Course of Business and Economic Position

Group

Overview of 2018

- Group net sales increased to € 14.8 billion; strong organic growth (6.1%) was reduced by negative exchange rate effects (–3.9%)
- All business sectors contributed to the Group's organic sales growth
- EBITDA pre declined by –10.5% and came to € 3.8 billion (2017: € 4.2 billion)
- At 25.6% (2017: 29.3%), EBITDA pre margin of the Group did not achieve prior-year profitability
- Earnings per share pre declined to € 5.10 (2017: € 5.92)
- Decrease in business free cash flow to € 2.5 billion (2017: € 3.2 billion)
- Net financial liabilities reduced by –33.9% to € 6.7 billion (December 31, 2017: € 10.1 billion)

GROUP

Key figures[1]

€ million	2018	2017	Change € million	Change in %
Net sales	14,836	14,517	319	2.2%
Operating result (EBIT)[2]	1,727	2,423	–696	–28.7%
Margin (% of net sales)[2]	11.6%	16.7%		
EBITDA[2]	3,528	4,164	–636	–15.3%
Margin (% of net sales)[2]	23.8%	28.7%		
EBITDA pre[2]	3,800	4,246	–446	–10.5%
Margin (% of net sales)[2]	25.6%	29.3%		
Profit after tax	3,396	2,615	781	29.9%
Earnings per share (€)	7.76	5.99	1.77	29.5%
Earnings per share pre (€)[2]	5.10	5.92	–0.82	–13.9%
Business free cash flow[2]	2,508	3,193	–685	–21.4%

[1] Previous year's figures have been adjusted, see Note (49) "Effects from new accounting standards and other presentation and measurement changes" in the Notes to the Consolidated Financial Statements.
[2] Not defined by International Financial Reporting Standards (IFRSs).

DEVELOPMENT OF NET SALES AND RESULTS OF OPERATIONS

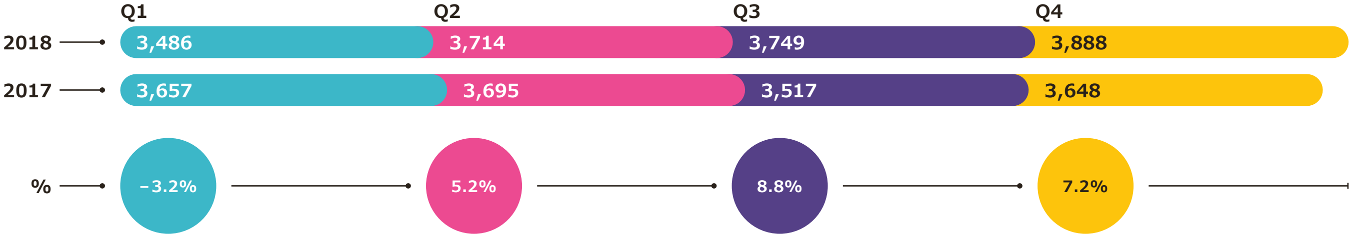
The presentation of net sales refers to the continuing business areas of the Group. Net sales of the Consumer Health business were no longer reported in Group sales, as this business was to be classified as a discontinued operation pursuant to IFRS 5. The prior-year periods were adjusted accordingly (further information on the sale of the Consumer Health business is included in Note (5) "Acquisitions and divestments" in the notes to the Note to the Consolidated Financial Statements.

In 2018, net sales of the Group increased by € 319 million or 2.2% to € 14,836 million (2017: € 14,517 million). This rise was attributable to organic sales growth of € 882 million, or 6.1%, to which all business sectors contributed. The stronger euro led to negative exchange rate effects of € –563 million or –3.9% in 2018, which affected all regions. In particular, this affected the regions North America due to the exchange rate development of the U.S. dollar, as well as Asia-Pacific as a result of negative exchange rate effects of the Chinese renminbi, the Korean won and the Taiwan dollar, and the region of Latin America.

The net sales in the individual quarters as well as the respective organic growth rates in 2018 are presented in the following graph:

GROUP

Net sales and organic growth[1] by quarter[2,3]
€ million/organic growth in %

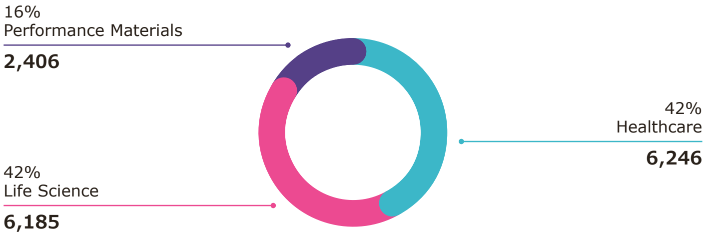


[1] Not defined by International Financial Reporting Standards (IFRSs).
[2] Quarterly breakdown unaudited.
[3] Previous year's figures have been adjusted, see Note (49) "Effects from new accounting standards and other presentation and measurement changes" in the Notes to the Consolidated Financial Statements.

Based on organic sales growth of 5.2%, net sales of the Healthcare business sector rose by € 56 million, or 0.9%, to € 6,246 million (2017: € 6,190 million). Healthcare therefore remained the strongest business sector in terms of sales with a share of 42% (2017: 43%) of Group sales. In 2018, the share of Group sales accounted for by Life Science increased by 2 percentage points to 42% (2017: 40%). With organic growth of 8.8% and a total increase in net sales of 5.2% to € 6,185 million (2017: € 5,882 million), the Life Science business sector recorded the sharpest rise in sales. Net sales of the Performance Materials business sector declined by –1.7% to € 2,406 million in 2018 (2017: € 2,446 million), as organic growth of 1.7% was more than offset by negative exchange rate effects of –3.4%. Performance Materials thus accounted for 16% (2017: 17%) of Group net sales.

GROUP

Net sales by business sector – 2018
€ million/% of net sales



GROUP

Net sales by business sector[1]

€ million	2018	Share	Organic growth[2]	Exchange rate effects	Acquisitions/ divestments	Total change	2017	Share
Healthcare	6,246	42%	5.2%	–4.3%	–	0.9%	6,190	43%
Life Science	6,185	42%	8.8%	–3.6%	–	5.2%	5,882	40%
Performance Materials	2,406	16%	1.7%	–3.4%	–	–1.7%	2,446	17%
Group	**14,836**	**100%**	**6.1%**	**–3.9%**	**–**	**2.2%**	**14,517**	**100%**

[1] Previous year's figures have been adjusted, see Note (49) "Effects from new accounting standards and other presentation and measurement changes" in the Notes to the Consolidated Financial Statements.
[2] Not defined by International Financial Reporting Standards (IFRSs).

In 2018, the Group recorded the following regional sales performance:

GROUP

Net sales by region[1]

€ million	2018	Share	Organic growth[2]	Exchange rate effects	Acquisitions/ divestments	Total change	2017	Share
Europe	4,559	31%	4.9%	–1.5%	–	3.5%	4,406	30%
North America	3,818	26%	4.7%	–4.5%	–	0.2%	3,810	26%
Asia-Pacific (APAC)	4,965	33%	7.8%	–3.5%	–	4.3%	4,761	33%
Latin America	950	6%	10.2%	–14.8%	–	–4.6%	996	7%
Middle East and Africa (MEA)	544	4%	2.9%	–2.9%	–	–	544	4%
Group	**14,836**	**100%**	**6.1%**	**–3.9%**	**–**	**2.2%**	**14,517**	**100%**

[1] Previous year's figures have been adjusted, see Note (49) "Effects from new accounting standards and other presentation and measurement changes" in the Notes to the Consolidated Financial Statements.
[2] Not defined by International Financial Reporting Standards (IFRSs).

The consolidated income statement of the Group is as follows:

GROUP

Consolidated Income Statement[1]

€ million	2018	in %	2017	in %	Change € million	Change in %
Net sales	**14,836**	**100.0%**	**14,517**	**100.0%**	**319**	**2.2%**
Cost of sales	–5,382	–36.3%	–5,071	–34.9%	–311	6.1%
Gross profit	**9,454**	**63.7%**	**9,446**	**65.1%**	**8**	**0.1%**
Marketing and selling expenses	–4,384	–29.5%	–4,349	–30.0%	–35	0.8%
Administration expenses	–993	–6.7%	–899	–6.2%	–95	10.5%
Research and development costs	–2,225	–15.0%	–2,108	–14.5%	–117	5.6%
Remaining operating expenses and income	–126	–0.8%	332	2.3%	–458	> 100.0%
Operating result (EBIT)[2]	**1,727**	**11.6%**	**2,423**	**16.7%**	**–696**	**–28.7%**
Financial result	–266	–1.8%	–294	–2.0%	28	–9.6%
Profit before income tax	**1,461**	**9.8%**	**2,129**	**14.7%**	**–668**	**–31.4%**
Income tax	–368	–2.5%	428	3.0%	–796	> 100.0%
Profit after tax from continuing operations	**1,093**	**7.4%**	**2,557**	**17.6%**	**–1,464**	**–57.3%**
Profit after tax from discontinued operation	**2,303**	**15.5%**	**57**	**0.4%**	**2,246**	**> 100.0%**
Profit after tax	**3,396**	**22.9%**	**2,615**	**18.0%**	**781**	**29.9%**
Non-controlling interests	–22	–0.2%	–10	–0.1%	–12	> 100.0%
Net income	**3,374**	**22.7%**	**2,605**	**17.9%**	**769**	**29.5%**

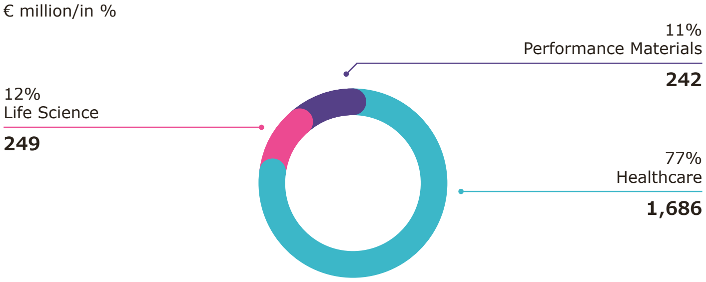
[1] Previous year's figures have been adjusted, see Note (49) "Effects from new accounting standards and other presentation and measurement changes" in the Notes to the Consolidated Financial Statements.
[2] Not defined by International Financial Reporting Standards (IFRSs).

In 2018, gross profit of the Group came to € 9,454 million and thus exceeded the 2017 figure of € 9,446 million only slightly. The positive development of this key indicator for the Life Science business sector, which generated an increase of € 169 million, was eaten up by declining profits in the other two business sectors. The gross margin of the Group, i.e. gross profit as a percentage of net sales, amounted to 63.7% (2017: 65.1%).

Group research and development costs rose by 5.6% to € 2,225 million and led to a research spending ratio (research and development costs as a percentage of net sales) of 15.0% (2017: 14.5%). Accounting for an unchanged 77% of Group R&D spending (2017: 77%), Healthcare remained the most research-intensive business sector of the Group.

GROUP

Research and development costs by business sector[1] – 2018
€ million/in %



[1] Not presented: Research and development costs of € 47 million allocated to Corporate and Other.

Other operating expenses and income showed an expense balance of € 126 million in 2018, after an income balance of € 332 million in 2017. This strong change was mainly due to developments in the Healthcare business sector (see explanations under “Healthcare”). In particular, the gain on the divestment of the Biosimilars business activities amounting to € 319 million had a positive effect in 2017. Detailed information about the development and composition of other operating expenses and income can be found in Note (12) “Other operating income”, Note (13) “Other operating expenses” and Note (38) “Management of financial risks” in the Notes to the Consolidated Financial Statements.

The increase in provisions for obligations from long-term variable compensation programs (Long-Term Incentive Plan) negatively impacted the operating result in 2018; the increase in the intrinsic value of the Share Units of Merck KGaA, Darmstadt, Germany – depending on the fields of activity of the eligible participants – was reflected in the respective functional costs (see Note (26) “Other provisions”).

The improvement in the negative financial result by € 28 million or 9.6% to € –266 million (2017: € –294 million) resulted mainly from higher interest income. Details with respect to the development of finance income and finance expenses of the Group are shown in Note (32) “Financial result/net profit and losses from financial instruments” in the Notes to the Consolidated Financial Statements.

Income tax expense came to € 368 million in 2018 and resulted in a tax ratio of 25.2%. The income balance of € 428 million in 2017 was due to one-time effects from deferred taxes in connection with the tax reform in the United States. Further information on income taxes are included in Note (14) “Income taxes” in the Notes to the Consolidated Financial Statements.

Profit after tax from discontinued operation of € 2,303 million (2017: € 57 million) included the Consumer Health business, which must be reported separately in the Group income statement pursuant to IFRS 5. In 2018, this profit figure also includes the gain on the divestment of the Consumer Health business amounting to € 2,244 million. Further information on the divestment of the Consumer Health business is found in Note (5) “Acquisitions and divestments” in the Notes to the Consolidated Financial Statements.

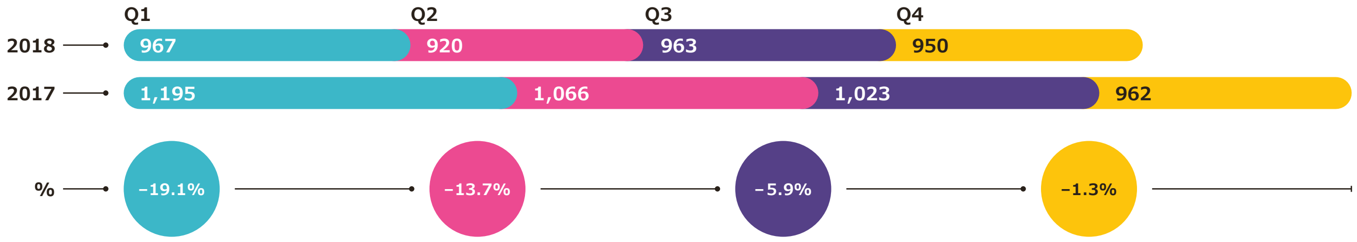
Thanks to the gain on the divestment of the Consumer Health business, in particular, net income rose by € 769 million to € 3,374 million (2017: € 2,605 million). In 2017, an exceptional tax income in connection with the tax reform in the United States of € 906 million boosted net income. Earnings per share increased accordingly to € 7.76 (2017: € 5.99).

EBITDA pre, the key financial indicator used to steer operating business, declined by € –446 million or –10.5% to € 3,800 million (2017: € 4,246 million). Unfavorable foreign exchange effects lowered EBITDA pre by –8.9%. Relative to net sales, the EBITDA pre margin was 25.6% in 2018 (2017: 29.3%). The reconciliation of the operating result (EBIT) to EBITDA pre is presented in the chapter entitled “Internal Management System”.

The development of EBITDA pre in the individual quarters in comparison with 2017 as well as the respective growth rates are presented in the following overview:

GROUP

EBITDA pre[1] and change by quarter[2,3]
€ million/change in %

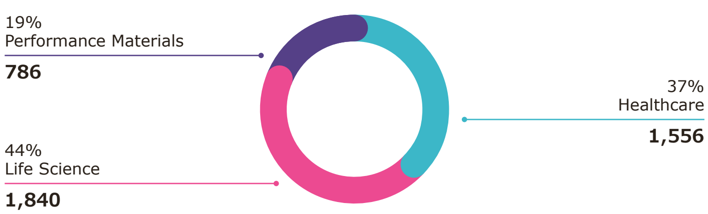


[1] Not defined by International Financial Reporting Standards (IFRSs).
[2] Quarterly breakdown unaudited.
[3] Previous year's figures have been adjusted, see Note (49) "Effects from new accounting standards and other presentation and measurement changes" in the Notes to the Consolidated Financial Statements.

The decrease in Group EBITDA pre was attributable to the Healthcare and Performance Materials business sectors. By contrast, in Life Science the good business development had a positive effect on this key figure. Consequently, at € 1,840 million (2017: € 1,786 million) the business sector for the first time generated the highest EBITDA pre of all the business sectors within the Group. This meant that the share of Group EBITDA pre accounted for by Life Science (not taking into account the € −381 million reduction due to Corporate and Other) rose to 44% (2017: 39%). EBITDA pre of Healthcare declined by −12.2% to € 1,556 million. The business sector thus contributed 37% (2017: 39%) to EBITDA pre for the Group. With an EBITDA pre of € 786 million (2017: € 980 million), the share of this Group key performance indicator attributable to Performance Materials decreased to 19% (2017: 22%).

GROUP

EBITDA pre[1] by business sector[2] – 2018
€ million/in %



[1] Not defined by International Financial Reporting Standards (IFRSs).
[2] Not presented: Decline in Group EBITDA pre by € −381 million due to Corporate and Other.

GROUP

Balance sheet structure

	Dec. 31, 2018		Dec. 31, 2017		Change	
	€ million	in %	€ million	in %	€ million	in %
Non-current assets	**27,652**	**75.0%**	**28,166**	**79.1%**	**–513**	**–1.8%**
of which:						
Goodwill	13,764		13,582		183	
Other intangible assets	7,237		8,317		–1,080	
Property, plant and equipment	4,811		4,512		299	
Other non-current assets	1,840		1,755		85	
Current assets	**9,236**	**25.0%**	**7,455**	**20.9%**	**1,781**	**23.9%**
of which:						
Inventories	2,764		2,632		133	
Trade accounts receivable	2,931		2,923		8	
Current financial assets	24		90		–66	
Other current assets	1,345		1,221		124	
Cash and cash equivalents	2,170		589		1,582	
Total assets	**36,888**	**100.0%**	**35,621**	**100.0%**	**1,267**	**3.6%**
Equity	**17,233**	**46.7%**	**14,066**	**39.5%**	**3,167**	**22.5%**
Non-current liabilities	**11,138**	**30.2%**	**12,919**	**36.3%**	**–1,782**	**–13.8%**
of which:						
Provisions for pensions and other post-employment benefits	2,336		2,257		80	
Other non-current provisions	780		788		–7	
Non-current financial liabilities	6,681		8,033		–1,352	
Other non-current liabilities	1,340		1,842		–502	
Current liabilities	**8,517**	**23.1%**	**8,635**	**24.2%**	**–117**	**–1.4%**
of which:						
Current provisions[1]	600		457		143	
Current financial liabilities	2,215		2,790		–576	
Trade accounts payable/Refund liabilities	2,238		2,195		43	
Other current liabilities[1]	3,464		3,191		273	
Total equity and liabilities	**36,888**	**100.0%**	**35,621**	**100.0%**	**1,267**	**3.6%**

[1] Previous year's figures have been adjusted, see Note (49) "Effects from new accounting standards and other presentation and measurement changes" in the Notes to the Consolidated Financial Statements.

The total assets of the Group amounted to € 36,888 million as of December 31, 2018 (December 31, 2017: € 35,621 million), representing an increase of 3.6% or € 1,267 million. One main reason for this rise was the cash inflow from the sale of the Consumer Health business amounting to € 3,052 million. Details of this transaction and its impact on the consolidated balance sheet are included in Note (5) "Acquisitions and divestments" in the Notes to the Consolidated Financial Statements. Due to exchange rate developments, total assets rose by around € 0.8 billion. This development was primarily the result of the trend of the exchange rate between the euro and the U.S. dollar, which had an impact on intangible assets, in particular.

The rise in net working capital of 2.9% to € 3,486 million (2017: € 3,387 million) was mainly attributable to the slight build-up in inventories.

GROUP

Working capital[1]

€ million	Dec. 31, 2018	Dec. 31, 2017	Change € million	Change in %
Trade accounts receivable	2,931	2,923	8	0.3%
Receivables from royalties and licenses	29	28	1	1.8%
Inventories	2,764	2,632	133	5.0%
Trade accounts payable/Refund liabilities	–2,238	–2,195	–43	1.9%
Working capital[1]	**3,486**	**3,387**	**99**	**2.9%**

[1] Not defined by International Financial Reporting Standards (IFRSs).

The composition and the development of net financial debt were as follows:

GROUP

Net financial debt[1]

€ million	Dec. 31, 2018	Dec. 31, 2017	Change € million	Change in %
Bonds and commercial papers	7,286	8,213	–927	–11.3%
Bank loans	620	1,653	–1,034	–62.5%
Liabilities to related parties	824	767	57	7.4%
Loans from third parties and other financial liabilities	72	73	–1	–1.4%
Liabilities from derivatives (financial transactions)	90	113	–23	–20.6%
Finance lease liabilities	4	4	–	11.4%
Financial liabilities	**8,896**	**10,823**	**–1,928**	**–17.8%**
less:				
Cash and cash equivalents	2,170	589	1,582	>100.0%
Current financial assets	24	90	–66	–72.9%
Net financial debt[1]	**6,701**	**10,144**	**–3,443**	**–33.9%**

[1] Not defined by International Financial Reporting Standards (IFRSs).

GROUP

Reconciliation of net financial debt[1]

€ million	2018	2017
January 1	**10,144**	**11,513**
Currency translation	126	–429
Dividend payments to shareholders and to E. Merck KG, Darmstadt, Germany[2]	768	624
Acquisitions[2]	–	17
Payments from the disposal of assets held for sale and from other divestments[2]	–3,129	–167
Free cash flow[1]	–1,301	–1,433
Other	93	19
Dec. 31	**6,701**	**10,144**

[1] Not defined by International Financial Reporting Standards (IFRSs).
[2] According to the consolidated cash flow statement.

In 2018, equity of the Group rose by 22.5% or € 3,167 million to € 17,233 million (December 31, 2017: € 14,066 million). The increase reflected mainly the strong profit after tax of € 3,396 million (2017: € 2,615 million). In addition, the currency translation of foreign currency assets to the reporting currency (euro) had a positive effect. Dividend payments and the profit transfer to E. Merck KG, Darmstadt, Germany, reduced consolidated net equity accordingly (see "Consolidated Statement of Comprehensive Income" and "Consolidated Statement of Changes in Net Equity" in the Consolidated Financial Statements). The increase in equity led to an improvement in the equity ratio by 7 percentage points to 46.7% (December 31, 2017: 39.5%).

The composition of free cash flow as well as the development of the relevant items are presented in the following table:

GROUP

Free cash flow[1]

€ million	**2018**	2017	Change € million	Change in %
Cash flow from operating activities according to the cash flow statement	2,219	2,696	–477	–17.7%
Payments for investments in intangible assets	–106	–392	286	–72.9%
Payments from the disposal of intangible assets	67	4	62	> 100.0%
Payments for investments in property, plant and equipment	–910	–919	9	–0.9%
Payments from the disposal of property, plant and equipment	31	44	–12	–28.0%
Free cash flow[1]	**1,301**	**1,433**	**–132**	**–9.2%**

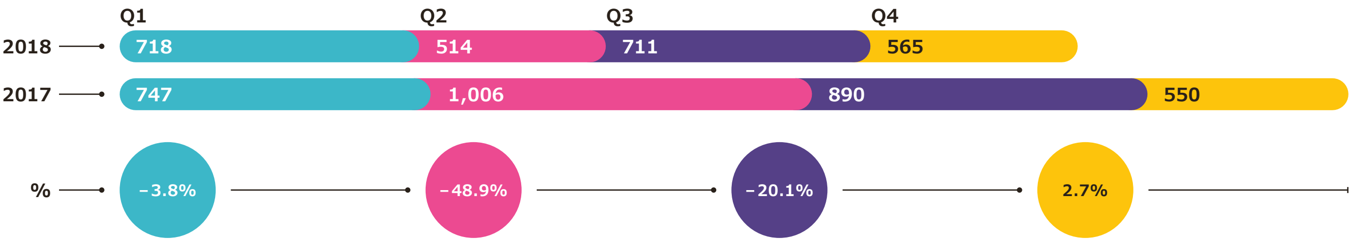
[1] Not defined by International Financial Reporting Standards (IFRSs).

Business free cash flow of the Group declined to € 2,508 million in 2018 (2017: € 3,193 million). This development was primarily due to the lower EBITDA pre, the increase in inventories and higher receivables as of the 2018 balance sheet date. The composition of this financial indicator is presented under "Internal Management System".

The distribution of business free cash flow across the individual quarters and the percentage changes in comparison with 2017 were as follows:

GROUP

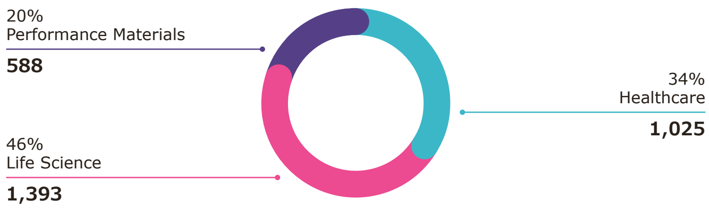
Business free cash flow[1] and change by quarter[2]
€ million/change in %



[1] Not defined by International Financial Reporting Standards (IFRSs).
[2] Quarterly breakdown unaudited.

GROUP

Business free cash flow[1] by business sector[2] – 2018
€ million/in %



[1] Not defined by International Financial Reporting Standards (IFRSs).
[2] Not presented: Decline in Group business free cash flow by € –497 million due to Corporate and Other.

The contributions of the operating business sectors to business free cash flow of the Group in 2018 developed as follows: Life Science generated business free cash flow amounting to € 1,393 million (2017: € 1,402 million). Consequently, with a 46% share (2017: 39%) of Group business free cash flow (excluding the decline of € –497 million due to Corporate and Other), Life Science was the business sector with the highest cash inflows. In 2018, the Healthcare business sector showed a decline of 22.0% to € 1,025 million (2017: € 1,314 million), thus contributing a share of 34% to Group business free cash flow (2017: 36%). With business free cash flow of € 588 million (2017: € 906 million), Performance Materials contributed 20% (2017: 25%) to this Group key performance indicator.

The investments in property, plant, equipment and software as well as advance payments for intangible assets included in the calculation of business free cash flow decreased in 2018 by –7.9% to € 932 million (2017: € 1,012 million). The investments in property, plant and equipment included therein amounted to € 890 million in 2018 (2017: € 936 million), of which € 480 million (2017: € 438 million) was attributable to strategic investment projects each with a project volume of more than € 2 million; the remainder was attributable to smaller investment projects.

Strategic investments made in 2018 included € 161 million (2017: € 212 million) to expand the Darmstadt site, of which the Healthcare business sector invested € 68 million, among other things in a new packaging center (€ 29 million).

Outside Germany, high levels of strategic investments were made particularly in China (€ 70 million) and the United States (€ 67 million). In China, the Healthcare business sector invested € 15 million in new production facilities and € 17 million in a new logistics center; the Life Science business sector invested € 29 million in new production facilities in China. In the United States, Life Science invested € 51 million, of which € 26 million in the expansion of the Sheboygan site in Wisconsin.

Our credit ratings from the independent rating agencies did not change in 2018. Our company is currently rated by Standard & Poor's, Moody's and Scope. Standard & Poor's has issued a long-term credit rating of A with a stable outlook, Moody's a rating of Baa1 with a stable outlook and Scope a rating of A–, likewise with a stable outlook. An overview of the development of our rating in recent years is presented in the Report on Risks and Opportunities.

The development of key balance sheet figures was as follows:

GROUP

Key balance sheet figures

in %		**Dec. 31, 2018**	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2014
Equity ratio[1]	Equity / Total assets	46.7%	39.5%	36.7%	33.8%	45.4%
Asset ratio[1]	Non-current assets / Total assets	75.0%	79.1%	80.0%	80.7%	59.7%
Asset coverage[1]	Equity / Non-current assets	62.3%	49.9%	45.9%	41.8%	76.0%
Finance structure[1]	Current liabilities / Liabilities (total)	43.3%	40.1%	37.5%	37.2%	46.5%

[1] Not defined by International Financial Reporting Standards (IFRSs).

OVERALL ASSESSMENT OF BUSINESS PERFORMANCE AND ECONOMIC SITUATION

2018 was a year of transition for our company in terms of the operating business activities of the Group. We generated solid results amid a challenging market environment. At the same time, important strategic decisions were made to allow us to generate profitable growth again in the future. The financial targets that we had set ourselves for 2018 were achieved. Satisfying organic growth of 6.1% enabled Group net sales to increase to € 14,836 million (2017: € 14,517 million). In 2018, EBITDA pre amounted to € 3,800 million (2017: € 4,246 million) and recorded an organic decline of –1.6% over the prior year.

Our Healthcare business sector benefited from the approval of Bavencio® and Mavenclad® in 2017. The steady further development and optimum use of our promising pipeline remains a high priority. In 2018, we also pushed ahead with the forming of alliances for selected active substances, such as the collaboration agreement with the SFJ Pharmaceuticals Group to develop abituzumab. The disposal of the Consumer Health business was successfully completed in 2018. The cash inflow it generated helped reduce net debt substantially and thereby strengthen our financial flexibility. As a result, despite investment activity remaining strong, we reduced our net financial debt by € –3,443 million to € 6,701 million (2017: € 10,144 million).

Net sales in Life Science showed a very strong performance in 2018. Following the integration of Sigma-Aldrich, which we completed in 2018, and our growth initiatives we are well-equipped for the future.

Our Performance Materials business sector launched the “Bright Future” transformation program in 2018 in order to pave the way for future growth.

Our key balance sheet figures showed a further improvement in 2018. For instance, the equity ratio rose by 7 percentage points to 46.7% (2017: 39.5%) and has thus reached a very good level. We will continue to assign high priority to the planned reduction of our financial liabilities. In 2018, there were no changes to our credit ratings by the independent rating agencies Standard & Poor’s (A with a stable outlook), Moody’s (Baa1 with a stable outlook) and Scope (A– with a stable outlook).

The economic position and business development of the Group can be assessed positively overall. A foundation has been laid for profitable organic growth going forward. We are seeking to help shape the important technological developments for our business sectors and take optimum advantage of the opportunities this creates.