

Course of Business and Economic Position

Group

Overview of 2020

- Group net sales up € 1.4 billion or 8.6% to € 17.5 billion (2019: € 16.2 billion)
- Organic (6.0%) and acquisition-related (5.3%) sales growth offset by negative exchange rate effects (-2.6%)
- Group EBITDA pre increases by 18.6% to € 5.2 billion (2019: € 4.4 billion); this includes income of € 365 million from the release of a provision for patent dispute
- Profitable growth for the Group: EBITDA pre margin rises to 29.7% (2019: 27.1%)
- Earnings per share pre increases by 20.5% to € 6.70 (2019: € 5.56)
- Business free cash flow of the Group amounts to € 3.8 billion (2019: € 2.7 billion)
- Reduction in net financial debt of 13.0% to € 10.8 billion (December 31, 2019: € 12.4 billion)

Group

Key figures

€ million	2020	2019	Change	
			€ million	%
Net sales	17,534	16,152	1,383	8.6%
Operating result (EBIT) ¹	2,985	2,120	865	40.8%
Margin (% of net sales) ¹	17.0%	13.1%		
EBITDA ¹	4,923	4,066	857	21.1%
Margin (% of net sales) ¹	28.1%	25.2%		
EBITDA pre ¹	5,201	4,385	817	18.6%
Margin (% of net sales) ¹	29.7%	27.1%		
Profit after tax	1,994	1,324	670	50.6%
Earnings per share (€)	4.57	3.04	1.53	50.3%
Earnings per share pre (€) ¹	6.70	5.56	1.14	20.5%
Business free cash flow ¹	3,765	2,732	1,033	37.8%

¹ Not defined by International Financial Reporting Standards (IFRS).

Development of sales and results of operations

In fiscal 2020, the Group generated net sales of € 17,534 million (2019: € 16,152 million), representing a year-on-year increase of € 1,383 million or 8.6%. This positive development was attributable to organic sales growth in the Life Science and Healthcare business sectors as well as acquisition-related sales growth in the Performance Materials business sector. Group-wide organic net sales growth totaled € 961 million or 6.0% in fiscal 2020. Information on the impact of the Covid-19 pandemic on net sales can be found in the sections on the individual business sectors. Exchange rate effects negatively impacted net sales in the amount of € -428 million or -2.6% in fiscal 2020. They resulted in particular from the U.S. dollar, the Brazilian real, and the Chinese renminbi. Group net sales rose by € 849 million or 5.3% due to portfolio changes in the year under review. This was primarily due to the acquisition of Versum Materials, Inc., United States (Versum Materials), which was completed on October 7, 2019, and which supplements the semiconductor business of the

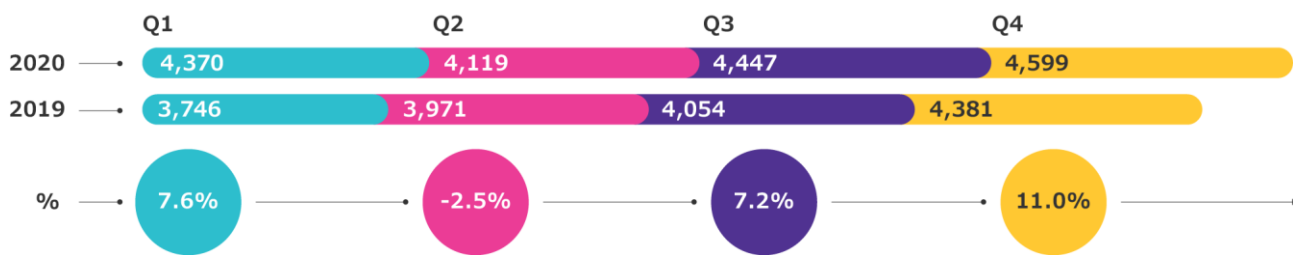
Performance Materials business sector. The disposal of the Allergopharma allergy business effective March 31, 2020, served to reduce net sales in the Healthcare business sector.

The net sales in the individual quarters as well as the respective organic growth rates in 2020 are presented in the following graph:

Group

Net sales and organic growth¹ by quarter²

€ million/organic growth in %



¹ Not defined by International Financial Reporting Standards (IFRS).

² Quarterly breakdown unaudited.

The Life Science business sector increased its net sales by 9.5% year-on-year to € 7,515 million (2019: € 6,864 million). Double-digit organic growth of 11.8% was offset by negative exchange rate effects of -2.3%. Accounting for 43% of Group sales (2019: 42%), Life Science was the strongest business sector in terms of net sales. The net sales of the Healthcare business sector declined by -1.1% to € 6,639 million in fiscal 2020 (2019: € 6,714 million). This was due to negative exchange rate and portfolio effects, which exceeded the organic growth of 3.4%. Accordingly, the share of Group sales attributable to Healthcare fell by 4 percentage points to 38% (2019: 42%). The 31.3% increase in Performance Materials sales to € 3,380 million (2019: € 2,574 million) was primarily attributable to the acquisition of Versum Materials. In organic terms, net sales declined by -3.2%. The share of the Group's net sales attributable to Performance Materials increased by 3 percentage points to 19% (2019: 16%).

Group

Net sales by business sector – 2020

€ million/% of net sales



Group

Net sales by business sector

€ million	2020	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	2019	Share
Healthcare	6,639	38%	3.4%	-3.6%	-0.9%	-1.1%	6,714	42%
Life Science	7,515	43%	11.8%	-2.3%	-	9.5%	6,864	42%
Performance Materials	3,380	19%	-3.2%	-0.9%	35.4%	31.3%	2,574	16%
Group	17,534	100%	6.0%	-2.6%	5.3%	8.6%	16,152	100%

¹ Not defined by International Financial Reporting Standards (IFRS).

In fiscal 2020, the Group recorded the following regional sales performance:

Group

Net sales by region

€ million	2020	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	2019	Share
Europe	4,991	29%	6.8%	-1.1%	-0.3%	5.4%	4,735	29%
North America	4,739	27%	9.7%	-2.4%	5.2%	12.5%	4,214	26%
Asia-Pacific (APAC)	6,313	36%	3.0%	-1.4%	11.1%	12.7%	5,599	35%
Latin America	910	5%	7.8%	-18.0%	0.1%	-10.1%	1,012	6%
Middle East and Africa (MEA)	581	3%	-3.0%	-2.2%	3.5%	-1.7%	591	4%
Group	17,534	100%	6.0%	-2.6%	5.3%	8.6%	16,152	100%

¹ Not defined by International Financial Reporting Standards (IFRS).

The Consolidated Income Statement of the Group is as follows:

Group

Consolidated Income Statement

€ million	2020	%	2019	%	Change	
					€ million	%
Net sales	17,534	100.0%	16,152	100.0%	1,383	8.6%
Cost of sales	-6,835	-39.0%	-6,006	-37.2%	-829	13.8%
Gross profit	10,699	61.0%	10,145	62.8%	554	5.5%
Marketing and selling expenses	-4,207	-24.0%	-4,576	-28.3%	369	-8.1%
Administration expenses	-1,188	-6.8%	-1,154	-7.1%	-34	3.0%
Research and development costs	-2,288	-13.0%	-2,268	-14.0%	-20	0.9%
Impairment losses and reversals of impairment losses on financial assets (net)	-6	0.0%	-8	0.0%	2	-24.8%
Other operating income and expenses	-25	-0.1%	-19	-0.1%	-6	31.8%
Operating result (EBIT)¹	2,985	17.0%	2,120	13.1%	865	40.8%
Financial result	-354	-2.0%	-385	-2.4%	30	-7.9%
Profit before income tax	2,630	15.0%	1,735	10.7%	895	51.6%
Income tax	-637	-3.6%	-440	-2.7%	-197	44.8%
Profit after tax from continuing operations	1,994	11.4%	1,296	8.0%	698	53.9%
Profit after tax from discontinued operation	-	0.0%	28	0.2%	-28	-100.0%
Profit after tax	1,994	11.4%	1,324	8.2%	670	50.6%
Non-controlling interests	-7	0.0%	-3	0.0%	-3	96.4%
Net income	1,987	11.3%	1,320	8.2%	667	50.5%

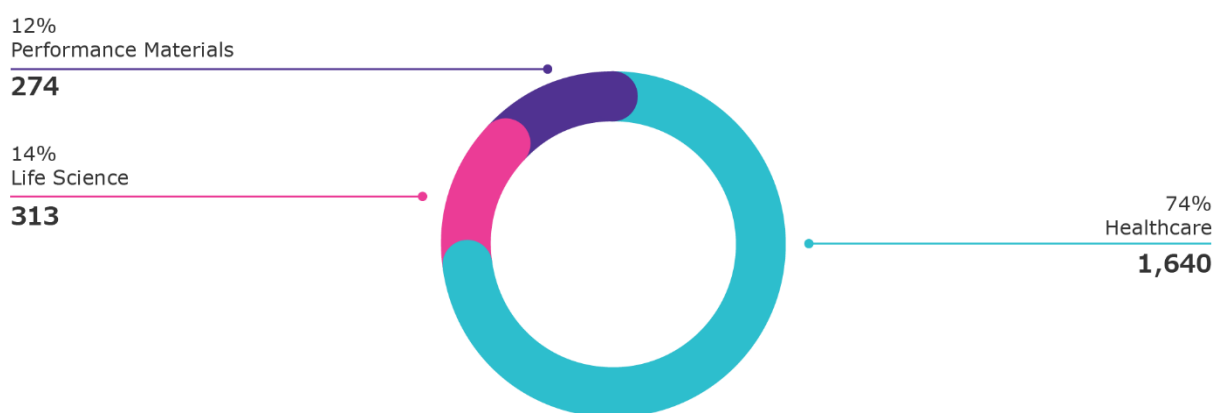
¹ Not defined by International Financial Reporting Standards (IFRS).

The positive business performance in the year under review led to an increase of 5.5% in the gross profit to € 10,699 million (2019: € 10,145 million). The resulting gross margin of the Group, i.e. gross profit as a percentage of net sales, amounted to 61.0% (2019: 62.8%). The -8.1% reduction in marketing and selling expenses to € 4,207 million (2019: € 4,576 million) was attributable to the Healthcare business sector (see “Healthcare” section). Group-wide research and development (R&D) costs rose slightly year-on-year to € 2,288 million in fiscal 2020 (2019: € 2,268 million) and led to a research spending ratio (research and development costs as a percentage of net sales) of 13.0% (2019: 14.0%). Accounting for 74% (2019: 75%) of Group R&D spending, Healthcare remained the most research-intensive business sector of the Group.

Group

Research and development costs by business sector¹ – 2020

€ million/%



¹ Not presented: research and development costs of € 62 million allocated to Corporate and Other.

Detailed information about the development and composition of other operating expenses and income can be found in Note (13) “Other operating income” and Note (14) “Other operating expenses” in the Notes to the Consolidated Financial Statements.

An increase in provisions for obligations under long-term variable compensation programs (Long-Term Incentive Plan of Merck KGaA, Darmstadt, Germany) had an adverse effect on the operating result in the year under review, with the rise in the intrinsic value of the Share Units of Merck KGaA, Darmstadt, Germany, being reflected in the respective functional costs depending on the area of activity of the plan beneficiaries.

The financial result improved by 7.9% to € -354 million in fiscal 2020 (2019: € -385 million) which was particularly attributable to lower interest expenses. Details about the development of the finance income and finance expenses of the Group can be found in Note (40) “Financial income and expenses/Net profit and losses from financial instruments” in the Notes to the Consolidated Financial Statements.

Income tax expense amounted to € 637 million in 2020 (2019: € 440 million) and resulted in a tax rate of 24.2% (2019: 25.3%). Further information on income taxes can be found in Note (15) “Income taxes” in the Notes to the Consolidated Financial Statements.

The profit after tax from discontinued operations reported in the previous year in the amount of € 28 million was due to subsequent effects in connection with the sale of the Consumer Health business in December 2018.

The net income attributable to Merck KGaA, Darmstadt, Germany, shareholders increased by 50.5% to € 1,987 million (2019: € 1,320 million) and resulted in a corresponding improvement in earnings per share to € 4.57 in fiscal 2020 (2019: € 3.04).

EBITDA pre, the key financial indicator used to steer operating business, rose by € 817 million, or 18.6%, to € 5,201 million (2019: € 4,385 million). Organic earnings growth, which also includes income from the release

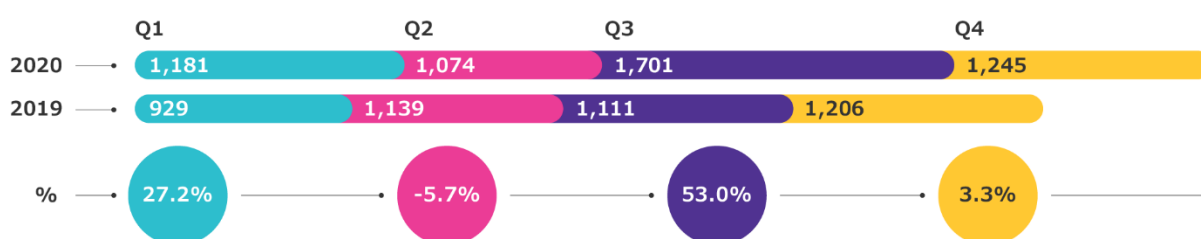
of a provision for patent dispute in the amount of € 365 million (see Note (27) "Other provisions" in the Notes to the Consolidated Financial Statements), amounted to 16.8%. Portfolio effects – primarily resulting from the acquisition of Versum Materials – led to a 6.4% increase in EBITDA pre in fiscal 2020. This was offset by negative exchange rate effects of -4.6%. Relative to net sales, the Group recorded an EBITDA pre margin of 29.7% (2019: 27.1%). 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 2019 as well as the respective growth rates are presented in the following overview:

Group

EBITDA pre¹ and change by quarter²

€ million/change in %



¹ Not defined by International Financial Reporting Standards (IFRS).

² Quarterly breakdown unaudited.

All business sectors contributed to the growth in Group EBITDA pre. Life Science generated EBITDA pre of € 2,405 million, up 13.0% on the previous year (2019: € 2,129 million). This meant the EBITDA pre margin in the Life Science business sector increased to 32.0% in fiscal 2020 (2019: 31.0%). The share of Group EBITDA pre attributable to the Life Science business sector (not taking into account the € -495 million reduction due to Corporate and Other) amounted to 42% in the year under review (2019: 44%).

EBITDA pre in the Healthcare business sector increased by 18.0% to € 2,267 million (2019: € 1,922 million). The resulting EBITDA pre margin improved substantially to 34.1% (2019: 28.6%). The share of Group EBITDA pre attributable to Healthcare remained unchanged year-on-year at 40%.

In fiscal 2020, the Performance Materials business sector benefited considerably from the acquisition of Versum Materials in October 2019, reporting a 27.5% increase in EBITDA pre to € 1,024 million (2019: € 803 million). Accordingly, the share of Group EBITDA pre attributable to Performance Materials rose by 2 percentage points to 18% (2019: 16%). The EBITDA pre margin declined slightly to 30.3% (2019: 31.2%).

Group

EBITDA pre¹ by business sector² – 2020

€ million/%



¹ Not defined by International Financial Reporting Standards (IFRS).

² Not presented: Decline in Group EBITDA pre by €-495 million due to Corporate and Other.

Group

Balance sheet structure¹

	Dec. 31, 2020		Dec. 31, 2019		Change	
	€ million	%	€ million	%	€ million	%
Non-current assets	32,516	77.8%	34,805	79.4%	-2,289	-6.6%
thereof:						
Goodwill	15,959		17,114		-1,155	
Other intangible assets	7,653		9,221		-1,567	
Property, plant and equipment	6,421		6,192		229	
Other non-current assets	2,483		2,278		205	
Current assets	9,280	22.2%	9,003	20.6%	277	3.1%
thereof:						
Inventories	3,294		3,342		-48	
Trade and other current receivables	3,221		3,488		-267	
Other current financial assets	125		57		68	
Other current assets	1,286		1,336		-51	
Cash and cash equivalents	1,355		781		575	
Total assets	41,796	100.0%	43,808	100.0%	-2,012	-4.6%
Equity	17,017	40.7%	17,914	40.9%	-897	-5.0%
Non-current liabilities	15,548	37.2%	14,053	32.1%	1,496	10.6%
thereof:						
Non-current provisions for employee benefits	3,880		3,194		686	
Other non-current provisions	281		254		27	
Non-current financial debt	9,785		8,644		1,141	
Other non-current liabilities	1,603		1,962		-359	
Current liabilities	9,231	22.1%	11,842	27.0%	-2,610	-22.0%
thereof:						
Current provisions	613		933		-320	
Current financial debt	2,357		4,550		-2,193	
Trade and other current payables/ refund liabilities	2,434		2,618		-185	
Other current liabilities	3,828		3,740		88	
Total equity and liabilities	41,796	100.0%	43,808	100.0%	-2,012	-4.6%

¹ Previous year's figures have been adjusted, see Note (2) "Reporting principles" in the Notes to the Consolidated Financial Statements.

The total assets of the Group amounted to € 41,796 million as of December 31, 2020 (December 31, 2019: € 43,808 million), representing a decrease of -4.6% or € -2,012 million in fiscal 2020. The development of total assets was largely due to exchange rate changes, in particular the weaker US dollar at the reporting date. Working capital remained largely unchanged year-on-year at € 3,938 million (2019: € 3,944 million) despite the increase in the business volume in fiscal 2020.

Group

Working capital¹

€ million	Dec. 31, 2020	Dec. 31, 2019	Change	
			€ million	%
Trade accounts receivable	3,052	3,174	-122	-3.8%
Receivables from royalties and licenses	24	45	-22	-47.8%
Inventories/right of return for goods already delivered	3,296	3,344	-47	-1.4%
Trade and other current payables/refund liabilities	-2,434	-2,618	185	-7.1%
Working capital¹	3,938	3,944	-6	-0.2%

¹ Not defined by International Financial Reporting Standards (IFRS).

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

Group

Net financial debt¹

€ million	Dec. 31, 2020	Dec. 31, 2019	Change	
			€ million	%
Bonds and commercial paper	9,642	10,059	-417	-4.1%
Bank loans	1,085	1,587	-501	-31.6%
Liabilities to related parties	817	809	8	1.0%
Loans from third parties and other financial debt	58	97	-39	-40.5%
Liabilities from derivatives (financial transactions)	102	76	26	34.2%
Lease liabilities	438	567	-129	-22.7%
Financial debt	12,142	13,194	-1,052	-8.0%
less:				
Cash and cash equivalents	1,355	781	575	73.6%
Other current financial assets ²	28	50	-22	-43.4%
Net financial debt¹	10,758	12,363	-1,605	-13.0%

¹ Not defined by International Financial Reporting Standards (IFRS).

² Excluding current derivatives (operational).

Group

Reconciliation of net financial debt¹

€ million	2020	2019
Jan. 01	12,363	6,701
Currency translation difference	-189	79
Change in lease liabilities ²	65	663
Dividend payments/profit withdrawals ³	687	689
Acquisitions ³	11	5,020
Payments for/proceeds from the disposal of assets held for sale ³	-48	110
Transfer of financial debt due to acquisitions	-	966
Free cash flow ¹	-2,038	-1,889
Other	-93	24
Dec. 31	10,758	12,363

¹ Not defined by International Financial Reporting Standards (IFRS).

² In 2019 included € 465 million due to the first-time application of IFRS 16 as of January 1, 2019.

³ According to the Consolidated Cash Flow Statement.

In fiscal 2020, the equity of the Group declined by -5.0% to € 17,017 million (December 31, 2019: € 17,914 million). This development was primarily due to negative currency translation effects as well as dividend payments and profit withdrawals. The profit after tax generated in fiscal 2020 was not sufficient to offset these effects (see “Consolidated Statement of Changes in Equity” in the Consolidated Financial Statements). The equity ratio declined only slightly to 40.7% (December 31, 2019: 40.9%). The composition of free cash flow as well as the development of the relevant items are presented in the following table:

Group

Free cash flow¹

€ million	2020	2019	Change	
			€ million	%
Cash flow from operating activities according to the consolidated cash flow statement	3,477	2,856	621	21.7%
Payments for investments in intangible assets	-150	-208	58	-27.8%
Proceeds from the disposal of intangible assets	88	23	66	>100.0%
Payments for investments in property, plant and equipment	-1,413	-813	-600	73.8%
Proceeds from the disposal of property, plant and equipment	35	31	4	14.3%
Free cash flow¹	2,038	1,889	149	7.9%

¹ Not defined by International Financial Reporting Standards (IFRS).

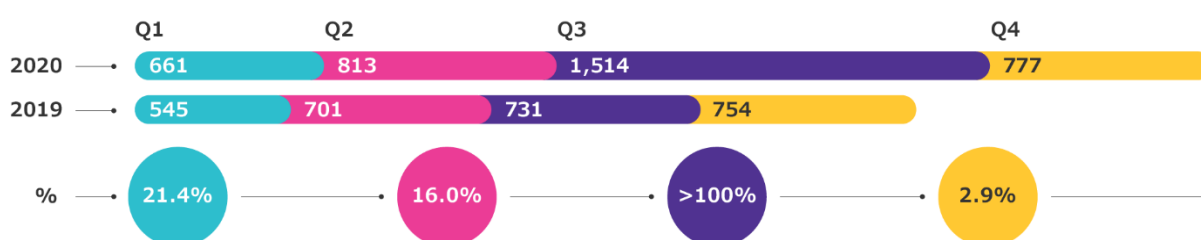
The business free cash flow of the Group rose by 37.8% to € 3,765 million in fiscal 2020 (2019: € 2,732 million). This was due in particular to the higher level of EBITDA pre and the development of inventories and receivables. The composition of business free cash flow is presented in the chapter entitled “Internal Management System”.

The distribution of business free cash flow across the individual quarters and the percentage changes in comparison with 2019 were as follows:

Group

Business free cash flow¹ and change by quarter²

€ million/change in %



¹ Not defined by International Financial Reporting Standards (IFRS).

² Quarterly breakdown unaudited.

Group

Business free cash flow¹ by business sector² – 2020

€ million/%

¹ Not defined by International Financial Reporting Standards (IFRS).² Not presented: decline in Group business free cash flow by € -571 million due to Corporate and Other.

The contributions of the operating business sectors to Group business free cash flow developed as follows in fiscal 2020: The contribution of Healthcare increased by 51.4% to € 1,895 million (2019: € 1,252 million) and hence was the business sector with the highest cash flows, accounting for a 44% share (2019: 38%) of Group business free cash flow (not taking into account the € -571 million reduction due to Corporate and Other). In 2020, the Life Science business sector generated business free cash flow of € 1,595 million (2019: € 1,375 million), thus contributing a share of 37% to Group business free cash flow (2019: 42%). With business free cash flow of € 847 million (2019: € 641 million), Performance Materials contributed 19% (2019: 20%) to this Group key performance indicator.

Investments in property, plant, equipment, and software, as well as advance payments for intangible assets included in the calculation of business free cash flow, rose in 2020 by 40.2% to € 1,439 million (2019: € 1,026 million). The investments in property, plant, and equipment included therein amounted to € 1,344 million in 2020 (2019: € 1,104 million), of which € 858 million (2019: € 497 million) was attributable to strategic investment projects each with a project volume of more than € 2 million.

In 2020, strategic investments of € 168 million were made in Germany (2019: € 146 million), of which € 118 million related to the expansion of our site in Darmstadt. Among other things, the Performance Materials business sector invested € 15 million in a new research center and the Life Science business sector invested € 34 million in a new membrane production plant. The Life Science business sector also invested € 33 million in a new filling and logistics center in Schnelldorf.

Outside Germany, high levels of strategic investments were made in the United States (€ 366 million) and Switzerland (€ 162 million) in particular. The United States saw a Healthcare investment of € 27 million in the expansion of the research and development center in Billerica, Massachusetts, and a Life Science investment of € 36 million in a new manufacturing facility for gene therapy products in Carlsbad. In addition, the Life Science business sector acquired its previously leased company headquarters in Burlington, Massachusetts, for € 208 million. The same applies to the Performance Materials business sector, which purchased its previously leased facility in Tempe, Arizona, for € 18 million. In Switzerland, the Healthcare business sector invested € 85 million in a new development center to produce biotechnological products and € 41 million in a new production building for bottling these products.

Our credit ratings from the independent rating agencies did not change in 2020. Merck KGaA, Darmstadt, Germany, 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

%		Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2016
Equity ratio ¹	Total equity	40.7%	40.9%	46.7%	39.5%	36.7%
	Total assets					
Asset ratio ¹	Non-current assets	77.8%	79.4%	75.0%	79.1%	80.0%
	Total assets					
Asset coverage ¹	Total equity	52.3%	51.5%	62.3%	49.9%	45.9%
	Non-current assets					
Finance structure ¹	Current liabilities	37.3%	45.7%	43.3%	40.1%	37.5%
	Liabilities (total)					

¹ Not defined by International Financial Reporting Standards (IFRS).

Overall assessment of business performance and economic situation

2020 was dominated by the global spread of Covid-19. The Group succeeded in mastering the unprecedented challenges this entailed, with the effectiveness of our business model and its three innovative business sectors proving its worth in the Covid-19 crisis.

Despite considerable obstacles in some business units as a result of the pandemic, the financial targets we had set for 2020 were reached or even exceeded. In particular, we recorded further profitable growth in fiscal 2020. Group net sales increased by 8.6% to € 17,534 (2019: € 16,152 million), while the key financial indicator used to steer our operating business, EBITDA pre, rose by as much as 18.6% to € 5,201 million (2019: € 4,385 million). All our business sectors contributed to this success.

Another milestone in our Healthcare business sector was the approval of our cancer immunotherapy Bavencio® by the U.S. Food and Drug Administration (FDA) for the treatment of patients with advanced urothelial carcinoma. We obtained additional approvals for Mavenclad® around the world, meaning that the product is now approved in more than 80 countries including in the European Union, the United States, Australia, Canada, and Switzerland. With the sale of our Allergopharma allergy business, we are now further heightening our focus on the development of innovative medicines for hard-to-treat diseases.

We also invested in research, development and production in the Life Science business sector in fiscal 2020. For example, we celebrated the topping-out ceremony for our new membrane facility in Darmstadt and announced the expansion of production sites in the United States.

In Performance Materials, we developed further into a leading player for materials-based solutions for the electronics market in 2020 as part of the "Bright Future" transformation program. Our current portfolio means we already occupy a strong position on the market for electronic materials, thanks in part to the acquisitions of Versum Materials and Intermolecular in 2019.

The solid financing policies of the Group are reflected in persistently good key balance sheet figures. The equity ratio was 40.7% on December 31, 2020 (December 31, 2019: 40.9%), and thus at a very good level. Having risen to € 12,363 million in the previous year due to the acquisition of Versum Materials, net financial debt was reduced by 13.0% in 2020 and amounted to € 10,758 million at the end of the fiscal year. So that we can continue to achieve a rapid reduction in financial liabilities, we are focusing on generating organic growth and on high inflows of financial resources from operating business activities.

Based on our solid net assets and financial position, and our profitable operations, we view the economic situation of the Group as positive overall. Our clear focus on science and technology means we are well positioned even in economically challenging times.