

CONDENSED INTERIM FINANCIAL REPORT – SUPPLEMENTARY DATA

Novartis Q2 and H1 2019 Condensed Interim Financial Report – Supplementary Data

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Novartis Q2 and H1 2019 Condensed Interim Financial Report – Supplementary Data

Key figures ¹	Q2 2019 USD m	Q2 2018 USD m	% change USD cc ²		H1 2019 USD m	H1 2018 USD m	% change USD cc ²	
Net sales to third parties from continuing operations	11 764	11 339	4	8	22 870	22 254	3	8
Divisional operating income from continuing operations	2 846	2 580	10	18	5 228	5 124	2	11
Corporate income and expense, from continuing operations, net	- 183	- 149	- 23	- 28	- 323	- 322	0	- 4
Operating income from continuing operations	2 663	2 431	10	17	4 905	4 802	2	11
As % of net sales	22.6	21.4			21.4	21.6		
Income from associated companies	176	5 932	nm	nm	256	6 084	nm	nm
Interest expense	- 205	- 237	14	12	- 431	- 455	5	4
Other financial income and expense	0	45	nm	nm	44	80	- 45	- 38
Taxes	- 525	- 443	- 19	- 26	- 797	- 813	2	- 6
Net income from continuing operations	2 109	7 728	- 73	- 71	3 977	9 698	- 59	- 56
Net income from discontinued operations	4 691	40	nm	nm	4 590	98	nm	nm
Net income	6 800	7 768	- 12	- 10	8 567	9 796	- 13	- 8
Basic earnings per share from continuing operations (USD)	0.91	3.32	- 73	- 71	1.72	4.17	- 59	- 55
Basic earnings per share from discontinued operations (USD)	2.03	0.02	nm	nm	1.98	0.04	nm	nm
Basic earnings per share (USD)	2.94	3.34	- 12	- 10	3.70	4.21	- 12	- 8
Cash flows from operating activities from continuing operations	3 111	3 512	- 11		5 445	5 893	- 8	
Free cash flow from continuing operations ²	3 612	3 268	11		5 481	5 187	6	
Core ²								
Core operating income from continuing operations	3 648	3 207	14	20	6 902	6 187	12	19
As % of net sales	31.0	28.3			30.2	27.8		
Core net income from continuing operations	3 096	2 735	13	19	5 907	5 419	9	16
Core net income from discontinued operations		276	nm	nm	278	574	nm	nm
Core net income	3 096	3 011	3	8	6 185	5 993	3	10
Core basic earnings per share from continuing operations (USD)	1.34	1.18	14	20	2.55	2.33	9	17
Core basic earnings per share from discontinued operations (USD)		0.11	nm	nm	0.12	0.25	nm	nm
Core basic earnings per share (USD)	1.34	1.29	4	9	2.67	2.58	3	11

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 42 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 55. 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 42 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 during 2019, pending closing conditions including regulatory approvals. 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 second quarter

Net sales

Net sales were USD 11.8 billion (+4%, +8% cc) in the second quarter driven by volume growth of 10 percentage points (cc), mainly from *Cosentyx*, *Entresto* and *Lutathera*. Strong volume growth was partly offset by the negative impacts of pricing (-1 percentage point cc) and generic competition (-1 percentage point cc).

Corporate income and expense, net

Corporate income and expense, which includes the cost of Group headquarter and coordination functions, amounted to an expense of USD 183 million in the second quarter compared to USD 149 million mainly on account of higher NBS restructuring costs.

Operating income

Operating income was USD 2.7 billion (+10%, +17% cc) mainly driven by higher sales, improved gross margin, productivity programs and higher divestment gains, partly offset by growth investments and legal provisions. Operating income margin was 22.6% of net sales, increasing by 1.2 percentage points (+1.9 percentage points cc). Core adjustments amounted to USD 1.0 billion (2018: USD 0.8 billion).

Core operating income was USD 3.6 billion (+14%, +20% cc) mainly driven by higher sales, improved gross margin and productivity programs, partly offset by growth investments. Core operating income margin was 31.0% of net sales, increasing by 2.7 percentage points (+3.2 percentage points cc).

Income from associated companies

Income from associated companies decreased from USD 5.9 billion in prior year to USD 176 million in the second quarter of 2019. 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 estimated reported income from Roche Holding AG increased from USD 146 million to USD 177 million.

Core income from associated companies increased to USD 253 million from USD 231 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 205 million from USD 237 million in prior year, as the decrease in interest expense due to lower outstanding debts more than offset 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 were negligible in the quarter compared to an income of USD 45 million in the prior year quarter, as higher currency losses and financial expenses more than offset higher interest income.

Taxes

The tax rate in the second quarter was 19.9% compared to 5.4% in prior year. In May 2019, Swiss federal tax reform was enacted, which eliminated certain tax privileges, effective January 1, 2020. This required a revaluation of certain deferred tax assets and liabilities to the newly enacted tax rates. The impact of this revaluation was offset by the impact of a change to uncertain tax positions. The prior year tax rate was impacted by the divestment of the 36.5% stake in the GSK consumer healthcare joint venture.

Excluding the impacts of the Swiss federal tax reform and changes to uncertain tax positions in the second quarter and the GSK consumer healthcare joint venture divestment in prior year, the second quarter tax rate would have been 15.4% compared to 16.4% in the prior year. The decrease from prior year was mainly the result of a change in profit mix.

The core tax rate for continuing operations was 16.7% compared to 15.7% in prior year, mainly as a result of a change in profit mix.

Net income and EPS

Net income was USD 2.1 billion, declining compared to prior year which 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 0.91.

Core net income was USD 3.1 billion (+13%, +19% cc) driven by growth in core operating income. Core EPS was USD 1.34 (+14%, +20% cc) in line with core net income.

Free cash flow from continuing operations amounted to USD 3.6 billion (+11% USD) compared to USD 3.3 billion in prior year, mainly driven by higher operating income adjusted for non-cash items, and higher divestment proceeds, partly offset by higher working capital, increased payments out of provisions and lower dividends received from the OTC JV which was divested in Q2 2018.

Continuing operations first half

Net sales

Net sales were USD 22.9 billion (+3%, +8% cc) in the first half driven by volume growth of 11 percentage points (cc), mainly from *Cosentyx*, *Entresto* and *Lutathera*. Strong volume growth was partly offset by the negative impacts of pricing (-2 percentage points cc) and generic competition (-1 percentage point cc).

Corporate income and expense, net

Corporate income and expense, which includes the cost of Group headquarter and coordination functions, amounted to an expense of USD 323 million in the first half year, in line with the prior year amount.

Operating income

Operating income was USD 4.9 billion (+2%, +11% cc) mainly driven by higher sales and improved gross margin, partly offset by growth investments and legal provisions. Operating income margin was 21.4% of net sales, decreasing by 0.2 percentage points (+0.7 percentage points cc). Core adjustments amounted to USD 2.0 billion (2018: USD 1.4 billion).

Core operating income was USD 6.9 billion (12%, +19% cc) mainly driven by higher sales, improved gross margin and productivity programs, partly offset by growth investments. Core operating income margin was 30.2% of net sales, increasing by 2.4 percentage points (+2.9 percentage points cc).

Income from associated companies

Income from associated companies amounted to USD 256 million in the first half compared to USD 6.1 billion in the 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 257 million compared to USD 171 million in prior year. The estimated income for Roche Holding AG, net of amortization, was USD 343 million compared to USD 296 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 the first half decreased to USD 531 million compared to USD 606 million in prior year due to the discontinuation of core income from the GSK consumer healthcare joint venture. The core income contribution from Roche Holding AG increased to USD 532 million from USD 463 million in prior year, due to 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, and higher estimated core income contribution from Roche for the current period.

Interest expense and other financial income/expense

Interest expense decreased to USD 431 million from USD 455 million in prior year, as the decrease in interest expense due to lower outstanding debts more than offset the additional interest expense on lease liabilities of USD 32 million, following the implementation of IFRS 16 Leases as of January 1, 2019.

Other financial income and expense amounted to an income of USD 44 million compared to USD 80 million in prior year, as higher currency losses and financial expenses more than offset higher interest income.

Taxes

The tax rate in the first half was 16.7% compared to 7.7% in prior year. In February 2019, the Swiss canton Basel-Stadt enacted a tax rate reduction effective January 1, 2019. In May 2019, Swiss federal tax reform was enacted, which eliminated certain tax privileges, effective January 1, 2020. This required a revaluation of certain deferred tax assets and liabilities to the newly enacted tax rates. The impact of this revaluation was offset by the impact of a change to uncertain tax positions. The prior year tax rate was significantly impacted by the divestment of the 36.5% stake in the GSK consumer healthcare joint venture.

Excluding the impacts of Swiss canton Basel-Stadt tax rate reduction, the Swiss federal tax reform and the changes to uncertain tax positions in the first half and the GSK consumer healthcare joint venture divestment in prior year, the tax rate in the first half would have been 15.4% compared to 16.1% in prior year. The decrease from prior year was mainly the result of a change in profit mix.

The core tax rate was 16.4% compared to 15.6% in prior year, mainly as a result of a change in profit mix.

Net income and EPS

Net income was USD 4.0 billion (-59%, -56% 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 1.72 (-59%, -55% cc) in line with net income.

Core net income was USD 5.9 billion (+9%, +16% 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 2.55 (+9%, +17% cc) in line with core net income.

Free cash flow from continuing operations amounted to USD 5.5 billion (+6% USD) compared to USD 5.2 billion in the prior year, mainly driven by higher operating income adjusted for non-cash items and higher divestment proceeds, partly offset by higher working capital, a sales milestone from the divested Vaccines business received in the prior year, increased payments out of provisions and lower dividends received from the OTC JV which was divested in Q2 2018.

Discontinued operations second quarter

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, the operating results in the second quarter were not material. Net income in the second quarter 2019 includes the non-taxable non-cash net gain on distribution of Alcon Inc. to Novartis AG shareholders which amounted to USD 4.7 billion. The second quarter of prior year included the results from the operations of the Alcon Division and certain Corporate costs directly attributable to Alcon with sales of USD 1.8 billion and operating income of USD 53 million. 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 shareholders.

Discontinued operations first half

Discontinued operations net sales in the first half of 2019 were USD 1.8 billion compared to USD 3.6 billion in 2018 and operating income amounted to USD 71 million compared to USD 129 million in 2018. Net income from discontinued operations in the first half of 2019 amounted to USD 4.6 billion compared to USD 98 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 shareholders.

Total Group second quarter

For the total Group, net income amounted to USD 6.8 billion compared to USD 7.8 billion in the prior year, and basic earnings per share decreased to USD 2.94 from USD 3.34. Cash flow from operating activities for the total Group amounted to USD 3.1 billion and free cash flow to USD 3.6 billion.

Total Group first half

For the total Group, net income amounted to USD 8.6 billion compared to USD 9.8 billion in the prior year, and basic earnings per share decreased to USD 3.70 from USD 4.21. Cash flow from operating activities for the total Group amounted to USD 5.5 billion and free cash flow to USD 5.4 billion.

Innovative Medicines

	Q2 2019	Q2 2018	% change		H1 2019	H1 2018	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Net sales	9 326	8 876	5	9	18 106	17 274	5	10
Operating income	2 564	2 252	14	22	4 673	4 387	7	15
As % of net sales	27.5	25.4			25.8	25.4		
Core operating income	3 306	2 854	16	22	6 228	5 485	14	21
As % of net sales	35.4	32.2			34.4	31.8		

Second quarter

Net sales

Net sales were USD 9.3 billion (+5%, +9% cc) in the second quarter, as Pharmaceuticals grew 5% (+10% cc) and Oncology grew 5% (+9% cc). Volume contributed 10 (cc) percentage points to sales growth, mainly driven by *Cosentyx*, *Entresto* and *Lutathera*. Generic competition had a negative impact of 1 (cc) percentage points. Net pricing had a negligible impact.

Regionally, US sales (USD 3.3 billion, +10%) delivered a strong performance driven by *Cosentyx*, *Entresto* and *Lutathera*. Europe sales (USD 3.2 billion, +3%, +10% cc) benefited from continued strong performance of *Entresto*, *Tafinlar* + *Mekinist*, *Jakavi* and *Lucentis*. Japan sales were USD 0.6 billion (+1%, +2% cc). Emerging Growth Markets sales grew (+2%, +10% cc), led by double-digit cc growth in China.

Pharmaceuticals BU sales were USD 5.7 billion (+5%, +10% cc). *Entresto* (USD 421 million, +76%, +81% cc) continued to deliver strong double-digit performance, benefiting from the PIONEER data on hospital initiation and higher demand in ambulatory settings. *Cosentyx* (USD 858 million, +22%, +25% cc) grew double-digit across all indications. *Xolair* (USD 290 million, +11%, +18% cc) continued double-digit growth. *Lucentis* continued to grow (USD 536 million, +4%, +10% cc) and *Gilenya* (USD 825 million, -5%, -2% cc) declined.

Oncology BU sales were USD 3.6 billion (+5%, +9% cc). Growth was mainly driven by *Lutathera* (USD 109 million), *Promacta/Revolade* (USD 349 million, +20%, +23% cc), *Tafinlar* + *Mekinist* (USD 340 million, +20%, +25% cc), *Kisqali* (USD 111 million, +88%, +94% cc), *Jakavi* (USD 284 million, +19%, +26% cc) and *Kymriah* (USD 58 million).

Operating income

Operating income was USD 2.6 billion (+14%, +22% cc) mainly driven by continued strong sales growth, productivity, higher divestment gains and the pre-launch inventory provision releases, partly offset by legal provisions. Operating income margin was 27.5% of net sales increasing 2.1 percentage points (+2.8 percentage points in cc).

Core adjustments were USD 742 million, mainly USD 0.7 billion from legal provisions and USD 0.5 billion of amortization partly offset by USD 0.6 billion of net divestment gains, mainly from the sale and leaseback of real estate. Core adjustments increased compared to prior year mainly due to a legal provisions partly offset by higher divestment income.

Core operating income was USD 3.3 billion (+16%, +22% cc) mainly driven by higher sales, productivity programs and pre-launch provision releases, partly offset by higher growth investments. Core operating income margin was 35.4% of net sales, increasing 3.2 percentage points (+3.7 percentage points cc). Core gross margin increased by 0.3 percentage points (cc) driven by productivity. Core R&D expenses decreased by 1.4 percentage points (cc) mainly driven by sales leverage, productivity and portfolio prioritization. Core SG&A expenses declined by 1.0 percentage points (cc) mainly driven by productivity and sales leverage. Core Other Income and Expense, net increased the margin by 1.0 percentage points (cc) mainly due to *Zolgensma* pre-launch inventory provision release.

First half

Net sales

Innovative medicines delivered net sales of USD 18.1 billion (+5%, +10% cc) in the first half. Pharmaceuticals BU grew 5% (+10% cc) driven by *Cosentyx* reaching USD 1.6 billion and *Entresto* USD 778 million. Oncology grew 5% (+9% cc) driven by AAA including *Lutathera*, as well as *Promacta/Revolade*, *Tafinlar + Mekinist* and *Kisqali*. Volume contributed 11 (cc) percentage points to sales growth. Generic competition had a negative impact of 1 (cc) percentage points. Net pricing had a negligible impact.

Regionally, US sales (USD 6.3 billion, +12%) delivered a strong performance driven by *Cosentyx*, *Entresto* and *Lutathera*. Europe sales (USD 6.4 billion, +2%, +11% cc) benefited from continued strong performance of *Entresto*, *Lucentis*, *Tafinlar + Mekinist* and *Cosentyx*. Japan sales were USD 1.2 billion (0%, +1% cc). Emerging Growth Markets sales grew (+2%, +11% cc), led by double-digit cc growth in China.

Operating income

Operating income was USD 4.7 billion (+7%, +15% cc), mainly driven by continued strong sales growth, productivity and higher divestment gains, partly offset by growth investments and by legal provisions. Operating income margin was 25.8% of net sales, increasing 0.4 percentage points (+1.3 percentage points cc).

Core adjustments were USD 1.6 billion, mainly due to USD 1.0 billion of amortization. Core adjustments increased compared to prior year mainly driven by higher legal provisions and higher net impairment charges partly offset by higher net divestments (mainly from real estate).

Core operating income was USD 6.2 billion (+14%, +21% cc) mainly driven by higher sales and productivity programs, partly offset by higher growth investments. Core operating income margin was 34.4% of net sales, increasing 2.6 percentage points (+3.2 percentage points cc). Core gross margin increased by 0.6 percentage points (cc), mainly driven by productivity. Core R&D expenses decreased by 1.5 percentage points (cc) mainly driven by sales leverage, productivity and portfolio prioritization. Core SG&A expenses declined by 0.8 percentage points (cc) mainly driven by productivity and sales leverage. Core Other Income and Expense, net increased the margin by 0.3 percentage points (cc).

ONCOLOGY BUSINESS UNIT

	Q2 2019	Q2 2018	% change		H1 2019	H1 2018	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
<i>Tasigna</i>	468	488	-4	-1	902	954	-5	-2
<i>Sandostatin</i>	403	399	1	4	795	799	-1	3
<i>Afinitor/Votubia</i>	401	408	-2	0	774	783	-1	1
<i>Promacta/Revolade</i>	349	292	20	23	656	549	19	24
<i>Tafinlar + Mekinist</i> ¹	340	284	20	25	637	551	16	21
<i>Gleevec/Glivec</i>	323	416	-22	-19	630	808	-22	-18
<i>Jakavi</i>	284	239	19	26	542	473	15	23
<i>Exjade/Jadenu</i>	253	289	-12	-10	491	550	-11	-8
<i>Votrient</i>	193	219	-12	-9	380	433	-12	-9
<i>Lutathera</i>	109	24	nm	nm	215	30	nm	nm
<i>Kisqali</i>	111	59	88	94	202	103	96	103
<i>Kymriah</i>	58	16	263	278	103	28	268	281
Other	314	300	5	9	600	563	7	11
Total Oncology business unit	3 606	3 433	5	9	6 927	6 624	5	9

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

Tasigna (USD 468 million, -4%, -1% cc) declined in the US, partially offset by modest growth in all other regions.

Sandostatin (USD 403 million, +1%, +4% cc) sales grew moderately driven by the US and EGM, partly offset by competitive pressure mainly in Europe.

Afinitor/Votubia (USD 401 million, -2%, 0% cc) was broadly in line with prior year as growth in the US was offset by the first generic competition in Europe. In the US, the Abbreviated New Drug Application (ANDA) challenges to the compound patent, and the ANDA and IPR challenges to the renal cell carcinoma use patent, have been resolved and the patents upheld. Novartis has resolved patent

litigation with certain generic manufacturers which may result in limited generic competition for *Afinitor* toward the end of 2019, and additional generic competition starting in mid-2020.

Promacta/Revolade (USD 349 million, +20%, +23% cc) continued to grow at a strong double-digit rate across all regions driven by increased use in chronic immune thrombocytopenia (ITP) and uptake as first-line treatment for severe aplastic anemia (SAA) in the US and Japan.

Tafinlar + Mekinist (USD 340 million, +20%, +25% cc) continued double-digit growth due to demand in metastatic melanoma and NSCLC, and strong uptake of the adjuvant melanoma indication in the US and Europe.

Gleevec/Glivec (USD 323 million, -22%, -19% cc) continued to decline due to generic competition in most major markets.

Jakavi (USD 284 million, +19%, +26% cc) continued double-digit growth across all regions driven by demand in the myelofibrosis and polycythemia vera indications.

Exjade/Jadenu (USD 253 million, -12%, -10% cc) declined mainly due to pressure from new generic competition in the US and generics in other regions.

Votrient (USD 193 million, -12%, -9% cc) sales declined, mainly driven by competitive pressure in the US.

Lutathera (USD 109 million) continued to grow led by the US with over 140 centers actively treating and the European launch progressing well. Sales from all AAA brands (including *Lutathera* and radiopharmaceutical diagnostic products) were USD 171 million.

Kisqali (USD 111 million, +88%, +94% cc) continued to grow in the US driven by use in first-line metastatic breast cancer patients, independent of menopausal status or combination partner, with strong uptake in Europe and other regions.

Kymriah (USD 58 million) strong demand continued and sales increased primarily driven by ongoing uptake in the US and Europe. There are over 130 qualified treatment centers and 19 countries worldwide that have coverage for at least one indication. Reimbursement for both Pediatric ALL and DLBCL was received in Japan, making *Kymriah* the only CAR-T available in Asia.

PHARMACEUTICAL BUSINESS UNIT

OPHTHALMOLOGY

	Q2 2019 USD m	Q2 2018 USD m	% change		H1 2019 USD m	H1 2018 USD m	% change	
			USD	cc			USD	cc
<i>Lucentis</i>	536	515	4	10	1 069	1 035	3	10
Travoprost Group	106	134	-21	-19	221	258	-14	-11
Other	532	531	0	4	1 045	1 044	0	4
Total Ophthalmology	1 174	1 180	-1	4	2 335	2 337	0	5

Lucentis (USD 536 million, +4%, +10% cc) delivered double-digit growth driven by commercial execution and strong market growth.

Travoprost Group (USD 106 million, -21%, -19% cc) declined mainly due to increased competition in the US and generic competition in Europe.

NEUROSCIENCE

	Q2 2019 USD m	Q2 2018 USD m	% change		H1 2019 USD m	H1 2018 USD m	% change	
			USD	cc			USD	cc
<i>Gilenya</i>	825	866	-5	-2	1 591	1 687	-6	-2
<i>Aimovig</i>	24		nm	nm	42		nm	nm
Other	37	23	61	72	50	43	16	23
Total Neuroscience	886	889	0	3	1 683	1 730	-3	1

Gilenya (USD 825 million, -5%, -2% cc) declined in the US mainly due to competitive pressures. In the US, the ANDA (Abbreviated New Drug Application) proceedings challenging the compound patent and extensions expiring in 2019 have been resolved and the patent upheld.

Aimovig (USD 24 million), is the most prescribed anti-CGRP worldwide, with more than 250,000 patients prescribed in the post-trial setting. It has now been launched in 30 countries for the preventive treatment of migraine 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 unless a final court decision terminates the agreements.

Zolgensma previously known as AVXS-101, was approved and launched in the US in Q2 for the treatment of pediatric patients less than 2 years of age with spinal muscular atrophy (SMA) with bi-allelic mutations in the survival motor neuron 1 (SMN1) gene. Administered as a single, one-time intravenous (IV) infusion, *Zolgensma* is the first and only gene therapy approved by the FDA for the treatment of all types of SMA, including those who are pre-symptomatic at diagnosis. One-time treatment with *Zolgensma* offers an alternative to lifetime chronic therapy for patients with SMA. Novartis is working closely with payers to offer pay-over-time options up to 5 years and outcomes-based agreements up to 5 years, as well as providing a patient program to support affordability and access. *Zolgensma* is currently under regulatory review in Europe and in Japan.

Mayzent was approved by the FDA on March 26th, 2019 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 typical SPMS population.

IMMUNOLOGY, HEPATOLOGY and DERMATOLOGY

	Q2 2019 USD m	Q2 2018 USD m	% change		H1 2019 USD m	H1 2018 USD m	% change	
			USD	cc			USD	cc
<i>Cosentyx</i>	858	701	22	25	1 649	1 281	29	32
<i>Ilaris</i>	165	132	25	31	316	258	22	29
Total Immunology, Herpetology and Dermatology	1 023	833	23	26	1 965	1 539	28	32

Xolair sales for all indications are reported in the Respiratory franchise

Cosentyx (USD 858 million, +22%, +25% cc) delivered strong demand driven growth in the US and all other regions. In the US, *Cosentyx* (USD 534 million) sales grew 31%, in the rest of the world 11% (18% cc). In June, Novartis presented the first-of-its-kind MAXIMISE study, showing efficacy and safety of a biologic in the management of axial manifestations of PsA. As the first IL-17A inhibitor *Cosentyx* was launched in China in May, based on data which confirmed rapid response and high efficacy of *Cosentyx* in psoriasis patients.

Ilaris (USD 165 million, +25%, +31% cc) sales were driven by strong double-digit volume growth, mostly in Europe and the US.

Xolair continued to grow in Chronic Spontaneous Urticaria (CSU, also known as Chronic Idiopathic Urticaria, CIU), a severe skin disease. *Xolair* on a global level is managed by the Respiratory franchise which reports all *Xolair* sales.

RESPIRATORY

	Q2 2019 USD m	Q2 2018 USD m	% change		H1 2019 USD m	H1 2018 USD m	% change	
			USD	cc			USD	cc
<i>Ultibro Breezhaler</i>	112	116	-3	1	216	222	-3	4
<i>Seebri Breezhaler</i>	34	39	-13	-9	65	77	-16	-9
<i>Onbrez Breezhaler</i>	20	27	-26	-18	42	54	-22	-15
Subtotal COPD Portfolio	166	182	-9	-4	323	353	-8	-2
<i>Xolair</i>	290	261	11	18	571	516	11	19
Other	5	6	-17	-2	12	13	-8	0
Total Respiratory	461	449	3	9	906	882	3	10

Xolair sales for all indications are reported in the Respiratory franchise

Xolair (USD 290 million, +11%, +18% cc) continued to grow in both indications, Severe Allergic Asthma (SAA) and Chronic Spontaneous Urticaria (CSU). Growth was mainly driven by the recent approval of *Xolair*

for home-use in Europe and strong performance in Emerging Growth Markets. 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 112 million, -3%, +1% cc) an inhaled LABA/LAMA, sales were broadly in line with prior year.

Seebri Breezhaler (USD 34 million, -13%, -9% cc) an inhaled LAMA, and **Onbrez Breezhaler** (USD 20 million, -26%, -18% cc) an inhaled LABA, declined due to competition in Europe.

CARDIOVASCULAR, RENAL AND METABOLISM

	Q2 2019 USD m	Q2 2018 USD m	% change		H1 2019 USD m	H1 2018 USD m	% change	
			USD	cc			USD	cc
<i>Entresto</i>	421	239	76	81	778	439	77	83
Other	6	6	0	14	12	10	20	20
Total Cardiovascular, Renal and Metabolism	427	245	74	79	790	449	76	81

Entresto (USD 421 million, +76%, +81% cc) delivered a strong quarter with continued growth momentum fueled by increased demand in both hospital and ambulatory settings across all territories/geographies. The Heart Failure Association of the European Society of Cardiology published a consensus paper in May that supports *Entresto* as a first line treatment option for patients hospitalized with new-onset HFrEF or decompensated congestive HFrEF. The paper also simplified treatment initiation and supported the use of *Entresto* in every patient stabilized in hospital.

ESTABLISHED MEDICINES

	Q2 2019 USD m	Q2 2018 USD m	% change		H1 2019 USD m	H1 2018 USD m	% change	
			USD	cc			USD	cc
<i>Galvus Group</i>	320	332	-4	2	635	650	-2	5
<i>Diovan Group</i>	283	244	16	23	544	509	7	14
<i>Exforge Group</i>	264	250	6	12	531	498	7	14
<i>Zortress/Certican</i>	124	115	8	12	240	224	7	12
<i>Neoral/Sandimmun(e)</i>	110	120	-8	-3	213	235	-9	-4
<i>Voltaren/Cataflam</i>	95	114	-17	-13	208	229	-9	-4
Other	553	672	-18	-13	1 129	1 368	-17	-12
Total Established Medicines	1 749	1 847	-5	0	3 500	3 713	-6	0

Galvus Group (USD 320 million, -4%, +2% cc) sales were broadly in line with prior year, with solid performance in Emerging Growth Markets including China.

Diovan Group (USD 283 million, +16%, +23% cc) grew in Europe, Emerging Growth Markets and the US mainly due to the recall of competitive generic products.

Exforge Group (USD 264 million, +6%, +12% cc) grew in Emerging Growth Markets and Europe mainly due to the recall of competitive generic products.

Zortress/Certican (USD 124 million, +8%, +12% cc) continued to grow in most regions.

Neoral/Sandimmun(e) (USD 110 million, -8%, -3% cc) declined due to generic competition and mandatory price reductions.

Voltaren/Cataflam (USD 95 million, -17%, -13% cc) declined due to generic competition.

Sandoz

	Q2 2019	Q2 2018	% change		H1 2019	H1 2018	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Net sales	2 438	2 463	-1	3	4 764	4 980	-4	1
Operating income	282	328	-14	-7	555	737	-25	-17
As % of net sales	11.6	13.3			11.6	14.8		
Core operating income	501	480	4	10	962	979	-2	6
As % of net sales	20.5	19.5			20.2	19.7		

Sandoz US Generics Transaction

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 during 2019. The results of this business are included in continuing operations.

Second quarter

Net sales

Net sales were USD 2.4 billion (-1%, +3% cc) driven by volume growth of 10 percentage points (cc) partially offset by 7 percentage points (cc) of price erosion mainly in the US. Excluding the US, net sales grew (+1%, +7% cc).

Sales in Europe were USD 1.3 billion (+3%, +9% cc). Sales in the US were USD 642 million declining 7% as continued industry-wide pricing pressure was partly offset by a lower prior year base. Sales in Asia / Africa / Australasia were USD 333 million (-2%, +1% cc). Sales in Canada and Latin America were USD 194 million (+1%, +7% cc).

Global sales of Biopharmaceuticals (biosimilars, biopharmaceutical contract manufacturing and *Glatopa*) grew to USD 401 million (+10%, +16% cc), driven by continued strong double-digit growth in Europe from *Rixathon* (rituximab), *Hyrmoz* (adalimumab) and *Erelzi* (etanercept). Launch roll-outs in Asia / Africa / Australasia also contributed to growth.

Retail sales were USD 1.9 billion (-3%, +2% cc) including sales from first-to-market launches. Total Anti-Infectives franchise sales were USD 320 million (-4%, +1% cc), including finished dosage forms sold under the Sandoz name and Anti-Infectives sold to third parties for sale under their own name (USD 134 million, -8%, -4% cc).

Operating income

Operating income was USD 282 million (-14%, -7% cc) as higher net changes in legal settlements and higher net restructuring expenses from the announced Sandoz transformation were partly offset by continued gross margin improvement. Operating income margin was 11.6% of net sales, declining 1.7 percentage points (-1.3 percentage points cc).

Core adjustments were USD 219 million, including USD 81 million of amortization. Prior year core adjustments were USD 152 million. The change in core adjustments compared to prior year was driven by higher net restructuring expenses from the announced Sandoz transformation.

Core operating income was USD 501 million (+4%, +10% cc) driven by gross margin improvements, sales growth and cost discipline, partly offset by price erosion and higher net changes in legal settlements. Core operating income margin was 20.5% of net sales, increasing 1.0 percentage point (1.4 percentage points cc). Core gross margin increased by 2.1 percentage points (cc), as favorable product and geographic mix and ongoing productivity improvements were partly offset by the impact of price erosion mainly in the US. Core R&D expenses increased by 0.1 percentage points (cc). Core SG&A expenses decreased by 1.6 percentage points (cc). Core Other Income and Expense decreased the margin by 2.2 percentage points (cc) mainly due to higher net changes in legal settlements.

First half

Net sales

Net sales were USD 4.8 billion (-4%, +1% cc) driven by volume growth of 9 percentage points (cc) partially offset by 8 percentage points (cc) of price erosion, mainly in the US. Excluding the US, net sales grew (-1%, +6% cc).

Sales in Europe were USD 2.5 billion (-1%, +7% cc). Sales in the US were USD 1.2 billion (-12%), mainly due to continued industry-wide pricing pressure. Sales in Asia / Africa / Australasia were USD 651 million (-2%, +2% cc). Sales in Canada and Latin America were USD 371 million (-4%, +3% cc).

Global sales of Biopharmaceuticals (biosimilars, biopharmaceutical contract manufacturing and *Glatopa*) grew to USD 752 million (+8%, +14% cc), driven by continued strong double-digit growth in Europe from *Rixathon* (rituximab), *Hyrimoz* (adalimumab) and *Erelzi* (etanercept). Launch roll-outs in Asia / Africa / Australasia also contributed to growth.

Retail sales were USD 3.8 billion (-6%, -1% cc), as the decline in the US (-8%) was mostly offset by growth in the rest of world. Excluding the US, retail sales were (-5%, +2% cc). Total Anti-Infectives franchise sales were USD 649 million (-8%, -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 259 million, -9%, -5% cc).

Operating income

Operating income was USD 555 million (-25%, -17% cc) as higher net changes in legal settlements, higher restructuring expenses from the announced Sandoz transformation and lower divestment income were partially offset by continued gross margin improvement. Operating income margin was 11.6% of net sales, declining 3.2 percentage points (-2.6 percentage points cc).

Core adjustments were USD 407 million, including USD 160 million of amortization. Prior year core adjustments were USD 242 million. The change in core adjustments compared to prior year was driven by higher net restructuring expenses from the announced Sandoz transformation, lower divestment gains and higher net changes in legal settlements.

Core operating income was USD 962 million (-2%, +6% cc) as gross margin improvements, sales growth and lower SG&A costs were partly offset by price erosion, higher net legal settlements and lower divestment income. Core operating income was 20.2% of net sales, increasing 0.5 percentage points (+0.9 percentage points cc). Core gross margin increased by 1.9 percentage points (cc), as favorable product and geographic mix and ongoing productivity improvements, were partly offset by the impact of price erosion mainly in the US. Core R&D expenses increased by 0.3 percentage points (cc). Core SG&A expenses decreased by 0.6 percentage points (cc). Core Other Income and Expense decreased the margin by 1.3 percentage points (cc) mainly due to higher net legal settlements.

GROUP CASH FLOW AND BALANCE SHEET

Cash flow

Second quarter

Net cash flows from operating activities from continuing operations amounted to USD 3.1 billion, compared to USD 3.5 billion in the prior year quarter. Higher net income adjusted for non-cash items and other adjustments, including divestment gains, was more than offset by higher working capital, lower dividends from associated companies (OTC JV dividends received in the prior year quarter), and higher provision payments.

Net cash flows from operating activities from discontinued operations are not material on account of the completion of the Alcon spin-off on April 9, 2019, compared to USD 430 million in the prior year quarter.

Net cash inflows from investing activities from continuing operations amounted to USD 0.2 billion, compared to USD 4.5 billion in the prior year quarter. The current year period includes mainly cash inflows from the sale of property, plant and equipment (including proceeds from the sale and leaseback of real estate), intangible and financial assets of USD 1.0 billion, partly offset by cash outflows for the purchase of property, plant and equipment of USD 0.3 billion, for intangible assets of USD 0.2 billion, for financial assets and other non-current assets of USD 0.1 billion, and for the acquisitions of businesses of USD 0.3 billion for IFM Tre, Inc.

In the prior year quarter, net cash flows from investing activities from continuing operations were mainly related to the cash inflow of USD 13.0 billion from the divestment of our 36.5% stake in the GSK consumer healthcare joint venture. This was partly offset by cash outflows for the acquisitions of businesses of USD 8.4 billion, mainly for AveXis, Inc. of USD 8.3 billion, net (USD 8.7 billion, net of cash acquired USD 0.4 billion).

Net cash flows used in investing activities from discontinued operations amounted to USD 0.7 billion, compared to USD 0.1 billion in the prior year quarter. The current year period mainly includes the cash outflow of USD 0.6 billion due to the derecognized cash and cash equivalents following the completion of the spin-off of the Alcon business.

Net cash flows used in financing activities from continuing operations amounted to USD 2.7 billion, compared to USD 1.3 billion in the prior year quarter. The current year period mainly includes the cash outflows for net treasury share transactions of USD 2.4 billion, the net repayments of financial debts of USD 0.8 billion, partly offset by other net financing cash inflows of USD 0.5 billion.

In the prior year quarter, net cash flows used in financing activities from continuing operations included net repayments of financial debts of USD 0.9 billion, cash outflows for net treasury share transactions of USD 0.6 billion, partly offset by other net financing cash inflows of USD 0.3 billion.

Net cash inflows from financing activities from discontinued operations amounted to USD 2.7 billion, compared to a cash outflow of USD 0.3 billion in the prior year quarter. The current year period includes mainly the cash inflows of USD 3.2 billion from Alcon borrowings, partly offset by USD 0.1 billion payments for transaction costs.

Free cash flow from continuing operations amounted to USD 3.6 billion (+11% USD) compared to USD 3.3 billion in prior year, mainly driven by higher operating income adjusted for non-cash items, and higher divestment proceeds, partly offset by higher working capital, increased payments out of provisions and lower dividends received from the OTC JV which was divested in Q2 2018.

First half

Net cash flows from operating activities from continuing operations amounted to USD 5.4 billion, compared to USD 5.9 billion in the prior year period. Higher net income adjusted for non-cash items and other adjustments, including divestment gains, was more than offset by lower dividends from associated companies (OTC JV dividends received in the prior year period), higher provision payments and higher working capital, which in the prior year period included the receipt of a GSK sales milestone from the divested Vaccines business of USD 0.4 billion.

Net cash flows from operating activities from discontinued operations are USD 78 million, compared to USD 563 million in the prior year period.

Net cash inflows from investing activities from continuing operations amounted to USD 2.0 billion, compared to USD 0.5 billion in the prior year period. The current year mainly includes USD 2.3 billion net proceeds from the sales of marketable securities and commodities and cash inflows from the sale of property, plant and equipment (including the proceeds from the sale and leaseback of real estate), intangible and financial assets of USD 1.3 billion, partly offset by cash outflows for the purchase of property, plant and equipment of USD 0.6 billion, for intangible assets of USD 0.5 billion, for financial assets and other non-current assets of USD 0.2 billion, and for acquisitions and divestments of businesses, net of USD 0.4 billion including the acquisition of IFM Tre, Inc. (USD 0.3 billion).

In the prior year period, net cash flows from investing activities from continuing operations were mainly related to the cash inflow of USD 13.0 billion from the divestment of our 36.5% stake in the GSK consumer healthcare joint venture. This was partly offset by cash outflows for the acquisitions of businesses of USD 11.9 billion, mainly Advanced Accelerator Applications S.A. of USD 3.5 billion, net (USD 3.9 billion, net of cash acquired USD 0.4 billion) and AveXis, Inc. of USD 8.3 billion, net (USD 8.7 billion, net of cash acquired USD 0.4 billion).

Net cash flows used in investing activities from discontinued operations amounted to USD 1.1 billion, compared to USD 0.3 billion in the prior year period. The current year period includes mainly the cash outflow for the acquisition of PowerVision, Inc. of USD 0.3 billion 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 13.0 billion, compared to USD 2.8 billion in the prior year period. The current year mainly includes the cash outflows for the dividend payment of USD 6.6 billion, the repayment at maturity of a US dollar bond of USD 3.0 billion and for net treasury share transactions of USD 2.4 billion. The net repayments of current financial debts amounted to USD 1.0 billion.

In the prior year period, net cash flows used in financing activities from continuing operations included cash outflows for the dividend payment of USD 7.0 billion, the repayment of non-current financial debts of USD 0.4 billion and for net treasury transactions of USD 0.3 billion. This was partly offset by cash inflows from the issuance of euro bonds totaling USD 2.8 billion (notional amount EUR 2.25 billion), the net increase in current financial debts of USD 1.8 billion, and other net financing cash inflows of USD 0.3 billion.

Net cash inflows from financing activities from discontinued operations amounted to USD 3.3 billion, compared to a cash outflow of USD 0.3 billion in the prior year period. The current year period includes mainly the cash inflows of USD 3.5 billion from Alcon borrowings, partly offset by USD 0.2 billion payments for transaction costs.

Free cash flow from continuing operations amounted to USD 5.5 billion (+6% USD) compared to USD 5.2 billion in the prior year, mainly driven by higher operating income adjusted for non-cash items, and higher divestment proceeds, partly offset by higher working capital, a sales milestone from the divested Vaccines business received in the prior year, increased payments out of provisions and lower dividends received from the OTC JV which was divested in Q2 2018.

Balance sheet

There has been a significant change on the balance sheet as a result of the completion of the spin-off of the Alcon business through the completion of the dividend in kind distribution to Novartis AG shareholders on April 9, 2019 (see Note 2, 3 and 11 for further details).

Assets

Total non-current assets of USD 88.0 billion at June 30, 2019 decreased by USD 22.0 billion compared to prior year end, mainly due to the derecognition of the Alcon business non-current assets as a result of the dividend in kind distribution to Novartis AG shareholders. Excluding the effect of the derecognition, total non-current assets increased by USD 1.6 billion. The reduction of USD 0.8 billion in intangible assets other than goodwill is due to amortization and impairments only partially offset by net additions and the impact of business combinations. Goodwill of USD 26.5 billion remained stable compared to December 31, 2018. Property, plant and equipment decreased by USD 0.5 billion to USD 12.3 billion mainly due to depreciation only partly offset by net additions. Right-of-use assets of USD 1.8 billion were recognized resulting from the implementation of IFRS 16 – Leases on January 1, 2019. Financial assets at USD 3.4 billion increased by USD 1.1 billion mostly due to the investments in

Alcon Inc. shares recognized by certain consolidated foundations through the Alcon spin-off. Investments in associated companies, deferred tax assets and other non-current assets were broadly in line with prior year end.

Total current assets of USD 28.3 billion at June 30, 2019 decreased by USD 7.2 billion. Excluding the effect of the derecognition of the Alcon business current assets, cash and cash equivalents decreased by USD 3.1 billion, mainly due to the repayment of financial debts and the dividend payment in Q1 2019. Marketable securities, commodities, time deposits and derivative financial instruments decreased by USD 2.3 billion. Inventories at USD 6.1 billion, and trade receivables at USD 8.0 billion increased by USD 0.6 billion and USD 0.5 billion respectively, while other current assets remained broadly in line with prior year end at USD 2.8 billion.

Liabilities

Total non-current liabilities of USD 34.7 billion decreased by USD 2.6 billion compared to December 31, 2018. Excluding the effect of the derecognition of the Alcon business non-current liabilities, total non-current liabilities remained broadly in line with prior year end. The recognition of the USD 1.8 billion lease liabilities, resulting from the implementation of IFRS 16 – Leases on January 1, 2019, was offset by the reduction of the non-current financial debt and the deferred tax liabilities by USD 2.0 billion and USD 0.2 billion respectively. Provisions and other non-current liabilities increased compared to prior year end by USD 0.4 billion to USD 6.8 billion.

Total current liabilities of USD 30.1 billion at June 30, 2019 increased by USD 0.5 billion. Excluding the effect of the derecognition of the Alcon business current liabilities, total current liabilities increased by USD 2.2 billion at June 30, 2019. Financial debts and derivatives decreased by USD 1.8 billion mainly due to repayment of USD 3.0 billion bond issued in February 2009. Lease liabilities of USD 0.3 billion were recognized resulting from the implementation of IFRS 16 – Leases on January 1, 2019. Provisions and other current liabilities increased by USD 3.5 billion mainly due to liabilities related to the treasury share repurchase obligation under a share buyback trading plan. Current income tax liabilities at USD 2.2 billion increased by USD 0.3 billion. Trade payable remained broadly in line with prior year end at USD 4.8 billion.

Net assets of disposal group held for sale of USD 0.8 billion are 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).

Group equity

The Group's equity decreased by USD 27.2 billion to USD 51.5 billion at June 30, 2019 compared to USD 78.7 billion at December 31, 2018. This decrease was mainly due to derecognition of the dividend in kind distribution liability of USD 23.4 billion upon the completion of the Alcon spin-off (see Note 2, 3 and 11 for further details), the cash-dividend payment of USD 6.6 billion, purchase of treasury shares of USD 3.0 billion, increase of treasury share repurchase obligation under a share buyback trading plan of USD 2.3 billion, net actuarial losses of USD 0.9 billion and transaction costs of USD 0.3 billion. This was partially offset by net income of USD 8.6 billion and the net effect of exercise of options and employee transactions of USD 0.7 billion.

Net debt and debt/equity ratio

The net debt increased to USD 17.9 billion at June 30, 2019 compared to USD 16.2 billion at December 31, 2018. The Group's liquidity amounted to USD 10.3 billion at June 30, 2019 compared to USD 16.0 billion at December 31, 2018, and the total of the non-current and current financial debt, including derivatives, amounted to USD 28.2 billion at June 30, 2019, compared to USD 32.1 billion at December 31, 2018. The debt/equity ratio increased to 0.55:1 at June 30, 2019 compared to 0.41:1 at December 31, 2018.

Innovation Review

Benefitting from our continued focus on innovation, Novartis has one of the industry's most competitive pipelines with more than 200 projects in clinical development.

Selected Innovative Medicines approvals: US, EU and Japan

Product	Active ingredient/ Descriptor	Indication	Approval date
<i>Piqray</i>	alpelisib + fulvestrant	PIK3CA mutant HR+/HER2- postmenopausal advanced or metastatic BC	May 2019
<i>Zolgensma</i>	onasemnogene abepar- vovec-xioi	Spinal Muscular Atrophy (IV formulation)	May 2019

Selected Innovative Medicines projects awaiting regulatory decisions

Product	Indication	Completed submissions			News update
		US	EU	Japan	
<i>Zolgensma</i> (AVXS-101)	Spinal Muscular Atrophy Type 1 (IV formulation)	Approved	Q4 2018	Q4 2018	- PRIME designation in EU - Sakigake designation in Japan
<i>Mayzent</i> (BAF312)	Secondary Progressive Multiple Sclerosis	Approved	Q3 2018	Q1 2019	
BYL719 (<i>Piqray</i> in US, alpelisib) + fulvestrant	PIK3CA mutant HR+/HER2- postmenopausal advanced or metastatic BC	Approved	Q4 2018		
LCI699	Cushing's disease	Q1 2019	Q4 2018		- Announced plan to divest along with <i>Signifor</i> , in H2 2019
<i>Lucentis</i>	Retinopathy of prematurity		Q4 2018	Q1 2019	
	Diabetic retinopathy		Q4 2018		
<i>Promacta/ Revolade</i>	Severe aplastic anemia, 1 st line	Approved	Q2 2018	Approved	
RTH258	nAMD	Q1 2019	Q1 2019	Q2 2019	
SEG101	Sickle cell disease	Q2 2019	Q2 2019		- US Priority review
QMF149	Asthma		Q2 2019		- QUARTZ study meets primary and key secondary endpoints
QVM149	Asthma		Q2 2019		
<i>Xiidra</i>	Dry eye	Approved	Q4 2018		- CHMP opinion anticipated Q4 2019

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	≥2023	II	
ACZ885 (canakinumab)	Adjuvant NSCLC	2022	III	Enrollment ongoing for Phase III studies
	1 st line NSCLC	2021	III	
	2 nd line NSCLC	2021	III	
<i>Zolgensma</i>	Spinal Muscular Atrophy Type 2/3 (IT formulation)	2020	I	- Interim data presented at AAN in May
AVXS-201	Rett Syndrome	2022	I	
CAD106	Alzheimer's disease	≥2023	II / III	

BYL719 (Piqray in US)	HR- HER+ adv. breast cancer	≥2023	III	
	Triple negative breast cancer	≥2023	III	
	Head and neck squamous cell carcinoma	≥2023	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 - Positive interim readout CIRRU I trial June 2019
	Sjogren's syndrome	≥2023	II	
CNP520	Alzheimer's disease	NA	II / III	- program discontinued in July 2019
Cosentyx	Non-radiographic axial spondyloarthritis	2019	III	- On track for readout in H2 2019
	Psoriatic arthritis head-to-head vs. adalimumab	2020	III	
	Ankylosing spondylitis head-to-head vs. adalimumab	2022	III	
	Hidradenitis suppurativa	2022	III	
CSJ117	Severe asthma	≥2023	II	
ECF843	Dry eye	2022	II	
Entresto	Chronic heart failure with preserved ejection fraction	2019	III	- PARAGON-HF topline results expected Q3-2019
	Post-acute myocardial infarction	2020	III	
HDM201	Acute myeloid leukemia	≥2023	II	
INC280 (capmatinib)	NSCLC (cMET amp and mut)	2019	II	- Primary analysis in the GEOMETRY mono -1 study demonstrates promising efficacy – June 2019 - Breakthrough Therapy designation granted by FDA - Orphan Drug designation granted by FDA (US) and MHLW (Japan)
Jakavi	Acute graft-versus-host disease (GvHD)	2020	III	
	Chronic graft-versus-host disease (GvHD)	2020	III	
KAE609 (cipargamin)	Malaria	≥2023	II	
KAF156 (ganaplacide)	Malaria	≥2023	II	
Kisqali (LEE011) + endocrine therapy	HR+/HER2- early BC (adjuvant)	≥2023	III	- Translational Research In Oncology (TRIO) is collaborating with Novartis on an upcoming phase III clinical trial (called NATALEE) - Positive read out MONALEESA-7 trial in advanced BC– June 2019
Kymriah (tisagenlecleucel)	r/r Follicular lymphoma	2021	II	
	Chronic lymphocytic leukemia	NA	II	- program discontinued in Q2 2019
	r/r DLBCL in 1 st relapse	2021	III	
+ pembrolizumab	r/r DLBCL	≥2023	I	
LAM320	Multi-drug resistant tuberculosis	2021	III	- WHO pre-qualification submission achieved in April 2019
LJC242	Non-alcoholic steatohepatitis (NASH)	≥2023	II	
LJN452 (tropifexor)	Non-alcoholic steatohepatitis (NASH)	≥2023	II	- FDA Fast Track designation

LMI070	Spinal Muscular Atrophy	≥2023	II	- FDA Orphan designation, EMA Orphan status obtained - Dose ranging study ongoing
LNP023	IgA nephropathy	≥2023	II	
	Membranous nephropathy	≥2023	II	
	C3 glomerulopathy	≥2023	II	
LOU064	Chronic spontaneous urticaria	≥2023	II	
¹⁷⁷ Lu-PSMA-617	Metastatic castration-resistant prostate cancer	2020	III	
MBG453	Myelodysplastic syndrome	2021	II	
MOR106	Atopic dermatitis	≥2023	II	
OMB157 (ofatumumab)	Relapsing multiple sclerosis	2019	III	- Phase III ASCLEPIOS studies fully recruited and on track for Q3 2019 readout
PDR001 + Tafenlar + Mekinist	Metastatic BRAF V600+ melanoma	2019	III	- On track for H2 2019 readout
PDR001 Combo	Metastatic melanoma	≥2023	II	- Enrollment ongoing
QAW039 (fevipiprant)	Asthma	2020	III	- Phase III LUSTER (1 and 2) and ZEAL (1 and 2) studies enrollment completed. On track for H2 2019 completion
QBW251	COPD	≥2023	II	
QGE031 (ligelizumab)	Chronic spontaneous urticaria / chronic idiopathic urticaria	2021	III	- Phase III trials initiated enrollment
RTH258 (brolucizumab)	Diabetic macular edema	2021	III	- DME trial started
	Retinal vein occlusion	≥2023	III	
Rydapt (PKC412)	Acute myeloid leukemia (FLT3 wild type)	2022	III	
SAF312	Chronic ocular surface pain	≥2023	II	
TQJ230	Secondary prevention of cardiovascular events in patients with elevated levels of lipoprotein (a)	≥2023	III	- Phase III planned to initiate in Q1 of 2020
UNR844	Presbyopia	2022	II	
VAY736 (lanalumab)	Auto-immune hepatitis	≥2023	II	
	Primary Sjogren's syndrome	≥2023	II	- FDA Fast Track designation - Phase II DRF study fully recruited
VAY785 (emricasan)	Non-alcoholic steatohepatitis (NASH)	≥2023	II	
VPM087	1st line colorectal cancer / 1st line renal cell carcinoma	≥2023	I	
Xolair	Nasal polyps	2019	III	- POLYP 1 and POLYP2 positive study read out – May 2019
ZPL389 (adriforant)	Atopic dermatitis	2022	II	- Phase IIb trial enrollment initiated

Selected Sandoz approvals and pipeline projects (biosimilars)

Project/ Compound	Potential indication/ Disease area	Submission status	Current Phase	News update
LA-EP2006 (pegfilgrastim)	Chemotherapy-induced neutropenia and others (same as originator)	US EU	Submitted Approved	- Resubmitted to FDA in April
GP2411 (denosumab)	Osteoporosis, skeletal-related in bone met. pts (same as originator)	EU/US	III	

CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Consolidated income statements

Second quarter (unaudited)

(USD millions unless indicated otherwise)	Note	Q2 2019	Q2 2018	Change
Net sales to third parties from continuing operations	10	11 764	11 339	425
Sales to discontinued operations			20	-20
Net sales from continuing operations		11 764	11 359	405
Other revenues	10	260	294	-34
Cost of goods sold		-3 406	-3 558	152
Gross profit from continuing operations		8 618	8 095	523
Selling, general and administration		-3 585	-3 495	-90
Research and development		-2 051	-2 126	75
Other income		989	481	508
Other expense		-1 308	-524	-784
Operating income from continuing operations		2 663	2 431	232
Income from associated companies		176	5 932	-5 756
Interest expense		-205	-237	32
Other financial income and expense		0	45	-45
Income before taxes from continuing operations		2 634	8 171	-5 537
Taxes		-525	-443	-82
Net income from continuing operations		2 109	7 728	-5 619
Net income from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders	11		40	-40
Gain on distribution of Alcon Inc. to Novartis AG shareholders	3, 11	4 691		4 691
Net income from discontinued operations		4 691	40	4 651
Net income		6 800	7 768	-968
<i>Attributable to:</i>				
Shareholders of Novartis AG		6 799	7 768	-969
Non-controlling interests		1		1
Weighted average number of shares outstanding – Basic (million)		2 310	2 327	-17
<i>Basic earnings per share from continuing operations (USD) ¹</i>		<i>0.91</i>	<i>3.32</i>	<i>-2.41</i>
<i>Basic earnings per share from discontinued operations (USD) ¹</i>		<i>2.03</i>	<i>0.02</i>	<i>2.01</i>
Total basic earnings per share (USD) ¹		2.94	3.34	-0.40
Weighted average number of shares outstanding – Diluted (million)		2 333	2 346	-13
<i>Diluted earnings per share from continuing operations (USD) ¹</i>		<i>0.90</i>	<i>3.29</i>	<i>-2.39</i>
<i>Diluted earnings per share from discontinued operations (USD) ¹</i>		<i>2.01</i>	<i>0.02</i>	<i>1.99</i>
Total diluted earnings per share (USD) ¹		2.91	3.31	-0.40

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

Consolidated income statements

First half (unaudited)

(USD millions unless indicated otherwise)	Note	H1 2019	H1 2018	Change
Net sales to third parties from continuing operations	10	22 870	22 254	616
Sales to discontinued operations		53	33	20
Net sales from continuing operations		22 923	22 287	636
Other revenues	10	556	529	27
Cost of goods sold		-6 657	-7 009	352
Gross profit from continuing operations		16 822	15 807	1 015
Selling, general and administration		-6 915	-6 779	-136
Research and development		-4 350	-4 108	-242
Other income		1 192	869	323
Other expense		-1 844	-987	-857
Operating income from continuing operations		4 905	4 802	103
Income from associated companies		256	6 084	-5 828
Interest expense		-431	-455	24
Other financial income and expense		44	80	-36
Income before taxes from continuing operations		4 774	10 511	-5 737
Taxes		-797	-813	16
Net income from continuing operations		3 977	9 698	-5 721
Net loss/income from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders	11	-101	98	-199
Gain on distribution of Alcon Inc. to Novartis AG shareholders	3, 11	4 691		4 691
Net income from discontinued operations		4 590	98	4 492
Net income		8 567	9 796	-1 229
<i>Attributable to:</i>				
Shareholders of Novartis AG		8 565	9 793	-1 228
Non-controlling interests		2	3	-1
Weighted average number of shares outstanding –				
Basic (million)		2 312	2 326	-14
<i>Basic earnings per share from continuing operations (USD) ¹</i>		<i>1.72</i>	<i>4.17</i>	<i>-2.45</i>
<i>Basic earnings per share from discontinued operations (USD) ¹</i>		<i>1.98</i>	<i>0.04</i>	<i>1.93</i>
Total basic earnings per share (USD) ¹		3.70	4.21	-0.52
Weighted average number of shares outstanding –				
Diluted (million)		2 336	2 347	-11
<i>Diluted earnings per share from continuing operations (USD) ¹</i>		<i>1.70</i>	<i>4.13</i>	<i>-2.43</i>
<i>Diluted earnings per share from discontinued operations (USD) ¹</i>		<i>1.96</i>	<i>0.04</i>	<i>1.92</i>
Total diluted earnings per share (USD) ¹		3.66	4.17	-0.51

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

Consolidated statements of comprehensive income

Second quarter (unaudited)

(USD millions)	Q2 2019	Q2 2018	Change
Net income	6 800	7 768	-968
<i>Other comprehensive income to be eventually recycled into the consolidated income statement:</i>			
Fair value adjustments on deferred cash flow hedges, net of taxes		6	-6
Total fair value adjustments on financial instruments, net of taxes		6	-6
Novartis share of other comprehensive income recognized by associated companies, net of taxes ¹		-563	563
Net investment hedge	-27	124	-151
Currency translation effects ²	525	-809	1 334
Total of items to eventually recycle	498	-1 242	1 740
<i>Other comprehensive income never to be recycled into the consolidated income statement:</i>			
Actuarial (losses)/gains from defined benefit plans, net of taxes	-387	42	-429
Fair value adjustments on equity securities, net of taxes	-21	63	-84
Total of items never to be recycled	-408	105	-513
Total comprehensive income	6 890	6 631	259
<i>Attributable to:</i>			
Shareholders of Novartis AG	6 888	6 633	255
Continuing operations	2 298	6 553	-4 255
Discontinued operations	4 590	80	4 510
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 123 million were recycled into the consolidated income statement as a result of the Alcon spin-off (see Note 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.

Consolidated statements of comprehensive income

First half (unaudited)

(USD millions)	H1 2019	H1 2018	Change
Net income	8 567	9 796	-1 229
<i>Other comprehensive income to be eventually recycled into the consolidated income statement:</i>			
Fair value adjustments on debt securities, net of taxes	1	-2	3
Fair value adjustments on deferred cash flow hedges, net of taxes	1	9	-8
Total fair value adjustments on financial instruments, net of taxes	2	7	-5
Novartis share of other comprehensive income recognized by associated companies, net of taxes ¹	-54	-528	474
Net investment hedge	12	59	-47
Currency translation effects ²	189	233	-44
Total of items to eventually recycle	149	-229	378
<i>Other comprehensive income never to be recycled into the consolidated income statement:</i>			
Actuarial (losses)/gains from defined benefit plans, net of taxes ³	-890	224	-1 114
Fair value adjustments on equity securities, net of taxes	74	150	-76
Total of items never to be recycled	-816	374	-1 190
Total comprehensive income	7 900	9 941	-2 041
<i>Attributable to:</i>			
Shareholders of Novartis AG	7 898	9 941	-2 043
Continuing operations	3 321	9 786	-6 465
Discontinued operations	4 577	155	4 422
Non-controlling interests	2	0	2

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 123 million were recycled into the consolidated income statement as a result of the Alcon spin-off (see Note 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 enactment of the Swiss canton Basel-Stadt tax rate reduction, effective on January 1, 2019.

Consolidated balance sheets

(USD millions)	Note	Jun 30, 2019 (unaudited)	Dec 31, 2018 (audited)	Change
Assets				
Non-current assets				
Property, plant and equipment	10	12 290	15 696	-3 406
Right-of-use assets	6	1 762		1 762
Goodwill	10	26 533	35 294	-8 761
Intangible assets other than goodwill	10	27 221	38 719	-11 498
Investments in associated companies		8 204	8 352	-148
Deferred tax assets		7 827	8 699	-872
Financial assets		3 434	2 345	1 089
Other non-current assets		703	895	-192
Total non-current assets		87 974	110 000	-22 026
Current assets				
Inventories		6 094	6 956	-862
Trade receivables		7 973	8 727	-754
Income tax receivables		279	248	31
Marketable securities, commodities, time deposits and derivative financial instruments		344	2 693	-2 349
Cash and cash equivalents		9 991	13 271	-3 280
Other current assets		2 792	2 861	-69
Assets of disposal group held for sale	3	847	807	40
Total current assets		28 320	35 563	-7 243
Total assets		116 294	145 563	-29 269
Equity and liabilities				
Equity				
Share capital		936	944	-8
Treasury shares		-67	-69	2
Reserves		50 557	77 739	-27 182
Issued share capital and reserves attributable to Novartis AG shareholders		51 426	78 614	-27 188
Non-controlling interests		78	78	
Total equity		51 504	78 692	-27 188
Liabilities				
Non-current liabilities				
Financial debts		20 364	22 470	-2 106
Lease liabilities	6	1 752		1 752
Deferred tax liabilities		5 720	7 475	-1 755
Provisions and other non-current liabilities		6 843	7 319	-476
Total non-current liabilities		34 679	37 264	-2 585
Current liabilities				
Trade payables		4 752	5 556	-804
Financial debts and derivative financial instruments		7 857	9 678	-1 821
Lease liabilities	6	294		294
Current income tax liabilities		2 196	2 038	158
Provisions and other current liabilities		14 962	12 284	2 678
Liabilities of disposal group held for sale	3	50	51	-1
Total current liabilities		30 111	29 607	504
Total liabilities		64 790	66 871	-2 081
Total equity and liabilities		116 294	145 563	-29 269

Consolidated statements of changes in equity

Second 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 April 1, 2019	944	-63	51 518	-5 170	47 229	78	47 307
Net income			6 799		6 799	1	6 800
Other comprehensive income				89	89	1	90
Total comprehensive income			6 799	89	6 888	2	6 890
Dividend in kind ¹			2 927		2 927		2 927
Purchase of treasury shares		-16	-2 754		-2 770		-2 770
Reduction of share capital	-8	12	-4				
Equity-based compensation			175		175		175
Shares delivered to Alcon employees as a result of the Alcon spin-off			32		32		32
Taxes on treasury share transactions ²			-185		-185		-185
Increase of treasury share repurchase obligation under a share buyback trading plan			-2 573		-2 573		-2 573
Transaction costs ³			-301		-301		-301
Fair value adjustments on financial assets sold			3	-3			
Fair value adjustments related to divestments			4	-4			
Impact of change in ownership of consolidated entities			-3		-3	-2	-5
Other movements ⁴			7		7		7
Total of other equity movements	-8	-4	-2 672	-7	-2 691	-2	-2 693
Total equity at June 30, 2019	936	-67	55 645	-5 088	51 426	78	51 504

¹ 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 Note 2, 3 and 11 for further details)

² Included in Q2 2019 is a USD 69 million impact related to the revaluation of deferred tax liability on treasury shares that are recognized through retained earnings. This revaluation resulted from the Swiss Federal tax reform enacted in May 2019, effective January 1, 2020.

³ Transaction costs directly attributable to the distribution (spin-off) of the Alcon business to Novartis AG shareholders (see Note 2)

⁴ 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 April 1, 2018	969	-93	73 498	-3 276	71 098	113	71 211
Net income			7 768		7 768		7 768
Other comprehensive income			-563	-572	-1 135	-2	-1 137
Total comprehensive income			7 205	-572	6 633	-2	6 631
Purchase of treasury shares		-4	-705		-709		-709
Reduction of share capital	-25	34	-9				
Equity-based compensation			169		169		169
Increase of treasury share repurchase obligation under a share buyback trading plan			-363		-363		-363
Transaction costs ¹			-11		-11		-11
Fair value adjustments on financial assets sold			11	-11			
Impact of change in ownership of consolidated entities			-2		-2	-25	-27
Total of other equity movements	-25	30	-910	-11	-916	-25	-941
Total equity at June 30, 2018	944	-63	79 793	-3 859	76 815	86	76 901

¹ Transaction costs directly attributable to the distribution (spin-off) of the Alcon business to Novartis AG shareholders (see Note 2)

Consolidated statements of changes in equity

First half 2019 (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 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			8 565		8 565	2	8 567
Other comprehensive income			-54	-613	-667		-667
Total comprehensive income			8 511	-613	7 898	2	7 900
Dividends			-6 645		-6 645		-6 645
Dividend in kind ²			-23 434		-23 434		-23 434
Purchase of treasury shares		-17	-2 955		-2 972		-2 972
Reduction of share capital	-8	12	-4				
Exercise of options and employee transactions		3	197		200		200
Equity-based compensation		4	443		447		447
Shares delivered to Alcon employees as a result of the Alcon spin-off			32		32		32
Taxes on treasury share transactions ³			-185		-185		-185
Increase of treasury share repurchase obligation under a share buyback trading plan			-2 289		-2 289		-2 289
Transaction costs ⁴			-253		-253		-253
Fair value adjustments on financial assets sold			19	-19			
Fair value adjustments related to divestments			4	-4			
Impact of change in ownership of consolidated entities			-3		-3	-2	-5
Other movements ⁵			13		13		13
Total of other equity movements	-8	2	-35 060	-23	-35 089	-2	-35 091
Total equity at June 30, 2019	936	-67	55 645	-5 088	51 426	78	51 504

¹ In H1 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).

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 Note 2, 3 and 11 for further details).

³ Included in H1 2019 is a USD 69 million impact related to the revaluation of deferred tax liability on treasury shares that are recognized through retained earnings. This revaluation resulted from the Swiss Federal tax reform enacted in May 2019, effective January 1, 2020.

⁴ Transaction costs 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

First half 2018 (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 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			9 793		9 793	3	9 796
Other comprehensive income			-528	676	148	-3	145
Total comprehensive income			9 265	676	9 941	0	9 941
Dividends			-6 966		-6 966		-6 966
Purchase of treasury shares		-5	-795		-800		-800
Reduction of share capital	-25	34	-9				
Exercise of options and employee transactions		4	429		433		433
Equity-based compensation		4	352		356		356
Increase of treasury share repurchase obligation under a share buyback trading plan			-363		-363		-363
Transaction costs ²			-11		-11		-11
Fair value adjustments on financial assets sold			18	-18			
Impact of change in ownership of consolidated entities			-3		-3	27	24
Total of other equity movements	-25	37	-7 348	-18	-7 354	27	-7 327
Total equity at June 30, 2018	944	-63	79 793	-3 859	76 815	86	76 901

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 (see Note 1 and 29 of the 2018 Annual report).

² Transaction costs directly attributable to the distribution (spin-off) of the Alcon business to Novartis AG shareholders (see Note 2).

Consolidated statements of cash flows

Second quarter (unaudited)

(USD millions)

	Note	Q2 2019	Q2 2018	Change
Net income from continuing operations		2 109	7 728	-5 619
<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	2 085	-4 084	6 169
Dividends received from associated companies and others		3	254	-251
Interest received		55	36	19
Interest paid		-239	-228	-11
Other financial receipts		10	38	-28
Other financial payments		28	49	-21
Taxes paid ¹		-560	-501	-59
Net cash flows from operating activities from continuing operations before working capital and provision changes		3 491	3 292	199
Payments out of provisions and other net cash movements in non-current liabilities		-323	-121	-202
Change in net current assets and other operating cash flow items		-57	341	-398
Net cash flows from operating activities from continuing operations		3 111	3 512	-401
Net cash flows from operating activities from discontinued operations ¹			430	-430
Total net cash flows from operating activities		3 111	3 942	-831
Purchase of property, plant and equipment		-279	-257	-22
Proceeds from sales of property, plant and equipment		648	6	642
Purchase of intangible assets		-161	-226	65
Proceeds from sales of intangible assets		210	222	-12
Purchase of financial assets		-45	-39	-6
Proceeds from sales of financial assets		142	55	87
Purchase of other non-current assets		-14	-9	-5
Proceeds from sales of other non-current assets		0	4	-4
Acquisitions and divestments of interests in associated companies, net		-1	13 001	-13 002
Acquisitions and divestments of businesses, net	7	-286	-8 352	8 066
Purchase of marketable securities and commodities		-75	-83	8
Proceeds from sales of marketable securities and commodities		69	139	-70
Net cash flows from investing activities from continuing operations		208	4 461	-4 253
Net cash flows used in investing activities from discontinued operations ²		-682	-136	-546
Total net cash flows used in/from investing activities		-474	4 325	-4 799
Acquisition of treasury shares		-2 368	-599	-1 769
Increase in non-current financial debts			91	-91
Repayments of non-current financial debts		-7	-365	358
Change in current financial debts		-793	-649	-144
Payments of lease liabilities, net		-69		-69
Impact of change in ownership of consolidated entities		-5	-2	-3
Dividends paid to non-controlling interests and other financing cash flows		532	256	276
Net cash flows used in financing activities from continuing operations		-2 710	-1 268	-1 442
Net cash flows from/used in financing activities from discontinued operations ³		2 682	-262	2 944
Total net cash flows used in financing activities		-28	-1 530	1 502
Net change in cash and cash equivalents		2 609	6 737	-4 128
Cash and cash equivalents of discontinued operations at March 31 ⁴		499		499
Effect of exchange rate changes on cash and cash equivalents		76	-104	180
Total net change in cash and cash equivalents		3 184	6 633	-3 449
Cash and cash equivalents at April 1		6 807	5 813	994
Cash and cash equivalents at June 30		9 991	12 446	-2 455

¹ In Q2 2018, the total net tax payment amounted to USD 516 million, of which USD 15 million was included in the "Net cash flows from operating activities from discontinued operations."

² For additional information related to Q2 2019 Net cash flows used in investing activities from discontinued operations, refer to Note 11.

³ Including USD 119 million (Q2 2018: USD 8 million) transaction cost payments directly attributable to the distribution (spin-off) of the Alcon business to Novartis AG shareholders (see Note 2)

⁴ Cash and cash equivalents of discontinued operations at March 31 represents the amount of the Alcon business cash and cash equivalents included in the March 31, 2019 consolidated balance sheets in the line "Assets related to discontinued operations."

Consolidated statements of cash flows

First half (unaudited)

(USD millions)	Note	H1 2019	H1 2018	Change
Net income from continuing operations		3 977	9 698	-5 721
<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	4 101	-2 619	6 720
Dividends received from associated companies and others		463	718	-255
Interest received		140	86	54
Interest paid		-406	-372	-34
Other financial receipts		10	38	-28
Other financial payments		-16	-14	-2
Taxes paid ¹		-960	-890	-70
Net cash flows from operating activities before working capital and provision changes from continuing operations		7 309	6 645	664
Payments out of provisions and other net cash movements in non-current liabilities		-516	-264	-252
Change in net current assets and other operating cash flow items		-1 348	-488	-860
Net cash flows from operating activities from continuing operations		5 445	5 893	-448
Net cash flows from operating activities from discontinued operations ¹		78	563	-485
Total net cash flows from operating activities		5 523	6 456	-933
Purchase of property, plant and equipment		-561	-515	-46
Proceeds from sales of property, plant and equipment		812	51	761
Purchase of intangible assets		-498	-642	144
Proceeds from sales of intangible assets		281	416	-135
Purchase of financial assets		-154	-71	-83
Proceeds from sales of financial assets		177	64	113
Purchase of other non-current assets		-24	-13	-11
Proceeds from sales of other non-current assets		3	4	-1
Acquisitions and divestments of interests in associated companies, net		-3	13 000	-13 003
Acquisitions and divestments of businesses, net	7	-382	-11 859	11 477
Purchase of marketable securities and commodities		-120	-223	103
Proceeds from sales of marketable securities and commodities		2 428	291	2 137
Net cash flows from investing activities from continuing operations		1 959	503	1 456
Net cash flows used in investing activities from discontinued operations ²		-1 105	-273	-832
Total net cash flows from investing activities		854	230	624
Dividends paid to shareholders of Novartis AG		-6 645	-6 966	321
Acquisition of treasury shares		-2 590	-774	-1 816
Proceeds from exercise options and other treasury share transactions		200	433	-233
Increase in non-current financial debts			2 856	-2 856
Repayments of non-current financial debts		-3 008	-365	-2 643
Change in current financial debts		-942	1 802	-2 744
Payments of lease liabilities, net		-91		-91
Impact of change in ownership of consolidated entities		-5	-7	2
Dividends paid to non-controlling interests and other financing cash flows		71	260	-189
Net cash flows used in financing activities from continuing operations		-13 010	-2 761	-10 249
Net cash flows used in financing activities from discontinued operations ³		3 299	-315	3 614
Total net cash flows used in financing activities		-9 711	-3 076	-6 635
Net change in cash and cash equivalents		-3 334	3 610	-6 944
Effect of exchange rate changes on cash and cash equivalents		54	-24	78
Total net change in cash and cash equivalents		-3 280	3 586	-6 866
Cash and cash equivalents at January 1		13 271	8 860	4 411
Cash and cash equivalents at June 30		9 991	12 446	-2 455

¹ In 2019, the total net tax payment amounted to USD 998 million (2018: USD 983 million), of which USD 38 million (2018: USD 93 million) is included in the "Net cash flows from operating activities from discontinued operations."

² For additional information related to H1 2019 Net cash flows used in investing activities from discontinued operations, refer to Note 11.

³ Including USD 170 million (2018: USD 8 million) transaction cost payments directly attributable to the distribution (spin-off) of the Alcon business to Novartis AG shareholders (see Note 2)

Notes to the Condensed Interim Consolidated Financial Statements for the three-month and six-month period ended June 30, 2019 (unaudited)

1. Basis of preparation

These Condensed Interim Consolidated Financial Statements for the three-month and six-month period ended June 30, 2019, were prepared in accordance with International Accounting Standard 34 *Interim Financial Reporting* and accounting policies set out in the 2018 Annual Report published on January 30, 2019.

2. Selected critical accounting policies

The Group's principal accounting policies are set out in Note 1 to the Consolidated Financial Statements in the 2018 Annual Report and conform with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board.

The presentation of financial statements requires management to make subjective and complex judgments that affect the reported amounts. Because of the inherent uncertainties, actual outcomes and results may differ from management's assumptions and estimates.

As disclosed in the 2018 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.

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 shareholder approval required the recognition of a distribution liability at the fair value of the Alcon business to be distributed to Novartis AG shareholders. This 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 are classified as "Level 3" in the fair value hierarchy. Note 1 and Note 11 to the Consolidated Financial Statements in the 2018 Annual Report provide additional information on key assumptions that are highly sensitive in the estimation of fair values using valuation techniques. Due to these factors and inherent uncertainties in the use of estimates, actual outcomes and results could vary significantly.

The February 28, 2019, shareholder approval for the spin-off required the Alcon Division and selected portions of Corporate activities attributable to Alcon's business (the "Alcon business") to be reported as discontinued operations. Refer to Note 3 and Note 11 for further details.

Transaction costs recorded in Equity

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

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.

Distribution liability

The distribution liability was recorded at the date of shareholder approval for the distribution of the business assets to the shareholders. The Group has elected to measure the distribution liability at the fair value of the business assets taken as a whole to be distributed to shareholders. As a result, the distribution liability was recognized based on the fair value of the Alcon business. The distribution liability was recognized through a reduction in retained earnings. It is 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 is 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 distribution settlement date, any resulting gain, which is measured as the excess amount of the distribution liability over the then carrying value of the assets of the business distributed, is recognized on the line "Gain on distribution of Alcon Inc. to Novartis AG shareholders" in the income statement of discontinued operations.

New IFRS standards 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 company 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.

Upon adoption of the new standard, a portion of the annual operating lease costs, which was previously fully recognized as a functional expense, is recorded as interest expense. In addition, the portion of the lease payments which 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 and the current low interest rate environment, these effects are not significant to the presentation of our consolidated income statement as well as consolidated cash flows from operating activities and from financing activities.

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 will not restate prior years.

Results of our impact assessment:

The undiscounted operating lease commitments as of December 31, 2018, disclosed in Note 27 to the Consolidated Financial Statements in the Annual Report 2018, amounted to USD 3.6 billion. This includes approximately USD 0.1 billion of leases with a commencement date in 2019 and short-term leases, as well as 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 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 USD 1.55 billion (after adjustments for the USD 0.18 billion 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 impact 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. 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 twelve 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. The lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, the Novartis incremental borrowing rate in the respective markets.

The 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.

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). Through the Distribution, each Novartis AG shareholder received 1 Alcon Inc. share for every 5 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 completion of the spin-off of the Alcon business on April 9, 2019, amounted to USD 4.7 billion consisting of:

(USD millions)	H1 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 on July 1, 2019

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 an USD 3.4 billion upfront payment, customary purchase price adjustments of USD 0.1 billion and the potential milestone payments up to USD 1.9 billion, which Takeda is eligible to receive upon the achievement of specified commercialization milestones.

Significant pending transaction

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

On September 6, 2018, Novartis announced 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 earn-outs.

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 close in the course of 2019 following the completion of customary closing conditions. As the fair value of the consideration (USD 0.8 billion) less costs to sell was 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 the Group's consolidated balance sheet at June 30, 2019 and at December 31, 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)	Jun 30, 2019	Dec 31, 2018
Assets of disposal group classified as held for sale		
Property, plant and equipment	158	148
Intangible assets other than goodwill	478	478
Deferred tax assets	8	8
Other non-current assets	1	1
Inventories	192	165
Other current assets	10	7
Total	847	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	44	45
Total	50	51

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

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 and two pre-clinical 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 pre-clinical stage gutdirected molecule for the treatment of inflammatory bowel disease; and a pre-clinical stage central nervous system (CNS)-penetrant molecule.

The previously held interest of 9% is adjusted to its preliminary fair value of USD 34 million through the consolidated income statement at acquisition date. This remeasurement resulted in a gain of USD 16 million. The preliminary fair value of the total purchase consideration for acquiring the 91% stake

Novartis did not already own amounting to USD 373 million. The amount consisted of an initial cash payment of USD 285 million and the preliminary net present value of the contingent consideration of USD 88 million due to the IFM Tre, Inc. shareholders, which they are eligible to receive upon the achievement of specified development and commercialization milestones. The preliminary purchase price allocation resulted in net identifiable assets of USD 366 million and goodwill of USD 41 million. Results of operations since the date of acquisition were not material.

Significant transaction closed in 2019 – Discontinued operations

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 preliminary 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.

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, 2018, Novartis held 99.1% 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) oxodotreotide), 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 preliminary purchase price allocation resulted in net identifiable assets of approximately USD 1.5 billion, consisting of USD 1.4 billion intangible assets, USD 0.2 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 remains preliminary and will be finalized within the 12-month purchase price allocation measurement period, which started as of the acquisition date. Adjustments made to the December 31, 2018, preliminary purchase price allocation were not material and the Group currently does not expect any potential additional revisions to be material. The 2018 results from operations since the date of the acquisition were not material.

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.

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	H1 2019	H1 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	-32.8	-9.2	-23.6	-2 819	-700	-2 119
Other share purchases	-1.6	-1.4	-0.2	-153	-100	-53
Exercise of options and employee transactions	5.5	7.7	-2.2	200	433	-233
Equity-based compensation	9.5	7.2	2.3	447	356	91
Shares delivered to Alcon employees as a result of the Alcon spin-off				32		32
Taxes on treasury share transactions ²				-185		-185
Increase of treasury share repurchase obligation under a share buyback trading plan				-2 289	-363	-1 926
Dividends to shareholders of Novartis AG				-6 645	-6 966	321
Dividend in kind ³				-23 434		-23 434
Net income of the period attributable to shareholders of Novartis AG				8 565	9 793	-1 228
Other comprehensive income attributable to shareholders of Novartis AG				-667	148	-815
Transaction costs ⁴				-253	-11	-242
Impact of change in ownership of consolidated entities				-3	-3	
Other movements ⁵				13		13
Balance at June 30	2 291.8	2 321.8	-30.0	51 426	76 815	-25 389

¹ In H1 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 H1 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 (see Note 1 and 29 of the 2018 Annual report)

² Included in H1 2019 is a USD 69 million impact related to the revaluation of deferred tax liability on treasury shares that are recognized through retained earnings. This revaluation resulted from the Swiss Federal tax reform enacted in May 2019, effective January 1, 2020.

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 Note 2, 3 and 11 for further details)

⁴ Transaction costs 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 financial instruments at fair value and those measured at amortized cost as of June 30, 2019 and December 31, 2018. For additional information on the hierarchies and other matters, please refer to the Consolidated Financial Statements in the 2018 Annual Report, published on January 30, 2019.

	Level 1		Level 2		Level 3		Valued at amortized cost or cost		Total	
	Jun 30, 2019	Dec 31, 2018	Jun 30, 2019	Dec 31, 2018	Jun 30, 2019	Dec 31, 2018	Jun 30, 2019	Dec 31, 2018	Jun 30, 2019	Dec 31, 2018
(USD millions)										
Debt securities		302	25	23					25	325
Fund investments	35	35							35	35
Total marketable securities	35	337	25	23					60	360
Time deposits and short term investments with original maturity more than 90 days							81	2 087	81	2 087
Derivative financial instruments			93	130					93	130
Accrued interest on debt securities								12		12
Total marketable securities, time deposits and derivative financial instruments	35	337	118	153			81	2 099	234	2 589
Financial investments and long-term loans										
Financial investments	1 946	698			539	488			2 485	1 186
Fund investments					224	251			224	251
Contingent consideration receivables					408	396			408	396
Long-term loans and receivables from customers and finance lease, advances, security deposits							317	512	317	512
Financial investments and long-term loans	1 946	698			1 171	1 135	317	512	3 434	2 345
Associated companies at fair value through profit or loss					167	145			167	145
Contingent consideration payables					-728	-907			-728	-907
Other financial liabilities					-22	-10			-22	-10
Derivative financial instruments			-189	-58					-189	-58
Total financial liabilities at fair value			-189	-58	-750	-917			-939	-975

There were no significant transfers from one level to the other and no significant transactions associated with level 3 financial instruments. During the second quarter of 2019, there were several individually non-significant transfers of equity securities from level 3 to level 1 for USD 24 million due to Initial Public Offerings.

The fair value of straight bonds amounted to USD 23.6 billion at June 30, 2019 (USD 25.4 billion at December 31, 2018) compared to the balance sheet value of USD 22.3 billion at June 30, 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 3.4 billion at June 30, 2018 (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 second quarter of 2019, Alcon Inc. shares with a fair value of USD 113 million were sold and the USD 9 million 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. Lease liability and Right-of-use assets

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.

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

The lease liability recorded in continuing operations on January 1, 2019, was USD 1 736 million and the right of use assets was USD 1 554 million.

Reconciliation of lease commitment disclosed on December 31, 2018, and lease liability recorded in continuing operations on January 1, 2019 is 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 liability 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 & 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 prepayments and accrued lease payments recognized at December 31, 2018.

The lease liability recorded in discontinued operations on January 1, 2019, was USD 286 million and the right-of-use asset was USD 276 million, including USD 89 million and USD 75 million, respectively, for the previously reported finance lease obligations.

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 liability, 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 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 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	399
Depreciation charge	-149
Lease contract terminations ²	-54
Currency translation effects	12
Total right-of-use assets at June 30, 2019	1 762

No impairments were recorded in the period.

¹ Additions in Q2 amounted to USD 143 millions.

² Lease contract terminations represent modifications to existing leases that result in reductions to the right-of-use assets, which includes contract terminations.

The right-of-use assets carrying value and depreciation charge of continuing operations at June 30, 2019, are shown below by underlying class of asset:

(USD millions)	June 30, 2019 Carrying value	Depreciation charge	
		Q2 2019	H1 2019
Land	541	5	8
Buildings	1 076	47	97
Vehicles	122	21	41
Machinery & equipment and other assets	23	2	3
Total right-of-use assets	1 762	75	149

The lease liability of continuing operations at June 30, 2019, amounted to USD 2 billion and its breakdown by maturity is as follows:

(USD millions)	June 30, 2019
Less than one year	294
Between one and two years	139
Between two and three years	170
Between three and four years	143
Between four and five years	129
After five years	1 171
Total lease liability	2 046

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

(USD millions)	Q2 2019	H1 2019
Interest expense on lease liabilities ¹	16	32
Expense on short-term leases	2	4
Expense on low-value leases	3	4
Total cash outflow for leases ²	80	111
<i>Thereof repayment of lease liability³</i>	<i>69</i>	<i>91</i>
Gain arising from sale and leaseback transaction	468	468

¹ Weighted average interest rate is 3.2% and 3.4% for Q2 2019 and H1 2019, respectively.

² Reported as cash outflows used in financing activities

³ Net of lease incentives received of USD 29 million in H1 2019 (Q2 2019: nil)

In the second quarter 2019, the Group completed a sale and leaseback transaction for certain property plant and equipment as part of its plans to consolidate sites. The transaction resulted in net cash flow inflows of USD 0.6 billion and the recognition of USD 86 million of lease liabilities, and USD 30 million of right-of-use assets. The right-of-use asset value reflects the proportion of the property, plant and equipment retained for a period of 1 to 5 years, with two 5 year extension periods for certain right-of-use assets, and the liability reflects the net present value of future lease payments. The net gain on the sale and leaseback transaction amounted to USD 0.5 billion.

The Group accounts for the expense of short-term leases of twelve months or less and underlying assets of low value leases on a straight-line basis over the lease term.

Variable lease payments were not significant. The income from subleasing right-of-use assets for the six months ended June 30, 2019, was not significant.

Following the completion of the Alcon Distribution (spin-off) on April 9, 2019, the right-of-use assets and lease liabilities classified as discontinued operations were derecognized (refer to Note 2, 3 and 11 for further details).

7. Details to the consolidated statements of cash flows

Reversal of non-cash items and other adjustments

(USD millions)	Q2 2019	Q2 2018	Change
Depreciation, amortization and impairments on:			
Property, plant and equipment	445	492	-47
Intangible assets	601	713	-112
Financial assets ¹	-32	-31	-1
Non-cash change in provisions and other non-current liabilities	958	109	849
Gains on disposal and other adjustments on property, plant and equipment; intangible assets; financial assets; and other non-current assets, net	-615	-225	-390
Equity-settled compensation expense	174	155	19
Income from associated companies ²	-176	-5 932	5 756
Taxes	525	443	82
Net financial expense	205	192	13
Total	2 085	-4 084	6 169

¹ Includes fair value adjustments

² Q2 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."

(USD millions)	H1 2019	H1 2018	Change
Depreciation, amortization and impairments on:			
Property, plant and equipment	868	853	15
Intangible assets	1 619	1 357	262
Financial assets ¹	-20	-106	86
Non-cash change in provisions and other non-current liabilities	1 018	247	771
Gains on disposal and other adjustments on property, plant and equipment; intangible assets; financial assets; and other non-current assets, net	-684	-411	-273
Equity-settled compensation expense	372	337	35
Income from associated companies ²	-256	-6 084	5 828
Taxes	797	813	-16
Net financial expense	387	375	12
Total	4 101	-2 619	6 720

¹ Includes fair value adjustments

² 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."

Cash flows arising from acquisitions and divestments of businesses, net

(USD millions)	Q2 2019	Q2 2018	H1 2019	H1 2018
Net assets recognized as a result of business combinations	-407	-8 318	-486	-11 848
Fair value of previously held equity interests	34		34	
Receivables and payables contingent consideration, net	88		88	-5
Other payments and deferred consideration, net	-3	2	-3	-37
Cash flows used for acquisitions of businesses	-288	-8 316	-367	-11 890
Cash flows from/used in divestments of businesses	2	-36	-15	31
Cash flows used for acquisitions and divestments of businesses, net	-286	-8 352	-382	-11 859

8. Acquisitions of businesses

(USD millions)	H1 2019	H1 2018
Property, plant and equipment	44	135
Currently marketed products		2 230
Acquired research and development	449	8 545
Other intangible assets	0	1
Deferred tax assets	20	242
Financial and other assets		17
Inventories	6	17
Trade receivables and other current assets	4	81
Cash and cash equivalents		809
Deferred tax liabilities	-101	-2 647
Current and non-current financial debts	-2	-14
Trade payables and other liabilities	-9	-431
Net identifiable assets acquired	411	8 985
Acquired cash and cash equivalents		-809
Non-controlling interests		-27
Goodwill	75	3 699
Net assets recognized as a result of business combinations	486	11 848

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 July 17, 2019 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.

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. It seeks damages and disgorgement of Novartis profits from the alleged unlawful conduct which, based on the government's calculation, with trebling and penalties could exceed USD 1 billion. 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.

In addition to the matter 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.

The developments during the second quarter of 2019 do not significantly affect the assessment of management concerning the adequacy of the total provisions recorded for legal proceedings.

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 pharmaceuticals to third parties. Retail Generics includes the areas of cardiovascular, central nervous system, dermatology, gastrointestinal and hormonal therapies, metabolism, oncology, ophthalmics, pain and respiratory, as well as finished dosage form 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 2018.

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

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.

Segmentation – Consolidated income statement – Second quarter

(USD millions)	Innovative Medicines		Sandoz		Corporate (including eliminations)		Group	
	Q2 2019	Q2 2018	Q2 2019	Q2 2018	Q2 2019	Q2 2018	Q2 2019	Q2 2018
Net sales to third parties from continuing operations	9 326	8 876	2 438	2 463			11 764	11 339
Sales to continuing and discontinued segments	177	177	37	34	-214	-191		20
Net sales from continuing operations	9 503	9 053	2 475	2 497	-214	-191	11 764	11 359
Other revenues	250	285	6	6	4	3	260	294
Cost of goods sold	-2 327	-2 359	-1 315	-1 404	236	205	-3 406	-3 558
Gross profit from continuing operations	7 426	6 979	1 166	1 099	26	17	8 618	8 095
Selling, general and administration	-2 911	-2 778	-550	-593	-124	-124	-3 585	-3 495
Research and development	-1 853	-1 931	-198	-195			-2 051	-2 126
Other income	847	297	45	127	97	57	989	481
Other expense	-945	-315	-181	-110	-182	-99	-1 308	-524
Operating income from continuing operations	2 564	2 252	282	328	-183	-149	2 663	2 431
<i>as % of net sales</i>	<i>27.5%</i>	<i>25.4%</i>	<i>11.6%</i>	<i>13.3%</i>			<i>22.6%</i>	<i>21.4%</i>
Income from associated companies	1		1	4	174	5 928	176	5 932
Interest expense							-205	-237
Other financial income and expense, net							0	45
Income before taxes from continuing operations							2 634	8 171
Taxes							-525	-443
Net income from continuing operations							2 109	7 728
Net income from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders								40
Gain on distribution of Alcon Inc. to Novartis AG shareholders							4 691	
Net income from discontinued operations							4 691	40
Net income							6 800	7 768

Segmentation – Consolidated income statement – First half

	Innovative Medicines		Sandoz		Corporate (including eliminations)		Group	
(USD millions)	H1 2019	H1 2018	H1 2019	H1 2018	H1 2019	H1 2018	H1 2019	H1 2018
Net sales to third parties from continuing operations	18 106	17 274	4 764	4 980			22 870	22 254
Sales to continuing and discontinued segments	426	345	76	91	-449	-403	53	33
Net sales from continuing operations	18 532	17 619	4 840	5 071	-449	-403	22 923	22 287
Other revenues	511	508	34	10	11	11	556	529
Cost of goods sold	-4 551	-4 632	-2 591	-2 802	485	425	-6 657	-7 009
Gross profit from continuing operations	14 492	13 495	2 283	2 279	47	33	16 822	15 807
Selling, general and administration	-5 564	-5 333	-1 112	-1 195	-239	-251	-6 915	-6 779
Research and development	-3 958	-3 714	-392	-394			-4 350	-4 108
Other income	922	508	82	240	188	121	1 192	869
Other expense	-1 219	-569	-306	-193	-319	-225	-1 844	-987
Operating income from continuing operations	4 673	4 387	555	737	-323	-322	4 905	4 802
<i>as % of net sales</i>	<i>25.8%</i>	<i>25.4%</i>	<i>11.6%</i>	<i>14.8%</i>			<i>21.4%</i>	<i>21.6%</i>
Income from associated companies	1		1	4	254	6 080	256	6 084
Interest expense							-431	-455
Other financial income and expense, net							44	80
Income before taxes from continuing operations							4 774	10 511
Taxes							-797	-813
Net income from continuing operations							3 977	9 698
Net loss/income from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders							-101	98
Gain on distribution of Alcon Inc. to Novartis AG shareholders							4 691	
Net income from discontinued operations							4 590	98
Net income							8 567	9 796

Segmentation – Additional balance sheet disclosure

	Innovative Medicines		Sandoz		Corporate (including eliminations)		Group	
(USD millions)	Jun 30, 2019	Dec 31, 2018	Jun 30, 2019	Dec 31, 2018	Jun 30, 2019	Dec 31, 2018	Jun 30, 2019	Dec 31, 2018 ¹
Net operating assets	55 271	53 999	14 160	13 951			69 390	94 876
Included in net operating assets are:								
Property, plant and equipment	9 701	10 098	2 062	2 159	527	561	12 290	15 696
Goodwill	18 698	18 551	7 828	7 837	7	7	26 533	35 294
Intangible assets other than goodwill	25 443	26 042	1 727	1 875	51	123	27 221	38 719

¹ Group December 31, 2018 balances include the net operating assets of the Alcon segment amounting to USD 24.0 billion, including property, plant and equipment of USD 2.9 billion, Goodwill of USD 8.9 billion and intangible assets other than goodwill of USD 10.7 billion, that were deconsolidated on April 9, 2019, with the completion of the distribution (spin-off) of the Alcon business to Novartis AG shareholders (refer to Note 2, 3 and 11).

Segmentation – Net sales by region¹ – Second quarter

	Q2 2019	Q2 2018	% change		Q2 2019	Q2 2018
	USD m	USD m	USD	cc ²	% of total	% of total
Innovative Medicines						
Europe	3 218	3 112	3	10	35	35
US	3 336	3 023	10	10	36	34
Asia/Africa/Australasia	2 106	2 060	2	6	23	23
Canada and Latin America	666	681	-2	10	6	8
Total	9 326	8 876	5	9	100	100
<i>Of which in Established Markets</i>	7 071	6 663	6	9	76	75
<i>Of which in Emerging Growth Markets</i>	2 255	2 213	2	10	24	25
Sandoz						
Europe	1 269	1 237	3	9	52	50
US	642	692	-7	-7	26	28
Asia/Africa/Australasia	333	341	-2	1	14	14
Canada and Latin America	194	193	1	7	8	8
Total	2 438	2 463	-1	3	100	100
<i>Of which in Established Markets</i>	1 796	1 812	-1	3	74	74
<i>Of which in Emerging Growth Markets</i>	642	651	-1	5	26	26
Continuing operations						
Europe	4 487	4 349	3	10	38	38
US	3 978	3 715	7	7	34	33
Asia/Africa/Australasia	2 439	2 401	2	5	21	21
Canada and Latin America	860	874	-2	9	7	8
Total	11 764	11 339	4	8	100	100
<i>Of which in Established Markets</i>	8 867	8 475	5	8	75	75
<i>Of which in Emerging Growth Markets</i>	2 897	2 864	1	9	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 55.

Segmentation – Net sales by region¹ – First half

	H1 2019	H1 2018	% change		H1 2019	H1 2018
	USD m	USD m	USD	cc ²	% of total	% of total
Innovative Medicines						
Europe	6 352	6 204	2	11	35	36
US	6 329	5 675	12	12	35	33
Asia/Africa/Australasia	4 123	4 049	2	6	23	23
Canada and Latin America	1 302	1 346	-3	10	7	8
Total	18 106	17 274	5	10	100	100
<i>Of which in Established Markets</i>	13 638	12 873	6	9	75	75
<i>Of which in Emerging Growth Markets</i>	4 468	4 401	2	11	25	25
Sandoz						
Europe	2 510	2 529	-1	7	53	51
US	1 232	1 400	-12	-12	26	28
Asia/Africa/Australasia	651	664	-2	2	14	13
Canada and Latin America	371	387	-4	3	7	8
Total	4 764	4 980	-4	1	100	100
<i>Of which in Established Markets</i>	3 491	3 668	-5	-1	73	74
<i>Of which in Emerging Growth Markets</i>	1 273	1 312	-3	5	27	26
Continuing operations						
Europe	8 862	8 733	1	10	39	39
US	7 561	7 075	7	7	33	32
Asia/Africa/Australasia	4 774	4 713	1	5	21	21
Canada and Latin America	1 673	1 733	-3	8	7	8
Total	22 870	22 254	3	8	100	100
<i>Of which in Established Markets</i>	17 129	16 541	4	7	75	74
<i>Of which in Emerging Growth Markets</i>	5 741	5 713	0	9	25	26

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 55.

Segmentation – Net sales by business franchise

Innovative Medicines net sales by business franchise – Second quarter

	Q2 2019 USD m	Q2 2018 USD m	% change USD	% change cc ³
Oncology				
<i>Tasigna</i>	468	488	-4	-1
<i>Sandostatin</i>	403	399	1	4
<i>Afinitor/Votubia</i>	401	408	-2	0
<i>Promacta/Revolade</i>	349	292	20	23
<i>Tafinlar + Mekinist</i>	340	284	20	25
<i>Gleevec/Glivec</i>	323	416	-22	-19
<i>Jakavi</i>	284	239	19	26
<i>Exjade/Jadenu</i>	253	289	-12	-10
<i>Votrient</i>	193	219	-12	-9
<i>Lutathera</i>	109	24	nm	nm
<i>Kisqali</i>	111	59	88	94
<i>Kymriah</i>	58	16	263	278
Other	314	300	5	9
Total Oncology business unit	3 606	3 433	5	9
Ophthalmology				
<i>Lucentis</i>	536	515	4	10
Travoprost Group	106	134	-21	-19
Other	532	531	0	4
Total Ophthalmology	1 174	1 180	-1	4
Neuroscience				
<i>Gilenya</i>	825	866	-5	-2
<i>Aimovig</i>	24		nm	nm
Other	37	23	61	72
Total Neuroscience	886	889	0	3
Immunology, Hepatology and Dermatology				
<i>Cosentyx</i>	858	701	22	25
<i>Ilaris</i>	165	132	25	31
Total Immunology, Hepatology and Dermatology	1 023	833	23	26
Respiratory				
<i>Ultibro Breezhaler</i>	112	116	-3	1
<i>Seebri Breezhaler</i>	34	39	-13	-9
<i>Onbrez Breezhaler</i>	20	27	-26	-18
Subtotal COPD¹ portfolio	166	182	-9	-4
<i>Xolair</i> ²	290	261	11	18
Other	5	6	-17	-2
Total Respiratory	461	449	3	9
Cardiovascular, Renal and Metabolism				
<i>Entresto</i>	421	239	76	81
Other	6	6	0	14
Total Cardiovascular, Renal and Metabolism	427	245	74	79
Established Medicines				
<i>Galvus Group</i>	320	332	-4	2
<i>Diovan Group</i>	283	244	16	23
<i>Exforge Group</i>	264	250	6	12
<i>Zortress/Certican</i>	124	115	8	12
<i>Neoral/Sandimmun(e)</i>	110	120	-8	-3
<i>Voltaren/Cataflam</i>	95	114	-17	-13
Other	553	672	-18	-13
Total Established Medicines	1 749	1 847	-5	0
Total Pharmaceuticals business unit	5 720	5 443	5	10
Total Division net sales	9 326	8 876	5	9

¹ Chronic Obstructive Pulmonary Disease

² *Xolair* sales for all indications are reported in the Respiratory franchise.

³ Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 55.

nm = not meaningful

Innovative Medicines net sales by business franchise – First half

	H1 2019 USD m	H1 2018 USD m	% change USD	% change cc ³
Oncology				
<i>Tasigna</i>	902	954	-5	-2
<i>Sandostatin</i>	795	799	-1	3
<i>Afinitor/Votubia</i>	774	783	-1	1
<i>Promacta/Revolade</i>	656	549	19	24
<i>Tafinlar + Mekinist</i>	637	551	16	21
<i>Gleevec/Glivec</i>	630	808	-22	-18
<i>Jakavi</i>	542	473	15	23
<i>Exjade/Jadenu</i>	491	550	-11	-8
<i>Votrient</i>	380	433	-12	-9
<i>Lutathera</i>	215	30	nm	nm
<i>Kisqali</i>	202	103	96	103
<i>Kymriah</i>	103	28	268	281
Other	600	563	7	11
Total Oncology business unit	6 927	6 624	5	9
Ophthalmology				
<i>Lucentis</i>	1 069	1 035	3	10
<i>Travoprost Group</i>	221	258	-14	-11
Other	1 045	1 044	0	4
Total Ophthalmology	2 335	2 337	0	5
Neuroscience				
<i>Gilenya</i>	1 591	1 687	-6	-2
<i>Aimovig</i>	42		nm	nm
Other	50	43	16	23
Total Neuroscience	1 683	1 730	-3	1
Immunology, Hepatology and Dermatology				
<i>Cosentyx</i>	1 649	1 281	29	32
<i>Ilaris</i>	316	258	22	29
Total Immunology, Hepatology and Dermatology	1 965	1 539	28	32
Respiratory				
<i>Ultibro Breezhaler</i>	216	222	-3	4
<i>Seebri Breezhaler</i>	65	77	-16	-9
<i>Onbrez Breezhaler</i>	42	54	-22	-15
Subtotal COPD¹ portfolio	323	353	-8	-2
<i>Xolair</i> ²	571	516	11	19
Other	12	13	-8	0
Total Respiratory	906	882	3	10
Cardiovascular, Renal and Metabolism				
<i>Entresto</i>	778	439	77	83
Other	12	10	20	20
Total Cardiovascular, Renal and Metabolism	790	449	76	81
Established Medicines				
<i>Galvus Group</i>	635	650	-2	5
<i>Diovan Group</i>	544	509	7	14
<i>Exforge Group</i>	531	498	7	14
<i>Zortress/Certican</i>	240	224	7	12
<i>Neoral/Sandimmun(e)</i>	213	235	-9	-4
<i>Voltaren/Cataflam</i>	208	229	-9	-4
Other	1 129	1 368	-17	-12
Total Established Medicines	3 500	3 713	-6	0
Total Pharmaceuticals business unit	11 179	10 650	5	10
Total Division net sales	18 106	17 274	5	10

¹ Chronic Obstructive Pulmonary Disease

² *Xolair* sales for all indications are reported in the Respiratory franchise.

³ Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 55.

nm = not meaningful

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

Brands	Business franchise	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	534	31	324	11	18	858	22	25
<i>Gilenya</i>	Neuroscience	Relapsing multiple sclerosis	441	-6	384	-4	3	825	-5	-2
<i>Lucentis</i>	Ophthalmology	Age-related macular degeneration			536	4	10	536	4	10
<i>Tasigna</i>	Oncology	Chronic myeloid leukemia	204	-7	264	-2	3	468	-4	-1
<i>Sandostatin</i>	Oncology	Carcinoid tumors and acromegaly	218	5	185	-3	3	403	1	4
<i>Entresto</i>	Cardiovascular, Renal and Metabolism	Chronic heart failure	221	71	200	82	90	421	76	81
<i>Afinitor/Votubia</i>	Oncology	Breast cancer/TSC	259	7	142	-14	-10	401	-2	0
<i>Promacta/Revolade</i>	Oncology	Immune thrombocytopenic purpura	170	16	179	23	30	349	20	23
<i>Tafinlar + Mekinist</i>	Oncology	Melanoma	123	7	217	28	37	340	20	25
<i>Galvus Group</i>	Established Medicines	Diabetes			320	-4	2	320	-4	2
<i>Gleevec/Glivec</i>	Oncology	Chronic myeloid leukemia and GIST	96	-12	227	-26	-22	323	-22	-19
<i>Xolair</i> ¹	Respiratory	Asthma			290	11	18	290	11	18
<i>Diovan Group</i>	Established Medicines	Hypertension	28	40	255	14	22	283	16	23
<i>Jakavi</i>	Oncology	Myelofibrosis			284	19	26	284	19	26
<i>Exforge Group</i>	Established Medicines	Hypertension	4	-20	260	6	12	264	6	12
<i>Exjade/Jadenu</i>	Oncology	Chronic iron overload	118	-14	135	-11	-7	253	-12	-10
<i>Votrient</i>	Oncology	Renal cell carcinoma	87	-19	106	-5	2	193	-12	-9
<i>Ilaris</i>	Immunology, Hepatology and Dermatology	Auto-inflammatory (CAPS, TRAPS, HIDS/MKD, FMF, SJIA, AOSD and gout)	77	26	88	24	34	165	25	31
<i>Zortress/Certican</i>	Established Medicines	Transplantation	44	29	80	-1	4	124	8	12
<i>Travoprost Group</i>	Ophthalmology	Reduction of elevated intraocular pressure	37	-26	69	-18	-15	106	-21	-19
Top 20 products total			2 661	8	4 545	4	10	7 206	6	10
Rest of portfolio			675	20	1 445	-3	4	2 120	3	8
Total division sales			3 336	10	5 990	2	9	9 326	5	9

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 55.

Net sales of the top 20 Innovative Medicines products in 2019 – First half

Brands	Business franchise	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	1 008	38	641	16	24	1 649	29	32
<i>Gilenya</i>	Neuroscience	Relapsing multiple sclerosis	833	-6	758	-6	2	1 591	-6	-2
<i>Lucentis</i>	Ophthalmology	Age-related macular degeneration			1 069	3	10	1 069	3	10
<i>Tasigna</i>	Oncology	Chronic myeloid leukemia	384	-8	518	-4	3	902	-5	-2
<i>Sandostatin</i>	Oncology	Carcinoid tumors and acromegaly	433	7	362	-8	-1	795	-1	3
<i>Entresto</i>	Cardiovascular, Renal and Metabolism	Chronic heart failure	420	76	358	78	90	778	77	83
<i>Afinitor/Votubia</i>	Oncology	Breast cancer/TSC	493	9	281	-15	-8	774	-1	1
<i>Promacta/Revolade</i>	Oncology	Immune thrombocytopenic purpura	318	17	338	22	30	656	19	24
<i>Tafinlar + Mekinist</i>	Oncology	Melanoma	230	6	407	22	32	637	16	21
<i>Galvus Group</i>	Established Medicines	Diabetes			635	-2	5	635	-2	5
<i>Gleevec/Glivec</i>	Oncology	Chronic myeloid leukemia and GIST	175	-20	455	-23	-18	630	-22	-18
<i>Xolair</i> ¹	Respiratory	Asthma			571	11	19	571	11	19
<i>Diovan Group</i>	Established Medicines	Hypertension	45	10	499	7	15	544	7	14
<i>Jakavi</i>	Oncology	Myelofibrosis			542	15	23	542	15	23
<i>Exforge Group</i>	Established Medicines	Hypertension	7	-22	524	7	14	531	7	14
<i>Exjade/Jadenu</i>	Oncology	Chronic iron overload	231	-9	260	-12	-7	491	-11	-8
<i>Votrient</i>	Oncology	Renal cell carcinoma	172	-19	208	-6	1	380	-12	-9
<i>Ilaris</i>	Immunology, Hepatology and Dermatology	Auto-inflammatory (CAPS, TRAPS, HIDS/MKD, FMF, SJIA, AOSD and gout)	142	21	174	23	35	316	22	29
<i>Zortress/Certican</i>	Established Medicines	Transplantation	82	24	158	0	8	240	7	12
Travoprost Group	Ophthalmology	Reduction of elevated intraocular pressure	84	-14	137	-14	-10	221	-14	-11
Top 20 products total			5 057	9	8 895	3	10	13 952	5	10
Rest of portfolio			1 272	22	2 882	-3	4	4 154	3	9
Total division sales			6 329	12	11 777	2	9	18 106	5	10

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 55.

Sandoz net sales by business franchise – Second quarter

	Q2 2019 USD m	Q2 2018 USD m	% change USD	% change cc ²
Retail Generics ¹	1 903	1 955	-3	2
Biopharmaceuticals	401	363	10	16
Anti-Infectives	134	145	-8	-4
Total Division net sales	2 438	2 463	-1	3

¹ Of which USD 186 million (2018: USD 187 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 55.

Sandoz net sales by business franchise – First half

	H1 2019 USD m	H1 2018 USD m	% change USD	% change cc ²
Retail Generics ¹	3 753	3 997	-6	-1
Biopharmaceuticals	752	698	8	14
Anti-Infectives	259	285	-9	-5
Total Division net sales	4 764	4 980	-4	1

¹ Of which USD 390 million (2018: USD 417 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 55.

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

Segmentation – Other revenue – Second quarter

(USD millions)	Innovative Medicines		Sandoz		Corporate		Group	
	Q2 2019	Q2 2018	Q2 2019	Q2 2018	Q2 2019	Q2 2018	Q2 2019	Q2 2018
Profit sharing income	181	170	1	1			182	171
Royalty income	15	42	4	2	6	3	25	47
Milestone income	47	70		2			47	72
Other ¹	7	3	1	1	-2		6	4
Total other revenues	250	285	6	6	4	3	260	294

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 – First half

(USD millions)	Innovative Medicines		Sandoz		Corporate		Group	
	H1 2019	H1 2018	H1 2019	H1 2018	H1 2019	H1 2018	H1 2019	H1 2018
Profit sharing income	350	330	1	1			351	331
Royalty income	49	85	7	3	13	11	69	99
Milestone income	98	78	23	3			121	81
Other ¹	14	15	3	3	-2		15	18
Total other revenues	511	508	34	10	11	11	556	529

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

Consolidated income statement – Discontinued operations

(USD millions)	Q2 2019 ¹	Q2 2018	H1 2019	H1 2018
Net sales to third parties of discontinued operations	1 819	1 777	3 598	
Sales to continuing segments		32	3	
Net sales of discontinued operations	1 819	1 809	3 601	
Cost of goods sold	-939	-860	-1 859	
Gross profit of discontinued operations	880	949	1 742	
Selling, general and administration	-698	-638	-1 337	
Research and development	-150	-142	-288	
Other income	62	15	81	
Other expense	-41	-113	-69	
Operating income of discontinued operations	53	71	129	
<i>as % of net sales</i>	<i>2.9%</i>	<i>4.0%</i>	<i>3.6%</i>	
Interest expense	-7	-10	-13	
Other financial income and expense	2	-3	1	
Income before taxes of discontinued operations	48	58	117	
Taxes ²	-8	-159	-19	
Net loss/income from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders	40	-101	98	
Gain on distribution of Alcon Inc. to Novartis AG shareholders ³	4 691		4 691	
Net income of discontinued operations	4 691	40	4 590	98

¹ As the Alcon spin-off was completed on April 9, 2019, the Q2 2019 results of operations from the Alcon business were not material.

² The tax rate on the net loss from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders of 274% was impacted by prior period items, which the Group has concluded is not material to the current period or the prior periods to which they related, and changes in uncertain tax positions. Excluding these items, the tax rate would have been 15.5%.

³ See Note 3 for further details on the gain on distribution of Alcon Inc. to Novartis AG shareholders.

The following are included in net income from discontinued operations:

(USD millions)	Q2 2019 ¹	Q2 2018	H1 2019	H1 2018
Interest income		2		1
Depreciation of property, plant and equipment		-57	-42	-116
Amortization of intangible assets		-264	-174	-530
Impairment charges on intangible assets		-39		-39
Additions to restructuring provisions		-4		-4
Equity-based compensation of Novartis equity plans		-13	-9	-23

¹ As the Alcon spin-off was completed on April 9, 2019, the Q2 2019 results of operations from the Alcon business were not material.

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

Net assets derecognized

(USD millions)	H1 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

Net cash flows used in investing activities from discontinued operations

(USD millions)	Q2 2019	H1 2019
Payments out of provisions for transaction costs attributable to the spin-off of the Alcon business	-14	-14
Divested cash and cash equivalents	-628	-628
Cash flows attributable to the spin-off of the Alcon business	-642	-642
Other cash flows used in investing activities, net	-40	-463
Net cash flows used in investing activities from discontinued operations	-682	-1 105

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 9, 2019, refer to Note 2 and 3.

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 – Second quarter

	Innovative Medicines		Sandoz		Corporate		Group	
	Q2 2019	Q2 2018	Q2 2019	Q2 2018	Q2 2019	Q2 2018	Q2 2019	Q2 2018
(USD millions unless indicated otherwise)								
IFRS operating income from continuing operations	2 564	2 252	282	328	-183	-149	2 663	2 431
Amortization of intangible assets	521	520	81	95			602	615
Impairments								
Intangible assets	-17	61	2	20			-15	81
Property, plant and equipment related to the Group-wide rationalization of manufacturing sites	30	97	5	38			35	135
Other property, plant and equipment		7	6				6	7
Total impairment charges	13	165	13	58			26	223
Acquisition or divestment of businesses and related items								
- Income	-4				-38	-8	-42	-8
- Expense	10	63			37	9	47	72
Total acquisition or divestment of businesses and related items, net	6	63			-1	1	5	64
Other items								
Divestment gains	-598	-201			5	-14	-593	-215
Financial assets – fair value adjustments	-22	5			-10	14	-32	19
Restructuring and related items								
- Income	-15	-5	-1	-2	-1	-2	-17	-9
- Expense	151	51	127	43	19	8	297	102
Legal-related items								
- Income			-31	-63			-31	-63
- Expense	682	9	27				709	9
Additional income	-57	-8	-3		-5	-1	-65	-9
Additional expense	61	3	6	21	17	16	84	40
Total other items	202	-146	125	-1	25	21	352	-126
Total adjustments	742	602	219	152	24	22	985	776
Core operating income from continuing operations	3 306	2 854	501	480	-159	-127	3 648	3 207
<i>as % of net sales</i>	<i>35.4%</i>	<i>32.2%</i>	<i>20.5%</i>	<i>19.5%</i>			<i>31.0%</i>	<i>28.3%</i>
Income from associated companies	1		1	4	174	5 928	176	5 932
Core adjustments to income from associated companies, net of tax					77	-5 701	77	-5 701
Other financial income and expense								45
Core adjustments to other financial income and expense ¹							20	
Taxes, adjusted for above items (core taxes)							-620	-511
Core net income from continuing operations							3 096	2 735
Core net income from discontinued operations ²								276
Core net income							3 096	3 011
Core net income attributable to shareholders of Novartis AG							3 095	3 011
Core basic EPS from continuing operations (USD) ³							1.34	1.18
Core basic EPS from discontinued operations (USD) ³								0.11
Core basic EPS (USD) ³							1.34	1.29

¹ Other financial income and expense includes fair value adjustments on financial assets.

² For details on discontinued operations reconciliation from IFRS to core net income, please refer to page 66.

³ 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 – First half

	Innovative Medicines		Sandoz		Corporate		Group	
(USD millions unless indicated otherwise)	H1 2019	H1 2018	H1 2019	H1 2018	H1 2019	H1 2018	H1 2019	H1 2018
IFRS operating income from continuing operations	4 673	4 387	555	737	-323	-322	4 905	4 802
Amortization of intangible assets	978	1 036	160	192			1 138	1 228
Impairments								
Intangible assets	429	62	12	34			441	96
Property, plant and equipment related to the Group-wide rationalization of manufacturing sites	34	98	8	39			42	137
Other property, plant and equipment	1	9	6				7	9
Total impairment charges	464	169	26	73			490	242
Acquisition or divestment of businesses and related items								
- Income	-5				-39	-16	-44	-16
- Expense	26	86			39	22	65	108
Total acquisition or divestment of businesses and related items, net	21	86				6	21	92
Other items								
Divestment gains	-624	-277		-78	2	-45	-622	-400
Financial assets – fair value adjustments	-8	-78			-12	32	-20	-46
Restructuring and related items								
- Income	-23	-8	-1	-2	-2	-2	-26	-12
- Expense	228	99	179	69	32	25	439	193
Legal-related items								
- Income			-31	-63			-31	-63
- Expense	688	19	72	30			760	49
Additional income	-253	-30	-4		-6		-263	-30
Additional expense	84	82	6	21	21	29	111	132
Total other items	92	-193	221	-23	35	39	348	-177
Total adjustments	1 555	1 098	407	242	35	45	1 997	1 385
Core operating income from continuing operations	6 228	5 485	962	979	-288	-277	6 902	6 187
<i>as % of net sales</i>	<i>34.4%</i>	<i>31.8%</i>	<i>20.2%</i>	<i>19.7%</i>			<i>30.2%</i>	<i>27.8%</i>
Income from associated companies	1		1	4	254	6 080	256	6 084
Core adjustments to income from associated companies, net of tax					275	-5 478	275	-5 478
Other financial income and expense							44	80
Core adjustments to other financial income and expense ¹							20	
Taxes, adjusted for above items (core taxes)							-1 159	-999
Core net income from continuing operations							5 907	5 419
Core net income from discontinued operations ²							278	574
Core net income							6 185	5 993
Core net income attributable to shareholders of Novartis AG							6 183	5 990
Core basic EPS from continuing operations (USD) ³							2.55	2.33
Core basic EPS from discontinued operations (USD) ³							0.12	0.25
Core basic EPS (USD) ³							2.67	2.58

¹ Other financial income and expense includes fair value adjustments on financial assets.

² For details on discontinued operations reconciliation from IFRS to core net income, please refer to page 67.

³ 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 – Second quarter

(USD millions unless indicated otherwise)	Q2 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	Q2 2019 Core results	Q2 2018 Core results
Gross profit from continuing operations	8 618	592	2		65	9 277	8 820
Operating income from continuing operations	2 663	602	26	5	352	3 648	3 207
Income before taxes from continuing operations	2 634	679	26	5	372	3 716	3 246
Taxes from continuing operations ⁵	-525					-620	-511
Net income from continuing operations	2 109					3 096	2 735
Net income from discontinued operations ⁶	4 691						276
Net income	6 800					3 096	3 011
Basic EPS from continuing operations (USD)⁷	0.91					1.34	1.18
Basic EPS from discontinued operations (USD) ⁷	2.03						0.11
Basic EPS (USD)⁷	2.94					1.34	1.29

The following are adjustments to arrive at core gross profit

Other revenues	260				-24	236	294
Cost of goods sold	-3 406	592	2		89	-2 723	-2 833

The following are adjustments to arrive at core operating income

Selling, general and administration	-3 585			1	69	-3 515	-3 492
Research and development	-2 051	10	-17	4		-2 054	-2 051
Other income	989		-2	-42	-731	214	171
Other expense	-1 308		43	42	949	-274	-241

The following are adjustments to arrive at core income before taxes

Income from associated companies	176	77				253	231
Other financial income and expense ⁸					20	20	45

¹ Amortization of intangible assets: cost of goods sold includes 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 77 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 contains the reversal of an impairment charge; other income and other expense include net impairment charges on property, plant and equipment

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

⁴ Other items: other revenues includes an 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, selling, general and administration, other income and other expense include other restructuring income and expense and related items; other income and other expense also include fair value adjustments and divestment gains and losses on financial assets and legal-related items; selling, general and administration also includes a receivable expected credit loss provision; other income also includes net gains from the divestment of property, plant and equipment and products and provision releases

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 1.1 billion to arrive at the core results before tax amounts to USD 95 million. The average tax rate on the adjustments is 8.8%.

⁶ For details on discontinued operations reconciliation from IFRS to core net income please refer to page 66.

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

⁸ Other financial income and expense includes fair value adjustments on financial assets

CORE RESULTS – Reconciliation from IFRS results to core results – Group – First half

(USD millions unless indicated otherwise)	H1 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	H1 2019 Core results	H1 2018 Core results
Gross profit from continuing operations	16 822	1 116	12		99	18 049	17 230
Operating income from continuing operations	4 905	1 138	490	21	348	6 902	6 187
Income before taxes from continuing operations	4 774	1 413	490	21	368	7 066	6 418
Taxes from continuing operations ⁵	-797					-1 159	-999
Net income from continuing operations	3 977					5 907	5 419
Net income from discontinued operations ⁶	4 590					278	574
Net income	8 567					6 185	5 993
Basic EPS from continuing operations (USD)⁷	1.72					2.55	2.33
Basic EPS from discontinued operations (USD) ⁷	1.98					0.12	0.25
Basic EPS (USD)⁷	3.70					2.67	2.58

The following are adjustments to arrive at core gross profit

Other revenues	556				-66	490	529
Cost of goods sold	-6 657	1 116	12		165	-5 364	-5 586

The following are adjustments to arrive at core operating income

Selling, general and administration	-6 915			8	72	-6 835	-6 770
Research and development	-4 350	22	429	13	-132	-4 018	-4 040
Other income	1 192		-2	-44	-812	334	260
Other expense	-1 844		51	44	1 121	-628	-493

The following are adjustments to arrive at core income before taxes

Income from associated companies	256	275				531	606
Other financial income and expense ⁸	44				20	64	80

¹ Amortization of intangible assets: cost of goods sold includes 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 275 million for the Novartis share of the estimated Roche core items

² Impairments: cost of goods sold and research and development include 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: selling, general and administration, research and development and other expense include net charges related to acquisitions; other income and other expense include transitional service fee income and expenses, and other items related to the portfolio transformation

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 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 other restructuring income and expense and related items; selling, general and administration also includes a receivable expected credit loss provision and adjustments to provisions; research and development also includes fair value adjustments of contingent consideration liabilities; other income and other expense also include fair value adjustments and divestment gains and losses on financial assets and legal-related items; other income also includes net gains from divestments of products and property, plant & equipment and a provision release

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 2.3 billion to arrive at the core results before tax amounts to USD 362 million. The average tax rate on the adjustments is 15.8%, since the estimated full year core tax charge of 16.4% has been applied to the pre-tax income of the period.

⁶ For details on discontinued operations reconciliation from IFRS to core net income please refer to page 67.

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

⁸ Other financial income and expense includes fair value adjustments on financial assets

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

(USD millions)	Q2 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	Q2 2019 Core results	Q2 2018 Core results
Gross profit	7 426	511			25	7 962	7 545
Operating income	2 564	521	13	6	202	3 306	2 854

The following are adjustments to arrive at core gross profit

Other revenues	250				-24	226	285
Cost of goods sold	-2 327	511			49	-1 767	-1 793

The following are adjustments to arrive at core operating income

Selling, general and administration	-2 911			1	62	-2 848	-2 775
Research and development	-1 853	10	-17	4		-1 856	-1 856
Other income	847		-1	-4	-679	163	82
Other expense	-945		31	5	794	-115	-142

¹ Amortization of intangible assets: cost of goods sold includes 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: selling, general and administration, research and development and other expense include charges related to acquisitions and other income include transitional service-fee income related to the portfolio transformation

⁴ Other items: other revenues includes an income related to an amendment of a collaboration agreement; 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, selling, general and administration, other income and other expense include other restructuring income and charges and related items; other income and other expense also include fair value adjustments on financial assets; other income also includes net gains from the divestment of property, plant and equipment, products and financial assets and provision releases; other expense also includes legal-related items

CORE RESULTS – Reconciliation from IFRS results to core results – Innovative Medicines – First half

(USD millions)	H1 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	H1 2019 Core results	H1 2018 Core results
Gross profit	14 492	956			23	15 471	14 623
Operating income	4 673	978	464	21	92	6 228	5 485

The following are adjustments to arrive at core gross profit

Other revenues	511				-66	445	508
Cost of goods sold	-4 551	956			89	-3 506	-3 504

The following are adjustments to arrive at core operating income

Selling, general and administration	-5 564			8	62	-5 494	-5 324
Research and development	-3 958	22	429	13	-132	-3 626	-3 646
Other income	922		-1	-5	-717	199	127
Other expense	-1 219		36	5	856	-322	-295

¹ Amortization of intangible assets: cost of goods sold includes 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: selling, general and administration, research and development, other income and other expense include net charges related to acquisitions; other income also includes transitional service-fee income related to the portfolio transformation

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, selling, general and administration, research and development, other income and other expense include other restructuring income and charges and related items; research and development also includes fair value adjustments of contingent consideration liabilities; other income and other expense also include fair value adjustments on financial assets; other income also includes net gains from the divestment of property, plant and equipment, products and financial assets and provision releases; other expense also includes legal-related items

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

(USD millions)	Q2 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items	Other items ³	Q2 2019 Core results	Q2 2018 Core results
Gross profit	1 166	81	2		40	1 289	1 258
Operating income	282	81	13		125	501	480

The following are adjustments to arrive at core gross profit

Cost of goods sold	-1 315	81	2		40	-1 192	-1 245
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The following are adjustments to arrive at core operating income

Selling, general and administration	-550				7	-543	-593
Other income	45		-1		-32	12	62
Other expense	-181		12		110	-59	-52

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

² Impairments: cost of goods sold includes impairment charges related to intangible assets; 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; selling, general and administration also includes a receivable expected credit loss provision; other expense and other income also include legal-related items

CORE RESULTS – Reconciliation from IFRS results to core results – Sandoz – First half

(USD millions)	H1 2019 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items	Other items ³	H1 2019 Core results	H1 2018 Core results
Gross profit	2 283	160	12		76	2 531	2 574
Operating income	555	160	26		221	962	979

The following are adjustments to arrive at core gross profit

Cost of goods sold	-2 591	160	12		76	-2 343	-2 507
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The following are adjustments to arrive at core operating income

Selling, general and administration	-1 112				10	-1 102	-1 195
Other income	82		-1		-32	49	97
Other expense	-306		15		167	-124	-103

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

² Impairments: cost of goods sold includes impairment charges related to intangible assets; 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; selling, general and administration also includes a receivable expected credit loss provision; other income and other expense also include legal-related items

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

(USD millions)	Q2 2019 IFRS results	Amortization of intangible assets	Impairments	Acquisition or divestment of businesses and related items ¹	Other items ²	Q2 2019 Core results	Q2 2018 Core results
Gross profit	26					26	17
Operating income	-183			-1	25	-159	-127

The following are adjustments to arrive at core operating income

Other income	97			-38	-20	39	27
Other expense	-182			37	45	-100	-47

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, and other items related to the portfolio transformation

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

CORE RESULTS – Reconciliation from IFRS results to core results – Corporate continuing– First half

(USD millions)	H1 2019 IFRS results	Amortization of intangible assets	Impairments	Acquisition or divestment of businesses and related items ¹	Other items ²	H1 2019 Core results	H1 2018 Core results
Gross profit	47					47	33
Operating income	-323				35	-288	-277

The following are adjustments to arrive at core operating income

Other income	188			-39	-63	86	36
Other expense	-319			39	98	-182	-95

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, and other items related to the portfolio transformation

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

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

(USD millions)	Q2 2019 IFRS results	Amortization of intangible assets	Impairments	Acquisition or divestment of businesses and related items ¹	Other items	Q2 2019 Core results	Q2 2018 Core results
Gross profit							1 169
Operating income of discontinued operations							334
Income before taxes of discontinued operations							329
Taxes							-53
Net income from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders							276
Gain on distribution of Alcon Inc. to Novartis AG shareholders	4 691			-4 691			
Net income from discontinued operations	4 691						276
Basic EPS (USD)²	2.03						0.11

¹ Acquisition or divestment of businesses and related items represents the non-taxable non-cash gain related to the distribution (spin-off) of Alcon Inc. to Novartis AG shareholders

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 – Discontinued operations – First half

(USD millions)	H1 2019 IFRS results	Amortization of intangible assets ¹	Impairments	Acquisition or divestment of businesses and related items ²	Other items ³	H1 2019 Core results	H1 2018 Core results
Gross profit	949	165			9	1 123	2 284
Operating income of discontinued operations	71	167			112	350	694
Income before taxes of discontinued operations	58					337	682
Taxes ⁴	-159					-59	-108
Net loss/income from discontinued operations before gain on distribution of Alcon Inc. to Novartis AG shareholders	-101					278	574
Gain on distribution of Alcon Inc. to Novartis AG shareholders	4 691			-4 691			
Net income from discontinued operations	4 590					278	574
Basic EPS (USD)⁵	1.98					0.12	0.25

The following are adjustments to arrive at core gross profit

Cost of goods sold	-860	165			9	-686	-1 317
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The following are adjustments to arrive at core operating income

Selling, general and administration	-638				14	-624	-1 337
Research and development	-142	2			4	-136	-252
Other income	15				-3	12	19
Other expense	-113				88	-25	-20

¹ Amortization of intangible assets: cost of goods sold includes 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 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 a 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 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)	Q2 2019	Q2 2018	H1 2019	H1 2018
<i>Share of estimated Roche reported results</i>	206	183	412	371
<i>Prior-year adjustment</i>			-129	-125
Amortization of additional intangible assets recognized by Novartis on initial accounting for the equity interest	-29	-37	-69	-75
<i>Partial release of deferred tax liability recognized</i>			43	
Net income effect from Roche Holding AG	177	146	257	171
<i>Share of estimated GSK Consumer Healthcare Holdings Ltd. reported results</i>		-8		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		5 791		5 791
Net income effect from GlaxoSmithKline Consumer Healthcare Holdings Ltd. ¹		5 783		5 911
Others	-1	3	-1	2
Income from associated companies	176	5 932	256	6 084

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)	Q2 2019	Q2 2018	H1 2019	H1 2018
Income from associated companies	176	5 932	256	6 084
Share of estimated Roche core adjustments	77	80	114	159
Roche prior year adjustment			161	133
Share of estimated GSK Consumer Healthcare Holdings Ltd. core adjustments ¹		10		20
GSK Consumer Healthcare Holdings Ltd. prior year adjustment				1
Gain on divestment of GSK Consumer Healthcare Holdings Ltd., pre-tax ¹		-5 791		-5 791
Core income from associated companies	253	231	531	606

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

Second quarter

(USD millions)	Q2 2019	Q2 2018
Change in cash and cash equivalents	3 184	6 633
Change in marketable securities, commodities, financial debts and financial derivatives	471	1 845
Reduction in net debt	3 655	8 478
Net debt at April 1	-21 541	-27 688
Net debt at June 30	-17 886	-19 210

First half

(USD millions)	H1 2019	H1 2018
Change in cash and cash equivalents	-3 280	3 586
Change in marketable securities, commodities, financial debts and financial derivatives	1 578	-3 749
Increase in net debt	-1 702	-163
Net debt at January 1	-16 184	-19 047
Net debt at June 30	-17 886	-19 210

Components of net debt

(USD millions)	Jun 30, 2019	Jun 30, 2018
Non-current financial debts	-20 364	-22 760
Current financial debts and derivative financial instruments	-7 857	-9 596
Total financial debt	-28 221	-32 356
Less liquidity:		
Cash and cash equivalents	9 991	12 446
Marketable securities, commodities, time deposits and derivative financial instruments	344	700
Total liquidity	10 335	13 146
Net debt at June 30	-17 886	-19 210

Share information

	Jun 30, 2019	Jun 30, 2018
Number of shares outstanding	2 291 765 401	2 321 740 340
Registered share price (CHF)	89.20	75.28
ADR price (USD)	91.31	75.54
Market capitalization (USD billions) ¹	209.7	175.7
Market capitalization (CHF billions) ¹	204.4	174.8

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

Second quarter

(USD millions)

	Q2 2019	Q2 2018	Change
Operating income from continuing operations	2 663	2 431	232
Adjustments for non-cash items			
Depreciation, amortization and impairments	1 014	1 174	-160
Change in provisions and other non-current liabilities	958	109	849
Other	-441	-70	-371
Operating income adjusted for non-cash items	4 194	3 644	550
Dividends received from associated companies and others	3	254	-251
Interest and other financial receipts	65	74	-9
Interest and other financial payments	-211	-179	-32
Taxes paid	-560	-501	-59
Payments out of provisions and other net cash movements in non-current liabilities	-323	-121	-202
Change in inventory and trade receivables less trade payables	-609	-99	-510
Change in other net current assets and other operating cash flow items	552	440	112
Net cash flows from operating activities from continuing operations	3 111	3 512	-401
Purchase of property, plant and equipment	-279	-257	-22
Proceeds from sales of property, plant and equipment	648	6	642
Purchase of intangible assets	-161	-226	65
Proceeds from sales of intangible assets	210	222	-12
Purchase of financial assets	-45	-39	-6
Proceeds from sales of financial assets	142	55	87
Purchase of other non-current assets	-14	-9	-5
Proceeds from sales of other non-current assets	0	4	-4
Free cash flow from continuing operations	3 612	3 268	344
Free cash flow from discontinued operations		294	-294
Total free cash flow	3 612	3 562	50

Free cash flow

First half

(USD millions)

	H1 2019	H1 2018	Change
Operating income from continuing operations	4 905	4 802	103
Adjustments for non-cash items			
Depreciation, amortization and impairments	2 467	2 104	363
Change in provisions and other non-current liabilities	1 018	247	771
Other	-312	-74	-238
Operating income adjusted for non-cash items	8 078	7 079	999
Dividends received from associated companies and others	463	718	-255
Interest and other financial receipts	150	124	26
Interest and other financial payments	-422	-386	-36
Taxes paid	-960	-890	-70
Payments out of provisions and other net cash movements in non-current liabilities	-516	-264	-252
Change in inventory and trade receivables less trade payables	-1 306	-751	-555
Change in other net current assets and other operating cash flow items	-42	263	-305
Net cash flows from operating activities from continuing operations	5 445	5 893	-448
Purchase of property, plant and equipment	-561	-515	-46
Proceeds from sales of property, plant and equipment	812	51	761
Purchase of intangible assets	-498	-642	144
Proceeds from sales of intangible assets	281	416	-135
Purchase of financial assets	-154	-71	-83
Proceeds from sales of financial assets	177	64	113
Purchase of other non-current assets	-24	-13	-11
Proceeds from sales of other non-current assets	3	4	-1
Free cash flow from continuing operations	5 481	5 187	294
Free cash flow from discontinued operations	-62	290	-352
Total free cash flow	5 419	5 477	-58

Principal currency translation rates

Second quarter

(USD per unit)	Average rates Q2 2019	Average rates Q2 2018	Period-end rates Jun 30, 2019	Period-end rates Jun 30, 2018
1 CHF	0.998	1.015	1.026	1.005
1 CNY	0.147	0.157	0.146	0.151
1 EUR	1.124	1.192	1.138	1.163
1 GBP	1.285	1.361	1.268	1.311
100 JPY	0.910	0.916	0.929	0.904
100 RUB	1.548	1.612	1.583	1.595

First half

	Average rates H1 2019	Average rates H1 2018	Period-end rates Jun 30, 2019	Period-end rates Jun 30, 2018
1 CHF	1.000	1.035	1.026	1.005
1 CNY	0.147	0.157	0.146	0.151
1 EUR	1.130	1.211	1.138	1.163
1 GBP	1.294	1.376	1.268	1.311
100 JPY	0.909	0.920	0.929	0.904
100 RUB	1.533	1.685	1.583	1.595

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 “guidance,” “focused,” “momentum,” “upcoming,” “transformative,” “continued,” “potential,” “launches,” “launch,” “growth drivers,” “launched,” “on track” “filed,” “expected,” “to grow,” “will,” “enter,” “pipeline,” “committed,” “future,” “strategy,” “priority review,” “deliver,” “expect,” “to be completed,” “to become,” “to be presented,” “pending,” “closing conditions,” “continued,” “landmark,” “continues,” “submitted,” “resubmitted,” “submissions,” “filings,” “potentially,” “outlook,” “unforeseen,” “forecast,” “may,” “would,” “PRIME designation,” “Sakigake designation,” “enrollment,” “ongoing,” “planned,” “Fast Track designation,” “Orphan designation,” “Orphan status,” 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 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 the share buyback plan; 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; 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 strategic benefits, synergies or opportunities expected from the Alcon and Sandoz transactions may not be realized or may be more difficult or take longer to realize than expected; the inherent uncertainties involved in predicting shareholder returns; the uncertainties inherent 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 will continue this year; safety, quality or manufacturing issues; 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; uncertainties involved in the development or adoption of potentially transformational technologies and business models; 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; uncertainties regarding potential significant breaches of data security or data privacy, or disruptions of our information technology systems; 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 108,000 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 interim 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>

Important dates

September 9, 2019	ESG Investor day - London
October 22, 2019	Third quarter results 2019
December 5, 2019	R&D update 2019 - London