018 and December 31, 2017:

Derivative financial instruments valuation

in € THOUS	20)18	2017		
	Assets	Liabilities	Assets	Liabilities	
Current Foreign exchange contracts	1,434	(711) (414)	531	(2,182)	
Non-current Foreign exchange contracts	58		30	(11) $(1,016)$	
Derivatives in cash flow hedging relationships	1,492	(1,125)	561	(3,209)	
Current Foreign exchange contracts	6,402	(7,091)	11,279	(9,520)	
Non-current Derivatives embedded in the Convertible Bonds Share Options to secure the Convertible Bonds	11,820	(11,820)	102,434	(102,434)	
Derivatives not designated as hedging instruments	18,222	(18,911)	113,713	(111,954)	

The significant methods and assumptions used in estimating the fair values of derivative financial instruments are 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 balance sheet date. 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 balance sheet date. The result is then discounted on the basis of the market interest rates prevailing at the balance sheet date for the applicable currency. The fair value of the embedded derivative of the Convertible Bonds is calculated using the difference between the market value of the Convertible Bonds and the market value of an adequate straight bond discounted with the market interest rates as of the reporting date.

The Company'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 Company 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 default probability is based upon the credit default swap spreads of each

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

counterparty appropriate for the duration. The calculation of the credit risk considered in the valuation is performed by multiplying the default probability appropriate for the duration with the expected discounted cash flows of the derivative financial instrument.

The effect of financial instruments on the consolidated statements of income

The effects of financial instruments recorded in the consolidated statements of income consist of interest income of $\notin 147,409$ (2017: $\notin 51,375$), interest expense of $\notin 448,471$ (2017: $\notin 416,199$) as well as allowances for doubtful accounts of $\notin 19,112$ (2017: $\notin 549,631$).

Interest income in 2018 primarily results from the valuation of the derivatives embedded in the Convertible Bonds, interest on overdue receivables and lease receivables as well as interest income related to uncertain tax treatments. In 2017 interest income results mainly from the valuation of the Share Options which the Company purchased in connection with the issuance of the Convertible Bonds, interest on overdue receivables as well as interest income related to uncertain tax treatments.

In 2018 and 2017 the major part of interest expenses relates to financial liabilities of the Company which are not accounted for at FVPL and interest expense related to uncertain tax treatments.

In the fiscal year 2018 net losses from foreign currency transactions amount to €21,391 (2017: net losses €36,159).

The following table shows the effect of derivatives in cash flow hedging relationship on the consolidated financial statements:

The effect of derivatives in cash flow hedging relationships on the consolidated financial statements

in € THOUS

	Fair value gain (loss) recognized in AOCI on hedging instrument (hedge reserve)	Fair value gain (loss) recognized in AOCI on hedging instrument (cost of hedging)	Location of reclassified amounts from AOCI	Amount reclassified from hedge reserve	Amount reclassified from cost of hedging
For the year ended December 31, 2018					
Interest rate contracts	(105)	—	Interest income/ expense	22,249	—
Foreign exchange contracts	5,029	(2,244)	thereof: Revenue Costs of revenue Inventories	(423) (1,839) (17)	132 799 (21)
Total	4,924	(2,244)		19,970	<u>910</u>
For the year ended December 31, 2017					
Interest rate contracts	(388)	_	Interest income/ expense	27,875	—
Foreign exchange contracts	2,001	_	Costs of revenue	(1,505)	_
Total	1,613	—		26,370	—

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The following table shows the effect of derivatives not designated as hedging instruments on the consolidated financial statements:

The effect of derivatives not designated as hedging instruments on the consolidated financial statements

in € THOUS	Location of (gain) loss recognized	Amount of (recognized in deriva for the yea Decemb	income on tives ir ended,
	2018	2017	
Foreign exchange contracts Foreign exchange contracts Derivatives embedded in the	Selling, general and administrative expenses Interest income/expense	(12,841) 14,809	(8,275) 9,435
Convertible Bonds Share Options to secure the	Interest income/expense	(90,614)	7,771
Convertible Bonds	Interest income/expense	90,614	(7,771)
Derivatives not designated as hedging instruments	<u></u>	1,968	1,160

The following table shows when the cash flow from derivative financial instruments is expected to occur:

Cash Flow from derivative financial instruments

in € THOUS		Expected in	period of	
	Less than 1 year	1 - 3 years	3 - 5 years	Over 5 years
2018				
Designated as hedging instrument	87	58		
Not designated as hedging instrument	(689)	_	_	
2017				
Designated as hedging instrument	(2,370)	(530)		
Not designated as hedging instrument	1,762			

Credit risk

The Company is exposed to potential losses 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 at the balance sheet date. The maximum credit exposure of all derivatives amounted to \notin 19,714 at December 31, 2018 (2017: \notin 114,274). The maximum credit risk resulting from the use of non-derivative financial instruments is defined as the total amount of all financial assets. In order to control this credit risk, the Management of the Company carries out an ageing analysis of trade accounts and other receivables. For details on the ageing analysis and on the allowance for doubtful accounts, please see note 7.

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 Company 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 Company believes that existing credit facilities, net cash provided by operating activities and additional short-term debt are sufficient to meet the Company's foreseeable demand for liquidity (see note 13).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

The following table shows all non-discounted payments agreed by contract concerning financial liabilities and derivative financial instruments recorded in the consolidated balance sheets:

Payments agreed by contracts

in € THOUS	Payments due by period of				
	Less than 1 year	1 - 3 years	3 - 5 years	Over 5 years	
2018					
Accounts payable	641,271	1			
Accounts payable to related parties	153,781				
Other current financial liabilities	1,467,766				
Short-term debt ⁽¹⁾	1,394,194				
Long-term debt and capital lease obligations ⁽²⁾⁽³⁾	209,189	1,211,250	1,145,979	63,734	
Bonds	1,127,532	1,514,989	677,500	880,939	
Variable payments outstanding for acquisitions	57,217	69,918	33,221	30,576	
Noncontrolling interests subject to put provisions	494,576	183,396	66,324	107,857	
Letters of credit	12,413	12,322			
Derivative financial instruments – in cash flow hedging					
relationships	1,347				
Derivative financial instruments – not designated as					
hedging instrument	7,091	11,820	—		
2017					
Accounts payable	590,493	11			
Accounts payable to related parties	147,349				
Other current financial liabilities	1,461,428				
Short-term debt ⁽¹⁾	769,279				
Long-term debt and capital lease $obligations^{(2)(3)}$	198,585	1,463,857	1,328,177	66,063	
Bonds	946,099	1,613,103	1,532,235	365,213	
Variable payments outstanding for acquisitions	15,921	87,533	116,776	16,918	
Noncontrolling interests subject to put provisions	473,189	200,299	81,424	115,960	
Letters of credit		59,404	1,409		
Derivative financial instruments – in cash flow hedging		-	-		
relationships	2,901	560			
Derivative financial instruments – not designated as					
hedging instrument	9,523	102,434			

(1) Includes amounts from related parties.

(2) Future interest payments for financial liabilities with variable interest rates were calculated using the latest interest rates fixed prior to December 31, 2018 and 2017.

(3) Excluding Bonds.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

24. Other comprehensive income (loss)

The changes in the components of other comprehensive income (loss) for the years ended December 31, 2018, 2017, and 2016 are as follows:

Other comprehensive income (loss)

in € THOUS		2018			2017			2016	
	Pretax	Tax effect	Net	Pretax	Tax effect	Net	Pretax	Tax effect	Net
Components that will not be reclassified to profit or loss: Actuarial gain (loss) on defined benefit									
pension plans	(28,070)	7,713	(20,357)	6,840	(27,393)	(20,553)	(31,423)	7,085	(24,338)
Components that may be reclassified									
subsequently to profit or loss:									
Foreign currency translation adjustment	327,317	—	327,317	(1,284,173)	_	(1, 284, 173)	368,429	_	368,429
Other comprehensive income (loss) relating to cash flow hedges:									
Changes in fair value of cash flow hedges									
during the period	2,680	(698)	1,982	1,613	(430)	1,183	(1,357)	568	(789)
Reclassification adjustments	20,880	(6,036)	14,844	26,370	(7,977)	18,393	26,468	(7,607)	18,861
Total other comprehensive income (loss) relating to cash flow hedges	23,560	(6,734)	16,826	27,983	(8,407)	19,576	25,111	(7,039)	18,072
Other comprehensive income (loss)	322,807	979	323,786	(1,249,350)	(35,800)	(1,285,150)	362,117	46	362,163

25. Supplementary cash flow information

The following additional information is provided with respect to net cash provided by (used in) investing activities for the years ended December 31, 2018, 2017 and 2016:

Details for net cash provided by (used in) investing activities

in € THOUS	2018	2017	2016
Details for acquisitions			
Assets acquired	(360,375)	(758,720)	(792,941)
Liabilities assumed	21,122	128,552	113,491
Noncontrolling interests subject to put provisions	11,901	68,069	43,628
Noncontrolling interests	45,319	14,293	14,448
Non-cash consideration	28,530	8,851	220,849
Cash paid	(253,503)	(538,955)	(400,525)
Less cash acquired	3,538	17,630	20,660
Net cash paid for acquisitions	(249,965)	(521,325)	(379,865)
Cash paid for investments	(590,199)	(17,999)	(129,764)
Cash paid for intangible assets	(85,103)	(26,370)	(12,171)
Total cash paid for acquisitions and investments, net of cash			
acquired, and purchases of intangible assets	(925,267)	(565,694)	(521,800)
Details for divestitures			
Cash received from sale of subsidiaries or other businesses, less cash			
disposed	1,532,724	157,025	1,324
Cash received from divestitures of securities	150,172	256,136	116,922
Cash received from repayment of loans	79	2,227	72,001
Proceeds from divestitures	1,682,975	415,388	190,247

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

In connection with divestitures which occurred during 2018, the Company divested, in aggregate, assets, excluding cash, of \notin 1,100,315, liabilities of \notin 296,857, noncontrolling interests subject to put provisions of \notin 469 and noncontrolling interests of \notin 16,540.

The following table shows a reconciliation of debt to net cash provided by (used in) financing activities for 2018:

Reconciliation of debt to net cash provided by (used in) financing activities

in € THOUS				Non-ca	sh changes			
	January 1, 2018	Cash Flow	Acquisitions	Foreign currency translation	Amortization of debt issuance costs	New leases	Other	December 31, 2018
Short-term debt	760,279	444,844	3,046	(2,860)	_	_	(15)	1,205,294
Short-term debt from related parties Long-term debt and capital lease obligations	9,000	179,900	_	_	_	_	_	188,900
(excluding Accounts	6,384,734	(453,717)	8,652	188,165	15,975	6,517	1,708	6,152,034
Facility	293,673	(298,912)		4,883	356		_	

(1) Cash Flow excluding repayments of variable payments outstanding for acquisitions in the amount of €10.099.

The following table shows a reconciliation of debt to net cash provided by (used in) financing activities for 2017:

in € THOUS		Non-cash changes						
	January 1, 2017	Cash Flow	Acquisitions	Foreign currency	Amortization of debt issuance costs	New leases	Other	December 31, 2017
Short-term debt	572,010	202,687	(5,091)	(9,298)			(29)	760,279
Short-term debt from related parties Long-term debt and capital lease obligations	3,000	6,000	_	_	_	_	_	9,000
(excluding Accounts								
Receivable Facility) ^{(1)}	7,392,067	(491,428)	108,535	(656,556)	20,109	8,801	3,206	6,384,734
Accounts Receivable								
Facility	165,037	157,564		(29,138)	210			293,673

(1) Cash Flow excluding repayments of variable payments outstanding for acquisitions in the amount of €25,590.

26. Segment and corporate information

The Company's operating segments are the North America Segment, the EMEA Segment, the Asia-Pacific Segment and the Latin America Segment. The operating segments are determined based upon how the Company manages its businesses with geographical responsibilities. All segments are primarily engaged in providing health care services and the distribution of products and equipment for the treatment of ESRD and other extracorporeal therapies.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Management evaluates each segment using measures that reflect all of the segment's controllable revenues and expenses. With respect to the performance of business operations, management believes that the most appropriate measures are revenue, operating income and operating income margin. The Company does not include income taxes as it believes this is outside the segments' control. Financing is a corporate function, which the Company's segments do not control. Therefore, the Company does not include interest expense relating to financing as a segment measurement. Similarly, the Company does not allocate certain costs, which relate primarily to certain headquarters' overhead charges, including accounting and finance, because the Company believes that these costs are also not within the control of the individual segments. Production of products, production asset management, quality management and procurement related to production are centrally managed at Corporate. The Company's global research and development is also centrally managed at Corporate. These corporate activities do not fulfill the definition of a segment according to IFRS 8, Operating Segments. Products are transferred to the segments at cost; therefore, no internal profit is generated. The associated internal revenue for the product transfers and their elimination are recorded as corporate activities. Capital expenditures for production are based on the expected demand of the segments and consolidated profitability considerations. In addition, certain revenues, investments and intangible assets, as well as any related expenses, are not allocated to a segment but are accounted for as Corporate.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Information pertaining to the Company's segment and Corporate activities for the twelve-month periods ended December 31, 2018, 2017 and 2016 is set forth below:

Segment and corporate information

in € THOUS	North		A sia Da sifia	Latin	T-4-1		
	America Segment	EMEA Segment	Asia-Pacific Segment	America Segment	Total Segment	Corporate	Total
2018							
Revenue from contracts with	11 247 062	2 550 405	1 (07 715	(02.004	16 010 057	14 706	1(222 702
Customers	11,347,963 221,769	2,559,485 27,073	1,627,715 61,638	682,894 3,600	16,218,057 314,080	14,736	16,232,793 314,080
Revenue external customers		2,586,558	1,689,353	686,494	16,532,137	14,736	16,546,873
Inter – segment revenue	1,609	304	633	240	2,786	(2,786)	
Revenue	11,571,341	2,586,862	1,689,986	686,734	16,534,923	11,950	16,546,873
Operating income	2,665,187	398,683	303,956	28,848	3,396,674	(358,876)	3,037,798
Interest							(301,062)
Income before income taxes							2,736,736
Depreciation and amortization Income (loss) from equity method	(377,836)	(116,384)	(45,475)	(22,344)	(562,039)	(162,808)	(724,847)
investees	75,279	(4,322)	2,125	264	73,346		73,346
Total assets thereof investment in equity method	16,936,646	3,612,800	2,322,284	719,334	23,591,064	2,651,204	26,242,268
investees	348,096	178,886	98,741	24,057	649,780	_	649,780
equipment and intangible assets	598,988	158,974	53,962	26,894	838,818	316,147	1,154,965
2017 Bayanya aytamal aystamars	12 979 665	2 5 4 7 0 5 5	1,623,312	710 702	17,768,824	14 749	17 792 572
Revenue external customers Inter – segment revenue	12,878,005	2,547,055	1,025,512 356	719,792 374	2,644	(2,644)	17,783,572
Revenue	12,880,563	2,547,071	1,623,668	720,166	17,771,468	12,104	17,783,572
Operating income	2,086,391	443,725	313,042	58,349	2,901,507	(539,068)	2,362,439
Interest							(364,824)
Income before income taxes							1,997,615
Depreciation and amortization Income (loss) from equity method	(398,235)	(119,044)	(45,401)	(17,929)	(580,609)	(154,870)	(735,479)
investees	71,739	(7,159)	1,919	700	67,199	-	67,199
Total assets thereof investment in equity method	15,556,146	3,585,486	2,074,150	670,126	21,885,908	2,139,307	24,025,215
investees	342,462	181,870	98,281	24,396	647,009	_	647,009
Additions of property, plant and equipment and intangible assets	526,652	130,755	52,861	41,637	751,905	241,052	992,957
2016	520,052	150,755	52,001	41,007	751,905	241,052	<i>JJL,JJ</i>
Revenue external customers	12,030,093	2,409,110	1,474,132	643,373	16,556,708	13,007	16,569,715
Inter – segment revenue	3,105		31	241	3,377	(3,377)	
Revenue	12,033,198	2,409,110	1,474,163	643,614	16,560,085	9,630	16,569,715
Operating income	1,936,079	474,396	289,434	59,162	2,759,071	(350,169)	2,408,902
Interest							(363,408)
Income before income taxes Depreciation and amortization	(389,217)	(109,128)	(43,344)	(15,577)	(557,266)	(144,270)	2,045,494 (701,536)
Income (loss) from equity method investees	58,547 17,281,951	(2,637) 3,576,784	1,372 1,762,903	1,357 691,980	58,639 23,313,618	2,190,021	58,639 25,503,639
thereof investment in equity method investees	289,400	187,169	96,513	25,072	598,154		598,154
Additions of property, plant and equipment and intangible assets	522,406	118,671	49,907	33,414	724,398	248,936	973,334
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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

For the geographic presentation, revenues are attributed to specific countries based on the end user's location for products and the country in which the service is provided. Information with respect to the Company's geographic operations is set forth in the table below:

Geographic presentation				
in € THOUS	Germany	North America	Rest of the world	Total
2018				
Revenue external customers	426,327	11,569,732	4,550,814	16,546,873
Long-lived assets	948,355	13,260,913	3,290,930	17,500,198
2017				
Revenue external customers	433,105	12,878,665	4,471,802	17,783,572
Long-lived assets	905,571	13,037,452	3,122,590	17,065,613
2016				
Revenue external customers	380,887	12,030,093	4,158,735	16,569,715
Long-lived assets	835,690	14,379,237	2,852,313	18,067,240

27. Subsequent events

Share repurchase

The Company resolved to repurchase shares with an aggregate volume of up to $\notin 1,000,000$ via the capital markets over the next two years. The share repurchase program will be carried out in several tranches and in accordance with the European Union safe harbor provisions.

Acquisition of NxStage Medical, Inc.

The Company received notice from the Federal Trade Commission that the Commission voted to accept the Consent Order the Company signed in December 2018, which will allow its transaction with NxStage Medical, Inc. ("NxStage") to close. NxStage is a medical technology company that develops, manufactures and markets a product portfolio of medical devices for use in home dialysis and in the critical care setting.

No further significant activities have taken place subsequent to the balance sheet date December 31, 2018 that have a material impact on the key figures and earnings presented. Currently, there are no other significant changes in the Company's structure, management, legal form or personnel.

28. Compensation of the Management Board and the Supervisory Board

I. Compensation of the Management Board of the General Partner

The total compensation of the members of the Management Board of Fresenius Medical Care Management AG for the fiscal year 2018 amounted to $\notin 24,166$ (2017: $\notin 23,302$) and consisted of non-performance-based compensation (including fringe benefits) in the total amount of $\notin 6,532$ (2017: $\notin 5,768$), short-term performance-based compensation in the total amount of $\notin 8,437$ (2017: $\notin 8,640$) and components with long-term incentive effects (multi-year variable remuneration) in the total amount of $\notin 9,197$ (2017: $\notin 8,894$). Components with long-term incentive effects, which were granted in or for the 2018 fiscal year, include exclusively share-based compensation with cash settlement.

Under the Fresenius Medical Care Long-Term Incentive Plan 2016 (hereinafter: "LTIP 2016"), a total of 73,315 performance shares (in 2017: 73,746) were allocated to the members of the Management Board of Fresenius Medical Care Management AG, in the fiscal year 2018. The fair value of the performance shares granted in July of the fiscal year 2018 was €80.55 (in 2017: €75.12) each for grants denominated in euro and \$94.11 (in 2017: \$86.39) each for grants denominated in US-Dollar on the grant date. Dr. Katarzyna Mazur-Hofsäß (member of the Management Board since September 1, 2018) was granted Performance Shares in December of the fiscal year whose fair value on the grant date was €69.05.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

Due to the fact that the targets were met in the fiscal year 2018, in addition to the performance shares granted under the LTIP 2016, the Management Board members of Fresenius Medical Care Management AG were entitled to further share-based compensation with cash settlement (so-called Share Based Award) in the amount of $\notin 3,414$ (2017: $\notin 3,418$).

At the end of fiscal year 2018, the members of the Management Board of Fresenius Medical Care Management AG held a total of 204,693 performance shares (2017: 150,993) and 54,711 phantom stock (2017: 73,432). In addition, they held a total of 602,389 stock options at the end of fiscal year 2018 (2017: 819,491 stock options).

As of December 31, 2018, aggregate pension obligations of \notin 24,535 (December 31, 2017: \notin 21,753) existed relating to existing pension commitments. In the fiscal year 2018, the appropriation to the pension reserves amounted to \notin 5,071 (2017: \notin 212).

In the fiscal year 2018, no loans or advance payments of future compensation components were made to members of the Management Board of Fresenius Medical Care Management AG.

To the extent permitted by law, Fresenius Medical Care Management AG undertook to indemnify the members of the Management Board from claims against them arising out of their work for the Company and its affiliates, if such claims exceed their liability under German law. To secure such obligations, the Company has concluded a Directors & Officers liability insurance with an excess in compliance with the specifications according to German stock corporation law.

Mr. Dominik Wehner was a member of the Management Board until the end of December 31, 2017. In his termination agreement, it was agreed with respect to the compensation components he is entitled to by contract for the period from January 1, 2018 to March 31, 2022 that he will annually receive a base salary of €425 and an amount of 30% of his base salary. In addition, Mr. Dominik Wehner is entitled to fringe benefits such as the private use of his company car, contributions to financial planning, insurance benefits and contributions to pension and health insurance in a total amount of approximately €38 p.a. The compensation components granted to Mr. Dominik Wehner under the Long-Term Incentive Program 2011, the LTIP 2016 and the Share Based Award are payable or can be exercised, as the case may be, by the relevant regular vesting date pursuant to the applicable conditions. Except for the Share Based Award for 2017, Mr. Dominik Wehner is no longer eligible to be granted any components with long-term incentive effects as of the fiscal year 2018. As of the completion of the age of 65, Mr. Dominik Wehner will receive a Company-funded retirement pension in accordance with the individual contractual pension commitment by Fresenius Medical Care Management AG.

In the fiscal year, Mr. Ronald Kuerbitz, who was a member of the Management Board until February 17, 2017, was granted no base salary (2017: €109) and no fringe benefits (2017: €43) and no one-year or multi-year variable compensation components (2017: €0). Since February 17, 2017 and for a maximum period of two years, Mr. Ronald Kuerbitz receives annual non-compete compensation of €515 (2017: €538) for the post-employment non-compete obligation agreed with him. In addition, Mr. Ronald Kuerbitz received one-off compensation of €852 in the fiscal year 2017 which had been agreed with him in the context of his resignation from the Management Board of the General Partner. The payment of this compensation was linked to the successful completion of various projects, part of which had not yet been completed as at the time of the agreement, and thus ensured Mr. Ronald Kuerbitz's involvement even after his resignation from the Management Board. It was also agreed with him that, after the end of his service agreement, he would act as an advisor to National Medical Care, Inc. as of August 14, 2017 until the end of August 13, 2018. The consideration to be granted for such services (including reimbursement of expenses) amounts to €212 (2017: €55) for the fiscal year. As of the completion of the age of 65, Mr. Ronald Kuerbitz will receive a Company-funded retirement pension of €124 per year.

Mr. Roberto Fusté, who was a member of the Management Board until March 31, 2016, received pension payments in the amount of approximately \notin 261 (2017: \notin 239) in the fiscal year. On the occasion of the termination of his service agreement with effect as of December 31, 2016 as a member of the Management Board, it was agreed with Mr. Roberto Fusté that he would be subject to a post-employment non-compete obligation lasting until the end of December 31, 2018 and that he would act as an advisor to the Chairman

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

of the Management Board. For this, he received non-compete compensation of \notin 377 (2017: \notin 377) and an advisory fee in the amount of \notin 377 (2017: \notin 377) in the fiscal year.

Prof. Emanuele Gatti, who was a member of the Management Board until March 31, 2014, received pension payments in the amount of €338 (2017: €338). On the occasion of the termination of his service agreement as a member of the Management Board effective as of April 30, 2015, a two-year post-employment non-compete obligation was agreed upon with Prof. Emanuele Gatti. As compensation for this, Prof. Emanuele Gatti received annual non-compete compensation in the amount of €488. In the fiscal year Prof. Gatti received no non-compete compensation (2017: €163) as the non-compete obligation already expired in the course of the previous year.

A consulting agreement was entered into with Dr. Rainer Runte, who was a member of the Management Board until March 31, 2014, with effect since March 1, 2017 the term of which meanwhile was extended until December 31, 2018. By this consulting agreement, Dr. Rainer Runte provided consulting services on certain fields. The consideration (including the reimbursement of expenses) to be granted by Fresenius Medical Care Management AG for such services amounts to €226 for the fiscal year (2017: €165).

Instead of a pension provision, a consulting agreement was entered into with Dr. Ben Lipps, the Chairman of the Management Board until December 31, 2012, for the period January 1, 2013 to December 31, 2021. By this consulting agreement, Dr. Ben Lipps will provide consulting services on certain fields and within a specified time frame and he will be subject to a non-compete covenant. The consideration to be granted by Fresenius Medical Care Management AG for such services (including reimbursement of expenses) amounts for the fiscal year to \notin 522 (2017: \notin 580). The present value of this agreement (including pension payments for the surviving spouse in case of death) amounts to \notin 1,586 (2017: \notin 1,996) as at December 31 of the fiscal year.

Former members of the Management Board did not receive any compensation in the fiscal year 2018 other than mentioned herein. As of December 31 of the fiscal year 2018, pension obligations towards this group of persons exist in an amount of \notin 25,163 (December 31, 2017: \notin 21,930).

A post-employment non-competition covenant was agreed upon with all members of the Management Board. If such covenant becomes applicable, the Management Board members receive compensation amounting to half of their respective annual base salary for each year of the respective application of the non-competition covenant, up to a maximum of two years. The employment contracts of the Management Board members contain no express provisions that are triggered by a change of control.

The new or extended employment contracts concluded with individual members of the Management Board with effect from January 1, 2018 provide for a severance payment cap. Under this cap, payments in connection with the early termination of a Management Board activity in the event of dismissal for cause (*Abberufung aus wichtigem Grund*) may not exceed the value of two years' compensation and may not compensate more than the remaining term of contract. For the calculation of the relevant annual compensation, only the non-performance-based compensation components are applied. If there is good cause for the termination of the employment contract, no severance payments are made.

In addition, on the basis of the LTIP 2016 plan conditions and in accordance with the employment contracts concluded with individual members of the Management Board as from January 1, 2018, the Company is entitled to reclaim already earned and paid compensation components (claw back). Such right to reclaim exists in particular in case of relevant violations of internal guidelines or undutiful conduct.

FMC-AG & Co. KGaA publishes detailed and also individualized information for each member of the Management Board of Fresenius Medical Care Management AG on the compensation of the Management Board in its Compensation Report, which is part of the management report and which can be accessed on Company's website under https://www.freseniusmedicalcare.com/en/investors/corporate-governance/ declaration-on-corporate-governance/.

II. Compensation of the Supervisory Board

In fiscal year 2018 the total compensation fees to all members of the Supervisory Board of FMC-AG & Co. KGaA amounted to €773 (2017: €876). This includes a fixed compensation of €361 (2017: €409) as well as a

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

compensation to all members of the Audit Committee of $\notin 148$ (2017: $\notin 185$). Additionally, for the previous year the entitlement to a payment of variable performance-related compensation of $\notin 264$ (2017: $\notin 282$) was achieved. Furthermore, in fiscal year 2018 the members of the Supervisory Board which are also members of the Joint Committee of FMC-AG & Co. KGaA, receive attendance fees of \$3,5 pursuant to Article 13e para. 3 of the articles of association.

The compensation of the supervisory board of the Fresenius Medical Care Management AG and the compensation of its Committees was, in compliance with article 7 para. 3 of the Articles of Association of FMC-AG & Co. KGaA, charged to FMC-AG & Co. KGaA. In fiscal year 2018 the total compensation for the members of the supervisory board of the Fresenius Medical Care Management AG amounted to $\notin 1,110 \ (2017: \notin 1,039)$. This includes fixed compensation components for the work in the supervisory board in the amount of $\notin 402 \ (2017: \notin 357)$ and compensation components for the work in the Committees of $\notin 428 \ (2017: \notin 447)$. Additionally, for the previous year the entitlement to a payment of variable performance-related compensation of $\notin 280 \ (2017: \notin 235)$ was achieved.

29. Principal accountant fees and services

In 2018, 2017 and 2016, fees for the auditor KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, and its affiliates were expensed as follows:

rees in € THOUS						
m c moos	Consolidated group	thereof Germany	Consolidated group	thereof Germany	Consolidated group	thereof Germany
	2018		2017		2016	
Audit fees	7,845	1,322	8,629	1,232	7,896	1,060
Audit-related fees	320	316	59	18	53	42
Tax fees	1,069	115	830	169	164	
Other fees	251	234	716	110	4,703	4,689

The current lead engagement partner for the audit of the consolidated financial statements assumed responsibility in 2017.

Audit fees are the aggregate fees billed by KPMG for the audit of the Company's consolidated financial statements and the statutory financial statements of FMC-AG & Co. KGaA and certain of its subsidiaries, reviews of interim financial statements and attestation services that are provided in connection with statutory and regulatory filings or engagements. Fees related to the audit of internal control over financial reporting are included in audit fees. Audit-related fees are fees charged by KPMG for assurance and related services that are reasonably related to the performance of the audit or review of the Company's financial statements and are not reported under audit fees. This category comprises fees billed for comfort letters, consultation on accounting issues, agreed-upon procedure engagements and other attestation services subject to regulatory requirements. Tax fees are fees for professional services rendered by KPMG for tax compliance, tax advice on implications for actual or contemplated transactions, tax consulting associated with international transfer prices, and expatriate employee tax services, as well as support services related to tax audits. Other fees include amounts related to services in regard to the harmonization of the IT-landscape as well as amounts related to supply chain consulting fees.

Fees billed by KPMG for non-audit services in Germany include fees for the services described above within the audit-related fees, tax fees and other fees.

30. Corporate governance

The Management Board of the General Partner, represented by Fresenius Medical Care Management AG, and the Supervisory Board of Fresenius Medical Care AG & Co. KGaA issued a compliance declaration pursuant to Section 161 of the German Stock Corporation Act (AktG). The Company has frequently made this public by publishing it declaration available to the on its website: https://www.freseniusmedicalcare.com/en/investors/corporate-governance/declaration-of-compliance/.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (in THOUS, except share and per share data)

31. Proposal for the distribution of earnings

It is proposed that the earnings of Fresenius Medical Care AG & Co. KGaA for the fiscal year 2018 will be distributed as follows:

Proposal for the distribution of earnings	
in € THOUS, except for share data	
Payment of a dividend of €1.17 per share on share capital of €306,879 entitled to receive	
dividends	359,048
Balance to be carried forward	3,295,832
	3,654,880

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Rice Powell, certify that:

- 1. I have reviewed this annual report on Form 20-F/A of Fresenius Medical Care AG & Co. KGaA (the "Report");
- 2. Based on my knowledge, this Report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this Report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this Report;
- 4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this Report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this Report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this Report based on such evaluation; and
 - (d) Disclosed in this Report any change in the company's internal control over financial reporting that occurred during the period covered by the annual Report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
- 5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date:

February 20, 2019

October 31, 2019

By: /s/ RICE POWELL

Rice Powell Chief Executive Officer and Chairman of the Management Board of Fresenius Medical Care Management AG, General Partner of Fresenius Medical Care AG & Co. KGaA

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Michael Brosnan, certify that:

- 1. I have reviewed this annual report on Form 20-F/A of Fresenius Medical Care AG & Co. KGaA (the "Report");
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
- 4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
- 5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date:

February 20, 2019

October 31, 2019

By: /s/ MICHAEL BROSNAN

Michael Brosnan Chief Financial Officer and Member of the Management Board of Fresenius Medical Care Management AG, General Partner of Fresenius Medical Care AG & Co. KGaA

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 20-F/A of Fresenius Medical Care AG & Co. KGaA (the "Company") for the year ended December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Rice Powell, Chief Executive Officer and Chairman of the Management Board of Fresenius Medical Care Management AG, the general partner of the Company, and Michael Brosnan, Chief Financial Officer and Member of the Management Board of Fresenius Medical Care Management AG, the general partner of the Sarbare Society, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbares-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.
 - By: /s/ RICE POWELL

Chief Executive Officer and Chairman of the Management Board of Fresenius Medical Care Management AG, General Partner of Fresenius Medical Care AG & Co. KGaA

February 20, 2019

October 31, 2019

By: /s/ MICHAEL BROSNAN

Chief Financial Officer and Member of the Management Board of Fresenius Medical Care Management AG, General Partner of Fresenius Medical Care AG & Co. KGaA

February 20, 2019

October 31, 2019

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Supervisory Board

Fresenius Medical Care AG & Co. KGaA:

We consent to the incorporation by reference in registration statement (No. 333-189721) on Form S-8 of Fresenius Medical Care AG & Co. KGaA of our reports dated February 20, 2019, except for the restatement as to the effectiveness of internal control over financial reporting for the material weakness related to revenue recognition specific to estimating the transaction price on certain fee-for-service revenue arrangements, as to which the date is October 31, 2019, with respect to the consolidated balance sheets of Fresenius Medical Care AG & Co. KGaA and its subsidiaries (the Company) as of December 31, 2018 and 2017, and the related consolidated statements of income, comprehensive income, cash flows and shareholders' equity for each of the years in the three-year period ended December 31, 2018, and the effectiveness of internal control over financial reporting as of December 31, 2018, which reports appear in the December 31, 2018 annual report on Form 20-F/A of Fresenius Medical Care AG & Co. KGaA.

Our report dated February 20, 2019, except for the restatement as to the effectiveness of internal control over financial reporting for the material weaknesses related to revenue recognition specific to estimating the transaction price on certain fee-for-service revenue arrangements, as to which the date is October 31, 2019, on the effectiveness of internal control over financial reporting as of December 31, 2018, expresses our opinion that the Company did not maintain effective internal control over financial reporting as of December 31, 2018 because of the effect of material weaknesses on the achievement of control objectives of the control criteria and contains an explanatory paragraph that states that a material weakness was identified related to revenue recognition specific to estimating the transaction price on certain fee-for-service revenue arrangements.

Our report with respect to the 2018 consolidated financial statements dated February 20, 2019, except for the restatement as to the effectiveness of internal control over financial reporting for the material weakness related to revenue recognition specific to estimating the transaction price on certain fee-for-service revenue arrangements, as to which the date is October 31, 2019, contains an explanatory paragraph that states the Company adopted IFRS 15, *Revenue From Contracts With Customers*, and IFRS 9, *Financial Instruments*.

/s/ KPMG AG Wirtschaftsprüfungsgesellschaft

Frankfurt am Main, Germany

October 31, 2019