

CONDENSED FINANCIAL REPORT – SUPPLEMENTARY DATA
Novartis Q4 and FY 2019 Condensed Financial Report – Supplementary Data

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Novartis Q4 and FY 2019 Condensed Financial Report – Supplementary Data

Key figures ¹	Q4 2019		Q4 2018		% change		FY 2019		FY 2018		% change	
	USD m	USD m	USD	cc ²	USD	cc ²	USD m	USD m	USD	cc ²	USD	cc ²
Net sales to third parties from continuing operations	12 403	11 481	8	9			47 445	44 751	6	9		
Divisional operating income from continuing operations	2 015	1 537	31	34			9 838	9 203	7	13		
Corporate income and expense, from continuing operations, net	- 192	- 175	-10	-11			- 752	- 800	6	4		
Operating income from continuing operations	1 823	1 362	34	37			9 086	8 403	8	14		
<i>As % of net sales</i>	<i>14.7</i>	<i>11.9</i>					<i>19.2</i>	<i>18.8</i>				
Income from associated companies	150	141	6	6			659	6 438	nm	nm		
Interest expense	- 203	- 248	18	17			- 850	- 932	9	8		
Other financial income and expense	- 11	78	nm	nm			45	186	- 76	- 69		
Taxes	- 630	- 113	nm	nm			-1 793	-1 295	- 38	- 46		
Net income from continuing operations	1 129	1 220	- 7	- 6			7 147	12 800	- 44	- 41		
Net loss from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders		- 26	nm	nm			- 101	- 186	nm	nm		
Gain on distribution of Alcon Inc. to Novartis AG shareholders							4 691		nm	nm		
Net income	1 129	1 194	- 5	- 4			11 737	12 614	- 7	- 3		
Basic earnings per share from continuing operations (USD)	0.50	0.53	-6	-4			3.12	5.52	- 43	-40		
Basic earnings per share from discontinued operations (USD)		-0.01	nm	nm			2.00	-0.08	nm	nm		
Basic earnings per share (USD)	0.50	0.52	- 4	- 2			5.12	5.44	- 6	- 2		
Cash flows from operating activities from continuing operations	3 540	3 436	3				13 547	13 049	4			
Free cash flow from continuing operations²	3 488	2 913	20				12 937	11 256	15			
Core²												
Core operating income from continuing operations	3 462	3 112	11	13			14 112	12 557	12	17		
<i>As % of net sales</i>	<i>27.9</i>	<i>27.1</i>					<i>29.7</i>	<i>28.1</i>				
Core net income from continuing operations	2 985	2 681	11	13			12 104	10 920	11	15		
Core net income from discontinued operations		200	nm	nm			278	1 018	nm	nm		
Core net income	2 985	2 881	4	5			12 382	11 938	4	8		
Core basic earnings per share from continuing operations (USD)	1.32	1.16	14	15			5.28	4.71	12	17		
Core basic earnings per share from discontinued operations (USD)		0.09	nm	nm			0.12	0.44	nm	nm		
Core basic earnings per share (USD)	1.32	1.25	6	7			5.40	5.15	5	9		

nm = not meaningful

¹ Continuing operations include the businesses of Innovative Medicines and Sandoz divisions and Corporate activities and discontinued operations include the business of Alcon. See page 45 for full explanation

² Constant currencies (cc), core results and free cash flow are non-IFRS measures. An explanation of non-IFRS measures can be found on page 58. Unless otherwise noted, all growth rates in this release refer to same period in prior year.

Financials

In order to comply with International Financial Reporting Standards (IFRS), Novartis has separated the Group's reported financial data for the current and prior years into "continuing" and "discontinued" operations. The results of the Alcon business are reported as discontinued operations. See page 45 and Notes 2, 3 and 11 for a full explanation.

Novartis continues to expect the previously-announced divestment of the Sandoz US oral solids and dermatology portfolio to be completed in Q1 2020, pending regulatory approval. Novartis remains fully committed to this business until it is divested to Aurobindo. The results of this business are included in continuing operations.

The commentary below focuses on continuing operations including the businesses of Innovative Medicines and Sandoz (including the US generic oral solids and dermatology portfolio), as well as the continuing Corporate functions. We also provide information on discontinued operations.

Continuing operations fourth quarter

Net sales

Net sales were USD 12.4 billion (+8%, +9% cc) in the fourth quarter driven by volume growth of 13 percentage points, mainly from *Entresto*, *Zolgensma*, *Cosentyx* and *Kisqali*. Strong volume growth was partly offset by the negative impacts of pricing (3 percentage points) and generic competition (1 percentage point).

Corporate income and expense, net

Corporate income and expense, which includes the cost of Group headquarters and coordination functions, amounted to an expense of USD 192 million in the fourth quarter compared to USD 175 million in prior year.

Operating income

Operating income was USD 1.8 billion (+34%, +37% cc) mainly driven by higher sales and divestments, partly offset by growth investments, higher legal provisions and higher amortization. Operating income margin was 14.7% of net sales, increasing by 2.8 percentage points (+2.9 percentage points cc). Core adjustments amounted to USD 1.6 billion (2018: USD 1.8 billion).

Core operating income was USD 3.5 billion (+11%, +13% cc) mainly driven by higher sales, partly offset by growth investments. Core operating income margin was 27.9% of net sales, increasing by 0.8 percentage points (+0.8 percentage points cc).

Income from associated companies

Income from associated companies increased to USD 150 million from USD 141 million in prior year due to a higher estimated income from Roche Holding AG.

Core income from associated companies increased to USD 242 million from USD 214 million in prior year due to a higher estimated core income contribution from Roche Holding AG.

Interest expense and other financial income/expense

Interest expense decreased to USD 203 million from USD 248 million in prior year, driven by lower outstanding debts partly offset by the additional interest expense on lease liabilities of USD 16 million, following the implementation of IFRS 16 Leases as of January 1, 2019.

Other financial income and expense, net amounted to an expense of USD 11 million in the quarter compared to an income of USD 78 million in prior year, mainly due to lower interest income and higher currency losses.

Taxes

The tax rate for continuing operations in the fourth quarter was 35.8%. The fourth quarter tax rate was negatively impacted by a one-time, non-cash deferred tax expense resulting from legal entity reorganizations. Excluding this impact, the tax rate for continuing operations in the fourth quarter would have been 15.8%. The prior year tax rate of 8.5% was positively impacted by the effect of adjusting to the full year tax rate, which was less than previously estimated.

The core tax rate for continuing operations was 14.6% compared to 15.1% in prior year, mainly as a result of a change in profit mix.

Net income and EPS

Net income was USD 1.1 billion (-7%, -6% cc) due to higher taxes, including a one-time, non-cash deferred tax expense, partly offset by higher operating income. EPS was USD 0.50 (-6%, -4% cc), benefiting from lower weighted average number of shares outstanding.

Core net income was USD 3.0 billion (+11%, +13% cc) driven by growth in core operating income. Core EPS was USD 1.32 (+14%, +15% cc) growing faster than core net income driven by lower weighted average number of shares outstanding.

Free cash flow from continuing operations amounted to USD 3.5 billion (+20%) compared to USD 2.9 billion in the prior year quarter. The increase was mainly driven by higher cash flows from operating activities and higher proceeds from the sale of intangible assets.

Continuing operations full year

Net sales

Net sales were USD 47.4 billion (+6%, +9% cc) in 2019 driven by volume growth of 12 percentage points, mainly from *Cosentyx*, *Entresto* and *Zolgensma* for the Pharmaceuticals BU and *Promacta/Revolade*, *Kisqali* and *Lutathera* for the Oncology BU. Strong volume growth was partly offset by the negative impacts of pricing (2 percentage points) and generic competition (1 percentage point).

Corporate income and expense, net

Corporate income and expense, which includes the cost of Group headquarters and coordination functions, amounted to an expense of USD 752 million in 2019 compared to USD 800 million in prior year, mainly driven by lower impairment charges from the Novartis Venture Fund financial assets, partly offset by higher restructuring costs.

Operating income

Operating income was USD 9.1 billion (+8%, +14% cc) mainly driven by higher sales, higher divestments and productivity programs, partly offset by growth investments, legal provisions and higher impairments. Operating income margin was 19.2% of net sales, improving by 0.4 percentage points (+0.9 percentage points cc). Core adjustments amounted to USD 5.0 billion (2018: USD 4.2 billion).

Core operating income was USD 14.1 billion (+12%, +17% cc) mainly driven by higher sales and productivity programs, partly offset by growth investments. Core operating income margin was 29.7% of net sales, increasing by 1.6 percentage points (+1.9 percentage points cc).

Income from associated companies

Income from associated companies amounted to USD 659 million in 2019 compared to USD 6.4 billion in prior year. This decrease is mainly due to the pre-tax gain of USD 5.8 billion recognized on the divestment of the 36.5% stake in the GSK consumer healthcare joint venture in 2018.

The share of income from Roche was USD 662 million compared to USD 526 million in prior year. The estimated income for Roche Holding AG was USD 748 million compared to USD 651 million in prior year and was partly offset by the negative prior year true up of USD 129 million in the first quarter of 2019, compared to a negative prior year true up of USD 125 million recognized in the first quarter of 2018. In addition, a USD 43 million income from revaluation of deferred tax liability, recognized upon initial accounting of the Roche investment, was recorded in the first quarter of 2019, following a change in the enacted tax rate in February 2019 of the Swiss Canton Basel-Stadt, effective January 1, 2019.

Core income from associated companies in 2019 amounted to USD 1.1 billion, in line with 2018 despite the discontinuation of core income from the GSK consumer healthcare joint venture. The core income contribution from Roche Holding AG increased to USD 1.1 billion from USD 970 million in prior year. The increase is due to a higher estimated core income contribution from Roche for the current period and the recognition of a favorable prior year core income true up of USD 32 million compared to a favorable true up of USD 8 million in the first quarter of 2018.

Interest expense and other financial income/expense

Interest expense decreased to USD 850 million from USD 932 million in prior year, driven by lower outstanding debts partly offset by the additional interest expense on lease liabilities of USD 66 million, following the implementation of IFRS 16 Leases as of January 1, 2019.

Other financial income and expense, net amounted to an income of USD 45 million compared to USD 186 million in prior year, the decrease is mainly due to lower interest income and higher currency losses.

Taxes

The tax rate for continuing operations in 2019 was 20.1% compared to 9.2% in the prior year. The 2019 tax rate was negatively impacted by a one-time, non-cash deferred tax expense resulting from legal entity reorganizations, a prior year item and an increase to an uncertain tax position, partially offset by the deferred tax credit from Swiss tax reform. The prior year tax rate was positively impacted by the divestment of the 36.5% stake in the GSK consumer healthcare joint venture. Excluding these impacts, the tax rate for continuing operations would have been 15.4% compared to 14.9% in the prior year. The increase compared to prior year is mainly the result of a change in profit mix.

The core tax rate for continuing operations was 16.0% compared to 15.5% in the prior year mainly as a result of a change in profit mix.

Net income and EPS

Net income was USD 7.1 billion (-44%, -41% cc) as prior year benefited from a USD 5.7 billion net gain recognized from the sale of our stake in the GSK consumer healthcare joint venture. EPS was USD 3.12 (-43%, -40% cc) benefiting from lower weighted average number of shares outstanding.

Core net income was USD 12.1 billion (+11%, +15% cc) driven by growth in core operating income partly offset by the discontinuation of core income from the GSK consumer healthcare joint venture. Core EPS was USD 5.28 (+12%, +17% cc) growing faster than core net income driven by lower weighted average number of shares outstanding.

Free cash flow from continuing operations amounted to USD 12.9 billion (+15%) compared to USD 11.3 billion in 2018. The increase was mainly driven by higher operating income adjusted for non-cash items, higher real estate divestment proceeds and lower investments in intangible assets, partly offset by higher taxes paid, provision payments and working capital, which in the prior year included the receipt of a GSK sales milestone from the divested Vaccines business of USD 0.4 billion, as well as lower dividends received from associated companies, as prior year included the GSK consumer healthcare joint venture that was divested in the second quarter of 2018.

Discontinued operations

Discontinued operations include the business of Alcon and certain Corporate costs directly attributable to Alcon up to the spin-off date. As the Alcon spin-off was completed on April 9, 2019, there were no operating results in the fourth quarter of 2019.

Discontinued operations net sales in 2019 were USD 1.8 billion compared to USD 7.1 billion in 2018 and operating income amounted to USD 71 million compared to an operating loss of USD 234 million in 2018. Net income from discontinued operations in 2019 amounted to USD 4.6 billion compared to a net loss of USD 186 million in 2018 driven by the non-taxable non-cash net gain on distribution of Alcon Inc. to Novartis AG shareholders which amounted to USD 4.7 billion. For further details see Note 3 "Significant transactions – Completion of the spin-off of the Alcon business through a dividend in kind distribution to Novartis AG shareholders".

Total Group fourth quarter

For the total Group, net income amounted to USD 1.1 billion compared to USD 1.2 billion in prior year, and basic earnings per share was USD 0.50 compared to USD 0.52 in prior year. Cash flow from operating activities for the total Group amounted to USD 3.5 billion and free cash flow to USD 3.5 billion.

Total Group full year

For the total Group, net income amounted to USD 11.7 billion compared to USD 12.6 billion in prior year, and basic earnings per share was USD 5.12 compared to USD 5.44 in prior year. Cash flow from operating activities for the total Group amounted to USD 13.6 billion and free cash flow to USD 12.9 billion.

Innovative Medicines

	Q4 2019	Q4 2018	% change	FY 2019	FY 2018	% change	
	USD m	USD m	USD cc	USD m	USD m	USD cc	
Net sales	9 920	9 022	10 11	37 714	34 892	8 11	
Operating income	2 210	1 300	70 73	9 287	7 871	18 24	
As % of net sales	22.3	14.4		24.6	22.6		
Core operating income	3 122	2 769	13 14	12 650	11 151	13 18	
As % of net sales	31.5	30.7		33.5	32.0		

Fourth quarter

Net sales

Net sales were USD 9.9 billion (+10%, +11% cc) in the fourth quarter. Pharmaceuticals BU sales grew 12% (+14% cc), driven by continued momentum on *Entresto* and *Cosentyx* and the launch uptake of *Zolgensma*. Oncology BU grew 7% (+8% cc) driven by continued momentum on *Kisqali* and *Kymriah* and the launch uptake of *Piqray*. Volume contributed 15 percentage points to sales growth. Generic competition had a negative impact of 2 percentage points. Net pricing had a negative impact of 2 percentage points.

Regionally, the US (USD 3.7 billion, +17%) delivered a strong performance driven by *Zolgensma*, *Cosentyx*, *Entresto*, *Xiidra* and *Piqray*. Europe sales (USD 3.3 billion, +7%, +9% cc) benefited from continued strong performance of *Entresto*, *Kisqali*, *Kymriah*, *Tafinlar* + *Mekinist* and *Jakavi*. Japan sales were USD 0.6 billion (-1%, -5% cc). Emerging Growth Markets sales grew (+11%, +14% cc), led by strong double-digit growth in China, including the launches of *Cosentyx* and *Entresto*.

Pharmaceuticals BU sales were USD 6.2 billion (+12%, +14% cc). *Cosentyx* (USD 965 million, +20%, +21% cc) grew double-digit across all indications. *Entresto* (USD 518 million, +63%, +65% cc) continued to deliver strong double-digit performance, benefiting from the PIONEER data on hospital initiation and higher demand in ambulatory settings. *Zolgensma* (USD 186 million) continued a strong launch performance. *Xolair* (USD 303 million, +13%, +16% cc) continued double-digit growth. *Beovu* (USD 35 million) had a strong launch.

Oncology BU sales were USD 3.7 billion (+7%, +8% cc). Growth was mainly driven by *Kisqali* (USD 155 million, +158%, +166% cc), *Kymriah* (USD 96 million), *Piqray* (USD 67 million), *Promacta/Revolade* (USD 380 million, +15%, +16% cc).

Operating income

Operating income was USD 2.2 billion (+70%, +73% cc) mainly driven by continued strong sales growth, higher divestment gains and lower impairment costs, partly offset by growth investments and higher legal provisions. Operating income margin was 22.3% of net sales increasing 7.9 percentage points (+7.9 percentage points in cc).

Core adjustments were USD 0.9 billion, mainly due to USD 0.7 billion of amortization. Prior year core adjustments were USD 1.5 billion. Core adjustments decreased compared to prior year mainly due to higher divestment gains. Higher legal provisions and amortization were offset by lower impairments and restructuring.

Core operating income was USD 3.1 billion (+13%, +14% cc) mainly driven by higher sales, partly offset by growth investments. Core operating income margin was 31.5% of net sales, increasing 0.8 percentage points (+0.7 percentage point cc). Core gross margin decreased by 1.7 percentage points (cc) due to lower other revenue (-1.3 percentage points cc) and the ramp up of capacity for cell / gene therapies, partly offset by productivity. Core R&D expenses as a percentage of net sales margin decreased by 1.9 percentage points (cc) mainly driven by the higher net sales, productivity and portfolio prioritization. Core SG&A expenses decreased by 0.7 percentage points (cc) mainly driven by sales leverage and productivity. Core other income and expense did not have a material impact on margin.

Full year

Net sales

Net sales were USD 37.7 billion (+8%, +11% cc) in 2019. Pharmaceuticals BU grew 9% (+12% cc) driven by *Cosentyx* reaching USD 3.6 billion, *Entresto* USD 1.7 billion and *Zolgensma* USD 0.4 billion. Oncology BU grew 7% (+10% cc) driven by *Lutathera* reaching USD 0.4 billion, *Promacta/Revolade*

USD 1.4 billion and *Kisqali* USD 0.5 billion. Volume contributed 13 percentage points to sales growth. Generic competition had a negative impact of 1 percentage point. Net pricing had a negative impact of 1 percentage point.

Regionally, the US (USD 13.8 billion, +16%) delivered a strong performance driven by *Cosentyx*, *Entresto*, *Lutathera* and *Zolgensma*. Europe sales (USD 12.8 billion, +4%, +10% cc) benefited from continued strong performance of *Entresto*, *Tafinlar* + *Mekinist*, *Kisqali*, *Kymriah* and *Jakavi*. Japan sales were USD 2.4 billion (+2%, 0% cc). Emerging Growth Markets sales grew (+6%, +12% cc), led by double-digit growth in China, including the launches of *Cosentyx* and *Entresto*.

Operating income

Operating income was USD 9.3 billion (+18%, +24% cc), mainly driven by continued strong sales growth and productivity, partly offset by growth investments. Operating income margin was 24.6% of net sales, increasing 2.0 percentage points (+2.5 percentage points cc).

Core adjustments were USD 3.4 billion, mainly due to USD 2.4 billion of amortization. Core adjustments were broadly in line with prior year as higher legal provisions were offset by higher divestment income and lower restructuring.

Core operating income was USD 12.7 billion (+13%, +18% cc) mainly driven by higher sales, partly offset by higher growth investments. Core operating income margin was 33.5% of net sales, increasing 1.5 percentage points (+1.8 percentage points cc). Core gross margin was broadly in line with prior year as productivity improvements were offset by the ramp up of capacity for cell / gene therapies and lower other revenue (-0.8 percentage points cc). Core R&D expenses decreased by 1.2 percentage points (cc) mainly driven by the higher net sales, productivity and portfolio prioritization. Core SG&A expenses declined by 0.7 percentage points (cc) mainly driven by sales leverage and productivity. Core other income and expense did not have a material impact on margin.

ONCOLOGY BUSINESS UNIT

	Q4 2019	Q4 2018	% change		FY 2019	FY 2018	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
<i>Tasigna</i>	491	476	3	4	1 880	1 874	0	3
<i>Sandostatin</i>	402	399	1	2	1 585	1 587	0	2
<i>Afinitor/Votubia</i>	365	399	-9	-8	1 539	1 556	-1	1
<i>Promacta/Revolade</i>	380	330	15	16	1 416	1 174	21	23
<i>Tafinlar</i> + <i>Mekinist</i> ¹	356	313	14	15	1 338	1 155	16	20
<i>Gleevec/Glivec</i>	313	373	-16	-15	1 263	1 561	-19	-17
<i>Jakavi</i>	293	256	14	17	1 114	977	14	20
<i>Exjade/Jadenu</i>	231	286	-19	-19	975	1 099	-11	-9
<i>Votrient</i>	177	198	-11	-10	755	828	-9	-6
<i>Kisqali</i>	155	60	158	166	480	235	104	111
<i>Lutathera</i>	107	81	32	31	441	167	164	160
<i>Kymriah</i>	96	28	nm	nm	278	76	nm	nm
<i>Piqray</i>	67		nm	nm	116		nm	nm
Other	295	300	-2	0	1 190	1 139	4	8
Total Oncology business unit	3 728	3 499	7	8	14 370	13 428	7	10

¹Majority of sales for *Mekinist* and *Tafinlar* are combination, but both can be used as a monotherapy
nm = not meaningful

Tasigna (USD 491 million, +3%, +4% cc) grew in most regions including Emerging Growth Markets, with solid uptake in China.

Sandostatin (USD 402 million, +1%, +2% cc) sales were broadly in line with prior year, as growth in the US and Emerging Growth Markets was offset by competitive pressure and first generic entry in Europe and Japan.

Afinitor/Votubia (USD 365 million, -9%, -8% cc) declined due to generic competition, primarily in Europe. In the US, Novartis has resolved patent litigation with certain generic manufacturers. We are starting to see generic competition in the US for the three lower dosage strengths; additional generic competition may start in mid-2020.

Promacta/Revolade (USD 380 million, +15%, +16% cc) continued to grow at a double-digit rate in most regions driven by increased use in chronic immune thrombocytopenia (ITP) and further uptake as first-line treatment for severe aplastic anemia (SAA) in the US.

Tafinlar + Mekinist (USD 356 million, +14%, +15% cc) continued to show double-digit growth due to demand in metastatic and adjuvant melanoma as well as NSCLC, with ongoing uptake of the adjuvant melanoma indication in Europe.

Gleevec/Glivec (USD 313 million, -16%, -15% cc) continued to decline due to generic competition in most major markets.

Jakavi (USD 293 million, +14%, +17% cc) continued double-digit growth across all regions driven by demand in the myelofibrosis and polycythemia vera indications.

Exjade/Jadenu (USD 231 million, -19%, -19% cc) declined mainly due to pressure from generic competition in the US and in other regions.

Votrient (USD 177 million, -11%, -10% cc) declined mainly due to increased competition in the US.

Kisqali (USD 155 million, +158%, +166% cc) accelerated in the US driven by use in metastatic breast cancer patients, independent of menopausal status or combination partner, and benefiting from overall survival data, as well as strong uptake and patient share gain in Europe and other regions.

Lutathera (USD 107 million, +32%, +31% cc) continued to grow led by the US, with over 170 centers actively treating patients, and ongoing launches in Europe. Sales from all AAA brands (including *Lutathera* and radiopharmaceutical diagnostic products) were USD 168 million.

Kymriah (USD 96 million) saw continued strong demand and sales growth in Europe and the US. There are over 200 qualified treatment centers and more than 20 countries worldwide have coverage for at least one indication, including Japan.

Piqray (USD 67 million) US launch continued to progress well. *Piqray* is the first and only treatment for the 40% of HR+/HER2- advanced breast cancer patients who harbor a PIK3CA mutation.

PHARMACEUTICAL BUSINESS UNIT

OPHTHALMOLOGY

	Q4 2019		Q4 2018		% change		FY 2019		FY 2018		% change	
	USD m	USD m	USD m	USD m	USD	cc	USD m	USD m	USD	cc	USD	cc
<i>Lucentis</i>	517	520	-1	1			2 086	2 046	2	7		
Travoprost Group	103	131	-21	-21			433	517	-16	-14		
<i>Xiidra</i>	90		nm	nm			192		nm	nm		
<i>Beovu</i>	35		nm	nm			35		nm	nm		
Other	482	476	1	2			2 030	1 995	2	5		
Total Ophthalmology	1 227	1 127	9	10			4 776	4 558	5	8		

nm = not meaningful

Lucentis (USD 517 million, -1%, +1% cc) was broadly in line with prior year. *Lucentis* received approval for the treatment of retinopathy of prematurity (ROP) in premature infants in the EU and Japan in H2 2019, making *Lucentis* the first licensed pharmacological therapy to treat the condition. *Lucentis* also received approval for the treatment of proliferative diabetic retinopathy (PDR) in the EU in October, becoming the first licensed pharmacological therapy to treat adults with PDR ex-US.

Travoprost Group (USD 103 million, -21%, -21% cc) declined mainly due to generic competition in the US and Europe.

Xiidra (USD 90 million) is the only prescription eye drop solution marketed in the US and Canada to treat the signs and symptoms of dry eye disease. It is dosed twice per day, approximately 12 hours apart, in each eye. *Xiidra* is approved in multiple markets including the US, Canada and Australia. It is under regulatory review in a number of additional markets. Novartis acquired *Xiidra* from Takeda and began recording sales as of July 1, 2019. Novartis is optimizing investments in *Xiidra*, including a direct to consumer campaign.

Beovu (USD 35 million, brovacizumab, formerly RTH258) was launched in the US following FDA approval in October, offering patients in the US a new treatment option for wet age-related macular degeneration (AMD) with demonstrated robust vision gains. *Beovu* is the only anti-VEGF in wet AMD

approved in the US to maintain eligible patients on up to three month dosing intervals immediately after the loading phase. *Beovu* received a positive CHMP opinion in the EU in December 2019. Initial US launch uptake has been strong and broad access has been established including a permanent J-code from CMS effective January 1, 2020.

IMMUNOLOGY, HEPATOLOGY and DERMATOLOGY

	Q4 2019	Q4 2018	% change		FY 2019	FY 2018	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
<i>Cosentyx</i>	965	806	20	21	3 551	2 837	25	28
<i>Ilaris</i>	178	155	15	16	671	554	21	25
Other		1	nm	nm		1	nm	nm
Total Immunology, Hepatology and Dermatology	1 143	962	19	20	4 222	3 392	24	27

Xolair sales for all indications are reported in the Respiratory franchise
nm = not meaningful

Cosentyx (USD 965 million, +20%, +21% cc) continued to grow strongly across indications and regions. In the US sales grew 25% with broad first line access in all three indications. Novartis presented detailed data from the Phase III PREVENT trial showing that 41.5% of patients with non-radiographic axial spondyloarthritis (nr-axSpA) treated with *Cosentyx* had improved ASAS40 scores through Week 16, with improvements continued through Week 52.

Ilaris (USD 178 million, +15%, +16% cc) sales were driven by strong double digit volume growth, mostly in Europe.

Xolair sales are reported in the Respiratory franchise. Dermatology teams help support commercial efforts of *Xolair* in chronic spontaneous urticaria/chronic idiopathic urticaria.

NEUROSCIENCE

	Q4 2019	Q4 2018	% change		FY 2019	FY 2018	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
<i>Gilenya</i>	803	836	-4	-3	3 223	3 341	-4	-1
<i>Zolgensma</i>	186		nm	nm	361		nm	nm
<i>Aimovig</i> ¹	28	8	nm	nm	103	8	nm	nm
<i>Mayzent</i>	17		nm	nm	26		nm	nm
Other	14	17	-18	-18	60	80	-25	-23
Total Neuroscience	1 048	861	22	23	3 773	3 429	10	13

nm = not meaningful

¹Ex-US, Ex-Japan sales are reported. *Aimovig* is co-commercialized with Amgen in the US, where Amgen records sales and Novartis has exclusive rights in all ex-US territories excluding Japan

Gilenya (USD 803 million, -4%, -3% cc) declined mainly due to increased competitive pressure. Novartis is in US ANDA litigation with generic manufacturers on the dosage regimen patent. In parallel, an appeal against a USPTO decision upholding that patent in IPR proceedings is ongoing.

Zolgensma (USD 186 million) US launch continued to progress well. Policies are in place covering ~97% of commercial patients and >50% of Medicaid patients. Currently, 16 states representing ~32% of newborns are screening for SMA in the US. Regulatory reviews are underway in Europe, with a CHMP opinion anticipated in Q1 2020, and Japan, with a decision anticipated in H1 2020.

Aimovig (USD 28 million, Ex-US, Ex-Japan) is the most prescribed anti-CGRP worldwide, with more than 350,000 patients prescribed worldwide in the post-trial setting. It has now been launched for the preventive treatment of migraine in 38 countries and additional launches are underway. *Aimovig* is co-commercialized with Amgen in the US, where Amgen records sales and Novartis has exclusive rights in all ex-US territories excluding Japan. The collaboration continues during the litigation between the companies and will remain in force until and unless a final court decision terminates the agreements.

Mayzent (USD 17 million) launch is progressing and efforts are ongoing to accelerate patient onboarding and drive urgency to treat. *Mayzent* was approved in the US and is indicated for the treatment of relapsing forms of multiple sclerosis (MS), to include clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive MS, in adults. *Mayzent* is the only FDA approved oral therapy for active SPMS based on evidence from a pivotal prospective Phase III clinical trial (EXPAND) in a broad SPMS population. *Mayzent* received EU approval in January 2020 for the treatment of adult patients with secondary progressive multiple sclerosis (SPMS) with active disease.

RESPIRATORY

	Q4 2019		Q4 2018		% change		FY 2019		FY 2018		% change	
	USD m	USD m	USD	cc	USD	cc	USD m	USD m	USD	cc	USD	cc
<i>Xolair</i>	303	268	13	16	1 173	1 039	13	19				
<i>Ultibro Breezhaler</i>	114	122	-7	-5	427	454	-6	-1				
<i>Seebri Breezhaler</i>	28	37	-24	-20	121	148	-18	-14				
<i>Onbrez Breezhaler</i>	20	23	-13	-12	82	101	-19	-14				
Other	6	6	0	-7	22	25	-12	-6				
Total Respiratory	471	456	3	6	1 825	1 767	3	9				

Xolair sales for all indications are reported in the Respiratory franchise

Xolair (USD 303 million, +13%, +16% cc) continued to grow in both indications Severe Allergic Asthma (SAA) and Chronic Spontaneous Urticaria (CSU). Growth for both indications benefited from the recent approval of *Xolair* for home-use in Europe. We co-promote *Xolair* with Genentech in the US and share a portion of operating income, but we do not record any US sales.

Ultibro Breezhaler (USD 114 million, -7%, -5% cc) an inhaled LABA/LAMA, sales declined mainly due to competition.

Seebri Breezhaler (USD 28 million, -24%, -20% cc) an inhaled LAMA, and ***Onbrez Breezhaler*** (USD 20 million, -13%, -12% cc) an inhaled LABA, declined mainly due to competition.

CARDIOVASCULAR, RENAL AND METABOLISM

	Q4 2019		Q4 2018		% change		FY 2019		FY 2018		% change	
	USD m	USD m	USD	cc	USD	cc	USD m	USD m	USD	cc	USD	cc
<i>Entresto</i>	518	318	63	65	1 726	1 028	68	71				
Other	5	6	-17	-26	24	22	9	4				
Total Cardiovascular, Renal & Metabolism	523	324	61	63	1 750	1 050	67	70				

Entresto (USD 518 million, +63%, +65% cc) continued strong momentum across geographies, fueled by increased demand in both hospital and ambulatory settings. New data presented at American Heart Association (AHA) Scientific Sessions 2019 on reverse cardiac remodeling, in-hospital use and quality of life, further reinforce *Entresto* as an essential, first-choice treatment for heart failure with reduced ejection fraction. In the US, the combination and complex patents are being challenged in ANDA proceedings against generic manufacturers.

ESTABLISHED MEDICINES

	Q4 2019		Q4 2018		% change		FY 2019		FY 2018		% change	
	USD m	USD m	USD	cc	USD	cc	USD m	USD m	USD	cc	USD	cc
<i>Galvus Group</i>	342	327	5	5	1 297	1 284	1	5				
<i>Diovan Group</i>	266	260	2	5	1 064	1 023	4	9				
<i>Exforge Group</i>	245	251	-2	-1	1 025	1 002	2	7				
<i>Zortress/Certican</i>	123	120	3	5	485	464	5	8				
<i>Neoral/Sandimmun(e)</i>	105	114	-8	-8	419	463	-10	-7				
<i>Voltaren/Cataflam</i>	104	112	-7	-7	417	445	-6	-4				
Other	595	609	-2	-1	2 291	2 587	-11	-8				
Total Established Medicines	1 780	1 793	-1	1	6 998	7 268	-4	0				

Galvus Group (USD 342 million, +5%, +5% cc) grew led by solid performance in Emerging Growth Markets, including China.

Diovan Group (USD 266 million, +2%, +5% cc) grew in Emerging Growth Markets, partially offset by declines in Europe and Japan.

Exforge Group (USD 245 million, -2%, -1% cc) grew in Emerging Growth Markets, offset by generic competition in other regions.

Zortress/Certican (USD 123 million, +3%, +5% cc) continued to grow in most regions.

Neoral/Sandimmun(e) (USD 105 million, -8%, -8% cc) declined due to generic competition and mandatory price reductions.

Voltaren/Cataflam (USD 104 million, -7%, -7% cc) declined mainly due to generic competition.

Sandoz

	Q4 2019	Q4 2018	% change		FY 2019	FY 2018	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Net sales	2 483	2 459	1	2	9 731	9 859	-1	2
Operating loss / income	-195	237	nm	nm	551	1 332	-59	-53
As % of net sales	-7.9	9.6			5.7	13.5		
Core operating income	517	482	7	10	2 094	2 002	5	10
As % of net sales	20.8	19.6			21.5	20.3		

Sandoz Transactions

Novartis announced on September 6, 2018 that it has agreed to sell selected portions of its Sandoz US portfolio, specifically the Sandoz US dermatology business and US oral solids portfolio, to Aurobindo Pharma USA Inc. This transaction is expected to be completed in Q1 2020, pending regulatory approval. The results of this business are included in continuing operations.

Novartis announced on November 11, 2019 that it entered into a binding agreement for the planned acquisition of the Japanese operations and associated assets of Aspen Global Incorporated (AGI), a wholly owned subsidiary of Aspen Pharmacare Holdings Limited. Novartis has received all relevant approvals and the transaction is expected to be completed in Q1 2020.

Fourth quarter

Net sales

Net sales were USD 2.5 billion (+1%, +2% cc), driven by volume growth of 5 percentage points partially offset by price erosion of 3 percentage points, impacted by favorable revenue deduction adjustments. Excluding the US, net sales grew strongly (+6%, +8% cc).

Sales in Europe were USD 1.3 billion (+6%, +9% cc) mainly driven by strong biosimilar growth. Sales in the US were USD 604 million declining 13%. Sales in Asia / Africa / Australasia were USD 357 million (+7%, +7% cc). Sales in Canada and Latin America were USD 214 million (+5%, +9% cc).

Global sales of Biopharmaceuticals (biosimilars, biopharmaceutical contract manufacturing and *Glatopa*) grew to USD 425 million (+9%, 11% cc), driven by continued strong double-digit growth in Europe from *Hyrimoz* (adalimumab), *Rixathon* (rituximab) and *Erelzi* (etanercept) partly offset by one-time sales reversals in biopharmaceutical contract manufacturing. Launch roll-outs in Asia / Africa / Australasia also contributed to growth and initial sales were recorded from the launch of US *Ziextenzo* (pegfilgrastim).

Retail Generics sales were USD 1.9 billion (-1%, 0% cc) as sales from first-to-market launches offset pricing pressure. Total Anti-Infectives franchise sales were USD 348 million (+1%, +3% cc), including finished dosage forms sold under the Sandoz name and Anti-Infectives sold to third parties for sale under their own name (USD 151 million, +11%, +14% cc).

Operating loss / income

Operating loss was USD 195 million impacted by USD 0.5 billion impairment of intangible assets and property, plant and equipment related to the discontinuation of the generic Advair® development program in the US. Operating income margin was negative 7.9% of net sales, declining 17.5 percentage points (-17.1 percentage points cc).

Core adjustments were USD 712 million, including USD 75 million of amortization. Prior year core adjustments were USD 245 million. The change in core adjustments compared to prior year was mainly driven by higher impairments of intangible assets and property, plant and equipment.

Core operating income was USD 517 million (+7%, +10% cc) driven by sales growth and continued gross margin improvements partly offset by lower divestment income. Core operating income margin was 20.8% of net sales, increasing 1.2 percentage points (1.5 percentage points cc). Core gross margin increased by 1.0 percentage points (cc), as favorable product and geographic mix and ongoing productivity improvements were partly offset by the impact of price erosion. Core R&D expenses decreased by 0.5 percentage points (cc) and Core SG&A expenses decreased by 0.2 percentage points (cc). Core other income and expense decreased the margin by 0.2 percentage points (cc) mainly due to lower divestment income.

Full Year

Net sales

Net sales were USD 9.7 billion (-1%, +2% cc) driven by strong volume growth of 8 percentage points partially offset by 6 percentage points of price erosion. Excluding the US, net sales grew strongly (+2%, +7% cc).

Sales in Europe were USD 5.1 billion (+3%, +9% cc) mainly driven by biosimilars. Sales in the US were USD 2.5 billion declining (-10%), mainly due to continued industry-wide pricing pressure. Sales in Asia / Africa / Australasia were USD 1.3 billion (-2%, +1% cc). Sales in Canada and Latin America were USD 784 million (+1%, +6% cc).

Global sales of Biopharmaceuticals (biosimilars, biopharmaceutical contract manufacturing and *Glatopa*) grew to USD 1.6 billion (+12%, +16% cc), driven by continued strong double-digit growth in Europe from *Hyrimoz* (adalimumab), *Rixathon* (rituximab) and *Erelzi* (etanercept). Launch roll-outs in Asia / Africa / Australasia also contributed to growth.

Retail Generics sales were USD 7.6 billion (-4%, 0% cc), in line with prior year as first-to-market launches offset the impact of US pricing pressure. Total Anti-Infectives franchise sales were USD 1.3 billion (-4%, 0% cc), including finished dosage forms sold under the Sandoz name and Anti-Infectives sold to third parties for sale under their own name (USD 534 million, -2%, +2% cc).

Operating income

Operating income was USD 551 million (-59%, -53% cc) impacted by higher impairments of intangible assets and property, plant and equipment related to the discontinuation of the generic Advair® development program in the US and higher restructuring charges mainly from the ongoing business transformation. Operating income was 5.7% of net sales, declining 7.8 percentage points (-7.3 percentage points cc).

Core adjustments were USD 1.5 billion, including USD 314 million of amortization. Prior year core adjustments were USD 670 million. The change in core adjustments compared to prior year was driven mainly by higher impairments of intangible assets and property, plant and equipment, higher restructuring charges mainly from the ongoing transformation, net changes in legal settlements and lower divestment income.

Core operating income was USD 2.1 billion (+5%, +10% cc) as sales growth and continued gross margin improvements were partly offset by price erosion and lower divestment income. Core operating income margin was 21.5% of net sales, increasing 1.2 percentage points (1.5 percentage points cc). Core gross margin increased by 1.6 percentage points (cc), as favorable product and geographic mix and ongoing productivity improvements were partly offset by the impact of price erosion. Core R&D expenses were in line with prior year while core SG&A expenses decreased by 0.6 percentage points (cc). Core other income and expense decreased the margin by 0.7 percentage points (cc) mainly due to lower divestment income.

GROUP CASH FLOW AND BALANCE SHEET

Cash Flow

Fourth quarter

Net cash flows from operating activities from continuing operations amounted to USD 3.5 billion, compared to USD 3.4 billion in the prior year quarter. This increase was driven by higher net income adjusted for non-cash items and other adjustments, including divestment gains and favorable working capital, partly offset by higher taxes paid and provision payments.

Net cash inflows from investing activities from continuing operations amounted to USD 0.4 billion, compared to a net cash outflow of USD 4.4 billion in the prior year quarter. The current year quarter mainly includes cash outflows of USD 0.5 billion for the purchase of property, plant and equipment; USD 0.2 billion for the purchase of intangible assets; USD 0.1 billion for the purchase of financial assets and other non-current assets. These were offset by cash inflows of USD 0.4 billion from the sale of financial assets (including USD 320 million in proceeds from the sale of Alcon Inc. shares); and cash inflows of USD 0.6 billion from the sale of intangible assets. Cash inflows from acquisitions and divestments of businesses, net, amounted to USD 0.1 billion.

In the prior year quarter, net cash flows used in investing activities from continuing operations amounted to USD 4.4 billion and were mainly related to the cash outflows for the acquisition of Endocyte, Inc. USD 1.8 billion, net, USD 2.0 billion net purchases of marketable securities and commodities and USD 0.7 billion for the purchase of property, plant and equipment and intangible assets. These were partly offset by cash inflows of USD 0.2 billion from the sale of property, plant and equipment and intangible assets. Other investing cash outflows, net, amounted to USD 0.1 billion.

Net cash flows used in investing activities from discontinued operations amounted to USD 0.1 billion, compared to USD 0.5 billion in the prior year quarter. The current year quarter includes mainly a cash outflow related to portfolio transformation transactions completed in 2015. The prior year quarter cash outflows were mainly related to USD 0.2 billion for the purchase of property, plant and equipment; USD 0.1 billion for the purchase of intangible and financial assets; and USD 0.2 billion for the acquisitions of businesses.

Net cash outflows from financing activities from continuing operations amounted to USD 1.2 billion, compared to net cash inflows of USD 0.2 billion in the prior year quarter. The current year quarter mainly includes the net cash outflows of USD 1.1 billion for current financial debts. Payments for lease liabilities, net, and other financing cash flows resulted in a net cash outflow of USD 0.1 billion. In the prior year quarter, net cash inflows from financing activities from continuing operations mainly included the cash inflows of USD 0.5 billion due to the net increase of current financial debts partly offset by other net financing cash outflows of USD 0.3 billion.

Net cash outflows used for financing activities from discontinued operations amounted to USD 22 million for Alcon transactions costs payments, compared to net cash inflows of USD 0.3 billion in the prior year quarter, including USD 16 million payments for Alcon transactions costs.

Free cash flow from continuing operations amounted to USD 3.5 billion (+20%) compared to USD 2.9 billion in the prior year quarter. The increase was mainly driven by higher cash flows from operating activities and higher proceeds from the sale of intangible assets.

Full year

Net cash flows from operating activities from continuing operations amounted to USD 13.5 billion, compared to USD 13.0 billion in 2018. This increase was driven by higher net income adjusted for non-cash items and other adjustments, including divestment gains. It was partly offset by lower dividends received from associated companies due to the divestment of the GSK consumer healthcare joint venture in the second quarter of 2018, higher taxes paid, provision payments and working capital, which included the receipt of a GSK sales milestone from the divested Vaccines business of USD 0.4 billion in the prior year.

Net cash flows from operating activities from discontinued operations were USD 78 million, compared to USD 1.2 billion in 2018. This reduction was due to the completion of the Alcon spin-off on April 9, 2019.

Net cash flows used in investing activities from continuing operations amounted to USD 1.1 billion, compared to USD 4.6 billion in 2018. The current year mainly includes cash outflows of USD 1.4 billion

for the purchase of property, plant and equipment; USD 0.9 billion for the purchase of intangible assets; USD 0.4 billion for the purchase of financial assets and other non-current assets; and USD 3.8 billion for the acquisitions and divestments of businesses, net, including the acquisition of IFM Tre, Inc. (USD 0.3 billion) and the acquisition of *Xiidra* from Takeda Pharmaceutical Company Limited (USD 3.5 billion). These were partly offset by net proceeds of USD 2.3 billion from the sale of marketable securities and commodities; cash inflows of USD 0.9 billion from the sale of property, plant and equipment (including the proceeds from the sale and leaseback of real estate); cash inflows of USD 1.2 billion from the sale of financial assets (including USD 976 million in proceeds from the sale of Alcon Inc. shares); and cash inflows of USD 1.0 billion from the sale of intangible assets.

In 2018, net cash flows used in investing activities from continuing operations were mainly related to the cash inflows of USD 13.0 billion from the divestment of our 36.5% stake in the GSK consumer healthcare joint venture, and of USD 1.1 billion in proceeds from the sale of property, plant and equipment; intangible assets; and financial assets. This was offset by cash outflows of USD 13.7 billion for the acquisitions of businesses, mainly Advanced Accelerator Applications S.A. (USD 3.5 billion, net), AveXis, Inc. (USD 8.3 billion, net) and Endocyte, Inc. (USD 1.8 billion, net); USD 1.3 billion for the purchase of property, plant and equipment; and USD 1.4 billion for the purchase of intangible assets. Net purchases of marketable securities and commodities amounted to USD 2.0 billion.

Net cash flows used in investing activities from discontinued operations amounted to USD 1.2 billion, compared to USD 1.0 billion in 2018. The current year mainly includes the cash outflow of USD 0.3 billion for the acquisition of PowerVision, Inc., and USD 0.6 billion due to the derecognized cash and cash equivalents following the completion of the Alcon spin-off on April 9, 2019.

Net cash flows used in financing activities from continuing operations amounted to USD 16.9 billion, compared to USD 4.1 billion in 2018. The current year mainly includes the cash outflows of USD 6.6 billion for the dividend payment and of USD 5.3 billion for net treasury share transactions (mainly related to the up-to USD 5 billion share buyback), and net cash outflows of USD 3.1 billion for non-current financial debts (mainly driven by the repayment at maturity of a US dollar bond of USD 3.0 billion). The net repayments of current financial debts amounted to USD 1.6 billion. Payments for lease liabilities, net, and other financing cash flows resulted in a net cash outflow of USD 0.2 billion.

In 2018, net cash flows used in financing activities from continuing operations mainly included the cash outflows of USD 7.0 billion for the dividend payment and of USD 1.3 billion for net treasury share transactions, partly offset by a net increase of USD 4.2 billion in current and non-current financial debts. Net cash inflows from financing activities from discontinued operations amounted to USD 3.3 billion, compared to a cash outflow of USD 0.2 billion in 2018. The current-year mainly includes the cash inflows of USD 3.5 billion from Alcon borrowings, partly offset by USD 0.2 billion in payments for transaction costs.

Free cash flow from continuing operations amounted to USD 12.9 billion (+15%) compared to USD 11.3 billion in 2018. The increase was mainly driven by higher operating income adjusted for non-cash items, higher real estate divestment proceeds and lower investments in intangible assets, partly offset by higher taxes paid, provision payments and working capital, which in the prior year included the receipt of a GSK sales milestone from the divested Vaccines business of USD 0.4 billion, as well as lower dividends received from associated companies, as prior year included the GSK consumer healthcare joint venture that was divested in the second quarter of 2018.

Balance sheet

There has been a significant change in the consolidated balance sheet resulting from the spin-off of the Alcon business through the dividend in kind distribution to Novartis AG shareholders completed on April 9, 2019 (see Note 2, Note 3 and Note 11 for further details). The December 31, 2018, consolidated balance sheet includes the assets and liabilities of the Alcon business. The December 31, 2019, consolidated balance sheet excludes the assets and liabilities of the Alcon business, due to the derecognition of the Alcon business at the date of the spin-off. The consolidated balance sheet discussion and analysis that follows excludes the impacts of the derecognition of the Alcon business at the date of the spin-off.

Assets

Total non-current assets of USD 88.9 billion at December 31, 2019, increased by USD 2.5 billion compared to December 31, 2018, excluding the impact of the derecognition of the Alcon business non-current assets as a result of the spin-off. This increase was mainly driven by the recognition of right-of-

use assets resulting from the implementation of IFRS 16 Leases on January 1, 2019, amounting to USD 1.7 billion; an increase in intangible assets other than goodwill of USD 0.7 billion, mainly due to the impact of acquiring *Xiidra* from Takeda Pharmaceutical Company Limited, net of amortizations; an increase in financial assets of USD 0.6 billion, primarily from the financial investments in Alcon Inc. shares recognized by certain consolidated foundations through the Alcon spin-off and an increase in investments in associated companies of USD 0.3 billion. This was partly offset by a decrease in property, plant and equipment of USD 0.7 billion, mainly due to depreciation in excess of net additions and a decrease in deferred tax assets of USD 0.1 billion. Goodwill and other non-current assets were broadly in line compared to December 31, 2018.

Total current assets of USD 29.5 billion at December 31, 2019, decreased by USD 2.7 billion compared to December 31, 2018, excluding the impact of the derecognition of the Alcon business current assets as a result of the spin-off. This decrease was mainly driven by the reduction in marketable securities, commodities, time deposits and derivative financial instruments of USD 2.4 billion and in cash and cash equivalents of USD 1.9 billion, mainly due to the repayment of financial debts and the dividend payment. This was partly offset by an increase in trade receivables by USD 0.8 billion, inventories by USD 0.5 billion, and in other current assets by USD 0.2 billion. Income tax receivable and assets of disposal group held for sale remained broadly in line compared to December 31, 2018. Net assets of disposal group held for sale of USD 0.8 billion include net assets and liabilities related to the pending divestment of the Sandoz US dermatology business and generic US oral solids portfolio to Aurobindo Pharma USA Inc., as announced on September 6, 2018 (see Note 3).

Liabilities

Total non-current liabilities of USD 34.6 billion decreased by USD 0.2 billion compared to December 31, 2018, excluding the impact of the derecognition of the Alcon business non-current liabilities as a result of the spin-off. This decrease was mainly driven by the USD 2.0 billion decrease in long-term financial debts, mainly driven by the reclassification from non-current to current financial debt of USD 2.0 billion US dollar bonds due in 2020. This was partly offset by the recognition of lease liabilities resulting from the implementation of IFRS 16 Leases on January 1, 2019, amounting to USD 1.7 billion, and the USD 0.2 billion increase in provisions and other non-current liabilities, mainly due to higher pension plan liabilities due to the decrease in discount rates used to calculate the actuarial defined benefit obligations. Deferred tax liabilities were broadly in line compared to December 31, 2018.

Total current liabilities of USD 28.3 billion increased by USD 0.5 billion compared to December 31, 2018, excluding the impacts of the derecognition of the Alcon business current liabilities as a result of the spin-off. This was mainly driven by an increase in provisions and other current liabilities of USD 2.0 billion, primarily from higher legal and revenue deduction provisions, increases of USD 0.5 billion in trade payables, USD 0.3 billion in current income tax liabilities and USD 0.2 billion in lease liabilities, resulting from the implementation of IFRS 16 Leases on January 1, 2019. This was partially offset by a USD 2.6 billion decrease in financial debts and derivative financial instruments, mainly due to the repayment of USD 3.0 billion of bonds issued in February 2009.

Group equity

The Group's equity decreased by USD 23.1 billion to USD 55.6 billion at December 31, 2019, compared to USD 78.7 billion at December 31, 2018. This decrease was mainly due to the dividend in kind to effect the spin-off of Alcon Inc. of USD 23.4 billion (see Note 2, Note 3 and Note 11 for further details), the cash-dividend payment of USD 6.6 billion, the purchase of treasury shares of USD 5.5 billion, net actuarial losses of USD 0.5 billion, transaction costs attributable to the Alcon spin-off of USD 0.3 billion and taxes on treasury shares of USD 0.2 billion. This was partially offset by net income of USD 11.7 billion, the net effect of exercise of options and employee transactions of USD 1.0 billion, favorable currency translation differences of USD 0.4 billion, and a decrease in the treasury share repurchase obligation under a share buyback trading plan of USD 0.3 billion.

Net debt and debt/equity ratio

The Group's liquidity amounted to USD 11.4 billion at December 31, 2019, compared to USD 16.0 billion at December 31, 2018. Total non-current and current financial debts, including derivatives, amounted to USD 27.4 billion at December 31, 2019, compared to USD 32.1 billion at December 31, 2018. The debt/equity ratio increased to 0.49:1 at December 31, 2019, compared to 0.41:1 at December 31, 2018. The net debt decreased to USD 15.9 billion at December 31, 2019, compared to USD 16.2 billion at December 31, 2018.

Innovation Review

Benefiting from our continued focus on innovation, Novartis has one of the industry's most competitive pipelines with more than 160 projects in clinical development.

Selected Innovative Medicines approvals: US, EU and Japan in Q4

Product	Active ingredient/ Descriptor	Indication	Approval date
<i>Adakveo</i>	crizanlizumab	Sickle cell disease	US – Nov 2019
<i>Lucentis</i>	ranibizumab	Diabetic retinopathy	EU – Nov 2019
<i>Lucentis</i>	ranibizumab	Retinopathy of prematurity	JP – Oct 2019
<i>Beovu</i>	brolucizumab	Neovascular (wet) AMD	US – Oct 2019

Selected Innovative Medicines projects awaiting regulatory decisions

Product	Indication	Completed submissions			News update
		US	EU	Japan	
BYL719 (<i>Piqray</i> in US, alpelisib)	PIK3CA mutant HR+, HER2 (-) postmenopausal adv BC 2nd line (+fulv)	Approved	Q4 2018		
<i>Cosentyx</i>	Non-radiographic axial spondyloarthritis	Q4 2019	Q3 2019	Q4 2019	
<i>Entresto</i>	HF with Reduced ejection fraction	Approved	Approved	Q3 2019	
INC280 (capmatinib)	NSCLC (cMET amp and mut)	Q4 2019		Q4 2019	
KJX839 (inclisiran)	hyperlipidemia	Q4 2019	Q1 2020		- Acquired from The Medicines Company in Jan 2020
<i>Lucentis</i>	Retinopathy of prematurity		Approved	Q1 2019	
<i>Mayzent</i>	Secondary Progressive Multiple Sclerosis	Approved	Approved	Q1 2019	
OMB157 (ofatumumab)	Relapsing Multiple Sclerosis	Q4 2019	Q1 2020		
QMF149	Asthma		Q2 2019	Q3 2019	- QUARTZ study meets primary and key secondary endpoints - Positive results Phase III PALLADIUM study – Sep 2019
QVM149	Asthma		Q2 2019	Q3 2019	- Positive results Phase III IRIDIUM study – Sep 2019
RTH258 (<i>Beovu</i> in US)	Neovascular (wet) AMD	Approved	Q1 2019	Q2 2019	- Positive CHMP opinion Dec 2019
SEG101 (<i>Adakveo</i> in US)	Sickle cell disease	Approved	Q2 2019		
<i>Xiidra</i>	Dry eye	Approved	Q4 2018		- CHMP opinion anticipated Q1 2020
<i>Xolair</i>	Nasal polyps	Q3 2019	Q4 2019		
<i>Zolgensma</i> (AVXS-101)	Spinal Muscular Atrophy (IV formulation)	Approved	Q4 2018	Q4 2018	- CHMP opinion anticipated Q1 2020 - Japan decision anticipated H1 2020

Selected Innovative Medicines pipeline projects

Project/ Compound	Potential indication/ Disease area	First planned submissions	Current Phase	News update
ABL001	Chronic myeloid leukemia 3 rd line	2021	III	
	Chronic myeloid leukemia 1 st line	NA	II	- Indication retired in Q4 2019

ACZ885 (canakinumab)	Adjuvant NSCLC	2022	III	· Enrollment ongoing for Phase III studies
	1 st line NSCLC	2021	III	
	2 nd line NSCLC	2021	III	
AVXS-101 IT	Spinal Muscular Atrophy (IT formulation)	2020	I / II	· Interim data presented at AAN in May and updated at World Muscle Society in October · FDA placed a partial clinical hold based on findings in a small pre-clinical animal study
AVXS-201	Rett Syndrome	≥2024	I	
BYL719 (alpelisib)	PROS (PIK3CA-related overgrowth spectrum)	2020	III	
	HER+ adv breast cancer	2023	III	
	Triple negative breast cancer	2023	III	
	Head and neck squamous cell carcinoma	≥2024	III	
	Ovarian Cancer	2023	III	
CFZ533 (iscalimab)	Solid organ transplantation	2023	II	· Enrollment has started in the phase IIb de novo and maintenance kidney transplant study
	Sjogren's syndrome	≥2024	II	
Cosentyx	Ankylosing spondylitis head-to-head vs. adalimumab	2022	III	
	Hidradenitis suppurativa	2022	III	
	Giant cell arteritis	≥2024	II	
	Lichen Planus	≥2024	II	
	Severe asthma	2023	II	
ECF843	Dry eye	2022	II	
Entresto	Chronic heart failure with preserved ejection fraction	2020	III	· PARAGON-HF topline results presented at ESC – Sep 2019
	Post-acute myocardial infarction	2021	III	
HDM201	Acute myeloid leukemia	NA	II	· Indication retired in Q4 2019
INC280 (capmatinib)	Solid Tumors	≥2024	II	
Jakavi	Acute graft-versus-host disease (GvHD)	2021	III	
	Chronic graft-versus-host disease (GvHD)	2021	III	
KAE609 (cipargamin)	Malaria acute uncomplicated	≥2024	II	
	Severe Malaria	≥2024	II	
KAF156 (ganaplacide)	Malaria acute uncomplicated	≥2024	II	
Kisqali + endocrine therapy	HR+/HER2- early BC (adjuvant)	2022	III	· Potential for registration as early as 2022 based on positive, pre-planned interim analysis
KJX839 (inclisiran)	Secondary prevention of cardiovascular events in patients with elevated levels of LDLC	≥2024	III	· Acquired from The Medicines Company in Jan 2020
Kymriah (tisagenlecleucel) + pembrolizumab	r/r Follicular lymphoma	2021	II	
	r/r DLBCL in 1 st relapse	2021	III	
	r/r DLBCL	≥2024	II	
LAM320	Multi-drug resistant tuberculosis	2021	III	
LJC242 (tropifexor + cenicriviroc)	Non-alcoholic steatohepatitis (NASH)	≥2024	II	

LJN452 (tropifexor)	Non-alcoholic steatohepatitis (NASH)	≥2024	II	- FDA Fast Track designation
LMI070	Spinal Muscular Atrophy	≥2024	II	- FDA Orphan designation, EMA Orphan status obtained - Dose ranging study ongoing
LNP023	Paroxysmal nocturnal hemoglobinuria	2023	II	
	IgA nephropathy	2023	II	
	Membranous nephropathy	≥2024	II	
	C3 glomerulopathy	2023	II	
LOU064	Chronic Spontaneous Urticaria	2023	II	- Phase IIb study start achieved
¹⁷⁷ Lu-PSMA-617	Metastatic castration-resistant prostate cancer	2020	III	- On track for H2 2020 readout
LXE408	Visceral leishmaniasis	≥2024	II	
MBG453	Myelodysplastic syndrome	2021	II	
	AML	≥2024	II	
MOR106	Atopic dermatitis	NA	II	- Program retired in Q4 2019
PDR001 + <i>Tafinlar</i> + <i>Mekinist</i>	Metastatic BRAF V600+ melanoma	2020	III	- Expected submission in H2 2020
PDR001 Combo	Metastatic melanoma	2023	II	- Enrollment ongoing
QAW039 (fevipirant)	Asthma	NA	III	- Indication retired in Q4 2019
QBW251	COPD	≥2024	II	
QGE031 (ligelizumab)	Chronic Spontaneous Urticaria / Chronic Idiopathic Urticaria	2021	III	- Phase III trials initiated enrollment
RTH258 (brolucizumab)	Diabetic macular edema	2021	III	- Expected readout in H2 2020
	Retinal vein occlusion	2023	III	
	Proliferative diabetic retinopathy	2023	III	
<i>Rydapt</i> (PKC412)	Acute myeloid leukemia (FLT3 wild type)	NA	III	- Program retired in Q4 2019
SAF312	Chronic ocular surface pain	≥2024	II	
TQJ230	Secondary prevention of cardiovascular events in patients with elevated levels of lipoprotein(a)	≥2024	III	- Trial initiated, PPFV in Q4 2019
UNR844	Presbyopia	≥2024	II	- On track for readout in 2020
VAY736 (ianalumab)	Auto-immune hepatitis	≥2024	II	
	Primary Sjogren's syndrome	≥2024	II	- FDA Fast Track designation - Phase II study fully recruited
VPM087	1st line colorectal cancer / 1st line renal cell carcinoma	≥2024	I	
<i>Xolair</i>	Food Allergy	2021	III	
ZPL389 (adriforant)	Atopic dermatitis	≥2024	II	- Phase IIb trial enrollment initiated

Selected Sandoz approvals and pipeline projects

Project/ Compound	Potential indication/ Disease area	News update
GP2411 (denosumab)	Osteoporosis, skeletal-related in bone met. pts (same as originator)	- In Phase III - First patient enrolled July 2019
Insulin glargine, lispro, aspart	Diabetes	- Collaboration with Gan & Lee
natalizumab	Multiple sclerosis and Crohn's disease	- Collaboration Polpharma Biologics
trastuzumab	HER2-positive cancer tumors	- Collaboration EirGenix
Generic Advair®	Asthma / COPD	- The generic Advair® development program in the US was discontinued

CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Consolidated income statements

Fourth quarter (unaudited)

(USD millions unless indicated otherwise)	Note	Q4 2019	Q4 2018	Change
Net sales to third parties from continuing operations	10	12 403	11 481	922
Sales to discontinued segment			21	-21
Net sales from continuing operations		12 403	11 502	901
Other revenues	10	313	395	-82
Cost of goods sold		-3 992	-4 038	46
Gross profit from continuing operations		8 724	7 859	865
Selling, general and administration		-3 905	-3 677	-228
Research and development		-2 853	-2 234	-619
Other income		643	164	479
Other expense		-786	-750	-36
Operating income from continuing operations		1 823	1 362	461
Income from associated companies		150	141	9
Interest expense		-203	-248	45
Other financial income and expense		-11	78	-89
Income before taxes from continuing operations		1 759	1 333	426
Taxes		-630	-113	-517
Net income from continuing operations		1 129	1 220	-91
Net loss from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders	11		-26	26
Net loss from discontinued operations			-26	26
Net income		1 129	1 194	-65
<i>Attributable to:</i>				
<i>Shareholders of Novartis AG</i>		<i>1 125</i>	<i>1 195</i>	<i>-70</i>
<i>Non-controlling interests</i>		<i>4</i>	<i>-1</i>	<i>5</i>
Weighted average number of shares outstanding – Basic (million)		2 265	2 310	-45
<i>Basic earnings per share from continuing operations (USD)</i> ¹		<i>0.50</i>	<i>0.53</i>	<i>-0.03</i>
<i>Basic earnings per share from discontinued operations (USD)</i> ¹			<i>-0.01</i>	<i>0.01</i>
Total basic earnings per share (USD) ¹		0.50	0.52	-0.02
Weighted average number of shares outstanding – Diluted (million)		2 292	2 336	-44
<i>Diluted earnings per share from continuing operations (USD)</i> ¹		<i>0.49</i>	<i>0.52</i>	<i>-0.03</i>
<i>Diluted earnings per share from discontinued operations (USD)</i> ¹			<i>-0.01</i>	<i>0.01</i>
Total diluted earnings per share (USD) ¹		0.49	0.51	-0.02

¹ Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

Consolidated income statements

Full year (audited)

(USD millions unless indicated otherwise)	Note	FY 2019	FY 2018	Change
Net sales to third parties from continuing operations	10	47 445	44 751	2 694
Sales to discontinued segment		53	82	-29
Net sales from continuing operations		47 498	44 833	2 665
Other revenues	10	1 179	1 266	-87
Cost of goods sold		-14 425	-14 510	85
Gross profit from continuing operations		34 252	31 589	2 663
Selling, general and administration		-14 369	-13 717	-652
Research and development		-9 402	-8 489	-913
Other income		2 031	1 629	402
Other expense		-3 426	-2 609	-817
Operating income from continuing operations		9 086	8 403	683
Income from associated companies		659	6 438	-5 779
Interest expense		-850	-932	82
Other financial income and expense		45	186	-141
Income before taxes from continuing operations		8 940	14 095	-5 155
Taxes		-1 793	-1 295	-498
Net income from continuing operations		7 147	12 800	-5 653
Net loss from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders	11	-101	-186	85
Gain on distribution of Alcon Inc. to Novartis AG shareholders	3, 11	4 691		4 691
Net income/(loss) from discontinued operations		4 590	-186	4 776
Net income		11 737	12 614	-877
<i>Attributable to:</i>				
Shareholders of Novartis AG		11 732	12 611	-879
Non-controlling interests		5	3	2
Weighted average number of shares outstanding – Basic (million)		2 291	2 319	-28
<i>Basic earnings per share from continuing operations (USD)</i> ¹		<i>3.12</i>	<i>5.52</i>	<i>-2.40</i>
<i>Basic earnings per share from discontinued operations (USD)</i> ¹		<i>2.00</i>	<i>-0.08</i>	<i>2.08</i>
Total basic earnings per share (USD) ¹		5.12	5.44	-0.32
Weighted average number of shares outstanding – Diluted (million)		2 319	2 344	-25
<i>Diluted earnings per share from continuing operations (USD)</i> ¹		<i>3.08</i>	<i>5.46</i>	<i>-2.38</i>
<i>Diluted earnings per share from discontinued operations (USD)</i> ¹		<i>1.98</i>	<i>-0.08</i>	<i>2.06</i>
Total diluted earnings per share (USD) ¹		5.06	5.38	-0.32

¹ Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

Consolidated statements of comprehensive income

Fourth quarter (unaudited)

(USD millions)	Q4 2019	Q4 2018	Change
Net income	1 129	1 194	-65
<i>Other comprehensive income to be eventually recycled into the consolidated income statement:</i>			
Fair value adjustments on debt securities, net of taxes		2	-2
Fair value adjustments on deferred cash flow hedges, net of taxes		3	-3
Total fair value adjustments on financial instruments, net of taxes		5	-5
Net investment hedge	-49	35	-84
Currency translation effects ¹	863	-279	1 142
Total of items to eventually recycle	814	-239	1 053
<i>Other comprehensive income never to be recycled into the consolidated income statement:</i>			
Actuarial gains/(losses) from defined benefit plans, net of taxes	841	-933	1 774
Fair value adjustments on equity securities, net of taxes	-22	-189	167
Total of items never to be recycled	819	-1 122	1 941
Total comprehensive income	2 762	-167	2 929
<i>Attributable to:</i>			
Shareholders of Novartis AG	2 759	-166	2 925
Continuing operations	2 759	-83	2 842
Discontinued operations		-83	83
Non-controlling interests	3	-1	4

¹ In 2019, cumulative currency translation gains of USD 6 million were recycled into the consolidated income statement.

Consolidated statements of comprehensive income

Full year (audited)

(USD millions)	FY 2019	FY 2018	Change
Net income	11 737	12 614	-877
<i>Other comprehensive income to be eventually recycled into the consolidated income statement:</i>			
Fair value adjustments on debt securities, net of taxes	1		1
Fair value adjustments on deferred cash flow hedges, net of taxes	1	12	-11
Total fair value adjustments on financial instruments, net of taxes	2	12	-10
Novartis share of other comprehensive income recognized by associated companies, net of taxes ¹	-94	-482	388
Net investment hedge	44	95	-51
Currency translation effects ²	352	315	37
Total of items to eventually recycle	304	-60	364
<i>Other comprehensive income never to be recycled into the consolidated income statement:</i>			
Actuarial losses from defined benefit plans, net of taxes ³	-467	-359	-108
Fair value adjustments on equity securities, net of taxes	-47	13	-60
Total of items never to be recycled	-514	-346	-168
Total comprehensive income	11 527	12 208	-681
<i>Attributable to:</i>			
Shareholders of Novartis AG	11 525	12 210	-685
Continuing operations	6 948	12 417	-5 469
Discontinued operations	4 577	-207	4 784
Non-controlling interests	2	-2	4

¹ In 2018, Novartis share of other comprehensive income recognized by associated companies, net of taxes of USD 511 million was recycled into the consolidated income statement as a result of the divestment of the investment in GSK Consumer Healthcare Holdings Ltd. (see Note 3).

² In 2019, cumulative currency translation gains of USD 129 million were recycled into the consolidated income statement mainly as a result of the Alcon spin-off (see Notes 3 and 11). In 2018, cumulative currency translation losses of USD 946 million were recycled into the consolidated income statement as a result of the divestment of the investment in GSK Consumer Healthcare Holdings Ltd.

³ Included in 2019 is a USD -358 million impact related to the revaluation of deferred tax assets on Swiss pension plans that were previously recognized through other comprehensive income. This revaluation resulted from the Swiss canton Basel-Stadt tax reform, enacted in February 2019.

Consolidated balance sheets

(USD millions)	Note	Dec 31, 2019 (audited)	Dec 31, 2018 (audited)	Change
Assets				
Non-current assets				
Property, plant and equipment	10	12 069	15 696	-3 627
Right-of-use assets	6	1 677		1 677
Goodwill	10	26 524	35 294	-8 770
Intangible assets other than goodwill	10	28 787	38 719	-9 932
Investments in associated companies		8 644	8 352	292
Deferred tax assets		7 909	8 699	-790
Financial assets		2 518	2 345	173
Other non-current assets		738	895	-157
Total non-current assets		88 866	110 000	-21 134
Current assets				
Inventories		5 982	6 956	-974
Trade receivables		8 301	8 727	-426
Income tax receivables		254	248	6
Marketable securities, commodities, time deposits and derivative financial instruments		334	2 693	-2 359
Cash and cash equivalents		11 112	13 271	-2 159
Other current assets		2 680	2 861	-181
Assets of disposal group held for sale	3	841	807	34
Total current assets		29 504	35 563	-6 059
Total assets		118 370	145 563	-27 193
Equity and liabilities				
Equity				
Share capital		936	944	-8
Treasury shares		-80	-69	-11
Reserves		54 618	77 739	-23 121
Issued share capital and reserves attributable to Novartis AG shareholders		55 474	78 614	-23 140
Non-controlling interests		77	78	-1
Total equity		55 551	78 692	-23 141
Liabilities				
Non-current liabilities				
Financial debts		20 353	22 470	-2 117
Lease liabilities	6	1 703		1 703
Deferred tax liabilities		5 867	7 475	-1 608
Provisions and other non-current liabilities		6 632	7 319	-687
Total non-current liabilities		34 555	37 264	-2 709
Current liabilities				
Trade payables		5 424	5 556	-132
Financial debts and derivative financial instruments		7 031	9 678	-2 647
Lease liabilities	6	246		246
Current income tax liabilities		2 194	2 038	156
Provisions and other current liabilities		13 338	12 284	1 054
Liabilities of disposal group held for sale	3	31	51	-20
Total current liabilities		28 264	29 607	-1 343
Total liabilities		62 819	66 871	-4 052
Total equity and liabilities		118 370	145 563	-27 193

Consolidated statements of changes in equity

Fourth quarter (unaudited)

(USD millions)	Share capital	Treasury shares	Retained earnings	Total value adjustments	Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
Total equity at October 1, 2019	936	-80	57 928	-6 260	52 524	74	52 598
Net income			1 125		1 125	4	1 129
Other comprehensive income				1 634	1 634	-1	1 633
Total comprehensive income			1 125	1 634	2 759	3	2 762
Purchase of treasury shares			-4		-4		-4
Exercise of options and employee transactions			10		10		10
Equity-based compensation			192		192		192
Shares delivered to Alcon employees as a result of the Alcon spin-off			-14		-14		-14
Fair value adjustments on financial assets sold			38	-38			
Fair value adjustments related to divestments			-7	7			
Other movements ¹			7		7		7
Total of other equity movements			222	-31	191		191
Total equity at December 31, 2019	936	-80	59 275	-4 657	55 474	77	55 551

¹ Impact of hyperinflationary economies

(USD millions)	Share capital	Treasury shares	Retained earnings	Total value adjustments	Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
Total equity at October 1, 2018	944	-69	80 155	-3 092	77 938	81	78 019
Net income			1 195		1 195	-1	1 194
Other comprehensive income				-1 361	-1 361		-1 361
Total comprehensive income			1 195	-1 361	-166	-1	-167
Purchase of treasury shares		-2	-180		-182		-182
Other share sales		2	261		263		263
Equity-based compensation			201		201		201
Decrease of treasury share repurchase obligation under a share buyback trading plan			605		605		605
Transaction costs, net of taxes ¹			-40		-40		-40
Fair value adjustments on financial assets sold			-1	1			
Impact of change in ownership of consolidated entities			-14		-14	-2	-16
Other movements ²			9		9		9
Total of other equity movements			841	1	842	-2	840
Total equity at December 31, 2018	944	-69	82 191	-4 452	78 614	78	78 692

¹ Transaction costs, net of tax of USD 10 million, directly attributable to the distribution (spin-off) of the Alcon business to Novartis AG shareholders (see Note 2).

² Impact of hyperinflationary economies

Consolidated statements of changes in equity

Full year 2019 (audited)

(USD millions)	Share capital	Treasury shares	Retained earnings	Total value adjustments	Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
Total equity at January 1, 2019, as previously reported	944	-69	82 191	-4 452	78 614	78	78 692
Impact of change in accounting policies ¹			3		3		3
Restated equity at January 1, 2019	944	-69	82 194	-4 452	78 617	78	78 695
Net income			11 732		11 732	5	11 737
Other comprehensive income			-94	-113	-207	-3	-210
Total comprehensive income			11 638	-113	11 525	2	11 527
Dividends			-6 645		-6 645		-6 645
Dividend in kind to effect the spin-off of Alcon Inc. ²			-23 434		-23 434		-23 434
Purchase of treasury shares		-31	-5 480		-5 511		-5 511
Reduction of share capital	-8	12	-4				
Exercise of options and employee transactions		3	207		210		210
Equity-based compensation		5	828		833		833
Shares delivered to Alcon employees as a result of the Alcon spin-off			18		18		18
Taxes on treasury share transactions ³			-189		-189		-189
Decrease of treasury share repurchase obligation under a share buyback trading plan			284		284		284
Transaction costs, net of taxes ⁴			-253		-253		-253
Changes in non-controlling interests						-1	-1
Fair value adjustments on financial assets sold			95	-95			
Fair value adjustments related to divestments			-3	3			
Impact of change in ownership of consolidated entities			-3		-3	-2	-5
Other movements ⁵			22		22		22
Total of other equity movements	-8	-11	-34 557	-92	-34 668	-3	-34 671
Total equity at December 31, 2019	936	-80	59 275	-4 657	55 474	77	55 551

¹ The impact of change in accounting policy includes USD 3 million related to the implementation of IFRS 16 Leases (see Notes 2 and 6 for further details).

² Fair value of the dividend-in-kind of the Alcon business distributed to Novartis AG shareholders and ADR (American Depositary Receipt) holders approved at the 2019 Annual General Meeting held on February 28, 2019. Distribution was effected on April 9, 2019, whereby each Novartis AG shareholders and ADR holder received 1 Alcon Inc. share for every 5 Novartis AG shares/ADRs they held on April 8, 2019, close of business (see Notes 2, 3 and 11 for further details)

³ In 2019, USD 69 million impact related to the revaluation of deferred tax liability on treasury shares. This revaluation resulted from the Swiss Federal tax reform enacted in May 2019.

⁴ Transaction costs, net of tax of USD 36 million, directly attributable to the distribution (spin-off) of the Alcon business to Novartis AG shareholders (see Note 2).

⁵ Impact of hyperinflationary economies

Consolidated statements of changes in equity

Full year 2018 (audited)

(USD millions)	Share capital	Treasury shares	Retained earnings	Total value adjustments	Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
Total equity at January 1, 2018, as previously reported	969	-100	77 639	-4 340	74 168	59	74 227
Impact of change in accounting policies ¹			237	-177	60		60
Restated equity at January 1, 2018	969	-100	77 876	-4 517	74 228	59	74 287
Net income			12 611		12 611	3	12 614
Other comprehensive income			-482	81	-401	-5	-406
Total comprehensive income			12 129	81	12 210	-2	12 208
Dividends			-6 966		-6 966		-6 966
Purchase of treasury shares		-13	-1 960		-1 973		-1 973
Reduction of share capital	-25	34	-9				
Exercise of options and employee transactions		4	430		434		434
Other share sales		2	261		263		263
Equity-based compensation		4	752		756		756
Increase of treasury share repurchase obligation under a share buyback trading plan			-284		-284		-284
Transaction costs, net of taxes ²			-79		-79		-79
Changes in non-controlling interests						-1	-1
Fair value adjustments on financial assets sold			16	-16			
Impact of change in ownership of consolidated entities			-13		-13	22	9
Other movements ³			38		38		38
Total of other equity movements	-25	31	-7 814	-16	-7 824	21	-7 803
Total equity at December 31, 2018	944	-69	82 191	-4 452	78 614	78	78 692

¹ The impact of change in accounting policies includes USD 60 million relating to IFRS 15 implementation and USD 177 million relating to IFRS 9 implementation.

² Transaction costs, net of tax of USD 20 million, directly attributable to the distribution (spin-off) of the Alcon business to Novartis AG shareholders (see Note 2).

³ Impact of hyperinflationary economies

Consolidated statements of cash flows

Fourth quarter (unaudited)

(USD millions)	Note	Q4 2019	Q4 2018	Change
Net income from continuing operations		1 129	1 220	-91
<i>Adjustments to reconcile net income from continuing operations to net cash flows from operating activities from continuing operations</i>				
Reversal of non-cash items and other adjustments	7	2 750	2 347	403
Dividends received from associated companies and others		0	0	0
Interest received		42	87	-45
Interest paid		-253	-271	18
Other financial receipts		-33	72	-105
Other financial payments		-8	-9	1
Taxes paid	7	-681	-397	-284
Net cash flows from operating activities from continuing operations before working capital and provision changes		2 946	3 049	-103
Payments out of provisions and other net cash movements in non-current liabilities		-262	-166	-96
Change in net current assets and other operating cash flow items		856	553	303
Net cash flows from operating activities from continuing operations		3 540	3 436	104
Net cash flows from operating activities from discontinued operations			330	-330
Total net cash flows from operating activities		3 540	3 766	-226
Purchase of property, plant and equipment		-461	-444	-17
Proceeds from sales of property, plant and equipment		48	47	1
Purchase of intangible assets		-175	-206	31
Proceeds from sales of intangible assets		552	121	431
Purchase of financial assets		-79	-57	-22
Proceeds from sales of financial assets		410	27	383
Purchase of other non-current assets		-26	-13	-13
Proceeds from sales of other non-current assets		-1	2	-3
Acquisitions and divestments of interests in associated companies, net		-2	-65	63
Acquisitions and divestments of businesses, net	7	82	-1 804	1 886
Purchase of marketable securities and commodities		-39	-2 138	2 099
Proceeds from sales of marketable securities and commodities		66	138	-72
Net cash flows from/used in investing activities from continuing operations		375	-4 392	4 767
Net cash flows used in investing activities from discontinued operations	11	-57	-543	486
Total net cash flows from/used in investing activities		318	-4 935	5 253
Acquisition of treasury shares		-3	-249	246
Proceeds from exercise of options and other treasury share transactions		-4	266	-270
Repayments of non-current financial debts		-1	0	-1
Change in current financial debts		-1 063	488	-1 551
Payments of lease liabilities, net		-90		-90
Impact of change in ownership of consolidated entities		0	-5	5
Other financing cash flows, net		-20	-350	330
Net cash flows used in/from financing activities from continuing operations		-1 181	150	-1 331
Net cash flows used in/from financing activities from discontinued operations	11	-22	303	-325
Total net cash flows used in/from financing activities		-1 203	453	-1 656
Net change in cash and cash equivalents before effect of exchange rate changes		2 655	-716	3 371
Effect of exchange rate changes on cash and cash equivalents		79	-13	92
Total net change in cash and cash equivalents		2 734	-729	3 463
Cash and cash equivalents at October 1		8 378	14 000	-5 622
Cash and cash equivalents at December 31		11 112	13 271	-2 159

Consolidated statements of cash flows

Full year (audited)

(USD millions)	Note	FY 2019	FY 2018	Change
Net income from continuing operations		7 147	12 800	-5 653
<i>Adjustments to reconcile net income from continuing operations to net cash flows from operating activities from continuing operations</i>				
Reversal of non-cash items and other adjustments	7	9 122	1 486	7 636
Dividends received from associated companies and others		463	719	-256
Interest received		214	241	-27
Interest paid		-793	-816	23
Other financial receipts		28	218	-190
Other financial payments		-33	-31	-2
Taxes paid	7	-1 876	-1 506	-370
Net cash flows from operating activities from continuing operations before working capital and provision changes		14 272	13 111	1 161
Payments out of provisions and other net cash movements in non-current liabilities		-924	-638	-286
Change in net current assets and other operating cash flow items		199	576	-377
Net cash flows from operating activities from continuing operations		13 547	13 049	498
Net cash flows from operating activities from discontinued operations		78	1 223	-1 145
Total net cash flows from operating activities		13 625	14 272	-647
Purchase of property, plant and equipment		-1 379	-1 254	-125
Proceeds from sales of property, plant and equipment		857	102	755
Purchase of intangible assets		-878	-1 394	516
Proceeds from sales of intangible assets		973	823	150
Purchase of financial assets		-302	-205	-97
Proceeds from sales of financial assets		1 152	165	987
Purchase of other non-current assets		-60	-39	-21
Proceeds from sales of other non-current assets		3	9	-6
Acquisitions and divestments of interests in associated companies, net		-6	12 854	-12 860
Acquisitions and divestments of businesses, net	7	-3 760	-13 683	9 923
Purchase of marketable securities and commodities		-228	-2 440	2 212
Proceeds from sales of marketable securities and commodities		2 561	472	2 089
Net cash flows used in investing activities from continuing operations		-1 067	-4 590	3 523
Net cash flows used in investing activities from discontinued operations	11	-1 159	-1 001	-158
Total net cash flows used in investing activities		-2 226	-5 591	3 365
Dividends paid to shareholders of Novartis AG		-6 645	-6 966	321
Acquisition of treasury shares		-5 533	-2 036	-3 497
Proceeds from exercise of options and other treasury share transactions		201	700	-499
Increase in non-current financial debts		93	2 856	-2 763
Repayments of non-current financial debts		-3 195	-366	-2 829
Change in current financial debts		-1 582	1 687	-3 269
Payments of lease liabilities, net		-273		-273
Impact of change in ownership of consolidated entities		-6	-19	13
Other financing cash flows, net		56	67	-11
Net cash flows used in financing activities from continuing operations		-16 884	-4 077	-12 807
Net cash flows from/used in financing activities from discontinued operations	11	3 257	-167	3 424
Total net cash flows used in financing activities		-13 627	-4 244	-9 383
Net change in cash and cash equivalents before effect of exchange rate changes		-2 228	4 437	-6 665
Effect of exchange rate changes on cash and cash equivalents		69	-26	95
Total net change in cash and cash equivalents		-2 159	4 411	-6 570
Cash and cash equivalents at January 1		13 271	8 860	4 411
Cash and cash equivalents at December 31		11 112	13 271	-2 159

Notes to the Condensed Interim Consolidated Financial Statements for the three-month (unaudited) and year ended December 31, 2019 (audited)

1. Basis of preparation

These Condensed Interim Consolidated Financial Statements for the three-month and year ended December 31, 2019, were prepared in accordance with International Accounting Standard 34 *Interim Financial Reporting* and accounting policies set out in the 2019 Annual Report published on January 29, 2020.

2. Selected critical accounting policies

The Group's principal accounting policies are set out in Note 1 to the Consolidated Financial Statements in the 2019 Annual Report and conform with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board.

The preparation of financial statements requires management to make certain estimates and assumptions, either at the balance sheet date or during the year, which affect the reported amounts of assets and liabilities, including any contingent amounts, the distribution liability recognized in connection with the distribution of Alcon Inc. to Novartis AG shareholders, as well as of revenues and expenses. Actual outcomes and results could differ from those estimates and assumptions.

As disclosed in the 2019 Annual Report, goodwill, and acquired In-Process Research & Development projects are reviewed for impairment at least annually and these, as well as all other investments in intangible assets, are reviewed for impairment whenever an event or decision occurs that raises concern about their balance sheet carrying value. The amount of goodwill and other intangible assets on the Group's consolidated balance sheet has risen significantly in recent years, primarily from acquisitions. Impairment testing may lead to potentially significant impairment charges in the future that could have a materially adverse impact on the Group's results of operations and financial condition.

Non-current assets held for sale or held for distribution to owners

Non-current assets are classified as assets held for sale or related to discontinued operations when their carrying amount is to be recovered principally through a sale transaction or distribution to owners and a sale or distribution to owners is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell with any resulting impairment recognized. Assets related to discontinued operations and assets of disposal group held for sale are not depreciated or amortized. The prior year consolidated balance sheet is not restated.

Distribution of Alcon Inc. to Novartis AG shareholders

During the first quarter of 2019, at the Annual General Meeting (AGM) of Novartis AG shareholders, held on February 28, 2019, the Novartis AG shareholders approved a special distribution by way of a dividend in kind to effect the spin-off of Alcon Inc.

The February 28, 2019, shareholder approval for the spinoff required the Alcon Division and selected portions of corporate activities attributable to Alcon's business (the "Alcon business") to be reported as discontinued operations.

The shareholder approval to spin off the Alcon business also required the recognition of a distribution liability at the fair value of the Alcon business. The Group elected to measure the distribution liability at the fair value of the Alcon business net assets taken as a whole. The distribution liability was recognized through a reduction in retained earnings. It was required to be adjusted at each balance sheet date for changes in its estimated fair value, up to the date of the distribution to shareholders through retained earnings. Any resulting impairment of the business assets to be distributed would have been recognized in the consolidated income statements in "Other expense" of discontinued operations, at the date of initial recognition of the distribution liability or at subsequent dates resulting from changes of the distribution liability valuation. At the April 8, 2019 distribution settlement date, the resulting gain, which was measured as the excess amount of the distribution liability over the then-carrying value of the net

assets of the business distributed, was recognized on the line “Gain on distribution of Alcon Inc. to Novartis AG shareholders” in the income statement of discontinued operations.

The recognition of the distribution liability required the use of valuation techniques for purposes of impairment testing of the Alcon business’ assets to be distributed and for the measurement of the fair value of the distribution liability. These valuations required the use of management assumptions and estimates related to the Alcon business’ future cash flows, market multiples to estimate day one market value, and control premiums to apply in estimating the Alcon business fair value. These fair value measurements were classified as “Level 3” in the fair value hierarchy. The section “—Impairment of goodwill and intangible assets” in Note 1 to the Consolidated Financial Statements of the Annual Report 2019 provides additional information on key assumptions that are highly sensitive in the estimation of fair values using valuation techniques.

Transaction costs that were directly attributable to the distribution (spin-off) of Alcon to the Novartis share-holders, and that would otherwise have been avoided, were recorded as a deduction from equity.

For additional disclosures, refer to Note 3 and 11.

New IFRS standard effective as of January 1, 2019

IFRS 16 LEASES

IFRS 16 Leases substantially changed the financial statements, as the majority of leases for which the Group is the lessee became on-balance sheet liabilities with corresponding right-of-use assets also recognized on the balance sheet. The lease liability reflects the net present value of the remaining lease payments, and the right-of-use asset corresponds to the lease liability, adjusted for payments made before the commencement date, lease incentives and other items related to the lease agreement. The standard replaces IAS 17 Leases and related interpretations.

Upon adoption of the new standard, a portion of the annual operating lease costs, which was previously fully recognized as functional expenses, as a component of operating income, is recorded as interest expense. In addition, the portion of the lease payments that represents the reduction of the lease liability is recognized in the cash flow statement as an outflow from financing activities, which was previously fully recognized as an outflow from operating activities. Given the leases involved, these effects are not significant to the consolidated income statement and consolidated statement of cash flow.

The Group implemented the new standard on January 1, 2019, and applied the modified retrospective method, with right-of-use assets measured at an amount equal to the lease liability, adjusted by the amount of the prepaid or accrued lease payments relating to those leases recognized in the balance sheet immediately before the date of initial application and did not restate prior years.

Results of our impact assessment:

The undiscounted operating lease commitments as of December 31, 2018, amounted to USD 3.6 billion. This includes approximately USD 0.1 billion of leases with a commencement date in 2019 as well as short-term leases, and low-value leases that are recognized from January 1, 2019, upon adoption of IFRS 16, on a straight-line basis as expense in profit and loss. This also includes USD 0.2 billion lease commitments related to the Alcon Division, which is attributable to discontinued operation in 2019. For the remaining undiscounted lease commitments attributable to continuing operations of USD 3.3 billion, the Group recognized on January 1, 2019, lease liabilities of USD 1.74 billion and right-of-use assets of USD 1.55 billion (after the reclassification of USD 0.1 billion from property, plant & equipment, and net adjustments for the USD 0.3 billion recognition of sublease receivables, prepayments and accrued lease payments recognized as at December 31, 2018). For the lease commitments attributable to discontinued operations, the Group recognized on January 1, 2019, lease liabilities and right-of-use assets of USD 0.2 billion. This does not include the discontinued operations right-of-use assets and lease liability on finance lease agreements of USD 75 million and USD 89 million, respectively. There was an insignificant increase to retained earnings upon adoption of IFRS 16 of USD 3 million that arose from subleases that were accounted for as operating lease agreements under IAS 17 and are accounted for as finance leases under IFRS 16.

As a lessor, the Group had no significant impact upon adoption.

For further information on the impact of adoption and additional disclosures of IFRS 16 Leases, see Note 6.

The Group has updated accounting policies, effective January 1, 2019, upon adoption of IFRS 16 Leases as follows:

Leases

As lessee, the Group assesses whether a contract contains a lease at inception of a contract and upon the modification of a contract. The Group elected to allocate the consideration in the contract to the lease and non-lease components on the basis of the relative standalone price.

The Group recognizes a right-of-use asset and a corresponding lease liability for all arrangements in which it is a lessee, except for leases with a term of 12 months or less (short-term leases) and low-value leases. For these short-term and low-value leases, the Group recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease.

The lease liability is initially measured at the present value of the future lease payments as from the commencement date of the lease to end of the lease term. The lease term includes the period of any lease extension that in management's assessment is highly probable to be exercised by the Group. The lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, the Novartis incremental borrowing rate for the asset subject to the lease in the respective markets.

The Group remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) whenever there is a change to the lease terms or expected payments under the lease, or a modification that is not accounted for as a separate lease.

The portion of the lease payments attributable to the repayment of lease liabilities is recognized in cash flows used in financing activities, and the portion attributable to the payment of interest is included in cash flows from operating activities.

Right-of-use assets are initially recognized on the balance sheet at cost, which comprises the amount of the initial measurement of the corresponding lease liability, adjusted for any lease payments made at or prior to the commencement date of the lease, any lease incentive received and any initial direct costs incurred by Novartis, and expected costs for obligations to dismantle and remove right-of-use assets when they are no longer used.

Right-of-use assets are depreciated on a straight-line basis from the commencement date of the lease over the shorter of the useful life of the right-of-use asset or the end of the lease term.

Right-of-use assets are assessed for impairment whenever there is an indication that the balance sheet carrying amount may not be recoverable using cash flow projections for the useful life.

In arrangements where the Group is the lessor, it determines at lease inception whether the lease is a finance lease or an operating lease. Leases that transfer substantially all of the risk and rewards incidental to ownership of the underlying asset to the counterparty (the lessee) are accounted for as finance leases. Leases that do not transfer substantially all of the risks and rewards of ownership are accounted for as operating leases. Lease payments received under operating leases are recognized on a straight-line basis over the lease term in the consolidated income statement in either "net sales" or "other income," depending on the nature of and underlying asset to the lease arrangement.

New IFRS standard effective as of January 1, 2020

IFRS 3 Business Combination amendments

The IASB issued an amendment to IFRS 3 Business Combinations that revised the definition of a business, which assist entities with the evaluation of when an asset or group of assets acquired or

disposed of should be considered a business. This amended standard is effective for the Group as of January 1, 2020 and is applicable to transactions entered into on or after January 1, 2020. The amended standard allows an entity to apply an optional concentration test, on a transaction-by-transaction basis, to evaluate whether substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets. If this optional concentration test is met, the entity may choose to consider the transaction an acquisition of an asset or set of assets. The Group does not expect the adoption of this amended standard on January 1, 2020 to have a significant impact on our consolidated financial statements in future periods. However, this will depend on the facts and circumstances of future transactions and if the Group decides to apply the optional concentration test in the assessment of whether an acquired set of activities and assets is or is not a business.

There are no other IFRS standards or interpretations not yet effective that would be expected to have a material impact on the Group.

3. Significant transactions

Significant transaction in 2019

Completion of the spin-off of the Alcon business through a dividend in kind distribution to Novartis AG shareholders

On June 29, 2018, Novartis announced its intention to seek shareholder approval for the spin-off of the Alcon business into a separately traded standalone company, following the complete structural separation of the Alcon business into a standalone company (the Alcon business or Alcon Inc.).

The Novartis AG shareholders approved the spin-off of the Alcon business at the 2019 Annual General Meeting held on February 28, 2019, subject to completion of certain conditions precedent to the distribution. Upon shareholder approval, the Alcon business was reported as discontinued operations, and the fair value of the Alcon business exceeded the carrying value of its net assets.

The conditions precedent to the spin-off were met and on April 8, 2019 the spin-off of the Alcon business was effected by way of a distribution of a dividend in kind of Alcon Inc. shares to Novartis AG shareholders and ADR (American Depositary Receipt) holders (the Distribution), which amounted to USD 23.4 billion and is recognized as a reduction to retained earnings. Through the Distribution, each Novartis AG shareholder received one Alcon Inc. share for every five Novartis AG shares/ADRs they held on April 8, 2019, close of business. As of April 9, 2019, the shares of Alcon Inc. are listed on the SIX Swiss Exchange (SIX) and on the New York Stock Exchange (NYSE) under the symbol "ALC."

The dividend in kind distribution liability to effect the spin-off of the Alcon business (the distribution liability) amounted to USD 26.4 billion at March 31, 2019, unchanged from its initial recognition on February 28, 2019, and was in excess of the carrying value of the Alcon business net assets as of February 28, 2019, and as of March 31, 2019. The net assets of the Alcon business amounted to USD 23.1 billion as at March 31, 2019.

On March 6, 2019, Alcon entered into financing arrangements with a syndicate of banks under which it borrowed on April 2, 2019, a total amount of USD 3.2 billion. These borrowings consisted of approximately USD 2.8 billion and the equivalent of USD 0.4 billion in EUR in bridge and other term loans under such Alcon facilities agreement. In addition, approximately USD 0.3 billion of borrowings under a number of local bilateral facilities in different countries, with the largest share of borrowings in Japan, were raised. This resulted in a total gross debt of USD 3.5 billion. These outstanding borrowings of the Alcon legal entities were recorded in the balance sheet and financing cash flow from discontinued operations. Prior to the spin-off, through a series of intercompany transactions, Alcon legal entities paid approximately USD 3.1 billion in cash to Novartis and its affiliates.

At the April 8, 2019 Distribution, the fair value of the distribution liability of the Alcon business amounted to USD 23.4 billion, a decrease of USD 3.0 billion from March 31, 2019. As mentioned above, prior to the spin-off, through a series of intercompany transactions, Alcon legal entities incurred additional net financial debt and paid approximately USD 3.1 billion in cash to Novartis and its affiliates. This additional net debt and transactions resulted in a decrease in Alcon's net assets to USD 20.0 billion at

the date of the Distribution of the dividend in kind to Novartis AG shareholders on April 8, 2019. The distribution liability at April 8, 2019, remained in excess of the then-carrying value of the Alcon business net assets.

Certain consolidated foundations own Novartis AG dividend-bearing shares restricting their availability for use by the Group. These Novartis AG shares are accounted for as treasury shares. Through the Distribution, these foundations received Alcon Inc. shares representing an approximate 4.7% equity interest in Alcon Inc. Upon the loss of control of Alcon Inc. through the Distribution, the financial investment in Alcon Inc. was recognized at its fair value based on the opening traded share price of Alcon Inc. on April 9, 2019 (a Level 1 hierarchy valuation). At initial recognition, its fair value of USD 1.3 billion was reported on the Group's consolidated balance sheet as a financial asset. Management has designated this investment at fair value through other comprehensive income.

The total non-taxable, non-cash gain recognized at the distribution date of the spin-off of the Alcon business amounted to USD 4.7 billion consisting of:

(USD millions)	April 8, 2019
Net assets derecognized ¹	-20 025
Derecognition of distribution liability	23 434
Difference between net assets and distribution liability	3 409
Recognition of Alcon Inc. shares obtained through consolidated foundations	1 273
Currency translation gains recycled into the consolidated income statement	123
Transaction costs recognized in the consolidated income statement	-114
Gain on distribution of Alcon Inc. to Novartis AG shareholders	4 691

¹ See Note 11 for additional information.

Significant transaction closed in 2019 – Continuing operations

Innovative Medicines – acquisition of IFM Tre, Inc.

On May 7, 2019, Novartis acquired IFM Tre, Inc., a privately held, US-based biopharmaceutical company focused on developing anti-inflammatory medicines targeting the NLRP3 inflammasome. The acquisition gives Novartis full rights to IFM Tre, Inc.'s portfolio of NLRP3 antagonists. The NLRP3 antagonists portfolio consists of one clinical program and two preclinical programs: IFM-2427, a first-in-class, clinical-stage systemic antagonist for an array of chronic inflammatory disorders, including atherosclerosis and nonalcoholic steatohepatitis (NASH); a preclinical-stage gut-directed molecule for the treatment of inflammatory bowel disease; and a preclinical-stage central nervous system (CNS)-penetrant molecule.

The previously held interest of 9% was adjusted to its fair value of USD 33 million through the consolidated income statement at acquisition date. This remeasurement resulted in a gain of USD 14 million. The fair value of the total purchase consideration for acquiring the 91% stake Novartis did not already own amounted to USD 361 million. The amount consisted of an initial cash payment of USD 285 million, and the fair value of the contingent consideration of USD 76 million due to the IFM Tre, Inc. shareholders, which they are eligible to receive upon the achievement of specified development and commercialization milestones. The purchase price allocation resulted in net identifiable assets of USD 355 million, mainly intangibles, and goodwill of USD 39 million. Results of operations since the date of acquisition were not material.

Innovative Medicines – acquisition of Xiidra

On May 8, 2019, Novartis entered into an agreement with Takeda Pharmaceutical Company Limited (Takeda) to acquire the assets associated with *Xiidra* (lifitegrast ophthalmic solution) 5% worldwide. *Xiidra* is the first and only prescription treatment approved to treat both signs and symptoms of dry eye by inhibiting inflammation caused by the disease. The transaction bolsters the Novartis front-of-the-eye portfolio and ophthalmic leadership. The transaction closed on July 1, 2019. The purchase price consists of a USD 3.4 billion upfront payment, customary purchase price adjustments of USD 0.1 billion, and the potential milestone payments of up to USD 1.9 billion, which Takeda is eligible to receive upon the achievement of specified commercialization milestones.

The fair value of the total purchase consideration is USD 3.7 billion. The amount consists of an initial cash payment of USD 3.5 billion, and the net present value of the contingent consideration of USD 0.2 billion, which Takeda is eligible to receive upon the achievement of specified commercialization milestones.

The purchase price allocation resulted in net identifiable assets of approximately USD 3.6 billion, consisting mainly of intangible assets of USD 3.6 billion, and goodwill amounted to approximately USD 0.1 billion. In 2019, from the date of acquisition, the business generated net sales of USD 0.2 billion. Management estimates that net sales for the entire year of 2019 would have amounted to USD 0.3 billion, had the business been acquired at the beginning of the 2019 reporting period. Results of operations since the date of acquisition were not material.

Significant transactions entered into in 2019 and closed in January 2020

Innovative Medicines – acquisition of The Medicines Company

On November 23, 2019, Novartis entered into an agreement and plan of merger (the Merger Agreement) with The Medicines Company, a US-based pharmaceutical company headquartered in Parsippany, New Jersey USA. Pursuant to the Merger Agreement, on December 5, 2019, Novartis, through a subsidiary, commenced a tender offer to acquire all outstanding shares of The Medicines Company for USD 85 per share, or a total consideration of approximately USD 9.7 billion in cash on a fully diluted basis. The tender offer expired on January 3, 2020, and on January 6, 2020, the acquiring subsidiary merged with and into The Medicines Company, resulting in The Medicines Company becoming an indirect wholly owned subsidiary of Novartis. Novartis will finance the transaction through available cash and short- and long-term borrowings. As the transaction closed on January 6, 2020 the purchase price allocation is incomplete.

The Medicines Company is focused on the development of inclisiran, a potentially first-in-class, twice-yearly therapy that allows administration during patients' routine visits to their healthcare professionals and will potentially contribute to improved patient adherence and sustained lower LDL-C levels.

Significant pending transaction

Sandoz – divestment of US dermatology business and generic US oral solids portfolio

On September 6, 2018, Novartis announced that it has agreed to sell selected portions of its Sandoz US portfolio, specifically the Sandoz US dermatology business and generic US oral solids portfolio, to Aurobindo Pharma USA Inc. (Aurobindo) for USD 0.8 billion in cash and potential earnouts.

The Sandoz US portfolios to be sold to Aurobindo include approximately 300 products as well as additional development projects. The sale includes the Sandoz US generic and branded dermatology businesses as well as its dermatology development center. As part of the transaction, Aurobindo will acquire the manufacturing facilities in Wilson, North Carolina, and in Hicksville and Melville, New York.

The transaction is expected to be completed in the first quarter of 2020, pending regulatory approval. As the fair value of the consideration (USD 0.8 billion) less costs to sell is below the carrying value of the divested business (USD 1.0 billion, which includes an allocation of Sandoz goodwill of USD 0.2 billion), an impairment of the net assets to be divested in the amount of USD 0.2 billion was recognized as a reduction to goodwill in 2018.

In the Group's consolidated balance sheet at December 31, 2019 and 2018, the business assets and liabilities of the Sandoz US dermatology business and generic US oral solids portfolio are separately shown as assets and liabilities of disposal group held for sale.

The disposal group, assets and liabilities classified as held for sale consist of the following:

(USD millions)	Dec 31, 2019	Dec 31, 2018
Assets of disposal group classified as held for sale		
Property, plant and equipment	169	148
Intangible assets other than goodwill	475	478
Deferred tax assets	11	8
Other non-current assets	2	1
Inventories	181	165
Other current assets	3	7
Total	841	807
Liabilities of disposal group classified as held for sale		
Deferred tax liabilities	2	2
Provisions and other non-current liabilities	4	4
Provisions and other current liabilities	25	45
Total	31	51

There are no cumulative income or expenses included in other comprehensive income relating to the disposal group.

Sandoz – acquisition of the Japanese business of Aspen Global Incorporated

On November 11, 2019, Sandoz entered into an agreement for the acquisition of the Japanese business of Aspen Global Incorporated (AGI), a wholly owned subsidiary of Aspen Pharmacare Holdings Limited. Under the agreement, Sandoz will acquire the shares in Aspen Japan K.K. and associated assets held by AGI. Pursuant to the agreed terms of the transaction, on closing the Group will pay an initial cash consideration of EUR 300 million (approximately USD 336 million). In addition, deferred consideration is due to AGI, upon fulfillment of certain conditions after closing, currently estimated at approximately EUR 100 million (approximately USD 112 million).

We have received all relevant approvals and this transaction is expected to be completed in Q1 2020.

Aspen's portfolio in Japan consists of off-patent medicines with a focus on anesthetics and specialty brands. The acquisition will enable Sandoz to expand its presence in the third-largest worldwide generics marketplace.

Significant transactions in 2018

Innovative Medicines – acquisition of Advanced Accelerator Applications S.A.

On October 30, 2017, Novartis entered into a binding memorandum of understanding with Advanced Accelerator Applications S.A. (AAA), a company headquartered in Saint-Genis-Pouilly, France, under which Novartis agreed to commence a tender offer for 100% of the share capital of AAA subject to certain conditions. Novartis commenced the tender offer on December 7, 2017, to purchase all of the outstanding ordinary shares for a price of USD 41 per share and USD 82 per American Depositary Share (ADS), each representing two ordinary shares of AAA, which expired on January 19, 2018. The offer valued AAA's equity at USD 3.9 billion, on a fully diluted basis.

As of January 19, 2018, the expiration date of the tender offer, approximately 97% of the then-outstanding fully diluted ordinary shares, including ordinary shares represented by ADSs (hereinafter collectively referred to as "the outstanding shares"), were validly tendered. On January 22, 2018, Novartis accepted and paid USD 3.9 billion for the outstanding shares tendered in the offer. On January 22, 2018, Novartis commenced a subsequent offering period that expired on January 31, 2018. As of the expiration of the subsequent offering period, an additional 1.8% of the outstanding shares were validly tendered. Novartis accepted and paid approximately USD 60 million, resulting in an increase in Novartis ownership in AAA to 98.7%.

The fair value of the total purchase consideration was USD 3.9 billion. The purchase price allocation resulted in net identifiable assets of approximately USD 1.9 billion, consisting of USD 2.5 billion intangible assets, USD 0.6 billion net deferred tax liabilities, and goodwill of approximately USD 2.0 billion. In 2018, from the date of the acquisition the business generated net sales of USD 0.4 billion. Management estimates net sales for the entire year 2018 would have amounted to USD 0.4 billion had

AAA been acquired at the beginning of 2018. The 2018 results from operations since the date of the acquisition were not material.

As of December 31, 2019, Novartis held 99.2% of the then-outstanding fully diluted ordinary shares, including ordinary shares represented by ADSs.

AAA is a radiopharmaceutical company that develops, produces and commercializes molecular nuclear medicines – including Lutathera (USAN: lutetium Lu 177 dotatate/INN: lutetium (177Lu) oxodotretotide), a first-in-class radioligand therapy product for neuroendocrine tumors – and a portfolio of diagnostic products. Radiopharmaceuticals, such as Lutathera, are unique medicinal formulations containing radioisotopes, which are used clinically for both diagnosis and therapy.

Innovative Medicines – acquisition of AveXis, Inc.

On April 6, 2018, Novartis entered into an agreement and plan of merger with AveXis, Inc., a US-based clinical stage gene therapy company, under which Novartis commenced on April 17, 2018, a tender offer to purchase all outstanding common stock of AveXis, Inc. for USD 218 per share in cash. On May 15, 2018, Novartis completed the acquisition of the common stock of AveXis, Inc. and paid a total of USD 8.7 billion.

The fair value of the total purchase consideration was USD 8.7 billion. The purchase price allocation resulted in net identifiable assets of approximately USD 7.2 billion, consisting of USD 8.5 billion intangible assets, USD 1.6 billion net deferred tax liabilities and other net assets of USD 0.3 billion, and goodwill of approximately USD 1.5 billion. The 2018 results of operations since the date of acquisition were not material.

AveXis, Inc. is focused on developing and commercializing novel treatments for patients suffering from rare and life-threatening neurological genetic diseases. AveXis, Inc.'s initial product candidate, AVXS-101, is a proprietary gene therapy currently in development for the treatment of spinal muscular atrophy (SMA) type 1 – the leading genetic cause of infant mortality – and SMA types 2 and 3. In addition, AveXis, Inc. has a pipeline of other novel treatments for rare neurological diseases, including Rett syndrome (RTT) and a genetic form of amyotrophic lateral sclerosis (ALS) caused by mutations in the superoxide dismutase 1 (SOD1) gene.

Innovative Medicines – acquisition of Endocyte, Inc.

On October 18, 2018, Novartis entered into an agreement and plan of merger with Endocyte, a US-based bio-pharmaceutical company focused on developing targeted therapeutics for cancer treatment. The transaction was completed on December 21, 2018. Under the terms of the agreement, Novartis acquired all outstanding shares of Endocyte common stock for USD 24 per share. The total consideration amounted to USD 2.1 billion.

The fair value of the total purchase consideration was USD 2.1 billion. The purchase price allocation resulted in net identifiable assets of approximately USD 1.5 billion, consisting of USD 1.5 billion intangible assets, USD 0.3 billion net deferred tax liabilities and other net assets of USD 0.3 billion, and goodwill of approximately USD 0.6 billion. The purchase price allocation was preliminary at December 31, 2018, as the transaction closed on December 21, 2018, which was close to the Group's year-end and therefore did not provide sufficient time to complete the valuation of the intangible assets, deferred taxes, assumed liabilities and goodwill. During 2019, there were no significant revisions to the purchase price allocation.

Endocyte uses drug conjugation technology to develop targeted therapies with companion imaging agents, including 177Lu-PSMA-617, a potential first-in-class investigational radioligand therapy for the treatment of metastatic castration-resistant prostate cancer (mCRPC).

Corporate – divestment of 36.5% stake in GlaxoSmithKline Consumer Healthcare Holdings Ltd.

On March 27, 2018, Novartis entered into an agreement with GlaxoSmithKline plc (GSK) to divest its 36.5% stake in GlaxoSmithKline Consumer Healthcare Holdings Ltd. to GSK for USD 13.0 billion in cash. As a result, Novartis discontinued the use of equity method accounting starting from April 1, 2018.

On June 1, 2018, the transaction closed and Novartis realized a pre-tax gain of USD 5.8 billion, recorded in income from associated companies.

For significant transactions closed in 2019 for Discontinued operations, see Note 11.

4. Summary of equity attributable to Novartis AG shareholders

	Number of outstanding shares (in millions)			Issued share capital and reserves attributable to Novartis AG shareholders (in USD millions)		
	2019	2018	Change	FY 2019	FY 2018	Change
Balance at beginning of year	2 311.2	2 317.5	-6.3	78 614	74 168	4 446
Impact of change in accounting policy ¹				3	60	-57
Restated equity at January 1				78 617	74 228	4 389
Shares acquired to be cancelled	-60.3	-23.3	-37.0	-5 351	-1 859	-3 492
Other share purchases	-1.7	-1.2	-0.5	-160	-114	-46
Exercise of options and employee transactions	5.5	7.8	-2.3	210	434	-224
Other share sales		3.0	-3.0		263	-263
Equity-based compensation	9.4	7.4	2.0	833	756	77
Shares delivered to Alcon employees as a result of the Alcon spin-off	0.9		0.9	18		18
Taxes on treasury share transactions ²				-189		-189
Decrease/(increase) of treasury share repurchase obligation under a share buyback trading plan				284	-284	568
Dividends to shareholders of Novartis AG				-6 645	-6 966	321
Dividend in kind to effect the spin-off of Alcon Inc. ³				-23 434		-23 434
Net income of the period attributable to shareholders of Novartis AG				11 732	12 611	-879
Other comprehensive income attributable to shareholders of Novartis AG				-207	-401	194
Transaction costs, net of taxes ⁴				-253	-79	-174
Impact of change in ownership of consolidated entities				-3	-13	10
Other movements ⁵				22	38	-16
Balance at December 31	2 265.0	2 311.2	-46.2	55 474	78 614	-23 140

¹ In 2019, the impact of change in accounting policy includes USD 3 million related to the implementation of IFRS 16 Leases (see Notes 2 and 6 for further details).

In 2018, the impact of change in accounting policy includes USD 60 million relating to the implementation of IFRS 15 Revenue from Contracts with Customers implementation and USD 177 million relating to the implementation IFRS 9 Financial instruments.

² Included in 2019 is a USD 69 million impact related to the revaluation of deferred tax liability on treasury shares. This revaluation resulted from the Swiss Federal tax reform enacted in May 2019.

³ Fair value of the dividend-in-kind of Alcon Inc. shares to Novartis AG shareholders and ADR (American Depositary Receipt) holders approved at the 2019 Annual General Meeting held on February 28, 2019. Distribution was effected on April 8, 2019, whereby each Novartis AG shareholders and ADR holder received 1 Alcon Inc. share for every 5 Novartis AG shares/ADRs they held on April 8, 2019, close of business (see Notes 2, 3 and 11 for further details)

⁴ Transaction costs, net of tax of USD 36 million (2018: USD 20 million), directly attributable to the distribution (spin-off) of the Alcon business to Novartis AG shareholders (see Note 2).

⁵ Impact of hyperinflationary economies

5. Financial instruments

Fair value by hierarchy

The following table illustrates the three hierarchical levels for valuing all financial instruments at fair value as well as certain financial assets measured at amortized cost as of December 31, 2019 and December 31, 2018. For additional information on the hierarchies and other matters, please refer to the Consolidated Financial Statements in the 2019 Annual Report, published on January 29, 2020.

(USD millions)	Level 1		Level 2		Level 3		Valued at amortized cost or cost		Total	
	Dec 31, 2019	Dec 31, 2018	Dec 31, 2019	Dec 31, 2018	Dec 31, 2019	Dec 31, 2018	Dec 31, 2019	Dec 31, 2018	Dec 31, 2019	Dec 31, 2018
Marketable securities										
Debt securities		302	24	23					24	325
Fund investments	37	35							37	35
Total marketable securities	37	337	24	23					61	360
Time deposits and short term investments with original maturity more than 90 days							61	2 087	61	2 087
Derivative financial instruments			102	130					102	130
Accrued interest on debt securities								12		12
Total marketable securities, time deposits and derivative financial instruments	37	337	126	153			61	2 099	224	2 589
Long-term financial investments, loans and receivables										
Debt and equity securities	976	698			581	488			1 557	1 186
Fund investments					233	251			233	251
Contingent consideration receivables					399	396			399	396
Long-term loans, advances, security deposits and long-term receivables							329	512	329	512
Total long-term financial investments, loans and receivables	976	698			1 213	1 135	329	512	2 518	2 345
Associated companies at fair value through profit or loss					186	145			186	145
Contingent consideration payables					-1 036	-907			-1 036	-907
Other financial liabilities					-29	-10			-29	-10
Derivative financial instruments			-185	-58					-185	-58
Total financial liabilities at fair value			-185	-58	-1 065	-917			-1 250	-975

There were no significant transfers from one level to the other and no significant transactions associated with level 3 financial instruments. During the fourth quarter of 2019, there was one non-significant transfer of equity security from level 3 to level 1 for USD 40 million due to an Initial Public Offering.

The fair value of straight bonds amounted to USD 23.7 billion at December 31, 2019 (USD 25.4 billion at December 31, 2018) compared to the balance sheet value of USD 22.2 billion at December 31, 2019 (USD 25.3 billion at December 31, 2018). For all other financial assets and liabilities, the carrying amount is a reasonable approximation of the fair value. The carrying amount of financial assets included in the line financial investments and long-term loans of USD 2.5 billion at December 31, 2019 (USD 2.3 billion at December 31, 2018) is included in line "Financial and other non-current assets" of the consolidated balance sheets.

During the year 2019, in accordance with the consolidated foundations Alcon Inc. share divestment plans, Alcon Inc. shares with a fair value of USD 976 million (USD 320 million for the fourth quarter 2019) were sold and the USD 62 million (USD 14 million for the fourth quarter 2019) gain on disposal was transferred from other comprehensive income to retained earnings.

The Group's exposure to financial risks has not changed significantly during the period and there have been no major changes to the risk management department or in any risk management policies.

6. Right-of-use assets and lease liabilities

Impact of adoption of IFRS 16 Leases

Note 2 explains the changes and new accounting policy introduced on January 1, 2019, resulting from the adoption of the new accounting standards IFRS 16 Leases.

On transition to IFRS 16, the Group elected to apply the practical expedient to not reassess whether a contract is, or contains, a lease at January 1, 2019, the implementation date of IFRS 16. As a result, at the date of implementation, the Group applied IFRS 16 only to contracts that were previously identified as leases under IAS 17 Leases and related interpretations, and the definition of a lease under IFRS 16 was applied only to contracts entered into or changed on or after January 1, 2019.

The impact on retained earnings upon implementation of IFRS 16 was USD 3 million arising from subleases that were accounted for as operating lease agreements under IAS 17 and are accounted for as finance leases under IFRS 16.

The Group has entered into various fixed-term leases, mainly for vehicles and real estate.

The lease liabilities recorded in continuing operations on January 1, 2019, were USD 1.7 billion and the right-of-use assets were USD 1.6 billion.

Reconciliation of lease commitment disclosed on December 31, 2018, and lease liabilities recorded in continuing operations on January 1, 2019, are as follows:

(USD millions)

Operating lease commitments December 31, 2018 ¹	3 612
Operating lease commitments December 31, 2018 related to discontinued operations	-222
Operating lease commitments December 31, 2018 related to continuing operations	3 390
Recognition exemption for short term leases	-30
Recognition exception for low value leases	-12
Lease arrangements with commencement date after December 31, 2018	-65
Undiscounted future lease payments continuing operations as of January 1, 2019	3 283
Effect of discounting	-1 547
Lease liabilities as of January 1, 2019²	1 736

¹ As reported in Annual Report 2018 Note 27

² Weighted average incremental borrowing rate of 3.5% was applied at January 1, 2019, the date of implementation of IFRS 16 Leases.

The right-of-use assets of continuing operations at January 1, 2019, by underlying class of asset comprise the following:

(USD millions)	January 1, 2019
Land	536
Buildings	848
Vehicles	147
Machinery and equipment and other assets	23
Right-of-use assets¹	1 554

¹ Right-of-use assets were lower than the lease liability at the date of implementation of IFRS 16 by USD 182 million, due to adjustments made for recognition of sublease receivables, prepayments and accrued lease payments and transfers from leased assets recorded in property, plant and equipment at December 31, 2018.

The adoption of IFRS 16 on January 1, 2019 had an impact on the classification of the annual lease expense in the consolidated income statement, the recognition of right-of-use assets and lease liabilities in the balance sheet and the classification of the annual lease payments in the consolidated statement of cash flows.

The adoption of IFRS 16 on January 1, 2019 did not significantly impact the individual lines of the consolidated income statement.

The following table shows the adjustments to the line items of the January 1, 2019, consolidated balance sheet, due to the implementation of IFRS 16:

(USD millions)	January 1, 2019
Assets	
Non-current assets	
Property, plant and equipment	-101
Right-of-use assets	1 554
Other non-current assets	74
Total non-current assets	1 527
Total assets	1 527
Equity and liabilities	
Equity	
Reserves	3
Total equity	3
Liabilities	
Non-current liabilities	
Financial debts	-2
Lease liabilities	1 471
Provision and other non-current liabilities	-212
Total non-current liabilities	1 257
Current liabilities	
Financial debts and derivative financial instruments	-1
Lease liabilities	268
Total current liabilities	267
Total liabilities	1 524
Total equity and liabilities	1 527

As a result of applying the modified retrospective method at the date of implementation of IFRS 16 on January 1, 2019, whereby the right-of-use assets were measured at the amount equal to the lease liabilities, there is no impact to the reported deferred tax assets and deferred tax liabilities on the consolidated balance sheet, as the corresponding deferred tax assets and deferred tax liabilities attributable to the lease liability and right-of-use asset relate to income taxes levied by the same taxation authority within the same legal entity, and were therefore offset.

The adoption of IFRS 16 on January 1, 2019 had no significant impact on the individual lines of the consolidated statement of cash flows, except for the principal portion of the lease payments (USD 0.3 billion for the year ended December 31, 2019) that is recognized as an outflow in the cash flow from financing activities and the interest portion of the lease payment (USD 0.1 billion for the year ended December 31, 2019) is recognized as an outflow in the cash flow from operating activities. Prior to the adoption of IFRS 16, the full amount of the lease payments was recognized as an outflow in the cash flow from operating activities.

Current year disclosures

The following table summarizes the movements of the right-of-use assets of continuing operations:

(USD millions)

Right-of-use assets at January 1, 2019	1 554
Additions ¹	537
Depreciation charge	-305
Lease contract terminations ²	-98
Impact of divestments	-17
Currency translation effects	6
Total right-of-use assets at December 31, 2019	1 677

No impairments were recorded in the period.

¹ Additions in Q4 amounted to USD 109 million.

² Lease contract terminations also includes modifications to existing leases that result in reductions to the right-of-use assets and reductions due to sub-leasing.

The right-of-use assets carrying value and depreciation charge of continuing operations at December 31, 2019, are shown below by underlying class of asset:

(USD millions)	December 31, 2019 Carrying value	Depreciation charge	
		Q4 2019	FY 2019
Land	537	4	14
Buildings	990	47	194
Vehicles	129	22	87
Machinery and equipment and other assets	21	5	10
Total right-of-use assets	1 677	78	305

The lease liabilities of continuing operations at December 31, 2019, by maturity are as follows:

(USD millions)	December 31, 2019	Lease liabilities
		undiscounted 2019
Less than one year	246	295
Between one and two years	202	246
Between two and three years	163	202
Between three and four years	138	173
Between four and five years	119	150
After five years	1 081	2 419
Total lease liabilities	1 949	3 485
Less current portion of lease liabilities	-246	-295
Non-current portion of lease liabilities	1 703	3 190

At January 1, 2019 and December 31, 2019, there were no material future cash outflows, including extension options, excluded from the measurement of lease liabilities. The Group's most material lease with a lease term extension, representing a lease liability value of USD 0.6 billion, has a determined lease term end date of 2071.

In 2019, the Group completed sale and leaseback transactions for certain property, plant and equipment as part of its plans to consolidate sites. Transactions resulted in net cash inflows of USD 0.7 billion and the recognition of USD 96 million of lease liabilities, and USD 37 million of right-of-use assets. The right-of-use assets value reflects the proportion of the property, plant and equipment retained for a period of one to five years, with two five-year extension periods for certain right-of-use assets. The liabilities reflect the net present value of future lease payments. The net gain on the sale and leaseback transactions amounted to USD 0.5 billion in the year and USD 10 million in the quarter.

The following table provides additional disclosures related to right-of-use assets and lease liabilities of continuing operations:

(USD millions)	Q4 2019	FY 2019
Interest expense on lease liabilities ¹	16	66
Expense on short-term leases	1	7
Expense on low-value leases	1	8
Total cash outflow for leases	107	339
<i>Thereof:</i>		
<i>Cash outflows for short-term leases and low-value leases²</i>	2	15
<i>Payments of interest³</i>	15	51
<i>Repayment of lease liabilities⁴</i>	90	273

¹ Weighted average interest rate is 3.3% and 3.9% for Q4 2019 and year ending December 2019, respectively.

² Cash flows from short-term and low-value leases are included within total net cash flows from operating activities. The portfolio of short-term leases to which the Group is committed to at December 31, 2019, is similar to the portfolio of short-term leases the Group entered into during 2019.

³ Included within total net cash flows from operating activities

⁴ Reported as cash outflows used in financing activities net of lease incentives received of USD 33 million in year ending December 2019 (Q4 2019: nil)

The net investment held and the income from subleasing right-of-use assets was not significant.

Note 11 provides additional disclosures on discontinued operations.

7. Details to the consolidated statements of cash flows

Reversal of non-cash items and other adjustments from continuing operations

(USD millions)	Q4 2019	Q4 2018	Change
Depreciation, amortization and impairments on:			
Property, plant and equipment	382	476	-94
Right-of-use assets	78		78
Intangible assets	1 477	1 160	317
Financial assets ¹	11	55	-44
Non-cash change in provisions and other non-current liabilities	471	470	1
Gains on disposal and other adjustments on property, plant and equipment; intangible assets; financial assets; and other non-current assets, net	-533	-123	-410
Equity-settled compensation expense	170	167	3
Income from associated companies	-150	-141	-9
Taxes	630	113	517
Net financial expense	214	170	44
Total	2 750	2 347	403

¹ Includes fair value adjustments

(USD millions)	FY 2019	FY 2018	Change
Depreciation, amortization and impairments on:			
Property, plant and equipment	1 547	1 783	-236
Right-of-use assets ¹	305		305
Intangible assets	3 974	3 428	546
Financial assets ²	-38	6	-44
Non-cash change in provisions and other non-current liabilities	1 871	895	976
Gains on disposal and other adjustments on property, plant and equipment; intangible assets; financial assets; and other non-current assets, net	-1 234	-902	-332
Equity-settled compensation expense	758	673	85
Income from associated companies ³	-659	-6 438	5 779
Taxes	1 793	1 295	498
Net financial expense	805	746	59
Total	9 122	1 486	7 636

¹ Depreciation of right-of-use assets recognized from January 1, 2019, the date of implementation of IFRS 16 leases. Notes 2 and 6 provide additional disclosures.

² Includes fair value adjustments

³ 2018 includes a reversal of a pre-tax gain (USD 5.8 billion) recognized from the divestment of the investment in GSK Consumer Healthcare Holdings Ltd. (see Note 3). The net cash proceed of USD 13.0 billion from the divestment was included in the consolidated statements of cash flows in line "Acquisitions and divestments of interests in associated companies, net."

Total amount of taxes paid

In 2019, the total amount of taxes paid was USD 2.0 billion (Q4 2019: USD 760 million), of which USD 1.9 billion (Q4 2019: USD 681 million) was included within "Net cash flows from operating activities from continuing operations", USD 38 million (Q4 2019: nil) was included within "Net cash flows from operating activities from discontinued operations," and USD 79 million (Q4 2019: USD 79 million) was included within "Net cash flows used in investing activities from discontinued operations."

In 2018, the total taxes paid amounted to USD 1.8 billion (Q4 2018: USD 490 million), of which USD 1.5 billion (Q4 2018: USD 397 million) was within "Net cash flows from operating activities from continuing operations", USD 164 million (Q4 2018: USD 29 million) was included within "Net cash flows from operating activities from discontinued operations," and USD 139 million (Q4 2018: USD 64 million) was included within "Net cash flows used in investing activities from continuing operations."

Cash flows arising from acquisitions and divestments of businesses, net

(USD millions)	Q4 2019	Q4 2018	FY 2019	FY 2018
Net assets recognized as a result of business combinations		-1 812	-4 124	-13 660
Fair value of previously held equity interests			33	
Receivables and payables contingent consideration, net			242	-5
Payments, deferred consideration and other adjustments, net	1	1	-2	-36
Cash flows used for acquisitions of businesses	1	-1 811	-3 851	-13 701
Cash flows from divestments of businesses, net¹	81	7	91	18
Cash flows used for acquisitions and from divestments of businesses, net	82	-1 804	-3 760	-13 683

¹ In 2019, the USD 91 million (Q4 2019: USD 81 million) included USD 4 million (Q4 2019: USD 15 million net cash inflows) net cash outflows from previous years divestments and USD 95 million (Q4 2019: USD 66 million) net cash inflows from business divestments in 2019. The net identifiable assets of the 2019 divested businesses amounted to USD 196 million (Q4 2019: USD 133 million), comprised of non-current asset of USD 159 million (Q4 2019: USD 94 million), current assets of USD 96 million including USD 11 million cash and cash equivalents (Q4 2019: USD 87 million, including USD 11 million cash and cash equivalents), non-current liabilities USD 18 million (Q4 2019: USD 11 million) and current liabilities of USD 41 million (Q4 2019: USD 37 million). In 2018, USD 18 million (Q4 2018: USD 7 million) represented the net cash inflows from previous years divestments.

Note 3 and 8 provide further information regarding acquisitions and divestments of businesses. All acquisitions were for cash.

For net cash flows used in investing activities from discontinued operations, see Note 11.

8. Acquisitions of businesses

Fair value of assets and liabilities arising from acquisitions:

(USD millions)	FY 2019	FY 2018
Property, plant and equipment	44	137
Currently marketed products	3 550	2 531
Acquired research and development	342	10 224
Other intangible assets	22	1
Deferred tax assets	60	381
Financial and other assets	8	19
Inventories	195	20
Trade receivables and other current assets	4	90
Cash and cash equivalents		1 112
Deferred tax liabilities	-107	-2 874
Current and non-current financial debts	-2	-14
Trade payables and other liabilities	-178	-627
Net identifiable assets acquired	3 938	11 000
Acquired cash and cash equivalents		-1 112
Non-controlling interests		-26
Goodwill	186	4 084
Net assets recognized as a result of business combinations¹	4 124	13 946

¹ Net assets recognized as a result of business combinations in the consolidated balance sheet from continuing operations were USD 13 660 million in 2018.

9. Legal proceedings update

A number of Novartis companies are, and will likely continue to be, subject to various legal proceedings, including litigations, arbitrations and governmental investigations, that arise from time to time. Legal proceedings are inherently unpredictable. As a result, the Group may become subject to substantial liabilities that may not be covered by insurance and may in the future incur judgments or enter into settlements of claims that could have a material adverse effect on its results of operations or cash flow. Note 19 to the Consolidated Financial Statements in our 2018 Annual Report and 2018 Form 20-F contains a summary as of the date of these reports of significant legal proceedings to which Novartis or its subsidiaries were a party. The following is a summary as of January 28, 2020 of significant developments in those proceedings, as well as any new significant proceedings commenced since the date of the 2018 Annual Report and 2018 Form 20-F. Reference is also made to Note 20 to the Consolidated Financial Statements in our 2019 Annual Report and 2019 Form 20-F for a summary of significant legal proceedings.

INVESTIGATIONS AND RELATED LITIGATIONS

Southern District of New York (S.D.N.Y.) marketing practices investigation and litigation

In 2013, the US government filed a civil complaint in intervention to an individual *qui tam* action against Novartis Pharmaceuticals Corporation (NPC) in the United States District Court for the S.D.N.Y. The complaint, as subsequently amended, asserts federal False Claims Act and common law claims with respect to speaker programs and other promotional activities for certain NPC cardiovascular medications (including *Lotrel*, *Starlix* and *Valturna*) allegedly serving as mechanisms to provide kickbacks to healthcare professionals from 2002 to 2011.

Also in 2013, New York State filed a civil complaint in intervention asserting similar claims. Neither government complaint in intervention adopted the individual relator's claims with respect to off-label promotion of *Valturna*, which were subsequently dismissed with prejudice by the court. The individual relator continues to litigate the kickback claims on behalf of other states and municipalities. Novartis is engaged in settlement discussions to resolve the above-described claims and has recorded a provision in the amount of USD 0.7 billion in Q2 2019.

South Korea investigation

In 2016, the Seoul Western District Prosecutor initiated a criminal investigation into, among other things, allegations that Novartis Korea utilized medical journals to provide inappropriate economic benefits to HCPs, which resulted in a non-material fine in January 2020.

In addition to the matters described above, there have been other developments in the other legal matters described in Note 19 to the Consolidated Financial Statements contained in our 2018 Annual Report and 2018 Form 20-F.

Novartis believes that its total provisions for investigations, product liability, arbitration and other legal matters are adequate based upon currently available information. However, given the inherent difficulties in estimating liabilities, there can be no assurance that additional liabilities and costs will not be incurred beyond the amounts provided.

10. Segmentation of key figures

The businesses of Novartis are divided operationally on a worldwide basis into two identified reporting segments, Innovative Medicines and Sandoz. In addition, we separately report Corporate activities.

Reporting segments are presented in a manner consistent with the internal reporting to the chief operating decision maker which is the Executive Committee of Novartis. The reporting segments are managed separately because they each research, develop, manufacture, distribute and sell distinct products that require differing marketing strategies.

The Executive Committee of Novartis is responsible for allocating resources and assessing the performance of the reporting segments.

The reporting segments are as follows:

Innovative Medicines researches, develops, manufactures, distributes and sells patented prescription medicines. The Innovative Medicines Division is organized into two global business units: Novartis Oncology and Novartis Pharmaceuticals. Novartis Oncology consists of the global business franchise Oncology, and Novartis Pharmaceuticals consists of the global business franchises Ophthalmology; Neuroscience; Immunology, Hepatology and Dermatology; Respiratory; Cardiovascular, Renal and Metabolism; and Established Medicines.

Sandoz develops, manufactures and markets finished dosage form medicines as well as intermediary products including active pharmaceutical ingredients. Sandoz is organized globally into three franchises: Retail Generics, Anti-Infectives and Biopharmaceuticals. In Retail Generics, Sandoz develops, manufactures and markets active ingredients and finished dosage forms of small molecule pharmaceuticals to third parties across a broad range of therapeutic areas, as well as finished dosage form of anti-infectives sold to third parties. In Anti-Infectives, Sandoz manufactures and supplies active pharmaceutical ingredients and intermediates, mainly antibiotics, for internal use by Retail Generics and for sale to third-party customers. In Biopharmaceuticals, Sandoz develops, manufactures and markets protein- or other biotechnology-based products, including biosimilars, and provides biotechnology manufacturing services to other companies.

The divisions are supported by Novartis Institutes for BioMedical Research, Global Drug Development, Novartis Technical Operations and Novartis Business Services. Corporate includes the costs of the Group headquarters and those of corporate coordination functions in major countries, and items that are not specific to one segment. Further details are provided in Note 3 to the Consolidated Financial Statements of the Annual Report 2019.

Following the February 28, 2019, shareholders' approval of the spin-off of the Alcon business, the Group reported its financial results for the current and prior years as "continuing operations" and "discontinued operations" (refer to Notes 2, 3 and 11 for further details).

Continuing operations comprise the activities of Innovative Medicines and Sandoz Divisions and the continuing Corporate activities.

Discontinued operations include the operational results from the Alcon eye care devices business and certain Corporate activities attributable to the Alcon business prior to the spin-off, the gain on distribution of Alcon Inc. to Novartis AG shareholders and certain other expenses related to the Distribution (See Notes 2, 3 and 11).

Segmentation – Consolidated income statement – Fourth quarter

(USD millions)	Innovative Medicines		Sandoz		Corporate (including eliminations)		Group	
	Q4 2019	Q4 2018	Q4 2019	Q4 2018	Q4 2019	Q4 2018	Q4 2019	Q4 2018
Net sales to third parties from continuing operations	9 920	9 022	2 483	2 459			12 403	11 481
Sales to continuing and discontinued segments	167	190	23	37	-190	-206		21
Net sales from continuing operations	10 087	9 212	2 506	2 496	-190	-206	12 403	11 502
Other revenues	286	381	22	14	5		313	395
Cost of goods sold	-2 820	-2 897	-1 389	-1 364	217	223	-3 992	-4 038
Gross profit from continuing operations	7 553	6 696	1 139	1 146	32	17	8 724	7 859
Selling, general and administration	-3 185	-2 960	-574	-576	-146	-141	-3 905	-3 677
Research and development	-2 192	-2 010	-661	-224			-2 853	-2 234
Other income	578	115	45	79	20	-30	643	164
Other expense	-544	-541	-144	-188	-98	-21	-786	-750
Operating income from continuing operations	2 210	1 300	-195	237	-192	-175	1 823	1 362
<i>as % of net sales</i>	<i>22.3%</i>	<i>14.4%</i>	<i>-7.9%</i>	<i>9.6%</i>			<i>14.7%</i>	<i>11.9%</i>
Income from associated companies		1			150	140	150	141
Interest expense							-203	-248
Other financial income and expense, net							-11	78
Income before taxes from continuing operations							1 759	1 333
Taxes							-630	-113
Net income from continuing operations							1 129	1 220
Net loss from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders								-26
Net loss from discontinued operations								-26
Net income							1 129	1 194

Segmentation – Consolidated income statement – Full year

(USD millions)	Innovative Medicines		Sandoz		Corporate (including eliminations)		Group	
	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018
Net sales to third parties from continuing operations	37 714	34 892	9 731	9 859			47 445	44 751
Sales to continuing and discontinued segments	783	741	141	177	-871	-836	53	82
Net sales from continuing operations	38 497	35 633	9 872	10 036	-871	-836	47 498	44 833
Other revenues	1 092	1 188	63	62	24	16	1 179	1 266
Cost of goods sold	-10 050	-9 870	-5 334	-5 530	959	890	-14 425	-14 510
Gross profit from continuing operations	29 539	26 951	4 601	4 568	112	70	34 252	31 589
Selling, general and administration	-11 617	-10 907	-2 218	-2 305	-534	-505	-14 369	-13 717
Research and development	-8 152	-7 675	-1 250	-814			-9 402	-8 489
Other income	1 586	977	167	505	278	147	2 031	1 629
Other expense	-2 069	-1 475	-749	-622	-608	-512	-3 426	-2 609
Operating income from continuing operations	9 287	7 871	551	1 332	-752	-800	9 086	8 403
<i>as % of net sales</i>	<i>24.6%</i>	<i>22.6%</i>	<i>5.7%</i>	<i>13.5%</i>			<i>19.2%</i>	<i>18.8%</i>
Income from associated companies	1	1	2	5	656	6 432	659	6 438
Interest expense							-850	-932
Other financial income and expense, net							45	186
Income before taxes from continuing operations							8 940	14 095
Taxes							-1 793	-1 295
Net income from continuing operations							7 147	12 800
Net loss from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders							-101	-186
Gain on distribution of Alcon Inc. to Novartis AG shareholders							4 691	
Net income/loss from discontinued operations							4 590	-186
Net income							11 737	12 614

Segmentation – Additional consolidated balance sheet disclosure¹

(USD millions)	Innovative Medicines		Sandoz		Alcon		Corporate (including eliminations)		Group	
	Dec 31, 2019	Dec 31, 2018	Dec 31, 2019	Dec 31, 2018	Dec 31, 2019	Dec 31, 2018	Dec 31, 2019	Dec 31, 2018	Dec 31, 2019	Dec 31, 2018
Net operating assets	55 893	53 999	12 664	13 951		24 007			71 489	94 876
Included in net operating assets are:										
Property, plant and equipment	9 632	10 098	1 888	2 159		2 878	549	561	12 069	15 696
Goodwill	18 750	18 551	7 767	7 837		8 899	7	7	26 524	35 294
Intangible assets other than goodwill	27 586	26 042	1 125	1 875		10 679	76	123	28 787	38 719

¹ From February 28, 2019, the Alcon Division was reported as discontinued operations (see Notes 2, 3 and 11). In accordance with IFRS, the December 31, 2018 consolidated balance sheet includes the assets and liabilities of the Alcon eye care devices business and certain Corporate assets and liabilities attributable to the Alcon business.

Segmentation – Net sales by region¹– Fourth quarter

	Q4 2019	Q4 2018	% change		Q4 2019	Q4 2018
	USD m	USD m	USD	cc ²	% of total	% of total
Innovative Medicines						
Europe	3 271	3 065	7	9	33	34
US	3 735	3 186	17	17	38	35
Asia/Africa/Australasia	2 223	2 119	5	4	22	23
Canada and Latin America	691	652	6	14	7	8
Total	9 920	9 022	10	11	100	100
<i>Of which in Established Markets</i>	7 530	6 867	10	11	76	76
<i>Of which in Emerging Growth Markets</i>	2 390	2 155	11	14	24	24
Sandoz						
Europe	1 308	1 230	6	9	53	50
US	604	693	-13	-13	24	28
Asia/Africa/Australasia	357	333	7	7	14	14
Canada and Latin America	214	203	5	9	9	8
Total	2 483	2 459	1	2	100	100
<i>Of which in Established Markets</i>	1 797	1 816	-1	1	72	74
<i>Of which in Emerging Growth Markets</i>	686	643	7	8	28	26
Continuing operations						
Europe	4 579	4 295	7	9	37	37
US	4 339	3 879	12	12	35	34
Asia/Africa/Australasia	2 580	2 452	5	5	21	21
Canada and Latin America	905	855	6	13	7	8
Total	12 403	11 481	8	9	100	100
<i>Of which in Established Markets</i>	9 327	8 683	7	8	75	76
<i>Of which in Emerging Growth Markets</i>	3 076	2 798	10	12	25	24

¹ Net sales from operations by location of third-party customer. Emerging Growth Markets comprise all markets other than the Established Markets of the US, Canada, Western Europe, Japan, Australia and New Zealand.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 58.

Segmentation – Net sales by region¹– Full year

	FY 2019	FY 2018	% change		FY 2019	FY 2018
	USD m	USD m	USD	cc ²	% of total	% of total
Innovative Medicines						
Europe	12 818	12 296	4	10	34	35
US	13 789	11 864	16	16	37	34
Asia/Africa/Australasia	8 458	8 097	4	6	22	23
Canada and Latin America	2 649	2 635	1	11	7	8
Total	37 714	34 892	8	11	100	100
<i>Of which in Established Markets</i>	28 573	26 258	9	11	76	75
<i>Of which in Emerging Growth Markets</i>	9 141	8 634	6	12	24	25
Sandoz						
Europe	5 115	4 963	3	9	53	50
US	2 491	2 754	-10	-9	26	28
Asia/Africa/Australasia	1 341	1 363	-2	1	14	14
Canada and Latin America	784	779	1	6	7	8
Total	9 731	9 859	-1	2	100	100
<i>Of which in Established Markets</i>	7 111	7 233	-2	2	73	73
<i>Of which in Emerging Growth Markets</i>	2 620	2 626	0	4	27	27
Continuing operations						
Europe	17 933	17 259	4	10	38	39
US	16 280	14 618	11	11	34	33
Asia/Africa/Australasia	9 799	9 460	4	6	21	21
Canada and Latin America	3 433	3 414	1	9	7	7
Total	47 445	44 751	6	9	100	100
<i>Of which in Established Markets</i>	35 684	33 491	7	9	75	75
<i>Of which in Emerging Growth Markets</i>	11 761	11 260	4	10	25	25

¹ Net sales from operations by location of third-party customer. Emerging Growth Markets comprise all markets other than the Established Markets of the US, Canada, Western Europe, Japan, Australia and New Zealand.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 58.

Segmentation – Net sales by business franchise

Innovative Medicines Division net sales by business franchise – Fourth quarter

	Q4 2019 USD m	Q4 2018 USD m	% change USD	% change cc ²
Oncology				
<i>Tasigna</i>	491	476	3	4
<i>Sandostatin</i>	402	399	1	2
<i>Afinitor/Votubia</i>	365	399	-9	-8
<i>Promacta/Revolade</i>	380	330	15	16
<i>Tafinlar + Mekinist</i>	356	313	14	15
<i>Gleevec/Glivec</i>	313	373	-16	-15
<i>Jakavi</i>	293	256	14	17
<i>Exjade/Jadenu</i>	231	286	-19	-19
<i>Votrient</i>	177	198	-11	-10
<i>Kisqali</i>	155	60	158	166
<i>Lutathera</i>	107	81	32	31
<i>Kymriah</i>	96	28	nm	nm
<i>Piqray</i>	67		nm	nm
Other	295	300	-2	0
Total Novartis Oncology business unit	3 728	3 499	7	8
Ophthalmology				
<i>Lucentis</i>	517	520	-1	1
Travoprost Group	103	131	-21	-21
<i>Xiidra</i>	90		nm	nm
<i>Beovu</i>	35		nm	nm
Other	482	476	1	2
Total Ophthalmology	1 227	1 127	9	10
Immunology, Hepatology and Dermatology				
<i>Cosentyx</i>	965	806	20	21
<i>Ilaris</i>	178	155	15	16
Other		1	nm	nm
Total Immunology, Hepatology and Dermatology	1 143	962	19	20
Neuroscience				
<i>Gilenya</i>	803	836	-4	-3
<i>Zolgensma</i>	186		nm	nm
<i>Aimovig</i>	28	8	nm	nm
<i>Mayzent</i>	17		nm	nm
Other	14	17	-18	-18
Total Neuroscience	1 048	861	22	23
Respiratory				
<i>Xolair</i> ¹	303	268	13	16
<i>Ultibro Breezhaler</i>	114	122	-7	-5
<i>Seebri Breezhaler</i>	28	37	-24	-20
<i>Onbrez Breezhaler</i>	20	23	-13	-12
Other	6	6	0	-7
Total Respiratory	471	456	3	6
Cardiovascular, Renal and Metabolism				
<i>Entresto</i>	518	318	63	65
Other	5	6	-17	-26
Total Cardiovascular, Renal and Metabolism	523	324	61	63
Established Medicines				
<i>Galvus Group</i>	342	327	5	5
<i>Diovan Group</i>	266	260	2	5
<i>Exforge Group</i>	245	251	-2	-1
<i>Zortress/Certican</i>	123	120	3	5
<i>Neoral/Sandimmun(e)</i>	105	114	-8	-8
<i>Voltaren/Cataflam</i>	104	112	-7	-7
Other	595	609	-2	-1
Total Established Medicines	1 780	1 793	-1	1
Total Novartis Pharmaceuticals business unit	6 192	5 523	12	14
Total division net sales	9 920	9 022	10	11

¹ *Xolair* sales for all indications are reported in the Respiratory franchise.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 58.

nm = not meaningful

Innovative Medicines Division net sales by business franchise – Full year

	FY 2019 USD m	FY 2018 USD m	% change USD	% change cc ²
Oncology				
<i>Tasigna</i>	1 880	1 874	0	3
<i>Sandostatín</i>	1 585	1 587	0	2
<i>Afinitor/Votubia</i>	1 539	1 556	-1	1
<i>Promacta/Revolade</i>	1 416	1 174	21	23
<i>Tafinlar + Mekinist</i>	1 338	1 155	16	20
<i>Gleevec/Glivec</i>	1 263	1 561	-19	-17
<i>Jakavi</i>	1 114	977	14	20
<i>Exjade/Jadenu</i>	975	1 099	-11	-9
<i>Votrient</i>	755	828	-9	-6
<i>Kisqali</i>	480	235	104	111
<i>Lutathera</i>	441	167	164	160
<i>Kymriah</i>	278	76	nm	nm
<i>Piqray</i>	116		nm	nm
Other	1 190	1 139	4	8
Total Novartis Oncology business unit	14 370	13 428	7	10
Ophthalmology				
<i>Lucentis</i>	2 086	2 046	2	7
Travoprost Group	433	517	-16	-14
<i>Xiidra</i>	192		nm	nm
<i>Beovu</i>	35		nm	nm
Other	2 030	1 995	2	5
Total Ophthalmology	4 776	4 558	5	8
Immunology, Hepatology and Dermatology				
<i>Cosentyx</i>	3 551	2 837	25	28
<i>Ilaris</i>	671	554	21	25
Other		1	nm	nm
Total Immunology, Hepatology and Dermatology	4 222	3 392	24	27
Neuroscience				
<i>Gilenya</i>	3 223	3 341	-4	-1
<i>Zolgensma</i>	361		nm	nm
<i>Aimovig</i>	103	8	nm	nm
<i>Mayzent</i>	26		nm	nm
Other	60	80	-25	-23
Total Neuroscience	3 773	3 429	10	13
Respiratory				
<i>Xolair</i> ¹	1 173	1 039	13	19
<i>Ultibro Breezhaler</i>	427	454	-6	-1
<i>Seebri Breezhaler</i>	121	148	-18	-14
<i>Onbrez Breezhaler</i>	82	101	-19	-14
Other	22	25	-12	-6
Total Respiratory	1 825	1 767	3	9
Cardiovascular, Renal and Metabolism				
<i>Entresto</i>	1 726	1 028	68	71
Other	24	22	9	4
Total Cardiovascular, Renal and Metabolism	1 750	1 050	67	70
Established Medicines				
<i>Galvus Group</i>	1 297	1 284	1	5
<i>Diovan Group</i>	1 064	1 023	4	9
<i>Exforge Group</i>	1 025	1 002	2	7
<i>Zortress/Certican</i>	485	464	5	8
<i>Neoral/Sandimmun(e)</i>	419	463	-10	-7
<i>Voltaren/Cataflam</i>	417	445	-6	-4
Other	2 291	2 587	-11	-8
Total Established Medicines	6 998	7 268	-4	0
Total Novartis Pharmaceuticals business unit	23 344	21 464	9	12
Total division net sales	37 714	34 892	8	11

¹ *Xolair* sales for all indications are reported in the Respiratory franchise.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 58.

nm = not meaningful

Net sales of the top 20 Innovative Medicines Division products in 2019 – Fourth quarter

Brands	Business franchise	Key indication	US		Rest of world			Total		
			USD m	% change USD/cc ²	USD m	% change USD	% change cc ²	USD m	% change USD	% change cc ²
<i>Cosentyx</i>	Immunology, Hepatology and Dermatology	Psoriasis, ankylosing spondylitis and psoriatic arthritis	611	25	354	11	14	965	20	21
<i>Gilenya</i>	Neuroscience	Relapsing multiple sclerosis	434	-2	369	-6	-3	803	-4	-3
<i>Lucentis</i>	Ophthalmology	Age-related macular degeneration			517	-1	1	517	-1	1
<i>Tasigna</i>	Oncology	Chronic myeloid leukemia	208	1	283	5	7	491	3	4
<i>Entresto</i>	Cardiovascular, Renal and Metabolism	Chronic heart failure	285	71	233	54	58	518	63	65
<i>Sandostatin</i>	Oncology	Carcinoid tumors and acromegaly	226	11	176	-10	-7	402	1	2
<i>Afinitor/Votubia</i>	Oncology	Breast cancer/TSC	244	-2	121	-19	-18	365	-9	-8
<i>Promacta/Revolade</i>	Oncology	Immune thrombocytopenia (ITP), severe aplastic anemia (SAA)	185	11	195	20	21	380	15	16
<i>Tafinlar + Mekinist</i>	Oncology	BRAF V600+ metastatic and adjuvant melanoma; advanced non-small cell lung cancer (NSCLC)	125	2	231	21	24	356	14	15
<i>Galvus Group</i>	Established Medicines	Diabetes			342	5	5	342	5	5
<i>Gleevec/Glivec</i>	Oncology	Chronic myeloid leukemia and GIST	78	-30	235	-10	-9	313	-16	-15
<i>Xolair</i> ¹	Respiratory	Severe Allergic Asthma (SAA) and Chronic Spontaneous Urticaria (CSU)			303	13	16	303	13	16
<i>Jakavi</i>	Oncology	Myelofibrosis (MF), polycythemia vera (PV)			293	14	17	293	14	17
<i>Diovan Group</i>	Established Medicines	Hypertension	19	12	247	2	4	266	2	5
<i>Exforge Group</i>	Established Medicines	Hypertension	1	-80	244	-1	1	245	-2	-1
<i>Exjade/Jadenu</i>	Oncology	Chronic iron overload	95	-32	136	-7	-7	231	-19	-19
<i>Votrient</i>	Oncology	Renal cell carcinoma	74	-24	103	3	5	177	-11	-10
<i>Ilaris</i>	Immunology, Hepatology and Dermatology	Auto-inflammatory (CAPS, TRAPS, HIDS/MKD, FMF, SJIA, AOSD and gout)	82	8	96	22	26	178	15	16
<i>Zortress/Certican</i>	Established Medicines	Transplantation	44	10	79	-1	1	123	2	5
<i>Kisqali</i>	Oncology	HR+/HER2- metastatic breast cancer	79	58	76	nm	nm	155	158	166
Top 20 products total			2 790	8	4 633	6	8	7 423	7	8
Rest of portfolio			945	57	1 552	6	7	2 497	21	22
Total division sales			3 735	17	6 185	6	8	9 920	10	11

¹ *Xolair* sales for all indications are reported in the Respiratory franchise.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 58.

nm = not meaningful

Net sales of the top 20 Innovative Medicines Division products in 2019 – Full year

Brands	Business franchise	Key indication	US			Rest of world			Total		
			USD m	% change USD/cc ²	USD m	% change USD	% change cc ²	USD m	% change USD	% change cc ²	
<i>Cosentyx</i>	Immunology, Hepatology and Dermatology	Psoriasis, ankylosing spondylitis and psoriatic arthritis	2 220	33	1 331	14	20	3 551	25	28	
<i>Gilenya</i>	Neuroscience	Relapsing multiple sclerosis	1 736	-2	1 487	-6	0	3 223	-4	-1	
<i>Lucentis</i>	Ophthalmology	Age-related macular degeneration			2 086	2	7	2 086	2	7	
<i>Tasigna</i>	Oncology	Chronic myeloid leukemia	804	0	1 076	1	5	1 880	0	3	
<i>Entresto</i>	Cardiovascular, Renal and Metabolism	Chronic heart failure	925	66	801	70	77	1 726	68	71	
<i>Sandostatin</i>	Oncology	Carcinoid tumors and acromegaly	881	8	704	-9	-3	1 585	0	2	
<i>Afinitor/Votubia</i>	Oncology	Breast cancer/TSC	1 003	8	536	-15	-10	1 539	-1	1	
<i>Promacta/Revolade</i>	Oncology	Immune thrombocytopenia (ITP), severe aplastic anemia (SAA)	691	19	725	22	27	1 416	21	23	
<i>Tafinlar + Mekinist</i>	Oncology	BRAF V600+ metastatic and adjuvant melanoma; advanced non-small cell lung cancer (NSCLC)	481	5	857	23	30	1 338	16	20	
<i>Galvus Group</i>	Established Medicines	Diabetes			1 297	1	5	1 297	1	5	
<i>Gleevec/Glivec</i>	Oncology	Chronic myeloid leukemia and GIST	334	-24	929	-17	-14	1 263	-19	-17	
<i>Xolair</i> ¹	Respiratory	Severe Allergic Asthma (SAA) and Chronic Spontaneous Urticaria (CSU)			1 173	13	19	1 173	13	19	
<i>Jakavi</i>	Oncology	Myelofibrosis (MF), polycythemia vera (PV)			1 114	14	20	1 114	14	20	
<i>Diovan Group</i>	Established Medicines	Hypertension	86	2	978	4	10	1 064	4	9	
<i>Exforge Group</i>	Established Medicines	Hypertension	13	-32	1 012	3	8	1 025	2	7	
<i>Exjade/Jadenu</i>	Oncology	Chronic iron overload	450	-14	525	-9	-6	975	-11	-9	
<i>Votrient</i>	Oncology	Renal cell carcinoma	332	-18	423	0	5	755	-9	-6	
<i>Ilaris</i>	Immunology, Hepatology and Dermatology	Auto-inflammatory (CAPS, TRAPS, HIDS/MKD, FMF, SJIA, AOSD and gout)	304	16	367	26	33	671	21	25	
<i>Zortress/Certican</i>	Established Medicines	Transplantation	169	17	316	-1	4	485	5	8	
<i>Kisqali</i>	Oncology	HR+/HER2- metastatic breast cancer	250	45	230	nm	nm	480	104	111	
Top 20 products total			10 679	11	17 967	5	11	28 646	7	11	
Rest of portfolio			3 110	39	5 958	-1	4	9 068	10	13	
Total division sales			13 789	16	23 925	4	9	37 714	8	11	

¹ *Xolair* sales for all indications are reported in the Respiratory franchise.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 58.

nm = not meaningful

Sandoz Division net sales by business franchise – Fourth quarter

	Q4 2019 USD m	Q4 2018 USD m	% change USD	% change cc ²
Retail Generics ¹	1 907	1 933	-1	0
Biopharmaceuticals	425	390	9	11
Anti-Infectives	151	136	11	14
Total division net sales	2 483	2 459	1	2

¹ Of which USD 197 million (2018: USD 208 million) represents Anti-Infectives sold under Sandoz name

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 58.

Sandoz Division net sales by business franchise – Full year

	FY 2019 USD m	FY 2018 USD m	% change USD	% change cc ²
Retail Generics ¹	7 590	7 880	-4	0
Biopharmaceuticals	1 607	1 436	12	16
Anti-Infectives	534	543	-2	2
Total division net sales	9 731	9 859	-1	2

¹ Of which USD 784 million (2018: USD 826 million) represents Anti-Infectives sold under Sandoz name

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 58.

The product portfolio of Sandoz is widely spread in 2019 and 2018.

Segmentation – Other revenue – Fourth quarter

(USD millions)	Innovative Medicines		Sandoz		Corporate		Group	
	Q4 2019	Q4 2018	Q4 2019	Q4 2018	Q4 2019	Q4 2018	Q4 2019	Q4 2018
Profit sharing income	190	310		1			190	311
Royalty income	25	41	6	3	5		36	44
Milestone income	43	21	7	9			50	30
Other ¹	28	9	9	1			37	10
Total other revenues	286	381	22	14	5		313	395

¹ Other includes revenue from activities such as manufacturing or other services rendered, to the extent such revenue is not recorded under net sales.

Segmentation – Other revenue – Full year

(USD millions)	Innovative Medicines		Sandoz		Corporate		Group	
	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018
Profit sharing income	732	874	2	3			734	877
Royalty income	104	162	19	10	24	16	147	188
Milestone income	201	128	30	45			231	173
Other ¹	55	24	12	4			67	28
Total other revenues	1 092	1 188	63	62	24	16	1 179	1 266

¹ Other includes revenue from activities such as manufacturing or other services rendered, to the extent such revenue is not recorded under net sales.

11. Discontinued operations

Discontinued operations include the operational results from the Alcon eye care devices business and certain Corporate activities attributable to the Alcon business prior to the spin-off, the gain on distribution of Alcon Inc. to Novartis AG shareholders, and certain other expenses related to the Distribution (refer to Notes 2 and 3 for further details).

The Alcon eye care devices business researched, discovered, developed, manufactured, distributed and sold a broad range of eye care products. Alcon was organized into two global business franchises, Surgical and Vision Care. Alcon also provided services, training, education and technical support for both the Surgical and Vision Care businesses.

Consolidated income statement

(USD millions)	Q4 2019 ¹	Q4 2018	FY 2019	FY 2018
Net sales to third parties of discontinued operations	1 788	1 777	1 777	7 149
Sales to continuing segments	1	32	32	4
Net sales of discontinued operations	1 789	1 809	1 809	7 153
Cost of goods sold	-910	-860	-860	-3 983
Gross profit of discontinued operations	879	949	949	3 170
Selling, general and administration	-727	-638	-638	-2 754
Research and development	-165	-142	-142	-585
Other income	-13	15	15	61
Other expense	-37	-113	-113	-126
Operating income of discontinued operations	-63	71	71	-234
<i>as % of net sales</i>	<i>-3.5%</i>	<i>4.0%</i>	<i>4.0%</i>	<i>-3.3%</i>
Interest expense	-6	-10	-10	-25
Other financial income and expense		-3	-3	-1
Income before taxes of discontinued operations	-69	58	58	-260
Taxes	43	-159	-159	74
Net loss from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders	-26	-101	-101	-186
Gain on distribution of Alcon Inc. to Novartis AG shareholders ²			4 691	
Net loss/income of discontinued operations	-26	4 590	4 590	-186

¹ As the Alcon spin-off was completed on April 8, 2019, there were no results of operations from the Alcon business recorded in Q4 2019.

² See Note 3 for further details on the non-taxable non-cash gain on distribution of Alcon Inc. to Novartis AG shareholders.

Supplemental disclosures related to the Alcon business distributed to Novartis AG shareholders

Net income

Included in net income from discontinued operations are:

(USD millions)	Q4 2019 ¹	Q4 2018	FY 2019	FY 2018
Interest income		1	1	2
Depreciation of property, plant and equipment		-58	-42	-235
Depreciation of right-of-use assets ²			-9	
Amortization of intangible assets		-258	-174	-1 052
Impairment charges on property, plant and equipment		-3		-3
Impairment charges on intangible assets		-2		-391
Additions to restructuring provisions		-9		-13
Equity-based compensation of Novartis equity plans		-59	-9	-93

¹ As the Alcon spin-off was completed on April 8, 2019, there were no results of operations from the Alcon business recorded in Q4 2019.

² Depreciation of right-of-use assets recognized from January 1, 2019, the date of implementation of IFRS 16 leases. See Note 2 for additional disclosures.

Cash flows used in investing activities from discontinued operations

Cash flows used in investing activities from discontinued operations include the investing activities of the Alcon business in all periods.

(USD millions)	Q4 2019	Q4 2018	FY 2019	FY 2018
Payments out of provisions for transaction costs attributable to the spin-off of the Alcon business	-3		-29	
Divested cash and cash equivalents			-628	
Cash flows attributable to the spin-off of the Alcon business	-3		-657	
Other cash flows used in investing activities, net	-54	-543	-502	-1 001
Net cash flows used in investing activities from discontinued operations	-57	-543	-1 159	-1 001

Cash flows from financing activities from discontinued operations

In 2019, the net cash inflows from financing activities from discontinued operations of USD 3.3 billion (Q4 2019: USD 22 million net cash outflows) included USD 3.5 billion cash inflows from borrowings in connection with the distribution (spin-off) of the Alcon business to Novartis AG shareholders and USD 212 million (Q4 2019: USD 22 million) transaction cost payment directly attributable to the distribution (spin-off) of the Alcon business to Novartis shareholders (see Notes 2 and 3).

In 2018, the net cash outflows from financing activities from discontinued operations of USD 167 million (Q4 2018: USD 303 million net cash inflows) included USD 57 million (Q4 2018: USD 16 million) transaction cost payment directly attributable to the distribution (spin-off) of the Alcon business to Novartis shareholders.

Leases

The lease liabilities recorded in discontinued operations on January 1, 2019, the date of implementation of IFRS 16 Leases (see Note 2), were USD 286 million, and the right-of-use assets were USD 276 million, including USD 89 million and USD 75 million, respectively, for the previously reported finance lease obligations. For discontinued operations, there were no impairments or significant additions, depreciation or contract terminations of right-of-use assets for the period from January 1, 2019, to February 28, 2019, the date of shareholder approval for the Alcon spin-off.

Net assets derecognized

(USD millions)	April 8, 2019
Property, plant and equipment	2 858
Right-of-use assets	269
Goodwill	8 906
Intangible assets other than goodwill	11 121
Deferred tax assets	732
Financial and other non-current assets	526
Inventories	1 469
Trade receivables and other current assets	1 787
Cash and cash equivalents	628
Deferred tax liabilities	-1 713
Current and non-current lease liabilities	-269
Current and non-current financial debts	-3 538
Trade payables, provisions and other liabilities	-2 751
Net assets derecognized	20 025

Significant transaction closed in 2019

In March 2019, Alcon acquired PowerVision, Inc. (PowerVision), a privately-held, US-based medical device development company focused on developing accommodative, implantable intraocular lenses. The fair value of the total purchase consideration was USD 424 million. The amount consisted of an initial cash payment of USD 289 million and the net present value of the contingent consideration of USD 135 million, due to PowerVision shareholders, which they are eligible to receive upon the achievement of specified regulatory and commercialization milestones. The purchase price allocation resulted in net identifiable assets of USD 418 million, consisting of intangible assets, of USD 505 million, net deferred tax liabilities of USD 93 million, other net assets of USD 6 million, and goodwill of USD 6 million. The 2019 results of operations since the date of the acquisition are not material.

For additional information related to the distribution (spin-off) of the Alcon business to Novartis AG shareholders, effected through a dividend in kind distribution that was completed on April 8, 2019, refer to Notes 2 and 3.

12. Events subsequent to the December 31, 2019, consolidated balance sheet date

Significant transaction closed in January 2020

On November 23, 2019, Novartis entered into an agreement and plan of merger with The Medicines Company, New Jersey, USA. The transaction was completed on January 6, 2020. For details see Note 3.

Increase in current financial debts

On January 7, 2020, Novartis borrowed USD 7 billion under a short-term credit facility with a syndicate of bank. For additional information, see Note 29 to the Consolidated Financial Statements of the Annual Report 2019.

Dividend proposal for 2019 and approval of the Group's 2019 consolidated financial statements

On January 28, 2020, the Novartis AG Board of Directors proposed the acceptance of the 2019 consolidated financial statements of the Novartis Group for approval by the Annual General Meeting on February 28, 2020. Furthermore, also on January 28, 2020, the Board proposed a dividend of CHF 2.95 per share to be approved at the Annual General Meeting on February 28, 2020. If approved, total dividend payments would amount to approximately USD 7.0 billion (2018: USD 6.6 billion), using the CHF/USD December 31, 2019, exchange rate.

SUPPLEMENTARY INFORMATION (unaudited)

Non-IFRS disclosures

Core results

The Group's core results –including core operating income, core net income and core earnings per share – exclude fully the amortization and impairment charges of intangible assets, excluding software, net gains and losses on fund investments and equity securities valued at fair value through profit and loss, and certain acquisition and divestment related items. The following items that exceed a threshold of USD 25 million are also excluded: integration and divestment related income and expenses, divestment gains and losses, restructuring charges/releases and related items, legal related items, impairments of property, plant and equipment and financial assets, as well as income and expense items that management deems exceptional and that are or are expected to accumulate within the year to be over a USD 25 million threshold.

Novartis believes that investor understanding of the Group's performance is enhanced by disclosing core measures of performance because, since they exclude items which can vary significantly from year to year, the core measures enable better comparison of business performance across years. For this same reason, Novartis uses these core measures in addition to IFRS and other measures as important factors in assessing the Group's performance.

The following are examples of how these core measures are utilized:

- In addition to monthly reports containing financial information prepared under International Financial Reporting Standards (IFRS), senior management receives a monthly analysis incorporating these core measures.
- Annual budgets are prepared for both IFRS and core measures.

Despite the use of these measures by management in setting goals and measuring the Group's performance, these are non-IFRS measures that have no standardized meaning prescribed by IFRS. As a result, such measures have limits in usefulness to investors.

Because of their non-standardized definitions, the core measures (unlike IFRS measures) may not be comparable to the calculation of similar measures of other companies. These core measures are presented solely to permit investors to more fully understand how the Group's management assesses underlying performance. These core measures are not, and should not be viewed as, a substitute for IFRS measures.

As an internal measure of Group performance, these core measures have limitations, and the Group's performance management process is not solely restricted to these metrics. A limitation of the core measures is that they provide a view of the Group's operations without including all events during a period, such as the effects of an acquisition, divestment, or amortization/impairments of purchased intangible assets and restructurings.

Constant currencies

Changes in the relative values of non-US currencies to the US dollar can affect the Group's financial results and financial position. To provide additional information that may be useful to investors, including changes in sales volume, we present information about our net sales and various values relating to operating and net income that are adjusted for such foreign currency effects.

Constant currency calculations have the goal of eliminating two exchange rate effects so that an estimate can be made of underlying changes in the consolidated income statement excluding the impact of fluctuations in exchange rates:

- the impact of translating the income statements of consolidated entities from their non-USD functional currencies to USD; and

- the impact of exchange rate movements on the major transactions of consolidated entities performed in currencies other than their functional currency.

We calculate constant currency measures by translating the current year's foreign currency values for sales and other income statement items into USD using the average exchange rates from the prior year and comparing them to the prior year values in USD.

We use these constant currency measures in evaluating the Group's performance, since they may assist us in evaluating our ongoing performance from year to year. However, in performing our evaluation, we also consider equivalent measures of performance which are not affected by changes in the relative value of currencies.

Growth rate calculation

For ease of understanding, Novartis uses a sign convention for its growth rates such that a reduction in operating expenses or losses compared to the prior year is shown as a positive growth.

Net debt and free cash flow

Net debt and free cash flow are non-IFRS financial measures, which means they should not be interpreted as measures determined under IFRS. Net debt is presented as additional information because management believes it is a useful supplemental indicator of the Group's ability to pay dividends, to meet financial commitments and to invest in new strategic opportunities, including strengthening its balance sheet. Free cash flow is presented as additional information because management believes it is a useful supplemental indicator of the Group's ability to operate without reliance on additional borrowing or use of existing cash. Free cash flow is a measure of the net cash generated that is available for debt repayment, investment in strategic opportunities and for returning to shareholders. Cash flows in connection with the acquisition or divestment of subsidiaries, associated companies and non-controlling interests in subsidiaries are not taken into account to determine free cash flow. Free cash flow is not intended to be a substitute measure for net cash flows from operating activities as determined under IFRS.

CORE RESULTS – Reconciliation from IFRS results to core results – Group – Fourth quarter

(USD millions unless indicated otherwise)	Innovative Medicines		Sandoz		Corporate		Group	
	Q4 2019	Q4 2018	Q4 2019	Q4 2018	Q4 2019	Q4 2018	Q4 2019	Q4 2018
IFRS operating income from continuing operations	2 210	1 300	-195	237	-192	-175	1 823	1 362
Amortization of intangible assets	737	478	75	80			812	558
Impairments								
Intangible assets	190	480	459	105			649	585
Property, plant and equipment related to the Group-wide rationalization of manufacturing sites	5	71	-1	19			4	90
Other property, plant and equipment	9	23	27				36	23
Total impairment charges	204	574	485	124			689	698
Acquisition or divestment of businesses and related items								
- Income	-1				-29	-2	-30	-2
- Expense	30	27			32	2	62	29
Total acquisition or divestment of businesses and related items, net	29	27			3		32	27
Other items								
Divestment gains	-461	8				-1	-461	7
Financial assets – fair value adjustments	35	15			-24	40	11	55
Restructuring and related items								
- Income	-20	-14	-4	-10	-1		-25	-24
- Expense	171	337	120	80	31	16	322	433
Legal-related items								
- Income			-1				-1	
- Expense	280	6	12				292	6
Additional income	-63	-35		-29	-6	-19	-69	-83
Additional expense		73	25		12		37	73
Total other items	-58	390	152	41	12	36	106	467
Total adjustments	912	1 469	712	245	15	36	1 639	1 750
Core operating income from continuing operations	3 122	2 769	517	482	-177	-139	3 462	3 112
<i>as % of net sales</i>	<i>31.5%</i>	<i>30.7%</i>	<i>20.8%</i>	<i>19.6%</i>			<i>27.9%</i>	<i>27.1%</i>
Income from associated companies		1			150	140	150	141
Core adjustments to income from associated companies, net of tax					92	73	92	73
Interest expense							-203	-248
Other financial income and expense							-11	78
Core adjustments to other financial income and expense							6	
Taxes, adjusted for above items (core taxes)							-511	-475
Core net income from continuing operations							2 985	2 681
Core net income from discontinued operations ¹								200
Core net income							2 985	2 881
Core net income attributable to shareholders of Novartis AG							2 981	2 882
Core basic EPS from continuing operations (USD)²							1.32	1.16
Core basic EPS from discontinued operations (USD) ²								0.09
Core basic EPS (USD)²							1.32	1.25

¹ For details on discontinued operations reconciliation from IFRS to core net income, please refer to page 70.

² Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

CORE RESULTS – Reconciliation from IFRS results to core results – Group – Full year

(USD millions unless indicated otherwise)	Innovative Medicines		Sandoz		Corporate		Group	
	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018
IFRS operating income from continuing operations	9 287	7 871	551	1 332	-752	-800	9 086	8 403
Amortization of intangible assets	2 447	2 158	314	363			2 761	2 521
Impairments								
Intangible assets	632	592	503	249			1 135	841
Property, plant and equipment related to the Group-wide rationalization of manufacturing sites	83	170	69	63			152	233
Other property, plant and equipment	10	65	33				43	65
Total impairment charges	725	827	605	312			1 330	1 139
Acquisition or divestment of businesses and related items								
- Income	-8				-108	-21	-116	-21
- Expense	87	126			115	29	202	155
Total acquisition or divestment of businesses and related items, net	79	126			7	8	86	134
Other items								
Divestment gains	-1 091	-482		-78	2	-56	-1 089	-616
Financial assets – fair value adjustments	-18	-107			-20	113	-38	6
Restructuring and related items								
- Income	-58	-25	-7	-12	-6	-2	-71	-39
- Expense	509	665	390	179	113	106	1 012	950
Legal-related items								
- Income		-1	-32	-63			-32	-64
- Expense	999	36	156	90			1 155	126
Additional income	-316	-73	-4	-171	-95	-19	-415	-263
Additional expense	87	156	121	50	119	54	327	260
Total other items	112	169	624	-5	113	196	849	360
Total adjustments	3 363	3 280	1 543	670	120	204	5 026	4 154
Core operating income from continuing operations	12 650	11 151	2 094	2 002	-632	-596	14 112	12 557
<i>as % of net sales</i>	<i>33.5%</i>	<i>32.0%</i>	<i>21.5%</i>	<i>20.3%</i>			<i>29.7%</i>	<i>28.1%</i>
Income from associated companies	1	1	2	5	656	6 432	659	6 438
Core adjustments to income from associated companies, net of tax					427	-5 325	427	-5 325
Interest expense							-850	-932
Other financial income and expense							45	186
Core adjustments to other financial income and expense							11	
Taxes, adjusted for above items (core taxes)							-2 300	-2 004
Core net income from continuing operations							12 104	10 920
Core net income from discontinued operations ¹							278	1 018
Core net income							12 382	11 938
Core net income attributable to shareholders of Novartis AG							12 377	11 935
Core basic EPS from continuing operations (USD) ²							5.28	4.71
Core basic EPS from discontinued operations (USD) ²							0.12	0.44
Core basic EPS (USD) ²							5.40	5.15

¹ For details on discontinued operations reconciliation from IFRS to core net income, please refer to page 71.

² Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

CORE RESULTS–Reconciliation from IFRS results to core results – Group – Fourth quarter

(USD millions unless indicated otherwise)	Q4 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	Q4 2019 Core results	Q4 2018 Core results
Gross profit from continuing operations	8 724	797	41	23	94	9 679	8 999
Operating income from continuing operations	1 823	812	689	32	106	3 462	3 112
Income before taxes from continuing operations	1 759	904	689	32	112	3 496	3 156
Taxes from continuing operations ⁵	-630					-511	-475
Net income from continuing operations	1 129					2 985	2 681
Net income from discontinued operations ⁶							200
Net income	1 129					2 985	2 881
Basic EPS from continuing operations (USD)⁷	0.50					1.32	1.16
Basic EPS from discontinued operations (USD) ⁷							0.09
Basic EPS (USD)⁷	0.50					1.32	1.25

The following are adjustments to arrive at core gross profit

Cost of goods sold	-3 992	797	41	23	94	-3 037	-2 898
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The following are adjustments to arrive at core operating income

Selling, general and administration	-3 905				-17	-3 922	-3 674
Research and development	-2 853	15	636		9	-2 193	-2 176
Other income	643			-30	-464	149	154
Other expense	-786		12	39	484	-251	-191

The following are adjustments to arrive at core income before taxes

Income from associated companies	150	92				242	214
Other financial income and expense	-11				6	-5	78

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to in-market products and other production-related intangible assets; research and development includes the amortization of acquired rights for technologies; income from associated companies includes USD 92 million for the Novartis share of the estimated Roche core items

² Impairments: cost of goods sold, and research and development include impairment charges related to intangible assets; cost of goods sold and other expense include net impairment charges related to property, plant and equipment

³ Acquisition or divestment of businesses and related items, including restructuring and integration charges: cost of goods sold and other expense include net charges related to acquisitions; other income and other expense include transitional service-fee income and expenses related to the Alcon spin-off

⁴ Other items: cost of goods sold and other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, research and development, other income and other expense include other restructuring income and charges and related items; cost of goods sold, and research and development also include fair value adjustments of contingent consideration liabilities; cost of goods sold includes inventory write-offs and other provisions; selling, general and administration includes the reversal of other provisions; other income and other expense include fair value adjustments on financial assets and legal-related items; other income also includes net gains from the divestment of products and financial assets; other expense includes other provisions and reversals of provisions; other financial income and expense includes a revaluation impact of a financial liability incurred through the Alcon distribution

⁵ Taxes on the adjustments between IFRS and core results take into account, for each individual item included in the adjustment, the tax rate that will finally be applicable to the item based on the jurisdiction where the adjustment will finally have a tax impact. Generally, this results in amortization and impairment of intangible assets and acquisition-related restructuring and integration items having a full tax impact. There is usually a tax impact on other items, although this is not always the case for items arising from legal settlements in certain jurisdictions. Adjustments related to income from associated companies are recorded net of any related tax effect. Due to these factors and the differing effective tax rates in the various jurisdictions, the tax on the total adjustments of USD 1.7 billion to arrive at the core results before tax amounts to USD 119 million. The average tax rate on the adjustments is 6.9%.

⁶ For details on discontinued operations reconciliation from IFRS to core net income please refer to page 70.

⁷ Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

CORE RESULTS –Reconciliation from IFRS results to core results – Group – Full year

(USD millions unless indicated otherwise)	FY 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	FY 2019 Core results	FY 2018 Core results
Gross profit from continuing operations	34 252	2 711	85	48	296	37 392	34 886
Operating income from continuing operations	9 086	2 761	1 330	86	849	14 112	12 557
Income before taxes from continuing operations	8 940	3 188	1 330	86	860	14 404	12 924
Taxes from continuing operations ⁵	-1 793					-2 300	-2 004
Net income from continuing operations	7 147					12 104	10 920
Net income from discontinued operations ⁶	4 590					278	1 018
Net income	11 737					12 382	11 938
Basic EPS from continuing operations (USD)⁷	3.12					5.28	4.71
Basic EPS from discontinued operations (USD) ⁷	2.00					0.12	0.44
Basic EPS (USD)⁷	5.12					5.40	5.15

The following are adjustments to arrive at core gross profit

Other revenues	1 179				-66	1 113	1 266
Cost of goods sold	-14 425	2 711	85	48	362	-11 219	-11 213

The following are adjustments to arrive at core operating income

Selling, general and administration	-14 369			10	40	-14 319	-13 690
Research and development	-9 402	50	1 078	10	-122	-8 386	-8 154
Other income	2 031		-2	-116	-1 418	495	558
Other expense	-3 426		169	134	2 053	-1 070	-1 043

The following are adjustments to arrive at core income before taxes

Income from associated companies	659	427				1 086	1 113
Other financial income and expense	45				11	56	186

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to in-market products and other production-related intangible assets; research and development includes the amortization of acquired rights for technologies; income from associated companies includes USD 427 million for the Novartis share of the estimated Roche core items

² Impairments: cost of goods sold, and research and development include impairment charges related to intangible assets; research and development also includes the reversal of an impairment charge; cost of goods sold, other income and other expense include net impairment charges related to property, plant and equipment

³ Acquisition or divestment of businesses and related items, including restructuring and integration charges: cost of goods sold, selling, general and administration, research and development, other income and other expense include net charges related to acquisitions; other income and other expense also include transitional service fee income and expenses related to the portfolio transformation and the Alcon spin-off

⁴ Other items: other revenues includes income from an outlicensing agreement, and income related to an amendment of a collaboration agreement; cost of goods sold, other income and other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, research and development, selling, general and administration, other income and other expense include other restructuring income and charges and related items; cost of goods sold, and research and development also include fair value adjustments of contingent consideration liabilities; cost of goods sold also includes inventory write-offs and other provisions; selling, general and administration includes receivable expected credit loss provisions and other provisions; other income and other expense include fair value adjustments and divestment gains and losses on financial assets and legal-related items as well as environmental provisions; other income also includes net gains from the divestment of products and property, plant and equipment, and provision releases; other expense includes a provision for onerous contracts and other provisions; other financial income and expense includes a revaluation impact of a financial liability incurred through the Alcon distribution

⁵ Taxes on the adjustments between IFRS and core results take into account, for each individual item included in the adjustment, the tax rate that will finally be applicable to the item based on the jurisdiction where the adjustment will finally have a tax impact. Generally, this results in amortization and impairment of intangible assets and acquisition-related restructuring and integration items having a full tax impact. There is usually a tax impact on other items, although this is not always the case for items arising from legal settlements in certain jurisdictions. Adjustments related to income from associated companies are recorded net of any related tax effect. Due to these factors and the differing effective tax rates in the various jurisdictions, the tax on the total adjustments for continuing operations of USD 5.5 billion to arrive at the core results before tax amounts to USD 507 million. The average tax rate on the adjustments is 9.3%.

⁶ For details on discontinued operations reconciliation from IFRS to core net income please refer to page 71.

⁷ Earnings per share (EPS) is calculated on the amount of net income, attributable to shareholders of Novartis AG.

CORE RESULTS – Reconciliation from IFRS results to core results – Innovative Medicines – Fourth quarter

(USD millions)	Q4 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	Q4 2019 Core results	Q4 2018 Core results
Gross profit	7 553	722		23	38	8 336	7 706
Operating income	2 210	737	204	29	-58	3 122	2 769

The following are adjustments to arrive at core gross profit

Cost of goods sold	-2 820	722		23	38	-2 037	-1 887
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The following are adjustments to arrive at core operating income

Selling, general and administration	-3 185				-17	-3 202	-2 960
Research and development	-2 192	15	190		6	-1 981	-1 952
Other income	578			-1	-446	131	115
Other expense	-544		14	7	361	-162	-140

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to in-market products and other production-related intangible assets; research and development includes the amortization of acquired rights for technologies

² Impairments: research and development includes impairment charges related to intangible assets; other expense includes impairment charges related to property, plant and equipment

³ Acquisition or divestment of businesses and related items, including restructuring and integration charges: cost of goods sold and other expense include charges related to acquisitions; other income and other expense include transitional service-fee income and expenses related to the Alcon spin-off

⁴ Other items: cost of goods sold and other expense include restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, research and development, other income and other expense include other restructuring income and charges and related items; cost of goods sold, and research and development include fair value adjustments of contingent consideration liabilities; selling, general and administration and other expense include reversals of provisions; other income and other expense include fair value adjustments on financial assets; other income also includes net gains from the divestment of products and financial assets; other expense includes legal-related items

CORE RESULTS – Reconciliation from IFRS results to core results – Innovative Medicines – Full year

(USD millions)	FY 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	FY 2019 Core results	FY 2018 Core results
Gross profit	29 539	2 397		48	116	32 100	29 687
Operating income	9 287	2 447	725	79	112	12 650	11 151
The following are adjustments to arrive at core gross profit							
Other revenues	1 092				-66	1 026	1 188
Cost of goods sold	-10 050	2 397		48	182	-7 423	-7 134
The following are adjustments to arrive at core operating income							
Selling, general and administration	-11 617			10	25	-11 582	-10 890
Research and development	-8 152	50	632	10	-125	-7 585	-7 340
Other income	1 586		-1	-8	-1 230	347	306
Other expense	-2 069		94	19	1 326	-630	-612

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to in-market products and other production-related intangible assets; research and development includes the amortization of acquired rights for technologies

² Impairments: research and development includes impairment charges and a reversal of impairment charges related to intangible assets; other income and other expense include net impairment charges related to property, plant and equipment

³ Acquisition or divestment of businesses and related items, including restructuring and integration charges: cost of goods sold, selling, general and administration, research and development, other income and other expense include net charges related to acquisitions; other income and other expense also include transitional service-fee income and expenses related to the portfolio transformation and the Alcon spin-off

⁴ Other items: other revenues includes a net income from an outlicensing agreement and an income related to an amendment of a collaboration agreement; cost of goods sold, other income and other expense include restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, research and development, other income and other expense include other restructuring income and charges and related items; cost of goods sold, and research and development also include fair value adjustments of contingent consideration liabilities; selling, general and administration includes other provisions; other income and other expense include fair value adjustments and divestment gains and losses on financial assets; other income also includes net gains from the divestment of products and property, plant and equipment, and provision releases; other expense includes legal-related items

CORE RESULTS – Reconciliation from IFRS results to core results – Sandoz – Fourth quarter

(USD millions)	Q4 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items	Other items ³	Q4 2019 Core results	Q4 2018 Core results
Gross profit	1 139	75	41		56	1 311	1 276
Operating income	-195	75	485		152	517	482
The following are adjustments to arrive at core gross profit							
Cost of goods sold	-1 389	75	41		56	-1 217	-1 234
The following are adjustments to arrive at core operating income							
Research and development	-661		446		3	-212	-224
Other income	45				-5	40	69
Other expense	-144		-2		98	-48	-66

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to in-market products and other production-related intangible assets

² Impairments: cost of goods sold, and research and development include impairment charges related to intangible assets; cost of goods sold also includes impairment charges related to property, plant and equipment; other expense includes the reversal of impairment charges

³ Other items: cost of goods sold and other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, other income and other expense include restructuring income and charges and related items; cost of goods sold also includes inventory write-offs and other provisions; other income and other expense include legal-related items; other expense also includes other provisions

CORE RESULTS – Reconciliation from IFRS results to core results – Sandoz – Full year

(USD millions)	FY 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items	Other items ³	FY 2019 Core results	FY 2018 Core results
Gross profit	4 601	314	85		180	5 180	5 129
Operating income	551	314	605		624	2 094	2 002

The following are adjustments to arrive at core gross profit

Cost of goods sold	-5 334	314	85		180	-4 755	-4 969
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The following are adjustments to arrive at core operating income

Selling, general and administration	-2 218				15	-2 203	-2 295
Research and development	-1 250		446		3	-801	-814
Other income	167		-1		-39	127	210
Other expense	-749		75		465	-209	-228

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to in-market products and other production-related intangible assets

² Impairments: cost of goods sold, and research and development include impairment charges related to intangible assets; cost of goods sold, other income and other expense include net impairment charges related to property, plant and equipment

³ Other items: cost of goods sold and other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, selling, general and administration, other income and other expense include restructuring income and charges and related items; cost of goods sold also includes inventory write-offs and other provisions; selling, general and administration includes receivable expected credit loss provisions and other provisions; other income and other expense also include legal-related items; other expense also includes an environmental provision, a provision for onerous contracts and other provisions

CORE RESULTS –Reconciliation from IFRS results to core results – Corporate continuing – Fourth quarter

(USD millions)	Q4 2019 IFRS results	Amortization of intangible assets	Impairments	Acquisition or divestment of businesses and related items ¹	Other items ²	Q4 2019 Core results	Q4 2018 Core results
Gross profit	32					32	17
Operating loss	-192			3	12	-177	-139

The following are adjustments to arrive at core operating income

Other income	20			-29	-13	-22	-30
Other expense	-98			32	25	-41	15

¹ Acquisition or divestment of businesses and related items, including restructuring and integration charges: other income and other expense include transitional service fee income and expenses related to the Alcon spin-off

² Other items: other income and other expense include fair value adjustments on financial assets, restructuring charges and related items

CORE RESULTS –Reconciliation from IFRS results to core results – Corporate continuing – Full year

(USD millions)	FY 2019 IFRS results	Amortization of intangible assets	Impairments	Acquisition or divestment of businesses and related items ¹	Other items ²	FY 2019 Core results	FY 2018 Core results
Gross profit	112					112	70
Operating loss	-752			7	113	-632	-596

The following are adjustments to arrive at core operating income

Other income	278			-108	-149	21	42
Other expense	-608			115	262	-231	-203

¹ Acquisition or divestment of businesses and related items, including restructuring and integration charges: other income and other expense include transitional service fee income and expenses related to the portfolio transformation and the Alcon spin-off

² Other items: other income and other expense include fair value adjustments and divestment gains and losses on financial assets, restructuring income and charges and related items, as well as environmental provisions

CORE RESULTS – Reconciliation from IFRS results to core results – Discontinued operations – Fourth quarter

(USD millions)	Q4 2019 IFRS results	Amortization of intangible assets	Impairments	Acquisition or divestment of businesses and related items	Other items	Q4 2019 Core results	Q4 2018 Core results
Gross profit							1 124
Operating income of discontinued operations							275
Income before taxes of discontinued operations							269
Taxes							-69
Net income from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders							200
Net income from discontinued operations							200
Basic EPS (USD) ¹							0.09

¹ Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

CORE RESULTS– Reconciliation from IFRS results to core results –Discontinued operations – Full year

(USD millions)	FY 2019 IFRS results	Amortization of intangible assets ¹	Impairments	Acquisition or divestment of businesses and related items ²	Other items ³	FY 2019 Core results	FY 2018 Core results
Gross profit	949	165			9	1 123	4 532
Operating income of discontinued operations	71	167			112	350	1 266
Income before taxes of discontinued operations	58					337	1 240
Taxes ⁴	-159					-59	-222
Net loss/income from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders	-101					278	1 018
Gain on distribution of Alcon Inc. to Novartis AG shareholders	4 691			-4 691			
Net income from discontinued operations	4 590					278	1 018
Basic EPS (USD)⁵	2.00					0.12	0.44
The following are adjustments to arrive at core gross profit							
Cost of goods sold	-860	165			9	-686	-2 621
The following are adjustments to arrive at core operating income							
Selling, general and administration	-638				14	-624	-2 739
Research and development	-142	2			4	-136	-527
Other income	15				-3	12	38
Other expense	-113				88	-25	-38

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to in-market products and other production-related intangible assets; research and development includes the amortization of acquired rights for technologies

² Acquisition or divestment of businesses and related items represents the non-taxable, non-cash gain adjustment related to the distribution of Alcon Inc. (spin-off) to Novartis AG shareholders

³ Other items: cost of goods sold, selling, general and administration, research and development and other expense include other restructuring charges and related items; research and development also includes amortization of option rights and the fair value adjustment of a contingent consideration liability; other income includes fair value adjustments on a financial asset; other expense also includes legal-related items

⁴ Taxes on the adjustments between IFRS and core results take into account, for each individual item included in the adjustment, the tax rate that will finally be applicable to the item based on the jurisdiction where the adjustment will finally have a tax impact. Generally, this results in amortization and impairment of intangible assets and acquisition-related restructuring and integration items having a full tax impact. There is usually a tax impact on other items, although this is not always the case for items arising from legal settlements in certain jurisdictions. Due to these factors and the differing effective tax rates in the various jurisdictions, the tax on the total adjustments, excluding the non-taxable, non-cash gain on the distribution (spin-off) of Alcon Inc. to Novartis AG shareholders of USD 279 million to arrive at the core results before tax amounts to USD 100 million. The 2019 core tax rate, excluding the effect of the gain on the distribution of Alcon Inc. to Novartis AG shareholders, is 17.5%.

⁵ Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

Income from associated companies

(USD millions)	Q4 2019	Q4 2018	FY 2019	FY 2018
<i>Share of estimated Roche reported results</i>	215	178	910	799
<i>Prior-year adjustment</i>			-129	-125
<i>Amortization of additional intangible assets recognized by Novartis on initial accounting for the equity interest</i>	-63	-36	-162	-148
<i>Partial release of deferred tax liability recognized</i>			43	
Net income effect from Roche Holding AG	152	142	662	526
<i>Share of estimated GSK Consumer Healthcare Holdings Ltd. reported results</i>				119
<i>Prior-year adjustment</i>				4
<i>Amortization of additional intangible assets recognized by Novartis on initial accounting for the equity interest</i>				-3
Gain on divestment of GSK Consumer Healthcare Holdings Ltd., pre-tax ¹		-1		5 790
Net income effect from GlaxoSmithKline Consumer Healthcare Holdings Ltd. ¹		-1		5 910
Others	-2		-3	2
Income from associated companies	150	141	659	6 438

¹ On March 27, 2018, Novartis entered into the agreement to divest its 36.5% investment in GSK Consumer Healthcare Holdings Ltd. to GSK. As a result, equity accounting was discontinued starting from April 1, 2018. The transaction closed on June 1, 2018, see Note 3.

Core income from associated companies

(USD millions)	Q4 2019	Q4 2018	FY 2019	FY 2018
Income from associated companies	150	141	659	6 438
Share of estimated Roche core adjustments	92	72	266	311
Roche prior year adjustment			161	133
Share of estimated GSK Consumer Healthcare Holdings Ltd. core adjustments ¹				20
GSK Consumer Healthcare Holdings Ltd. prior year adjustment				1
Gain on divestment of GSK Consumer Healthcare Holdings Ltd., pre-tax ¹		1		-5 790
Core income from associated companies	242	214	1 086	1 113

¹ On March 27, 2018, Novartis entered into the agreement to divest its 36.5% investment in GSK Consumer Healthcare Holdings Ltd. to GSK. As a result, equity accounting was discontinued starting from April 1, 2018. The transaction closed on June 1, 2018, see Note 3.

Condensed consolidated changes in net debt

Fourth quarter

(USD millions)	Q4 2019	Q4 2018
Change in cash and cash equivalents	2 734	-729
Change in marketable securities, commodities, financial debts and financial derivatives	759	1 617
Reduction in net debt	3 493	888
Net debt at October 1	-19 431	-17 072
Net debt at December 31	-15 938	-16 184

Full year

(USD millions)	FY 2019	FY 2018
Change in cash and cash equivalents	-2 159	4 411
Change in marketable securities, commodities, financial debts and financial derivatives	2 405	-1 548
Reduction in net debt	246	2 863
Net debt at January 1	-16 184	-19 047
Net debt at December 31	-15 938	-16 184

Components of net debt

(USD millions)	Dec 31, 2019	Dec 31, 2018
Non-current financial debts	-20 353	-22 470
Current financial debts and derivative financial instruments	-7 031	-9 678
Total financial debt	-27 384	-32 148
Less liquidity:		
Cash and cash equivalents	11 112	13 271
Marketable securities, commodities, time deposits and derivative financial instruments	334	2 693
Total liquidity	11 446	15 964
Net debt at December 31	-15 938	-16 184

Share information

	Dec 31, 2019	Dec 31, 2018
Number of shares outstanding	2 264 779 932	2 311 171 429
Registered share price (CHF)	91.90	84.04
ADR price (USD)	94.69	85.81
Market capitalization (USD billions) ¹	214.8	197.0
Market capitalization (CHF billions) ¹	208.1	194.2

¹ Market capitalization is calculated based on the number of shares outstanding (excluding treasury shares). Market capitalization in USD is based on the market capitalization in CHF converted at the quarter end CHF/USD exchange rate.

Free cash flow

Fourth quarter

(USD millions)

	Q4 2019	Q4 2018	Change
Operating income from continuing operations	1 823	1 362	461
Adjustments for non-cash items			
Depreciation, amortization and impairments	1 948	1 691	257
Change in provisions and other non-current liabilities	471	470	1
Other	-363	44	-407
Operating income adjusted for non-cash items	3 879	3 567	312
Dividends received from associated companies and others	0	0	0
Interest and other financial receipts	9	159	-150
Interest and other financial payments	-261	-280	19
Taxes paid	-681	-397	-284
Payments out of provisions and other net cash movements in non-current liabilities	-262	-166	-96
Change in inventory and trade receivables less trade payables	480	271	209
Change in other net current assets and other operating cash flow items	376	282	94
Net cash flows from operating activities from continuing operations	3 540	3 436	104
Purchase of property, plant and equipment	-461	-444	-17
Proceeds from sales of property, plant and equipment	48	47	1
Purchase of intangible assets	-175	-206	31
Proceeds from sales of intangible assets	552	121	431
Purchase of financial assets	-79	-57	-22
Proceeds from sales of financial assets ¹	90	27	63
Purchase of other non-current assets	-26	-13	-13
Proceeds from sales of other non-current assets	-1	2	-3
Free cash flow from continuing operations	3 488	2 913	575
Free cash flow from discontinued operations ²		26	-26
Total free cash flow	3 488	2 939	549

¹ For the free cash flow, proceeds from the sales of financial assets excludes the cash inflows from the sale of a portion of the Alcon Inc. shares recognized by certain consolidated foundations through the Alcon spin-off, which amounted to USD 320 million. (see Note 3)

² In Q4 2018, the free cash flow from discontinued operation amounted to USD 26 million consisting of USD 330 million net cash inflows from operating activities from discontinued operations and USD 543 million net cash flows used in investing activities from discontinued operations adjusted by USD 239 million of net cash outflows for acquisitions and divestments of businesses.

Free cash flow

Full year

(USD millions)	FY 2019	FY 2018	Change
Operating income from continuing operations	9 086	8 403	683
Adjustments for non-cash items			
Depreciation, amortization and impairments	5 788	5 217	571
Change in provisions and other non-current liabilities	1 871	895	976
Other	-476	-229	-247
Operating income adjusted for non-cash items	16 269	14 286	1 983
Dividends received from associated companies and others	463	719	-256
Interest and other financial receipts	242	459	-217
Interest and other financial payments	-826	-847	21
Taxes paid	-1 876	-1 506	-370
Payments out of provisions and other net cash movements in non-current liabilities	-924	-638	-286
Change in inventory and trade receivables less trade payables	-809	-679	-130
Change in other net current assets and other operating cash flow items	1 008	1 255	-247
Net cash flows from operating activities from continuing operations	13 547	13 049	498
Purchase of property, plant and equipment	-1 379	-1 254	-125
Proceeds from sales of property, plant and equipment	857	102	755
Purchase of intangible assets	-878	-1 394	516
Proceeds from sales of intangible assets	973	823	150
Purchase of financial assets	-302	-205	-97
Proceeds from sales of financial assets ¹	176	165	11
Purchase of other non-current assets	-60	-39	-21
Proceeds from sales of other non-current assets	3	9	-6
Free cash flow from continuing operations	12 937	11 256	1 681
Free cash flow from discontinued operations ²	-62	461	-523
Total free cash flow	12 875	11 717	1 158

¹ For the free cash flow, proceeds from the sales of financial assets excludes the cash inflows from the sale of a portion of the Alcon Inc. shares recognized by certain consolidated foundations through the Alcon spin-off, which amounted to USD 976 million. (see Note 3)

² In 2019, the free cash flow from discontinued operation was a cash outflow of USD 62 million (2018: USD 461 million cash inflow) consisting of USD 78 million net cash inflows from operating activities from discontinued operations (2018: USD 1.2 billion), USD 1.2 billion net cash flows used in investing activities from discontinued operations (2018: USD 1.0 billion) adjusted by USD 362 million of net cash outflows for acquisitions and divestments of businesses (2018: USD 239 million) and by USD 657 million attributable to the spin-off of the Alcon business (2018 : nil).

Principal currency translation rates

Fourth quarter

(USD per unit)	Average rates Q4 2019	Average rates Q4 2018	Period-end rates Dec 30, 2019	Period-end rates Dec 31, 2018
1 CHF	1.010	1.004	1.032	1.014
1 CNY	0.142	0.145	0.144	0.145
1 EUR	1.107	1.141	1.121	1.144
1 GBP	1.287	1.286	1.313	1.274
100 JPY	0.920	0.886	0.920	0.907
100 RUB	1.569	1.504	1.613	1.437

Full year

(USD per unit)	Average rates FY 2019	Average rates FY 2018	Period-end rates Dec 30, 2019	Period-end rates Dec 31, 2018
1 CHF	1.006	1.023	1.032	1.014
1 CNY	0.145	0.151	0.144	0.145
1 EUR	1.120	1.181	1.121	1.144
1 GBP	1.277	1.336	1.313	1.274
100 JPY	0.918	0.906	0.920	0.907
100 RUB	1.546	1.600	1.613	1.437

Disclaimer

This press release contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995, that can generally be identified by words such as “growth,” “expansion,” “breakthrough innovation,” “potentially,” “to optimize,” “transformative,” “potential,” “guidance,” “launched,” “launching,” “momentum,” “growth investments,” “submissions,” “submitted,” “submission,” “to sustain,” “advancing,” “focus,” “focused,” “focusing,” “expect,” “becoming,” “to improve,” “expected,” “to grow,” “continued,” “continuing,” “continue,” “growing,” “launches,” “continues,” “expect,” “to be completed,” “pending,” “fully committed,” “launch,” “ongoing,” “filings,” “breakthrough therapy designation,” “will,” “may,” “would,” “proposed,” “pipeline,” “priority,” “outlook,” “unforeseen,” “forecast,” “enter,” “priority review,” “upcoming,” “on track,” “integrate,” “potentially improving,” “promising,” “to be discontinued,” “prevail,” “impact,” “intends,” “launch,” “strongly,” “remain,” “likely,” “believes,” or similar expressions, or by express or implied discussions regarding potential new products, potential new indications for existing products, potential product launches, or regarding potential future revenues from any such products; or regarding the development or adoption of potentially transformational technologies, treatment modalities and business models; or regarding potential future or pending transactions, including the potential outcome, or financial or other impact on Novartis, of the proposed divestiture of certain portions of our Sandoz Division business in the US; or regarding the potential impact of share buybacks; or regarding potential future sales or earnings of the Group or any of its divisions or potential shareholder returns; or by discussions of strategy, plans, expectations or intentions. Such forward-looking statements are based on the current beliefs and expectations of management regarding future events, and are subject to significant known and unknown risks and uncertainties. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those set forth in the forward-looking statements. You should not place undue reliance on these statements. In particular, our expectations could be affected by, among other things: global trends toward healthcare cost containment, including ongoing government, payor and general public pricing and reimbursement pressures and requirements for increased pricing transparency; uncertainties regarding potential significant breaches of data security or data privacy, or disruptions of our information technology systems; regulatory actions or delays or government regulation generally, including potential regulatory actions or delays with respect to the proposed transactions or the development of the products described in this press release; the potential that the proposed divestiture of certain portions of our Sandoz Division business in the US or the planned acquisition of the Japanese operations and associated assets of Aspen Global Incorporated may not be completed in the expected time frame, or at all; the potential that the strategic benefits, synergies or opportunities expected from the acquisition of The Medicines Company, the proposed divestiture of certain portions of our Sandoz Division business in the US, or the planned acquisition of the Japanese operations and associated assets of Aspen Global Incorporated, and other transactions described, may not be realized or may be more difficult or take longer to realize than expected; the successful integration of The Medicines Company into the Novartis Group and the timing of such integration; potential adverse reactions to the transaction by customers, suppliers or strategic partners; dependence on key personnel of The Medicines Company; dependence on third parties to fulfill manufacturing and supply obligations; the uncertainties involved in predicting shareholder returns; the uncertainties in the research and development of new healthcare products, including clinical trial results and additional analysis of existing clinical data; our ability to obtain or maintain proprietary intellectual property protection, including the ultimate extent of the impact on Novartis of the loss of patent protection and exclusivity on key products that commenced in prior years and is expected to continue this year; safety, quality, data integrity, or manufacturing issues; uncertainties involved in the development or adoption of potentially transformational technologies and business models; uncertainties regarding actual or potential legal proceedings, including, among others, product liability litigation, disputes and litigation with business partners or business collaborators, government investigations generally, litigation and investigations regarding sales and marketing practices, and intellectual property disputes; our performance on environmental, social and governance measures; general political, economic and trade conditions, including uncertainties regarding the effects of ongoing instability in various parts of the world; uncertainties regarding future global exchange rates; uncertainties regarding future demand for our products; and other risks and factors referred to in Novartis AG’s current Form 20-F on file with the US Securities and Exchange Commission. Novartis is providing the information in this press release as of this date and does not undertake any obligation to update any forward-looking statements as a result of new information, future events or otherwise.

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About Novartis

Novartis is reimagining medicine to improve and extend people's lives. As a leading global medicines company, we use innovative science and digital technologies to create transformative treatments in areas of great medical need. In our quest to find new medicines, we consistently rank among the world's top companies investing in research and development. Novartis products reach more than 750 million people globally and we are finding innovative ways to expand access to our latest treatments. About 109,000 people of more than 140 nationalities work at Novartis around the world. Find out more at www.novartis.com

Novartis will conduct a conference call with investors to discuss this news release today at 14:00 Central European time and 8:00 Eastern Time. A simultaneous webcast of the call for investors and other interested parties may be accessed by visiting the Novartis website. A replay will be available after the live webcast by visiting.

<https://www.novartis.com/investors/event-calendar>

Detailed financial results accompanying this press release are included in the condensed financial report at the link below. Additional information is provided on Novartis divisions and pipeline of selected compounds in late stage development and a copy of today's earnings call presentation can be found at.

<https://www.novartis.com/investors/event-calendar>

Novartis issued its 2019 Annual Report today, and it is available at www.novartis.com. Novartis will also file its 2019 Annual Report on Form 20-F with the US Securities and Exchange Commission today, and will post this document on www.novartis.com. Novartis shareholders may receive a hard copy of either of these documents, each of which contains our complete audited financial statements, free of charge, upon request. Novartis also issued its 2019 Novartis in Society ESG report today, and it is available at www.novartis.com.

Important dates

February 28, 2020	Annual General Meeting
April 28, 2020	First quarter results 2020
May 19/20, 2020	Meet Novartis Management – in Basel
July 21, 2020	Second quarter results 2020
October 27, 2020	Third quarter results 2020