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Novartis Q2 and H1 2017 Condensed Interim Financial Report – Supplementary Data

GROUP AND DIVISIONAL OPERATING PERFORMANCE

Key figures[1]

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc[1]	USD m	USD m	USD	cc[1]
Net sales to third parties	**12 242**	**12 470**	*-2*	*0*	**23 781**	**24 070**	*-1*	*1*
Divisional operating income	2 386	2 253	*6*	*10*	4 407	4 810	*-8*	*-5*
Corporate income & expense, net	-106	-160	*34*	*29*	-205	-266	*23*	*18*
Operating income	**2 280**	**2 093**	***9***	***13***	**4 202**	**4 544**	***-8***	***-4***
As % of net sales	*18.6%*	*16.8%*			*17.7%*	*18.9%*		
Income from associated companies	215	203	*6*	*6*	430	330	*30*	*30*
Interest expense	-192	-180	*-7*	*-9*	-372	-365	*-2*	*-4*
Other financial income and expense	12	-3	*nm*	*nm*	2	-44	*nm*	*nm*
Taxes	-336	-307	*-9*	*-14*	-618	-648	*5*	*1*
Net income	**1 979**	**1 806**	***10***	***14***	**3 644**	**3 817**	***-5***	***-1***
Basic earnings per share (USD)	**0.84**	**0.76**	***11***	***15***	**1.54**	**1.60**	***-4***	***-1***
Cash flows from operating activities	**3 582**	**3 111**	***15***		**5 627**	**4 653**	***21***	
Free cash flow[1]	**3 243**	**2 526**	***28***		**4 908**	**3 888**	***26***	
Core[1]								
Core operating income	**3 235**	**3 332**	***-3***	***0***	**6 245**	**6 593**	***-5***	***-2***
As % of net sales	*26.4%*	*26.7%*			*26.3%*	*27.4%*		
Core net income	**2 866**	**2 930**	***-2***	***1***	**5 556**	**5 718**	***-3***	***0***
Basic core earnings per share (USD)	**1.22**	**1.23**	***-1***	***2***	**2.35**	**2.40**	***-2***	***1***

nm = not meaningful

Second quarter

Net sales

Net sales were USD 12.2 billion (-2%, 0% cc) in the second quarter, as volume growth of 6 percentage points was offset by the negative impacts of generic competition (-3 percentage points) and pricing (-3 percentage points).

Corporate income and expense, net

Corporate income and expense, which includes the cost of Group management and central services, amounted to a net expense of USD 106 million compared to USD 160 million in the prior year quarter. This decrease was mainly due to higher realized net gains from the investments in the Novartis Venture Fund and higher revenue from retained Vaccines intellectual property rights.

Operating income

Operating income was USD 2.3 billion (+9%, +13% cc) driven by higher divestment gains and lower amortization than the prior year quarter. Operating income margin in constant currencies increased 2.1 percentage points. Currency had a negative impact of 0.3 percentage points, resulting in a net increase of 1.8 percentage points to 18.6% of net sales.

Core adjustments amounted to USD 1.0 billion (2016: USD 1.2 billion). Core operating income was USD 3.2 billion (-3%, 0% cc). Core operating income margin in constant currencies remained flat as generic erosion of *Gleevec/Glivec* and growth investments were offset by gross margin expansion and productivity. Currency had a negative impact of 0.3 percentage points, resulting in a net decrease of 0.3 percentage points to 26.4% of net sales.

Income from associated companies

Income from associated companies amounted to USD 215 million, compared to USD 203 million in the prior year quarter. The estimated income contribution from GSK Consumer Healthcare Holdings Ltd. increased from USD 57 million to USD 76 million mainly due to a negative true-up for the 2015 actual audited accounts included in the prior year quarter. In the current year this true-up was recognized in

[1] Constant currencies (cc), core results and free cash flow are non-IFRS measures. An explanation of non-IFRS measures can be found on page 43. Unless otherwise noted, all growth rates in this document refer to same period in prior year.

the first quarter. The increase in the estimated income contribution from GSK Consumer Healthcare Holdings Ltd. was offset by the decrease in the estimated income contribution from Roche Holding AG (Roche) from USD 144 million to USD 119 million. In addition, we recognized an income of USD 20 million from other investments.

Core income from associated companies increased to USD 325 million from USD 306 million in the second quarter of 2016, in line with reported income from associated companies.

Interest expense and other financial income/expense
Interest expense increased to USD 192 million from USD 180 million in the prior year quarter due to higher outstanding debt. Other financial income and expense amounted to an income of USD 12 million compared to an expense of USD 3 million in the prior year quarter.

Taxes
The tax rate was 14.5% in line with the prior year quarter. The core tax rate was 15.2% in line with the prior year quarter.

Net income and EPS
Net income was USD 2.0 billion (+10%, +14% cc), broadly in line with operating income.

EPS was USD 0.84 (+11%, +15% cc), including the benefit from the share buyback program.

Core net income was USD 2.9 billion (-2%, +1% cc), broadly in line with core operating income.

Core EPS was USD 1.22 (-1%, +2% cc), including the benefit from the share buyback program.

Free cash flow amounted to USD 3.2 billion (+28% USD) compared to USD 2.5 billion in the prior year quarter. The increase of USD 0.7 billion was mainly driven by improved cash flows from operating activities, which included a higher dividend received from GSK Consumer Healthcare Holdings Ltd., as well as higher divestment proceeds and lower capital expenditure.

First half

Net sales
Net sales were USD 23.8 billion (-1%, +1% cc) in the first half, as volume growth of 6 percentage points was partially offset by the negative impacts of generic competition (-3 percentage points) and pricing (-2 percentage points).

Corporate income and expense, net
Corporate income and expense, which includes the cost of Group management and central services, amounted to a net expense of USD 205 million in the first half of 2017 compared to USD 266 million in the prior year period. The decrease was mainly due to higher realized net gains from the investments in the Novartis Venture Fund and higher revenue from retained Vaccines intellectual property rights.

Operating income
Operating income was USD 4.2 billion (-8%, -4% cc) mainly due to generic erosion of *Gleevec/Glivec* and growth investments. Operating income margin in constant currencies decreased 0.9 percentage points. Currency had a negative impact of 0.3 percentage points, resulting in a net decrease of 1.2 percentage points to 17.7% of net sales.

Core adjustments amounted to USD 2.0 billion in line with the prior year period, as the RLX030 net charge was offset mostly by lower amortization. Core operating income was USD 6.2 billion (-5%, -2% cc). Core operating income margin in constant currencies decreased 0.9 percentage points, mainly due to generic erosion of *Gleevec/Glivec* and growth investments. Currency had a negative impact of 0.2 percentage points, resulting in a net decrease of 1.1 percentage points to 26.3% of net sales.

Income from associated companies
Income from associated companies increased to USD 430 million from USD 330 million in the prior year mainly due to higher income from the investment in GSK Consumer Healthcare Holdings. The share of income from GSK Consumer Healthcare Holdings increased to USD 219 million from USD 107 million in the first half of 2016. The increase was due to an estimated income from GSK Consumer Healthcare Holdings of USD 172 million compared to USD 129 million in 2016, as well as

the recognition of a positive prior year true up of USD 47 million based on the actual audited results for 2016, compared to a negative prior year true up of USD 22 million in the first half of 2016.

Core income from associated companies increased to USD 677 million from USD 559 million in the prior year period. The share of income from GSK Consumer Healthcare Holdings increased to USD 236 million from USD 192 million in the first half of 2016, and the core income contribution from Roche Holding AG increased to USD 419 million from USD 363 million in the first half of 2016.

Interest expense and other financial income/expense
Interest expense was USD 372 million, broadly in line with USD 365 million in the prior year period. Other financial income and expense amounted to an income of USD 2 million compared to an expense of USD 44 million in the prior year period, mainly due to lower currency losses of USD 32 million compared to USD 74 million in the prior year period.

Taxes
The tax rate was 14.5% in line with the prior year period. The core tax rate was 15.2% in line with the prior year period.

Net income and EPS
Net income was USD 3.6 billion (-5%, -1% cc), declining less than operating income due to higher income from associated companies.

EPS was USD 1.54 (-4%, -1% cc), including the benefit from the share buyback program.

Core net income was USD 5.6 billion (-3%, 0% cc), including the benefit from higher core income from associated companies.

Core EPS was USD 2.35 (-2%, +1% cc), including the benefit from the share buyback program.

Free cash flow amounted to USD 4.9 billion (+26% USD) compared to USD 3.9 billion in the prior year period. The increase of USD 1.0 billion was mainly driven by improved cash flows from operating activities, which included a higher dividend received from GSK Consumer Healthcare Holdings Ltd.

Innovative Medicines

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Net sales	**8 275**	**8 387**	**-1**	**1**	**15 967**	**16 116**	**-1**	**2**
Operating income	**2 075**	**1 866**	**11**	**16**	**3 796**	**4 046**	**-6**	**-2**
As % of net sales	25.1	22.2			23.8	25.1		
Core operating income	**2 576**	**2 669**	**-3**	**1**	**5 002**	**5 271**	**-5**	**-1**
As % of net sales	31.1	31.8			31.3	32.7		

Second quarter

Net sales
Net sales were USD 8.3 billion (-1%, +1% cc) in the second quarter. Volume contributed *7* percentage points to sales growth. Generic competition had a negative impact of 4 percentage points and pricing had a negative impact of 2 percentage points, both largely due to *Gleevec/Glivec* genericization in Europe and the US.

Regionally, US sales (USD 2.9 billion, 0% cc) were stable as *Cosentyx*, *Entresto* and *Promacta/Revolade* more than offset the generic competition, largely for *Gleevec/Glivec*. Europe sales (USD 2.8 billion, -1% cc) slightly declined mainly driven by *Gleevec/Glivec* genericization, partly offset by *Cosentyx*, *Jakavi*, *Tafinlar + Mekinist* and *Entresto* growth. Japan sales (USD 0.6 billion, -3% cc) declined, mainly due to generic impact for *Diovan*. Emerging Growth Markets sales increased 8% (cc) to USD 2.1 billion.

Novartis Pharmaceuticals business unit sales were USD 5.2 billion (+5% cc). Ophthalmology sales (USD 1.4 billion, 0% cc) were stable. Immunology and Dermatology (USD 979 million, +36% cc) sales increased, driven by strong growth of *Cosentyx* (USD 490 million, +90% cc) across all indications, mainly in US and Europe. In Neuroscience (USD 864 million, +4% cc), *Gilenya* (USD 837 million, +5% cc) continued to grow. Respiratory (USD 393 million, +5% cc) performance was driven by strong growth of *Xolair* (USD 226 million, +12% cc). In Cardio-Metabolic, *Entresto* (USD 110 million, +240% cc) continued to grow, benefitting from the impact of improved access, sales force expansion in the US and reimbursement in Europe.

Novartis Oncology business unit sales were USD 3.1 billion (-5% cc; +9% cc excluding *Gleevec/Glivec*). The sales decline was driven by *Gleevec/Glivec* (USD 506 million, -42% cc) generic impact in Europe and the US, partly offset by *Promacta/Revolade* (USD 210 million, +35% cc), *Tafinlar + Mekinist* (USD 216 million, +28% cc), *Jakavi* (USD 186 million, +32% cc), *Tasigna* (USD 463 million, +7% cc) and *Afinitor* (USD 385 million, +7% cc).

Operating income
Operating income was USD 2.1 billion (+11%, +16% cc), up mainly due to higher divestment gains and lower Ophthalmology intangible assets amortization. Operating income margin in constant currencies increased 3.3 percentage points; currency had a negative impact of 0.4 percentage points, resulting in a net increase of 2.9 percentage points to 25.1% of net sales.

Core adjustments totaled USD 501 million, including USD 551 million for amortization of intangible assets. Prior year core adjustments were USD 803 million. Core operating income was USD 2.6 billion (-3%, +1% cc). Core operating income margin in constant currencies decreased by 0.2 percentage points; currency had a negative impact of 0.5 percentage points, resulting in a net decrease of 0.7 percentage points to 31.1% of net sales.

Core gross margin as a percentage of net sales increased by 0.9 percentage points (cc), driven by favorable product mix and productivity. Core R&D expenses decreased by 1.1 percentage points (cc), mainly reflecting continued productivity and resource allocation from the creation of the Global Drug Development Unit. Core SG&A expenses increased by 1.8 percentage points (cc), largely due to launch investments for *Entresto*, *Cosentyx* and *Kisqali*. Core Other Income and Expense, decreased the margin by 0.4 percentage points (cc).

First half

Net sales

Innovative Medicines delivered net sales of USD 16.0 billion (-1%, +2% cc) in the first half of the year, as volume growth (+7 percentage points) more than offset the negative impact of generic competition (-4 percentage points). Pricing had a negative impact of 1 percentage point.

In the US (USD 5.4 billion, 0% cc), the strong performance of *Cosentyx* and *Entresto* was offset by generic competition, largely for *Gleevec/Glivec*. Europe sales (USD 5.4 billion, 0% cc) were stable as generic competition, largely for *Gleevec/Glivec*, was fully offset by *Cosentyx*, *Jakavi*, *Tafinlar* + *Mekinist* and *Entresto* growth. Japan sales (USD 1.2 billion, -4% cc) declined versus the prior year, mainly due to generic competition and divestments. Emerging Growth Markets sales increased 8% (cc) to USD 4.1 billion.

Operating income

Operating income was USD 3.8 billion (-6%, -2% cc) for the first half mainly due to generic erosion and launch investments for *Entresto, Cosentyx* and *Kisqali*, partly offset by improved gross margin and productivity. Operating income margin in constant currencies decreased 0.9 percentage points; currency had a negative impact of 0.4 percentage points, resulting in a net decrease of 1.3 percentage points to 23.8% of net sales.

Core adjustments amounted to USD 1.2 billion, mainly due to USD 1.1 billion of amortization of intangible assets. Core adjustments were in line with prior year, as the RLX030 net charge was offset mostly by lower amortization. Core operating income was USD 5.0 billion (-5%, -1% cc). Core operating income margin in constant currencies decreased by 1.0 percentage points; currency had a negative impact of 0.4 percentage points, resulting in a net decrease of 1.4 percentage points to 31.3% of net sales.

Core gross margin as a percentage of net sales increased by 0.8 percentage points (cc) driven by favorable product mix and productivity. Core R&D expenses decreased by 0.8 percentage points (cc), mainly reflecting continued productivity and resource allocation from the creation of the Global Drug Development Unit. Core SG&A expenses increased by 2.0 percentage points (cc), largely due to launch investments. Core Other Income and Expense, net decreased the margin by 0.6 percentage points (cc).

Innovative Medicines product review

All comments below focus on second quarter movements in constant currencies.

ONCOLOGY BUSINESS UNIT

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Gleevec/Glivec	506	891	-43	-42	1 050	1 725	-39	-38
Tasigna	463	458	1	7	874	840	4	8
Sandostatin	404	424	-5	-1	789	825	-4	-2
Afinitor/Votubia	385	365	5	7	729	732	0	1
Exjade/Jadenu	267	254	5	7	514	477	8	10
Tafinlar + Mekinist[1]	216	172	26	28	403	322	25	28
Promacta/Revolade	210	158	33	35	385	289	33	35
Votrient	204	188	9	10	382	354	8	9
Jakavi	186	146	27	32	348	270	29	33
Kisqali	8	0	nm	nm	15	0	nm	nm
Other	225	263	-14	-12	441	514	-14	-12
Total Oncology business unit	**3 074**	**3 319**	**-7**	**-5**	**5 930**	**6 348**	**-7**	**-5**

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

Gleevec/Glivec (USD 506 million, -42% cc) declined driven by increased pressure from generic imatinib in most major markets. *Gleevec/Glivec* is approved in more than 110 countries for the treatment of adult patients in all phases of Ph+ CML, for the treatment of patients with KIT (CD117)-positive gastrointestinal tumors (KIT+ GIST), which cannot be surgically removed and/or have

metastasized, and for the treatment of adult patients following complete surgical removal of KIT+ GIST. Not all indications are available in every country.

Tasigna (USD 463 million, +7% cc) showed solid growth in the second quarter driven by the US and Emerging Growth Markets. *Tasigna* is approved for the treatment of adult patients newly diagnosed with Philadelphia chromosome-positive (Ph+) chronic myeloid leukemia (CML) in the chronic phase, and is also approved for the treatment of adult patients with Ph+ CML in the chronic or accelerated phase who are resistant or intolerant to at least one prior therapy including *Gleevec/Glivec*. In Q2, the European Commission approved the inclusion of Treatment-free Remission (TFR) data in the Tasigna Summary of Product Characteristics (SmPC).

Sandostatin (USD 404 million, -1% cc) declined slightly in the second quarter due to competitive pressure. *Sandostatin* is a somatostatin analogue available in immediate and long-acting release injectable formulations and is indicated for the treatment of acromegaly and NET. In NET, *Sandostatin LAR* is used for patients with symptoms of carcinoid syndrome from gastro-entero-pancreatic NET as well as for tumor control in patients with advanced NET of the midgut or unknown primary tumor location.

Afinitor/Votubia (USD 385 million, +7% cc) grew in the second quarter driven by continued growth in the neuroendocrine tumor (NET) and tuberous sclerosis complex (TSC) indications. *Afinitor* is approved in combination with exemestane for the treatment of postmenopausal women with hormone receptor positive, human epidermal growth factor receptor-2 negative (HR+/HER2-) advanced breast cancer after recurrence or progression following a non-steroidal aromatase inhibitor (in the US, specifically after failure of treatment with letrozole or anastrozole), for patients with advanced renal cell carcinoma whose disease has progressed on or after treatment with VEGF-targeted therapy (in the US, specifically after failure of treatment with sunitinib and sorafenib), for progressive, metastatic or unresectable well- or moderately-differentiated pancreatic NET, and for the treatment of progressive, metastatic or unresectable, well-differentiated, nonfunctional GI or lung NET. *Afinitor* is also approved for treatment of patients with subependymal giant cell astrocytoma associated with TSC that requires therapeutic intervention but cannot be curatively resected and for treatment of patients with renal angiomyolipoma associated with TSC who do not require immediate surgery. In January the European Commission approved *Votubia* as an adjunctive treatment for patients two years and older whose refractory partial-onset seizures, with or without secondary generalization, are associated with TSC, making it the first adjunctive treatment approved for this patient population. Everolimus, the active ingredient in *Afinitor/Votubia*, is available under the trade names *Zortress/Certican* for use in other non-oncology indications and is exclusively licensed to Abbott and sublicensed to Boston Scientific for use in drug-eluting stents.

Exjade/Jadenu (USD 267 million, +7% cc) sales grew in most markets, driven by continued uptake of *Jadenu*/*Exjade* Film-Coated Tablet (FCT). *Exjade* is a once-daily dispersible tablet for chronic transfusional iron overload, as well as for chronic iron overload in patients with non-transfusion-dependent thalassemia. *Jadenu*, a once-daily oral film-coated tablet formulation, which provides a simpler administration for patients, is approved in the US, Canada, Switzerland and other markets for the same indications as *Exjade*. In the EU, the film-coated tablet formulation is approved as *Exjade* FCT. Regulatory applications for FCT have been submitted in several other countries worldwide. In addition to the FCT, the film-coated tablet formulation has been developed as Granules for patients who cannot swallow tablets, using the same composition as the FCT. *Jadenu* Sprinkle granules were approved by the US FDA in May 2017, and *Jadenu* granules were approved in Japan, in July 2017. A regulatory application for granules also has been submitted under the name *Exjade* in the EU and regulatory approval is expected in 2017.

Tafinlar + Mekinist (USD 216 million, +28% cc) performance was driven by double-digit growth across all regions. *Tafinlar* + *Mekinist* is the first combination of its kind for the treatment of patients with BRAF V600E/K mutation-positive unresectable or metastatic melanoma, as detected by a validated test, and continues to be the market leader globally across targeted therapy options. It is also the first combination of BRAF and MEK inhibitors to report three years of follow-up survival data in a Phase III study and five years of follow up in a separate Phase II study in BRAF V600+ unresectable or metastatic melanoma patients. *Tafinlar* and *Mekinist* are also approved as single agents for the treatment of patients with unresectable or metastatic melanoma in more than 50 countries worldwide. In March, the EMA approved *Tafinlar* in combination with *Mekinist* to treat patients with advanced or metastatic non-small cell lung cancer (NSCLC) whose tumors express the BRAF V600 mutation, and in June FDA approved *Tafinlar* + *Mekinist* for the same indication, which

had Breakthrough Therapy Designation (BTD). In addition, *Tafinlar* monotherapy has FDA BTD in BRAF V600E mutant NSCLC after at least one prior line of platinum containing chemotherapy.

Promacta/Revolade (USD 210 million, +35% cc) grew at a strong double-digit rate, driven by continued worldwide uptake as well as growth of the thrombopoietin (TPO) class for chronic immune (idiopathic) thrombocytopenic purpura (ITP). It is the only approved once-daily oral TPO receptor agonist and the only TPO receptor agonist with multiple indications in different disease states and leads the market globally in the TPO class. It is approved in more than 100 countries for the treatment of thrombocytopenia in adult patients with chronic ITP who have had an inadequate response or are intolerant to other treatments. In the US and EU, *Promacta/Revolade* is approved for patients one year and older with chronic ITP who have had an insufficient response to other treatments. It is also approved in 45 countries for the treatment of patients with severe aplastic anemia who are refractory to other treatments, and in more than 50 countries for the treatment of thrombocytopenia in patients with chronic hepatitis C to allow them to initiate and maintain interferon-based therapy.

Votrient (USD 204 million, +10% cc) showed solid growth in most markets. *Votrient* is a small molecule tyrosine kinase inhibitor (TKI) that inhibits a number of intracellular proteins to limit tumor growth and cell survival, which is approved in the US for the treatment of patients with aRCC, and in the EU for first-line treatment of adult patients with aRCC as well as patients who have received prior cytokine therapy for advanced disease. *Votrient* is also indicated for the treatment of patients with selective subtypes of advanced soft tissue sarcoma (STS) who have received prior chemotherapy or have progressed within 12 months after neoadjuvant therapy (efficacy in adipocytic STS or gastrointestinal stromal tumors has not been demonstrated).

Jakavi (USD 186 million, +32% cc) showed continued double-digit growth across all major markets driven by myelofibrosis (MF) and launch of the second-line polycythemia vera (PV) indication. *Jakavi*, an oral inhibitor of the JAK 1 and JAK 2 tyrosine kinases, is the first JAK inhibitor indicated for the treatment of disease-related splenomegaly or symptoms in adult patients with primary MF (also known as chronic idiopathic MF), post-polycythemia vera MF or post-essential thrombocythemia MF. *Jakavi* is currently approved in 101 countries for the MF indication, including EU countries, Japan and Canada. More than 75 countries have also approved *Jakavi* for the treatment of adult patients with PV who are resistant to or intolerant of hydroxyurea, including EU countries, Switzerland, Canada and Japan, and regulatory applications have been submitted in other countries. Novartis licensed ruxolitinib from Incyte Corporation for development and commercialization in the areas of oncology, hematology and graft-versus-host disease outside the US. Ruxolitinib is marketed in the US by Incyte under the brand name Jakafi®.

Kisqali (USD 8 million) (ribociclib), previously known as LEE011, is a selective cyclin-dependent kinase inhibitor, a class of drugs that help slow the progression of cancer by inhibiting the proteins cyclin-dependent kinase 4 and 6. *Kisqali* was approved in combination with an aromatase inhibitor by the FDA and launched in the US in March 2017 as initial endocrine-based therapy for the treatment of postmenopausal women with hormone receptor positive, human epidermal growth factor receptor-2 negative (HR+/HER2-) advanced or metastatic breast cancer. On May 4, 2017, the US FDA approved the first-of-its-kind in Oncology *Kisqali* Femara Co-Pack (ribociclib tablets; letrozole tablets) as initial endocrine-based therapy for the treatment of HR+/HER2- advanced or metastatic breast cancer in postmenopausal women. Multiple patient access programs are available to initiate treatment and bridge to insurance coverage. In June 2017, the Committee for Medicinal Products for Human Use of the European Medicines Agency adopted a positive opinion recommending approval of *Kisqali* in combination with an aromatase inhibitor for treatment of postmenopausal women with HR+/HER2- locally advanced or metastatic breast cancer as initial endocrine-based therapy. Additional filings are underway with other health authorities worldwide.

PHARMACEUTICALS BUSINESS UNIT

OPHTHALMOLOGY

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Lucentis	477	475	0	5	922	927	-1	4
Travoprost Group	142	156	-9	-8	290	307	-6	-4
Systane Group	104	92	13	14	192	181	6	6
Topical Olopatadine Group	76	63	21	22	176	199	-12	-11
Other	579	618	-6	-6	1 119	1 160	-4	-3
Total Ophthalmology	**1 378**	**1 404**	**-2**	**0**	**2 699**	**2 774**	**-3**	**-1**

Lucentis (USD 477 million, +5% cc) sales grew driven by Europe, Japan and Emerging Growth Markets. In 2016, the EC approved *Lucentis* to treat patients with visual impairment due to rare conditions causing choroidal neovascularization (CNV). This new indication is now approved in 51 countries in addition to the EU. Further submissions have been filed in 27 countries, including Switzerland. *Lucentis* is approved for six indications and is the only treatment available for such a wide range of CNV indications. *Lucentis* is an anti-VEGF therapy specifically designed for the eye, minimizing systemic exposure. The *Lucentis* pre-filled syringe has now launched in 32 countries. *Lucentis* is licensed from Genentech, and Novartis holds the rights to commercialize the product ex-US. Genentech holds the rights to commercialize *Lucentis* in the US.

Travoprost Group (USD 142 million, -8% cc) sales declined mainly due to loss of exclusivity in Europe. Travoprost Group includes ***Travatan***, ***TravatanZ*** and ***DuoTrav***, which are indicated for the reduction of elevated intraocular pressure in patients with open-angle glaucoma or who have ocular hypertension. Single agent travoprost products (*Travatan*, *TravatanZ*, *Travatan* BAK-Free and *Izba*) are prescribed as first-line agents. *DuoTrav* (travoprost and timolol) is a fixed-dose combination solution approved as a second-line treatment.

***Systane* Group** (USD 104 million, +14% cc) sales grew across most markets. The *Systane* portfolio is a comprehensive offering of ocular health products, most of which are indicated for the temporary relief of burning and irritation due to dryness of the eye. The *Systane* portfolio includes *Systane Ultra, Systane Balance,* and *Systane* Hydration, and includes treatments for daily and nighttime relief, as well as products for everyday lid hygiene, and for discomfort associated with contact lens wear.

Topical Olopatadine Group (USD 76 million, +22% cc) sales growth mainly driven by seasonality. *Patanol, Pataday* and *Pazeo* are olopatadine hydrochloride ophthalmic solutions of different concentrations that are approved to treat the signs and symptoms of allergic conjunctivitis (*Patanol*), as well as ocular itching associated with allergic conjunctivitis (*Pataday* and *Pazeo*).

IMMUNOLOGY and DERMATOLOGY

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Cosentyx	490	260	88	90	900	436	106	109
Neoral/Sandimmun(e)	123	136	-10	-6	238	259	-8	-5
Zortress/Certican	100	102	-2	0	191	193	-1	2
Myfortic	98	91	8	10	180	195	-8	-1
Ilaris	98	73	34	37	180	135	33	35
Other	70	72	-3	-1	134	136	-1	0
Total Immunology and Dermatology	**979**	**734**	**33**	**36**	**1 823**	**1 354**	**35**	**38**

Xolair sales for all indications are reported in the Respiratory franchise

Cosentyx (USD 490 million, +90% cc) showed strong growth across all indications. Launched in February 2015, more than 90,000 patients have been treated with *Cosentyx* to date. *Cosentyx* is the only fully human monoclonal antibody that selectively neutralizes interleukin-17A (IL-17A) and is approved to treat psoriasis (PsO), ankylosing spondylitis (AS) and psoriatic arthritis (PsA). In clinical

trials, *Cosentyx* has shown superiority over Enbrel® and Stelara®, providing rapid and sustainable efficacy for patients with PsO. In January 2015, *Cosentyx* became the first IL-17A inhibitor and biologic approved in the EU as a first-line systemic treatment of moderate-to-severe plaque PsO in adult patients, and in the US as a treatment for moderate-to-severe plaque PsO in adult patients who are candidates for systemic therapy or phototherapy. *Cosentyx* is approved for the treatment of moderate-to-severe plaque PsO in 77 countries, including the US, EU, Switzerland, Canada and Australia. *Cosentyx* is also approved in around 70 countries for the treatment of adults with AS and PsA, including the US, EU, Canada and Australia. In Japan, *Cosentyx* is approved for the treatment of moderate-to-severe plaque PsO, pustular PsO, and PsA.

Xolair continued its strong growth globally. *Xolair* is approved in 85 countries, including the US, Canada, Australia, the EU countries, Switzerland and since March 2017 Japan, as a treatment for chronic spontaneous urticaria (CSU), also known as chronic idiopathic urticaria (CIU). *Xolair* has been launched for CSU/CIU in 50 countries, including the US, Switzerland, Canada and most EU countries. *Xolair* is also a treatment for moderate-to-severe or severe persistent allergic asthma (SAA), which is addressed below in the Respiratory section. All *Xolair* sales are booked in the Respiratory franchise. Novartis co-promotes *Xolair* with Genentech in the US and shares a portion of the operating income, but does not book US sales.

Neoral/Sandimmun(e) (USD 123 million, -6% cc) is an immunosuppressant to prevent organ rejection following a kidney, liver, heart, lung or bone marrow transplant. It is also indicated for the treatment of selected autoimmune disorders, such as endogenous uveitis, nephrotic syndrome, psoriasis, rheumatoid arthritis and atopic dermatitis. Sales are declining due to generic competition and mandatory price reductions, mainly in Europe and Japan. The decrease is not as rapid as has been the case in other therapeutic areas, due to the special characteristics of the solid organ transplant market.

Zortress/Certican (USD 100 million, 0% cc), approved in more than 100 countries to prevent organ rejection in adult heart and kidney transplant patients, was in line with prior year. It is also approved for liver transplant patients in over 70 countries, including EU countries and the US. Everolimus, the active ingredient in *Zortress*/*Certican*, is marketed for other indications under the trade names *Afinitor*/*Votubia*. For use in drug-eluting stents Everolimus is exclusively licensed to Abbott and sublicensed to Boston Scientific.

Myfortic (USD 98 million, +10% cc), a transplantation medicine, grew despite loss of exclusivity in several markets.

Ilaris (USD 98 million, +37% cc) continued to grow strongly as a treatment for adults and children with cryopyrin-associated periodic syndrome (CAPS), for which it is approved in more than 70 countries. *Ilaris* is also approved for the treatment of systemic juvenile idiopathic arthritis (SJIA) – an important growth driver for the product – in the US, EU and other countries, and is available for the symptomatic treatment of refractory acute gouty arthritis in the EU. In 2016, *Ilaris* was approved for patients with Adult-Onset Still's Disease in Europe, and for three rare and distinct types of Periodic Fever Syndromes, also known as Hereditary Periodic Fevers, in the US and Japan. The European Commission approved *Ilaris* for the same three Periodic Fever Syndromes in February 2017.

NEUROSCIENCE

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Gilenya	837	811	3	5	1 559	1 509	3	5
Other	27	31	-13	-13	51	64	-20	-20
Total Neuroscience	**864**	**842**	**3**	**4**	**1 610**	**1 573**	**2**	**4**

Gilenya (USD 837 million, +5% cc), the first once-daily oral therapy to treat relapsing forms of multiple sclerosis (RMS), exhibited continued growth in the second quarter. *Gilenya* is approved in over 80 countries. *Gilenya* has been used to treat more than 213,000 patients in both clinical trials and the post-marketing setting, with the total patient exposure now at more than 453,000 patient years. *Gilenya* is licensed from Mitsubishi Tanabe Pharma.

RESPIRATORY

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Ultibro Breezhaler	99	100	-1	2	190	178	7	10
Seebri Breezhaler	36	39	-8	-1	72	74	-3	2
Onbrez Breezhaler/Arcapta Neohaler	28	37	-24	-18	56	70	-20	-15
COPD portfolio	**163**	**176**	**-7**	**-3**	**318**	**322**	**-1**	**3**
Xolair[1]	226	212	7	12	428	404	6	11
Other	4	9	-56	-33	11	17	-35	-13
Total Respiratory	**393**	**397**	**-1**	**5**	**757**	**743**	**2**	**7**

[1]Revenue, which is ex-US only, reflects *Xolair* sales for all indications (including CSU/CIU, which is managed by the Immunology and Dermatology franchise)

The COPD portfolio, which consists of ***Ultibro Breezhaler/Utibron Neohaler***, ***Onbrez Breezhaler/Arcapta Neohaler*** and ***Seebri Breezhaler/Seebri Neohaler***, declined -3% (cc) to USD 163 million. All three products in the COPD portfolio are delivered via the low-resistance *Breezhaler/Neohaler* inhalation device. In the US, Sunovion Pharmaceuticals Inc. has assumed as of December 21, 2016 US commercialization rights for *Utibron Neohaler, Arcapta Neohaler and Seebri Neohaler.* Novartis will continue to bring *Ultibro Breezhaler, Onbrez Breezhaler* and *Seebri Breezhaler* to patients with COPD outside of the US.

Ultibro Breezhaler/Utibron Neohaler (USD 99 million, +2% cc), a LABA/LAMA, grew fuelled by the FLAME study positive results and the GOLD guidelines, which recommended LABA/LAMA as the preferred option in the majority of symptomatic patients regardless of their exacerbation risk. *Ultibro Breezhaler*, a first-in-class dual bronchodilator, is approved in over 90 countries, including Japan and EU countries. It is a once-daily fixed-dose combination of indacaterol and glycopyrronium bromide, and in the EU is indicated as a maintenance bronchodilator treatment to relieve symptoms in adult patients with COPD.

Seebri Breezhaler/Seebri Neohaler (USD 36 million, -1% cc), an inhaled LAMA is approved in over 100 countries and indicated as a maintenance bronchodilator treatment to relieve symptoms of patients with COPD. Glycopyrronium bromide and certain use and formulation intellectual property were exclusively licensed to Novartis in April 2005 by Sosei and Vectura.

Onbrez Breezhaler/Arcapta Neohaler (USD 28 million, -18% cc), an inhaled LABA, declined, due in part to a focus of resources on *Ultibro Breezhaler*. *Onbrez Breezhaler/Arcapta Neohaler* is indicated as a maintenance bronchodilator treatment of airflow obstruction in adult patients with COPD, and is approved in over 100 countries.

Xolair (USD 226 million, +12% cc) currently approved in more than 90 countries as a treatment for moderate-to-severe or severe persistent allergic asthma, continued to grow strongly. In July 2016, the FDA approved an expanded age range for *Xolair* to include children six to 11 years of age with moderate to severe persistent asthma. Worldwide, *Xolair* is the first biologic approved for adults and children with moderate-to-severe allergic asthma. *Xolair* as a treatment for CSU/CIU is addressed earlier in the Immunology and Dermatology section. Novartis co-promotes *Xolair* with Genentech in the US and shares a portion of the operating income, but does not book US sales.

CARDIO-METABOLIC

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Entresto	110	32	244	240	194	49	296	300
Other	3	3	0	13	7	6	17	21
Total Cardio-Metabolic	**113**	**35**	**223**	**217**	**201**	**55**	**265**	**268**

Entresto (USD 110 million, +240% cc) (sacubitril/valsartan) continued to grow, benefitting from the impact of improved access, sales force expansion in the US and reimbursement in Europe. *Entresto* is now approved in 86 countries and launched in more than 40 countries to date, and has been used to treat more than 290,000 patients with heart failure with reduced ejection fraction worldwide since July 2015. *Entresto*, a combination of valsartan and an angiotensin receptor neprilysin inhibitor,

demonstrated significant superiority in mortality (20%) over and above enalapril in the PARADIGM-HF trial, representing the first major advance in heart failure in over two decades.

ESTABLISHED MEDICINES

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Galvus	310	306	1	3	596	589	1	4
Diovan/Co-Diovan	240	283	-15	-12	482	555	-13	-10
Exforge	239	236	1	3	467	457	2	5
Voltaren/Cataflam	109	134	-19	-10	228	258	-12	0
Exelon/Exelon Patch	101	110	-8	-6	198	226	-12	-11
Ritalin/Focalin	61	77	-21	-22	118	147	-20	-20
Other	414	510	-19	-16	858	1 037	-17	-15
Total Established Medicines	**1 474**	**1 656**	**-11**	**-8**	**2 947**	**3 269**	**-10**	**-7**

***Galvus* Group** (USD 310 million, +3% cc) showed continued growth. The Group includes *Galvus*, an oral treatment for type-2 diabetes, and *Eucreas*, a single-pill combination of vildagliptin (the active ingredient in *Galvus*) and metformin. *Galvus* is mainly promoted for the treatment of patients whose diabetes is uncontrolled on metformin, earlier treatment intensification as well as on expansion of usage in key segments, such as elderly and renal-impaired patients. The *Galvus* Group is currently approved in more than 125 countries.

***Diovan* Group** (USD 240 million, -12% cc), consisting of *Diovan* monotherapy and the combination product *Co-Diovan/Diovan HCT*, saw sales decline due to loss of exclusivity including in the US, EU and Japan. *Diovan* group is still growing in Emerging Growth Markets.

***Exforge* Group** (USD 239 million, +3% cc), which includes *Exforge* and *Exforge HCT*, grew despite ongoing generic competition in the US and Japan, and beginning in Europe in 2017. Both *Exforge* and *Exforge HCT* grew strongly in Emerging Growth Markets.

Voltaren/Cataflam (USD 109 million, -10% cc) is a leading international brand by sales in the non-steroidal anti-inflammatory drugs (NSAIDs) market for the relief of symptoms in rheumatic diseases, such as rheumatoid arthritis and osteoarthritis, and for various other inflammatory and pain conditions. This product is subject to generic competition.

***Exelon*/*Exelon* Patch** (USD 101 million, -6% cc) declined due to generic competition for *Exelon* Patch in the US and EU. *Exelon* Patch is approved for the treatment of mild-to-moderate Alzheimer's disease dementia (AD) in more than 85 countries, and severe AD in 14 countries, including the US. *Exelon* Patch is also indicated for the treatment of Parkinson's disease dementia in more than 20 countries.

Ritalin/Focalin (USD 61 million, -22% cc) is a treatment for attention deficit hyperactivity disorder (ADHD). *Ritalin* and *Ritalin LA* are available in more than 70 and 30 countries, respectively, and are also indicated for narcolepsy. *Ritalin* and *Focalin* are subject to generic competition in the US.

Sandoz

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Net sales	**2,451**	**2,577**	**-5**	**-4**	**4,881**	**5,022**	**-3**	**-2**
Operating income	**330**	**380**	**-13**	**-13**	**673**	**726**	**-7**	**-8**
As % of net sales	13.5	14.7			13.8	14.5		
Core operating income	**497**	**535**	**-7**	**-7**	**957**	**1,020**	**-6**	**-6**
As % of net sales	20.3	20.8			19.6	20.3		

Second quarter

Net sales

Sandoz net sales were USD 2.5 billion (-5%, -4% cc) in the second quarter, as volume growth of 4 percentage points was more than offset by 8 percentage points of price erosion, mainly in the US. Global performance in the second quarter was impacted mainly by increased pricing pressure in the US and prior year launch timing. Net sales across Europe and the rest of the world grew 3% (cc).

Sales in the US were USD 820 million (-15% cc), mainly due to pricing pressure in retail generics. US Biopharma sales increased 2% (cc), as the continued double-digit growth of *Zarxio* was partly offset by the slowdown of *Omnitrope* and *Glatopa* 20mg.

Sales in Europe were USD 1.1 billion (+4% cc), driven by strong growth in Italy, France, Switzerland and Russia, partly offset by declines in Germany and Poland. Sales in Asia / Africa / Australasia were USD 340 million (-3% cc).

Global sales of Biopharmaceuticals (including biosimilars, biopharmaceutical contract manufacturing and *Glatopa* 20mg) grew 6% (cc) to USD 260 million, as continued double-digit growth in Europe was partly offset by slower growth in the US and lower sales from contract manufacturing. In Europe, Sandoz received European Commission approval in June for two new biosimilars, *Rixathon* (rituximab) and *Erelzi* (etanercept), which have been launched in selected European markets starting with the UK and Germany. Sandoz now has five approved and marketed biosimilars in Europe, more than any other company. Retail sales were USD 2.1 billion (-5% cc), as the decline in US Retail sales (-17% cc) more than offset growth in the rest of the world (+3% cc). Total Anti-Infectives franchise sales, including finished dosage forms sold under the Sandoz name and Anti-Infectives sold to third parties for sale under their own name, were USD 319 million (flat in cc).

Operating income

Operating income was USD 330 million (-13%, -13% cc) mainly due to the impact of higher US price erosion, higher impairments and increased M&S investments, partly offset by improved gross margin. Operating income margin in constant currencies decreased 1.5 percentage points; currency had a positive impact of 0.3 percentage points, resulting in a net decrease of 1.2 percentage points to 13.5% of net sales.

Core adjustments amounted to USD 167 million, mainly due to USD 142 million of amortization and impairments of intangible assets and USD 11 million of net restructuring charges. Prior year core adjustments were USD 155 million, including USD 117 million for amortization and impairments of intangible assets and USD 33 million of net restructuring charges. Core operating income was USD 497 million (-7%, -7% cc). Core operating income margin in constant currencies decreased by 0.7 percentage points, mainly due to higher M&S investment in key ex-US markets and biosimilars. Currency had a positive impact of 0.2 percentage points, resulting in a net decrease of 0.5 percentage points to 20.3% of net sales.

Core gross margin as a percentage of net sales increased by 1.4 percentage points (cc), driven by a favorable sales mix and ongoing productivity improvements, which more than offset the impact of price erosion in the US. Core R&D expenses increased by 0.1 percentage points (cc). Core SG&A expenses increased by 1.8 percentage points (cc). Core Other Income and Expense, net decreased the margin by 0.2 percentage points (cc).

First half

Net sales

Sandoz net sales were USD 4.9 billion (-3%, -2% cc) in the first half, as volume growth of 6 percentage points was more than offset by 8 percentage points of price erosion.

Sales in the US were USD 1.7 billion (-8% cc) mainly due to increased pricing pressure in retail generics, partly offset by strong performance of Biopharmaceuticals (+17% cc). Sales in Europe were USD 2.2 billion (+3% cc), driven by growth in Italy, Switzerland and Turkey partly offset by Germany and further pressure on pricing in Nordics. Sales in Asia / Africa / Australasia were USD 660 million (-4% cc) due to a slow-down in China and Middle East.

Global sales of Biopharmaceuticals grew 17% (cc) to USD 534 million, driven by *Zarxio* (filgrastim) and *Glatopa* 20mg (glatiramer acetate) in the US and double-digit growth in Europe. Retail Generics sales were USD 4.1 billion (-3% cc), as the decline in US Retail sales (-12% cc) more than offset growth in the rest of the world (+2% cc). Total Anti-Infectives franchise sales were USD 666 million (flat in cc). Growth in finished dosage forms sold under the Sandoz name (USD 424 million, +4% cc), was offset by a decline in Anti-Infectives sold to third parties for sale under their own name (USD 242 million -6% cc), reflecting the discontinuation of low-margin products impacting the first quarter.

Operating income

Operating income was USD 673 million (-7%, -8% cc) mainly due to the impact of higher US price erosion and increased M&S investments, partly offset by improved gross margin. Operating income margin in constant currencies decreased 0.9 percentage points; currency had a positive impact of 0.2 percentage points, resulting in a net decrease of 0.7 percentage points to 13.8% of net sales.

Core adjustments amounted to USD 284 million, mainly due to USD 254 million of amortization and impairments of intangible assets and USD 17 million of net restructuring charges. Prior year core adjustments were USD 294 million, including USD 236 million for amortization and impairments of intangible assets and USD 46 million of net restructuring charges. Core operating income was USD 1.0 billion (-6%, -6% cc). Core operating income margin in constant currencies decreased by 1.0 percentage point, mainly due to higher M&S investment in key ex-US markets and biosimilars. Currency had a positive impact of 0.3 percentage points, resulting in a net decrease of 0.7 percentage points to 19.6% of net sales.

Core gross margin as a percentage of net sales increased by 0.8 percentage points (cc), driven by a favorable sales mix and ongoing productivity improvements, which more than offset the impact of price erosion in the US. Core R&D expenses were flat (cc). Core SG&A expenses increased by 1.2 percentage points (cc). Core Other Income and Expense, net decreased the margin by 0.6 percentage points (cc).

Alcon

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Net sales	**1 516**	**1 506**	**1**	**3**	**2 933**	**2 932**	**0**	**2**
Operating income/loss	**-19**	**7**	**nm**	**nm**	**-62**	**38**	**nm**	**nm**
As % of net sales	-1.3	0.5			-2.1	1.3		
Core operating income	**211**	**238**	**-11**	**-7**	**398**	**481**	**-17**	**-13**
As % of net sales	13.9	15.8			13.6	16.4		

nm = not meaningful

Second quarter

Net sales
Alcon net sales were USD 1.5 billion (+1%, +3% cc) in the second quarter. Surgical sales grew 3% (cc) with growth in cataract consumables, vitreoretinal and intraocular lenses returning to growth globally. Vision Care sales grew 2% (cc), driven by the continued double-digit growth of *Dailies Total1*.

Regionally, Asia sales grew (+14% cc) driven by solid performance in both franchises, and Japan grew (+1% cc). Sales in Europe, the Middle East and Africa were flat. North America sales declined (-1% cc), primarily due to weaker contact lens performance in the weekly/monthly segment. Emerging Growth Markets grew (+20% cc).

Operating loss/income
Operating loss was USD 19 million, compared to USD 7 million income in the prior year quarter, impacted by continued investments behind the growth plan. Operating income margin in constant currencies decreased 1.0 percentage point; currency had a negative impact of 0.8 percentage points, resulting in a net decrease of 1.8 percentage points to negative 1.3% of net sales.

Core adjustments amounted to USD 230 million, in line with prior year, primarily due to amortization of intangible assets. Core operating income was USD 211 million (-11%, -7% cc), impacted by growth plan investments. Core operating income margin in constant currencies decreased by 1.5 percentage points; currency had a negative impact of 0.4 percentage points, resulting in a net decrease of 1.9 percentage points to 13.9% of net sales.

Core gross margin as a percentage of net sales decreased 0.7 percentage points (cc) versus the prior year quarter driven by product mix. Core R&D expenses decreased by 1.0 percentage points (cc), driven by timing of project spend. Core SG&A expenses increased by 1.1 percentage points (cc) behind investments to drive growth. Core Other Income and Expense, net decreased the margin by 0.7 percentage points (cc).

First half

Net sales
Alcon net sales were USD 2.9 billion (0%, +2% cc) in the first half. Surgical sales grew 1% (cc), driven by strong performance of the vitreoretinal portfolio and cataract consumables. Vision Care sales grew 3% (cc) driven by the continued double-digit growth of *Dailies Total1*.

Operating loss/income
Operating loss was USD 62 million in the first half, compared to an income of USD 38 million in the prior year period, impacted by continued investments behind the growth plan. Operating income margin in constant currencies decreased 2.6 percentage points; currency had a negative impact of 0.8 percentage points, resulting in a net decrease of 3.4 percentage points to negative 2.1% of net sales.

Core adjustments amounted to USD 460 million, primarily due to amortization of intangible assets, restructuring and other net costs, in line with prior year. Core operating income was USD 398 million (-17%, -13% cc), primarily impacted by continued investments behind the growth plan. Core operating income margin in constant currencies decreased by 2.3 percentage points; currency had a negative impact of 0.5 percentage points, resulting in a net decrease of 2.8 percentage points to 13.6% of net sales.

Core gross margin as a percentage of net sales decreased by 0.5 percentage points (cc) versus prior year. Core R&D expenses decreased 0.3 percentage points (cc), driven by timing of investments in

key pipeline projects. Core SG&A expenses increased by 1.5 percentage points (cc) behind investments to drive growth. Core Other Income and Expense, net decreased the margin by 0.6 percentage points (cc).

Alcon product review

All comments below focus on second quarter movements in constant currencies.

SURGICAL

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Cataract products	699	692	1	3	1 339	1 368	-2	0
Consumables	371	358	4	5	710	691	3	4
IOLs	252	252	0	3	480	513	-6	-3
Equipment	76	82	-7	-5	149	164	-9	-7
Vitreoretinal products	171	162	6	7	330	304	9	9
Refractive/Other	54	62	-13	-11	101	114	-11	-11
Total Surgical	**924**	**916**	**1**	**3**	**1 770**	**1 786**	**-1**	**1**

Surgical sales were USD 924 million (+3% cc) in the second quarter, driven by IOLs (+3% cc) returning to growth globally. Vitreoretinal (+7% cc) continued to deliver strong performance across key markets. Cataract equipment (-5% cc) declined, driven by high penetration across market segments.

VISION CARE

	Q2 2017	Q2 2016	% change		**H1 2017**	H1 2016	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Contact lenses	456	457	0	2	909	886	3	4
Contact lens care	136	133	2	4	254	260	-2	-2
Total Vision Care	**592**	**590**	**0**	**2**	**1 163**	**1 146**	**1**	**3**

Vision Care sales were USD 592 million (+2% cc) in the second quarter. Contact lenses grew (+2% cc), as double-digit growth of *Dailies Total1* globally was partially offset by weaker performance of the weekly/monthly portfolio in North America and timing of shipments in Europe. Contact lens care grew (+4% cc) driven by timing of promotional activities from key distributors in North America, as well as growth in Asia.

CASH FLOW AND GROUP BALANCE SHEET

Cash flow

Second quarter

Cash flows from operating activities amounted to USD 3.6 billion in the second quarter, compared to USD 3.1 billion in the prior year quarter. The increase of USD 0.5 billion was mainly driven by favorable working capital changes and a higher dividend received from GSK Consumer Healthcare Holdings Ltd. compared to the prior year quarter.

Cash flows used in investing activities from continuing operations amounted to USD 0.3 billion in the second quarter. This amount included cash outflows of USD 0.3 billion for the purchase of property, plant and equipment and USD 0.3 billion for intangible, financial and other non-current assets, partly offset by cash inflows of USD 0.3 billion of divestment proceeds from the sale of property, plant and equipment, intangible and financial assets. In the prior year quarter, the cash flows used in investing activities from continuing operations amounted to USD 0.6 billion, primarily for the purchase of property, plant and equipment, intangible, financial and other non-current assets. Cash flows used in investing activities from discontinued operations, which consists of payments out of provisions related to the portfolio transformation transactions, amounted to USD 40 million in the second quarter, compared to USD 251 million in the prior year quarter.

The cash flows used in financing activities amounted to USD 3.0 billion in the second quarter, compared to USD 1.6 billion in the prior year quarter. The current year quarter amount is mainly due to net cash outflows for treasury share transactions of USD 1.9 billion and for the net reduction in current and non-current financial debts of USD 1.2 billion. The prior year quarter amount included mainly the repayment at maturity of a euro denominated bond of USD 1.7 billion.

Free cash flow amounted to USD 3.2 billion (+ 28% USD) compared to USD 2.5 billion in the prior year quarter. The increase of USD 0.7 billion was mainly driven by improved cash flows from operating activities, which included a higher dividend received from GSK Consumer Healthcare Holdings Ltd., as well as higher divestment proceeds and lower capital expenditures.

First half

Cash flows from operating activities amounted to USD 5.6 billion in the first half, compared to USD 4.7 billion in the prior year period. The increase of approximately USD 1.0 billion was mainly driven by favorable working capital changes and a higher dividend received from GSK Consumer Healthcare Holdings Ltd., more than offsetting the decrease in net income adjusted for non-cash items.

Cash flows used in investing activities from continuing operations amounted to USD 1.4 billion in the first half. This amount included cash outflows of USD 0.7 billion for the purchase of property, plant and equipment, USD 0.7 billion for intangible, financial and other non-current assets and USD 0.7 billion for acquisitions and divestments of businesses, net (mainly the Ziarco Group Limited and Encore Vision, Inc. acquisitions), offset by cash inflows of USD 0.6 billion of divestment proceeds from the sale of property, plant and equipment, intangible and financial assets. In the prior year period, cash flows used in investing activities from continuing operations amounted to USD 1.2 billion. This amount included a net cash outflow of USD 1.4 billion for the purchase of property, plant and equipment, intangible, financial and other non-current assets, as well as a net amount of USD 0.4 billion for acquisitions and divestments of businesses, mainly for the acquisition of Transcend Medical, Inc., offset by USD 0.6 billion proceeds from the sale of property, plant and equipment, intangible and financial assets. Cash flows used in investing activities from discontinued operations, which consists of payments out of provisions related to the portfolio transformation transactions, amounted to USD 0.1 billion, compared to USD 0.5 billion in the prior year period.

The cash flows used in financing activities amounted to USD 3.4 billion in the first half, compared to USD 2.7 billion in the prior year period. The current year amount included cash outflows of USD 6.5 billion for the dividend payment and USD 2.9 billion, net for treasury share transactions. The net cash inflows from the increase in current and non-current financial debts of USD 6.0 billion were mainly due to the issuance of bonds denominated in US dollar and euro for a total notional amount of USD 5.0 billion and the increase in short-term borrowings of USD 1.3 billion. The repayment of a non-current financial debt amounted to USD 0.2 billion. The prior year period amount included mainly cash outflows of USD 6.5 billion for the dividend payment and USD 0.3 billion, net for treasury share transactions, partially offset by cash inflows from a USD 4.1 billion net increase in current and non-current financial debts.

Free cash flow amounted to USD 4.9 billion (+ 26% USD) compared to USD 3.9 billion in the prior year period. The increase of USD 1.0 billion was mainly driven by improved cash flows from operating activities, which included a higher dividend received from GSK Consumer Healthcare Holdings Ltd.

Balance sheet

Assets

Total non-current assets of USD 107.2 billion at June 30, 2017 increased by USD 2.0 billion compared to December 31, 2016. Property, plant and equipment increased by 0.6 billion to USD 16.2 billion, mainly due to the favorable currency translation adjustments, as net additions were offset by depreciation. Goodwill increased by USD 0.6 billion to USD 31.6 billion, due to additions of USD 0.1 billion and USD 0.5 billion favorable currency translation adjustments. Intangible assets other than goodwill increased by USD 0.1 billion to USD 31.5 billion, mainly due to net additions of USD 1.5 billion and favorable currency translation adjustments of USD 0.9 billion, offset by amortization and impairment charges totaling USD 2.3 billion. Financial and other non-current assets increased by USD 0.7 billion to USD 27.9 billion, mainly due to favorable currency translation adjustments.

Total current assets increased by USD 1.6 billion to USD 26.5 billion at June 30, 2017, compared to December 31, 2016. Cash and cash equivalents, marketable securities, commodities and derivatives increased by USD 0.7 billion and Inventories by USD 0.6 billion. Trade receivables and other current assets were broadly in line with prior year end.

Liabilities

Total non-current liabilities of USD 37.6 billion at June 30, 2017 increased by USD 4.6 billion compared to December 31, 2016. Non-current financial debt increased by USD 5.1 billion to USD 23.0 billion at June 30, 2017, mainly due to the issuance, in the first quarter, of bonds denominated in US dollar and euro for total notional amounts of USD 3.0 billion and USD 2.0 billion respectively. Other non-current liabilities decreased by USD 0.5 billion to USD 14.6 billion at June 30, 2017, compared to USD 15.1 billion at December 31, 2016, mainly due to lower pension obligations resulting from favorable returns on plan assets.

Total current liabilities increased by USD 3.9 billion to USD 26.1 billion at June 30, 2017. Trade payables at USD 4.7 billion were broadly in line with prior year end. Current financial debts and derivatives increased by USD 1.7 billion to USD 7.6 billion, mainly due to higher short-term borrowings. Other current liabilities increased by USD 2.5 billion to USD 13.9 billion, mainly due to the repurchase commitment under the share buyback trading plan of USD 2.3 billion, which will be credited to equity once the shares are repurchased or the obligation to repurchase own shares is settled.

Group equity

The Group's equity decreased by USD 4.9 billion to USD 70.0 billion at June 30, 2017, compared to USD 74.9 billion at December 31, 2016. The decrease was mainly on account of USD 6.5 billion dividend payment, net treasury share purchases of USD 3.1 billion and the recognition of the repurchase commitment under the share buyback trading plan of USD 2.3 billion. These amounts resulting from transactions with shareholders were partially offset by net income of USD 3.6 billion, favorable currency translation differences of USD 2.3 billion, net actuarial gains from defined benefit plans of USD 0.7 billion and Equity-based compensation of USD 0.3 billion.

Net debt and debt/equity ratio

The Group's liquidity amounted to USD 8.4 billion at June 30, 2017 compared to USD 7.8 billion at December 31, 2016, and the total of the non-current and current financial debt, including derivatives, amounted to USD 30.6 billion at June 30, 2017, compared to USD 23.8 billion at December 31, 2016. The net debt increased to USD 22.1 billion at June 30, 2017 compared to USD 16.0 billion at December 31, 2016. The debt/equity ratio increased to 0.44:1 at June 30, 2017 compared to 0.32:1 at December 31, 2016.

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.

Key developments from the second quarter of 2017 include:

New approvals and regulatory opinions

- The Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency (EMA) adopted a positive opinion recommending approval of ***Kisqali*** (ribociclib) in combination with an aromatase inhibitor for treatment of postmenopausal women with hormone receptor positive, human epidermal growth factor receptor-2 negative (HR+/HER2-) advanced or metastatic breast cancer as initial endocrine-based therapy.

- The US FDA approved the ***Kisqali Femara*** Co-Pack (ribociclib tablets; letrozole tablets) as initial endocrine-based therapy for the treatment of hormone receptor-positive, human epidermal growth factor receptor-2 negative (HR+/HER2-) advanced or metastatic breast cancer in postmenopausal women.

- In July, FDA held an Oncologic Drugs Advisory Committee to discuss the Biologics License Application (BLA) of **CTL019** (tisagenlecleucel), an investigational chimeric antigen receptor T (CAR-T) cell therapy, for the treatment of pediatric and young adult patients with relapsed or refractory (r/r) B-cell acute lymphoblastic leukemia. The committee unanimously recommended approval of CTL019. Novartis will continue to work with the FDA on the CTL019 BLA which was granted priority review in March. Novartis entered a global collaboration with the University of Pennsylvania in 2012 to research, develop and commercialize CAR-T therapies for the investigational treatment of cancers, including CTL019.

- The FDA approved ***Rydapt*** (midostaurin, formerly PKC412) in combination with standard cytarabine and daunorubicin induction and cytarabine consolidation chemotherapy, for the treatment of adult patients with newly diagnosed acute myeloid leukemia (AML) who are FLT3 mutation-positive, as detected by an FDA-approved test. *Rydapt* is also approved to treat adults with aggressive systemic mastocytosis (ASM), systemic mastocytosis with associated hematological neoplasm (SM-AHN) and mast cell leukemia, collectively known as advanced systemic mastocytosis (SM).

- ***Tasigna*** (nilotinib) received EU approval for inclusion of treatment free remission (TFR) data in the product label. TFR is the ability to maintain molecular response after stopping TKI therapy in Ph+ CML patients in chronic phase who meet strict eligibility criteria. The approval was based on efficacy and safety findings from the 48-week analyses of two open label trials, ENESTfreedom and ENESTop.

- ***Jadenu*** **Sprinkle** (deferasirox granules) received US FDA approval for the treatment of chronic transfusional iron overload and for chronic iron overload in patients with non-transfusion-dependent thalassemia. In July, the product was approved as *Jadenu* granules in Japan.

- FDA approved the use of ***Tafinlar + Mekinist*** (dabrafenib + trametinib) combination therapy to treat patients with metastatic non-small cell lung cancer whose tumors express the BRAF V600E mutation.

- ***Zykadia*** (ceritinib) received FDA regular approval for expanded use in first-line ALK-positive metastatic non-small cell lung cancer (NSCLC) as detected by an FDA-approved test.

- The European Commission approved expanding the use of ***Zykadia*** to include the first-line treatment of patients with advanced non-small cell lung cancer (NSCLC) whose tumors are anaplastic lymphoma kinase (ALK)-positive. The approval follows a positive opinion granted in May by the CHMP and is based on results from the open-label, randomized, multicenter, global ASCEND-4 Phase III trial.

- In July, Novartis received approval in the EU for a ***Cosentyx*** (secukinumab) label update. With this approval, the EU label will now reflect the benefit of *Cosentyx* in patients with moderate to severe scalp psoriasis as well as the long term superiority of *Cosentyx* vs Stelara® up to Week 52.

- **PDR001** (PD-1 Antagonist) received orphan drug designation from FDA for treatment of neuroendocrine tumors.

- The European Commission issued marketing authorizations for two **Sandoz biosimilars** in June, to treat all indications of their respective reference products. The EU approvals for ***Erelzi*** (biosimilar etanercept, Amgen's Enbrel®) and ***Rixathon*** (biosimilar rituximab, Roche's MabThera®/Rituxan®) followed CHMP positive opinions for both products in April. *Erelzi* is indicated for the treatment of autoimmune diseases including rheumatoid arthritis and *Rixathon* is indicated for the treatment of autoimmune diseases including rheumatoid arthritis as well as in oncology settings including non-Hodgkin's lymphoma.

- **Alcon *Clareon* monofocal IOL** was approved in the EU. *Clareon* is a next-generation intraocular lens with superior optical properties and stability.

Regulatory submissions and filings

- **AMG 334** (erenumab), a fully human anti-CGRP monoclonal antibody designed for migraine prevention, was submitted to the US Food and Drug Administration (FDA) and the European Medicines Agency (EMA). Novartis confirmed EMA acceptance of regulatory submission of AMG 334 in June. AMG 334 will be co-commercialized by Novartis and Amgen in the United States and both companies will continue co-development of the product. Amgen has exclusive commercialization rights in Japan and Novartis has exclusive rights in rest of world.

- The EMA confirmed in May that it had accepted for regulatory review two Sandoz marketing authorization applications, for **biosimilar adalimumab** (AbbVie's Humira®) and **biosimilar infliximab** (Janssen and Merck's Remicade®). Both proposed biosimilars would be used to treat immunological diseases such as rheumatoid arthritis and inflammatory bowel disease. Sandoz is seeking approval for both for use in all indications of their respective reference medicines. The comprehensive data packages included in the EMA submissions demonstrate biosimilarity of the proposed biosimilars to their respective reference medicines, with analytical, preclinical and clinical data matching across quality, efficacy and safety.

- **Sandoz Generic Advair Diskus®** regulatory submission was accepted by FDA for treatment of asthma and airflow obstruction and reducing exacerbations in patients with COPD.

Results from ongoing trials and other highlights

- Novartis reported that **RTH258** (brolucizumab) met the primary and key secondary endpoints in two Phase III studies, HAWK and HARRIER, which enrolled more than 1,800 patients with neovascular age-related macular degeneration (nAMD). The primary and key secondary efficacy endpoints were non-inferiority of RTH258 to aflibercept in mean change in best-corrected visual acuity (BCVA) from baseline to week 48, and average mean change over the period of week 36-48, respectively. Both were met with highly significant p values. RTH258 was generally well tolerated with overall ocular and non-ocular (systemic) adverse event rates comparable to aflibercept. RTH258 demonstrated long-lasting efficacy versus aflibercept dosed every eight weeks. A majority of patients, 57% (HAWK) and 52% (HARRIER), were maintained exclusively on a q12w (every 12 week) interval immediately following the loading phase through week 48.

- Novartis announced positive topline results from the global Phase III **CANTOS** study investigating the efficacy, safety and tolerability of **ACZ885** (canakinumab) in combination with standard of care in people with a prior heart attack and inflammatory atherosclerosis. CANTOS met the primary endpoint, demonstrating that when used in combination with standard of care, ACZ885 reduces the risk of major adverse cardiovascular events (MACE) in patients with a prior myocardial infarction and inflammatory atherosclerosis. MACE is a composite of cardiovascular death, non-fatal myocardial infarction and non-fatal stroke. In addition, Novartis and principal investigators are currently analyzing key subgroups which will assist in determining the optimal regulatory and commercialization approach.

- Interim analysis from the multi-center Phase II JULIET study of **CTL019** in adult patients with relapsed or refractory (r/r) diffuse large B-cell lymphoma (DLBCL) were presented at the International Conference on Malignant Lymphoma (ICML) meeting. At interim analysis, the primary endpoint of best overall response rate (ORR) was met. Among 51 patients with three months or more of follow-up or earlier discontinuation, best ORR was 59% (95% CI, 44.2-72.4; p<0.0001), with 43% achieving CR and 16% achieving PR. Results showed a three-month ORR of 45% (23 of the 51 patients evaluated), with 37% achieving a complete response (CR) and 8% achieving a partial response (PR), respectively. Fifty-seven percent of all treated patients experienced any grade cytokine release syndrome (CRS), and 26% experienced grade 3/4 CRS (17% grade 3; 9% grade 4) using the Penn Grading Scale, a rigorous scale for grading CRS. There were no deaths attributed to CTL019, CRS or cerebral edema, and no incidents of cerebral edema were reported in the study. First interpretable results of the primary analysis of 81 evaluable patients from the multi-center Phase II JULIET study, evaluating CTL019 in adult patients with r/r DLBCL, showed CTL019 continues to demonstrate response rates and durations of remission consistent with the interim analysis. Safety of CTL019 was consistent with previously reported interim analysis, with no new safety signals detected. This data will serve as the basis of worldwide regulatory submissions.

- Updated results from the ELIANA pivotal clinical trial of **CTL019** in relapsed/refractory (r/r) pediatric and young adult patients with B-cell acute lymphoblastic leukemia were presented at the European Hematology Association annual meeting. Study results demonstrated CTL019 remission rates are maintained at six months. Results show that 83% (52 of 63; 95% CI: 71%-91%) of patients achieved complete remission or complete remission with incomplete blood count recovery. No minimal residual disease was detected among responding patients.

- Findings from a pilot study of **CTL119** in combination with ibrutinib in patients with relapsed/refractory chronic lymphocytic leukemia (CLL) who had been taking ibrutinib for at least six months and who were not in complete remission showed that eight of nine evaluable patients had no signs of CLL in their bone marrow at three months. One of those patients had a partial response. In the study, 10 patients experienced cytokine release syndrome (CRS), two of which were grade 3. However, no patients required treatment with tocilizumab and all patients recovered from CRS. One patient developed tumor lysis syndrome and two patients had febrile neutropenia. These data were presented at Annual Meeting of the American Society of Clinical Oncology.

- New analyses from a pivotal Phase II study, presented at the American Headache Society showed the high efficacy of **AMG 334** (70mg and 140mg monthly doses) in patients with 15 or more headache days a month (chronic migraine) and a recent history of acute migraine medication overuse. Also presented at AHS were detailed results on monthly migraine days reduction as well as responders rates in STRIVE and ARISE, two successfully completed Phase III studies of AMG 334 in people with 4 to 14 migraine days per month (episodic migraine).

- The US National Comprehensive Cancer Network (NCCN) updated its clinical practice guidelines to include treatment with ***Rydapt*** (midostaurin) for AML based on the Phase III RATIFY clinical trial data.

- The full analysis of the ***Rydapt*** Phase III RATIFY (CALGB 10603 [Alliance]) trial data were published in NEJM in June. Top-line data from this study were previously presented during the plenary session at the American Society of Hematology Annual Meeting in 2015. New data include disease-free survival, further analysis of patients undergoing transplant and expanded safety information.

- Data from additional analyses of the ENESTfreedom and ENESTop clinical trials presented at European Hematology Association showed that approximately half of adult patients with Ph+CML-CP who met strict eligibility criteria and discontinued ***Tasigna*** remained in TFR 96 weeks after stopping treatment. In addition, more than 90% of Ph+ CML-CP patients in these studies who stopped *Tasigna* and were in TFR at 48-weeks remained in TFR at 96-weeks. Patients who discontinued *Tasigna* experienced musculoskeletal symptoms more frequently than before treatment discontinuation; the incidence decreased over time.

- Novartis presented results from its landmark Phase II study of ***Tafinlar + Mekinist*** demonstrating durable survival benefit at five years in patients with BRAF mutation-positive metastatic melanoma. The company also presented results from a separate Phase II trial of BRAF and MEK inhibitors showing positive results in BRAF V600-mutant melanoma patients with metastatic brain metastases.

- Novartis and Bristol Myers-Squibb announced a clinical research collaboration in which ***Mekinist*** will be combined with Opdivo® (nivolumab) and Opdivo® + Yervoy® (ipilimumab) in metastatic colorectal cancer.

- First patient first visit (FPFV) achieved for Phase III trial of **PDR001** in combination with *Tafinlar* + *Mekinist* for metastatic BRAF V600+ melanoma. Novartis also initiated Phase II trial of PDR001 in neuroendocrine tumors (NET) and three Phase I trials of PDR001 in other tumor types.

- At the EULAR 2017 Annual Meeting, Novartis presented new data on ***Cosentyx*** in Ankylosing Spondylitis (AS) and Psoriatic Arthritis (PsA). In the MEASURE 1 extension study, 80% of AS patients consistently achieved an ASAS 20 response (Assessment of Spondyloarthritis International Society response criteria) at 3 years. This was consistent with findings from the FUTURE 1 study in active PsA where *Cosentyx* has previously demonstrated sustained improvements in the signs and symptoms of disease in approximately 80% of patients at 3 years as measured by ACR 20 response (American College of Rheumatology response criteria).

Selected Innovative Medicines approvals: US, EU and Japan

Product	Active ingredient/ Descriptor	Indication	Approval date
Jadenu Sprinkle/*Jadenu* (granule)	Deferasirox	Chronic iron overload	US – May 2017 JP – Jul 2017
Kisqali Femara Co-Pack	Ribociclib; letrozole	As initial endocrine-based therapy for the treatment of HR+/HER2- advanced or metastatic breast cancer in postmenopausal women	US – May 2017
Rydapt (PKC412)	Midostaurin	In combination with standard cytarabine and daunorubicin induction and cytarabine consolidation chemotherapy, for the treatment of adult patients with newly diagnosed AML who are FLT3 mutation-positive, as detected by an FDA-approved test / Treatment of adults with aggressive systemic mastocytosis, systemic mastocytosis with associated hematological neoplasm and mast cell leukemia	US – Apr 2017
Tafinlar + *Mekinist*	Dabrafenib + trametinib	BRAF V600-positive metastatic non-small cell lung cancer (NSCLC).	US – Jun 2017
Zykadia	Ceritinib	ALK+ metastatic NSCLC, 1st line	US – May 2017 EU – Jun 2017

Selected Innovative Medicines projects awaiting regulatory decisions

		Completed submissions			
Product	**Indication**	**US**	**EU**	**Japan**	**News update**
AMG 334	Migraine prophylaxis		Q2 2017		- First anti-CGRP monoclonal antibody to receive EMA regulatory filing acceptance - Phase III STRIVE and ARISE data (monthly migraine days reduction and responders) presented at AAN (April) and AHS (June) - Collaboration with Amgen extended to include co-commercialization in the US
CTL019	Pediatric/young adult acute lymphoblastic leukemia	Q1 2017			- FDA Priority Review - FDA Breakthrough Therapy designation - FDA advisory committee unanimously recommended approval in July 2017
Jadenu/Exjade granules	Chronic iron overload	Approved	Q4 2016	Approved	
Kisqali (LEE011) + letrozole	HR+/HER2- postmenopausal advanced breast cancer (aBC) 1st line	Approved	Q3 2016		- CHMP positive opinion
Rydapt (PKC412)	Acute myeloid leukemia / advanced systemic mastocytosis	Approved	Q3 2016		
Promacta/ Revolade	Aplastic anemia (moderate and severe)			Q4 2016	
Signifor LAR	Cushing's disease		Q4 2016		- Working with FDA on data formatting for planned resubmission.
Tafinlar + *Mekinist*	BRAF V600+ non-small cell lung cancer (NSCLC)	Approved	Approved	Q4 2016	
Zykadia	ALK+ advanced NSCLC (1st line, treatment naïve)	Approved	Approved	Q4 2016	

Selected Innovative Medicines pipeline projects

Project/ Compound	**Potential indication/ Disease area**	**First planned submissions**	**Current Phase**	**News update**
ABL001	Chronic myeloid leukemia 3rd line	2020	I	- Start of pivotal trials planned for 2017
ACZ885 (canakinumab)	Secondary prevention of cardiovascular events	2017	III	- Positive Phase III results (CANTOS) announced in June 2017
Arzerra	Non-Hodgkin's lymphoma (refractory)	2019	III	- Study endpoint is event driven
BAF312	Relapsing multiple sclerosis	2018	III	- FDA submission is anticipated early 2018
BYL719 + fulvestrant	HR+/HER2- postmenopausal aBC 2nd line	2019	III	
BYM338	Hip fracture recovery	≥2021	II	
	Sarcopenia	≥2021	II	
CAD106	Alzheimer's disease	≥2021	II / III	- Generation study 1 ongoing - Phase II/III in cognitively healthy people at risk of Alzheimer's disease

CJM112	Immune disorders	≥2021	II	
CNP520	Alzheimer's disease	≥2021	II / III	- Generation study 1 ongoing - Generation study 2 opened enrollment in June 2017 - Phase II/III in cognitively healthy people at risk of Alzheimer's disease - In partnership with Amgen - FDA Fast Track designation
Cosentyx	Non-radiographic axial spondyloarthritis	2019	III	
	Psoriatic arthritis head-to-head vs. adalimumab	2020	III	- First Patient, First Visit (FPFV) achieved in April 2017
	Ankylosing spondylitis head-to-head vs. adalimumab	≥2021	III	
CTL019	Diffuse large B-cell lymphoma	2017	II	- FDA Breakthrough Therapy designation
ECF843	Dry eye	≥2021	II	- Acquisition of worldwide ophthalmic rights (ex-EU) from Lubris in April 2017
EMA401	Peripheral neuropathic pain	≥2021	II	
Entresto	Chronic heart failure with preserved ejection fraction	2019	III	- PARAGON-HF trial enrollment completed
	Post-acute myocardial infarction	2020	III	
FTY720 (fingolimod)	Pediatric multiple sclerosis	2017	III	
INC280	NSCLC (cMET amp and mut)	2018	II	
	NSCLC (EGFRm)	≥2021	II	- FPFV achieved in 2017
Jakavi	Acute graft-versus-host disease (GvHD)	2019	III	
	Chronic graft-versus-host disease (GvHD)	2020	III	
KAE609	Malaria	≥2021	II	
KAF156	Malaria	≥2021	II	
Kisqali (LEE011) + tamoxifen + goserelin or NSAI + goserelin	HR+/HER2- premenopausal aBC 1st line	2018	III	- Fully enrolled
Kisqali (LEE011) + fulvestrant	HR+/HER2- postmenopausal aBC 1st/2nd line	2018	III	- Fully enrolled
Kisqali (LEE011) + adjuvant endocrine therapy	HR+/HER2- BC (adjuvant, high risk)	≥2021	III	- FPFV achieved in 2017
	HR+/HER2- BC (adjuvant, intermediate risk)	≥2021	III	
LAM320	Multi-drug resistant tuberculosis	2018	III	
LCI699	Cushing's disease	2018	III	- Fully enrolled; additional registration trial for US currently enrolling
LIK066	Weight loss	≥2021	II	
LJN452	Non-alcoholic steatohepatitis (NASH)	≥2021	II	- FDA Fast Track designation
LMI070	Spinal muscular atrophy	≥2021	II	
Lucentis	Retinopathy of prematurity	2018	III	- Phase III PIP study enrolling
MAA868	Stroke prevention in atrial fibrillation	≥2021	II	
OMB157 (ofatumumab)	Relapsing multiple sclerosis	2019	III	- Trials ongoing
PDR001 + *Tafinlar* + *Mekinist*	Metastatic BRAF V600+ melanoma	2019	III	- FPFV achieved in 2017

PDR001	NET	2019	II	- Fully enrolled - FDA orphan drug designation
PIM447	Hematologic cancers	≥2021	I	
Promacta / Revolade	Severe aplastic anemia 1st line	2017	III	
QAW039	Asthma	2019	III	- Phase 3 program recruiting
QBW251	Cystic fibrosis	≥2021	II	
QGE031	Chronic spontaneous urticaria / chronic idiopathic urticaria	2020	II	
QMF149	Asthma	2019	III	
QVM149	Asthma	2019	III	
RTH258	nAMD	2018	III	- Positive Phase III results (HAWK, HARRIER) announced in June 2017
	Diabetic macular edema	2020	III	
Rydapt (PKC412)	Acute myeloid leukemia (FLT3 wild type)	≥2021	III	
SEG101	Sickle cell pain crises	2018	II/III	
Tafinlar + Mekinist	BRAF V600+ melanoma (adjuvant)	2017	III	- Trial ongoing
UNR844	Presbyopia	≥2021	II	
VAY736	Primary Sjoegren's syndrome	≥2021	II	- FDA Fast Track designation
VAY785 (emricasan)	Non-alcoholic steatohepatitis (NASH)	≥2021	II	- Conatus transaction announced in May 2017
ZPL389	Atopic dermatitis	≥2021	II	
Zykadia	ALK+ NSCLC (brain metastases)	2019	II	- Trial ongoing

Selected Sandoz approvals and pipeline projects (biosimilars)

Project/ Compound	Potential indication/ Disease area	Submission status	Current Phase	News update
GP2015 (etanercept)	Arthritides (rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis), plaque psoriasis and others (same as originator)	US EU	Approved Approved	- EU approval for *Erelzi* in June 2017
GP2013 (rituximab)	Follicular lymphoma, diffuse large B cell lymphoma, chronic lymphocytic leukemia, rheumatoid arthritis, granulomatosis with polyangiitis, and microscopic polyangiitis (same as originator)	US EU	III Approved	- ASSIST-FL results presented at ASH - EU approval for *Rixathon* in June 2017
GP2017 (adalimumab)	Arthritides (rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis), plaque psoriasis and others (same as originator)	US EU	III Submitted	- Data presented at AAD (Florida) in March 2017 showed that confirmatory Phase III study met primary endpoint of equivalent efficacy to reference product. - EU filing in May 2017
GP1111 (infliximab)	Autoimmune diseases including rheumatoid arthritis and psoriasis (same as originator)	EU	Submitted	- EU filing in May 2017
LA-EP2006 (pegfilgrastim)	Chemotherapy-induced neutropenia and others (same as originator)		III	- Resubmission planned for 2019 to address FDA complete response letter - Withdrawal of EU filing in January 2017 with planned re-filing in 2017

Selected Alcon pipeline projects

Project/ Compound	Potential indication/ Disease area	Planned submissions	Current Phase	News update
SURGICAL				
AcrySof IQ PanOptix IOL	Trifocal IOL	US 2019	Advanced	- Received CE Mark in Europe in Q2 2015
AcrySof IQ PanOptix Toric IOL	Trifocal IOL for astigmatism	US 2019	Advanced	- Received CE Mark in Europe in Q4 2016
A02238	Mid-tier phacoemulsification device	US 2018 EU 2018	Advanced Advanced	
Clareon Monofocal IOL	Next-generation IOL	US 2019 JP 2017	Advanced Submitted	- Received CE Mark in Europe in Q2 2017
CyPass Micro-Stent (manual load system)	Minimally invasive surgical glaucoma device for implant during cataract surgery	JP 2017	Advanced	- Received US approval in Q3 2016 - Received CE Mark in Europe in Q1 2017
VISION CARE				
AirOptix plus HydraGlyde	Monthly replacement line extension	JP 2016	Submitted	- Received CE Mark in Europe in Q4 2015, US approval in Q3 2016
A00717	Daily disposable line extension	EU 2018 JP 2018	Advanced Advanced	
A01660	New daily disposable lens	US 2018 EU 2018 JP 2019	Advanced Advanced Advanced	

CONDENSED INTERIM CONSOLIDATED FINANCIAL STATEMENTS

Consolidated income statements

Second quarter (unaudited)

(USD millions unless indicated otherwise)	**Q2 2017**	Q2 2016	Change
Net sales	**12 242**	**12 470**	**-228**
Other revenues	252	209	43
Cost of goods sold	-4 258	-4 451	193
Gross profit	**8 236**	**8 228**	**8**
Marketing & Sales	-3 240	-3 067	-173
Research & Development	-2 062	-2 190	128
General & Administration	-566	-582	16
Other income	480	239	241
Other expense	-568	-535	-33
Operating income	**2 280**	**2 093**	**187**
Income from associated companies	215	203	12
Interest expense	-192	-180	-12
Other financial income and expense	12	-3	15
Income before taxes	**2 315**	**2 113**	**202**
Taxes	-336	-307	-29
Net income	**1 979**	**1 806**	**173**
Attributable to:			
Shareholders of Novartis AG	*1 980*	*1 804*	*176*
Non-controlling interests	*-1*	*2*	*-3*
Weighted average number of shares outstanding – Basic (million)	**2 354**	**2 381**	**-27**
Basic earnings per share (USD) [1]	**0.84**	**0.76**	**0.08**
Weighted average number of shares outstanding – Diluted (million)	2 373	2 401	-28
Diluted earnings per share (USD) [1]	0.83	0.75	0.08

[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)	**H1 2017**	H1 2016	Change
Net sales	**23 781**	**24 070**	**-289**
Other revenues	498	419	79
Cost of goods sold	-8 363	-8 663	300
Gross profit	**15 916**	**15 826**	**90**
Marketing & Sales	-6 229	-5 808	-421
Research & Development	-4 231	-4 231	0
General & Administration	-1 049	-1 146	97
Other income	925	1 016	-91
Other expense	-1 130	-1 113	-17
Operating income	**4 202**	**4 544**	**-342**
Income from associated companies	430	330	100
Interest expense	-372	-365	-7
Other financial income and expense	2	-44	46
Income before taxes	**4 262**	**4 465**	**-203**
Taxes	-618	-648	30
Net income	**3 644**	**3 817**	**-173**
Attributable to:			
Shareholders of Novartis AG	*3 646*	*3 815*	*-169*
Non-controlling interests	*-2*	*2*	*-4*
Weighted average number of shares outstanding – Basic (million)	**2 362**	**2 380**	**-18**
Basic earnings per share (USD) [1]	**1.54**	**1.60**	**-0.06**
Weighted average number of shares outstanding – Diluted (million)	2 382	2 400	-18
Diluted earnings per share (USD) [1]	1.53	1.59	-0.06

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

Condensed consolidated statements of comprehensive income

Second quarter (unaudited)

(USD millions)	**Q2 2017**	Q2 2016	Change
Net income	**1 979**	**1 806**	**173**
Other comprehensive income to be eventually recycled into the consolidated income statement:			
Fair value adjustments on financial instruments, net of taxes	19	130	-111
Novartis share of other comprehensive income recognized by associated companies, net of taxes	28	12	16
Net investment hedge	-138		-138
Translation effects	1 588	-982	2 570
Total of items to eventually recycle	*1 497*	*-840*	*2 337*
Other comprehensive income never to be recycled into the consolidated income statement:			
Net actuarial gains/(losses) from defined benefit plans, net of taxes	404	-490	894
Comprehensive income	**3 880**	**476**	**3 404**
Attributable to:			
Shareholders of Novartis AG	*3 881*	*476*	*3 405*
Non-controlling interests	-1	*0*	*-1*

First half (unaudited)

(USD millions)	**H1 2017**	H1 2016	Change
Net income	**3 644**	**3 817**	**-173**
Other comprehensive income to be eventually recycled into the consolidated income statement:			
Fair value adjustments on financial instruments, net of taxes	6	-100	106
Novartis share of other comprehensive income recognized by associated companies, net of taxes	159	1	158
Net investment hedge	-138		-138
Translation effects	2 254	-534	2 788
Total of items to eventually recycle	*2 281*	*-633*	*2 914*
Other comprehensive income never to be recycled into the consolidated income statement:			
Net actuarial gains/(losses) from defined benefit plans, net of taxes	722	-1 532	2 254
Comprehensive income	**6 647**	**1 652**	**4 995**
Attributable to:			
Shareholders of Novartis AG	*6 647*	*1 652*	*4 995*
Non-controlling interests	*0*	*0*	*0*

Condensed consolidated balance sheets

(USD millions)	**Jun 30, 2017 (unaudited)**	Dec 31, 2016 (audited)	Change
Assets			
Non-current assets			
Property, plant & equipment	16 206	15 641	565
Goodwill	31 606	30 980	626
Intangible assets other than goodwill	31 473	31 340	133
Financial and other non-current assets	27 926	27 232	694
Total non-current assets	**107 211**	**105 193**	**2 018**
Current assets			
Inventories	6 901	6 255	646
Trade receivables	8 380	8 202	178
Other current assets	2 820	2 697	123
Cash and cash equivalents, marketable securities, commodities and derivatives	8 437	7 777	660
Total current assets	**26 538**	**24 931**	**1 607**
Total assets	**133 749**	**130 124**	**3 625**
Equity and liabilities			
Equity attributable to Novartis AG shareholders	69 919	74 832	-4 913
Non-controlling interests	59	59	0
Total equity	**69 978**	**74 891**	**-4 913**
Non-current liabilities			
Financial debts	22 999	17 897	5 102
Other non-current liabilities	14 626	15 127	-501
Total non-current liabilities	**37 625**	**33 024**	**4 601**
Current liabilities			
Trade payables	4 691	4 873	-182
Financial debts and derivatives	7 562	5 905	1 657
Other current liabilities	13 893	11 431	2 462
Total current liabilities	**26 146**	**22 209**	**3 937**
Total liabilities	**63 771**	**55 233**	**8 538**
Total equity and liabilities	**133 749**	**130 124**	**3 625**

Condensed consolidated changes in equity

Second quarter (unaudited)

(USD millions)	**Q2 2017**	Q2 2016	Change
Consolidated equity at April 1	**67 646**	**71 889**	**-4 243**
Comprehensive income	3 880	476	3 404
Purchase of treasury shares	-1 811	-23	-1 788
Exercise of options and employee transactions	4	8	-4
Equity-based compensation	142	182	-40
Decrease of treasury share repurchase obligation under a share buyback trading plan	117		117
Consolidated equity at June 30	**69 978**	**72 532**	**-2 554**

First half (unaudited)

(USD millions)	**H1 2017**	H1 2016	Change
Consolidated equity at January 1	**74 891**	**77 122**	**-2 231**
Comprehensive income	6 647	1 652	4 995
Purchase of treasury shares	-3 354	-378	-2 976
Exercise of options and employee transactions	235	214	21
Equity-based compensation	341	397	-56
Increase of treasury share repurchase obligation under a share buyback trading plan	-2 287		-2 287
Dividends to shareholders of Novartis AG	-6 495	-6 475	-20
Consolidated equity at June 30	**69 978**	**72 532**	**-2 554**

Condensed consolidated cash flow statements

Second quarter (unaudited)

(USD millions)	**Q2 2017**	Q2 2016	Change
Net income	**1 979**	**1 806**	**173**
Reversal of non-cash items			
Taxes	336	307	29
Depreciation, amortization and impairments	1 354	1 466	-112
Change in provisions and other non-current liabilities	101	227	-126
Income from associated companies	-215	-203	-12
Net financial expense	180	183	-3
Other	-71	165	-236
Net income adjusted for non-cash items	**3 664**	**3 951**	**-287**
Interest and other financial receipts	419	245	174
Interest and other financial payments	-216	-373	157
Taxes paid [1]	-467	-462	-5
Cash flows before working capital changes	**3 400**	**3 361**	**39**
Payments out of provisions and other net cash movements in non-current liabilities	-142	-501	359
Change in net current assets and other operating cash flow items	324	251	73
Cash flows from operating activities	**3 582**	**3 111**	**471**
Purchase of property, plant & equipment	-332	-448	116
Purchase of intangible, financial and other non-current assets	-262	-227	-35
Proceeds from sales of property, plant & equipment, intangible and financial assets	255	90	165
Acquisitions and divestments of businesses, net	4	-12	16
Change in marketable securities, commodities and divestments of interests in associated companies	38	4	34
Cash flows used in investing activities from continuing operations	**-297**	**-593**	**296**
Cash flows used in investing activities from discontinued operations [1]	-40	-251	211
Total cash flows used in investing activities	**-337**	**-844**	**507**
Change in current and non-current financial debts	-1 219	-1 580	361
Treasury share transactions, net	-1 875	-96	-1 779
Other financing cash flows	82	34	48
Cash flows used in financing activities	**-3 012**	**-1 642**	**-1 370**
Effect of exchange rate changes on cash and cash equivalents	51	-46	97
Change in cash and cash equivalents	**284**	**579**	**-295**
Cash and cash equivalents at April 1	7 572	4 457	3 115
Cash and cash equivalents at June 30	**7 856**	**5 036**	**2 820**

[1] In Q2 2016, the total tax payment amounted to USD 496 million, of which USD 34 million was included in the cash flows used in investing activities from discontinued operations.

Condensed consolidated cash flow statements

First half (unaudited)

(USD millions)	**H1 2017**	H1 2016	Change
Net income	**3 644**	**3 817**	**-173**
Reversal of non-cash items			
Taxes	618	648	-30
Depreciation, amortization and impairments	3 130	2 835	295
Change in provisions and other non-current liabilities	32	488	-456
Income from associated companies	-430	-330	-100
Net financial expense	370	409	-39
Other	-166	-28	-138
Net income adjusted for non-cash items	**7 198**	**7 839**	**-641**
Interest and other financial receipts	906	696	210
Interest and other financial payments	-346	-507	161
Taxes paid [1]	-904	-981	77
Cash flows before working capital changes	**6 854**	**7 047**	**-193**
Payments out of provisions and other net cash movements in non-current liabilities	-290	-1 013	723
Change in net current assets and other operating cash flow items	-937	-1 381	444
Cash flows from operating activities	**5 627**	**4 653**	**974**
Purchase of property, plant & equipment	-676	-833	157
Purchase of intangible, financial and other non-current assets	-651	-551	-100
Proceeds from sales of property, plant & equipment, intangible and financial assets	608	619	-11
Acquisitions and divestments of businesses, net	-655	-426	-229
Change in marketable securities, commodities and divestments of interests in associated companies	23	34	-11
Cash flows used in investing activities from continuing operations	**-1 351**	**-1 157**	**-194**
Cash flows used in investing activities from discontinued operations [1]	-87	-459	372
Total cash flows used in investing activities	**-1 438**	**-1 616**	**178**
Dividends related to shareholders of Novartis AG	-6 495	-6 475	-20
Change in current and non-current financial debts	6 015	4 081	1 934
Treasury share transactions, net	-2 933	-280	-2 653
Other financing cash flows	13	5	8
Cash flows used in financing activities	**-3 400**	**-2 669**	**-731**
Effect of exchange rate changes on cash and cash equivalents	60	-6	66
Change in cash and cash equivalents	**849**	**362**	**487**
Cash and cash equivalents at January 1	7 007	4 674	2 333
Cash and cash equivalents at June 30	**7 856**	**5 036**	**2 820**

[1] In H1 2016, the total tax payment amounted to USD 1 152 million, of which USD 171 million was included in the cash flows used in investing activities from discontinued operations.

Notes to the Condensed Interim Consolidated Financial Statements for the three- and six-month period ended June 30, 2017 (unaudited)

1. Basis of preparation

These Condensed Interim Consolidated Financial Statements for the three- and six-month period ended June 30, 2017, were prepared in accordance with International Accounting Standard 34 *Interim Financial Reporting* and accounting policies set out in the 2016 Annual Report published on January 25, 2017.

2. Selected critical accounting policies

The Group's principal accounting policies are set out in Note 1 to the Consolidated Financial Statements in the Annual Report 2016 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 discussed in the 2016 Annual Report, goodwill, Alcon brand name 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 under IFRS 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.

3. Significant transactions

Significant transactions in 2017

Innovative Medicines – Acquisition of Ziarco Group Limited
On January 20, 2017, Novartis acquired Ziarco Group Limited, a privately held company focused on the development of novel treatments in dermatology. This acquisition adds a once daily oral H4 receptor antagonist in development for atopic dermatitis (AD), commonly known as eczema, to complement the Novartis dermatology portfolio and pipeline. The fair value of the total purchase consideration was USD 420 million. The amount consisted of an initial cash payment of USD 325 million and the net present value of the contingent consideration of USD 95 million, due to the Ziarco shareholders, which they are eligible to receive upon achievement of specified development milestones. The purchase price allocation resulted in net identifiable assets of USD 395 million and goodwill of USD 25 million. Results of operations since the date of acquisition were not material.

Innovative Medicines – Acquisition of Encore Vision, Inc.
On January 20, 2017, Novartis acquired Encore Vision, Inc., a privately-held company in Fort Worth, Texas, USA, focused on the development of a novel treatment in presbyopia. The fair value of the total purchase consideration was USD 456 million. The amount consisted of an initial cash payment of USD 366 million and the net present value of the contingent consideration of USD 90 million, due to the Encore shareholders, which they are eligible to receive upon achievement of specified development and commercialization milestones. The purchase price allocation resulted in net identifiable assets of USD 389 million and goodwill of USD 67 million. Results of operations since the date of acquisition were not material.

Significant transactions in 2016

Alcon – Acquisition of Transcend Medical, Inc.
On February 17, 2016, Alcon entered into an agreement to acquire Transcend Medical, Inc. (Transcend), a privately-held, US-based company focused on developing minimally-invasive surgical devices to treat glaucoma. The transaction closed on March 23, 2016, and the fair value of the total purchase consideration was USD 332 million. The amount consisted of an initial cash payment of USD 240 million and the net present value of the contingent consideration of USD 92 million due to the Transcend shareholders, which they are eligible to receive upon achievement of specified development and commercialization milestones. The purchase price allocation resulted in net identifiable assets of USD 294 million and goodwill of USD 38 million. Results of operations since the date of acquisition were not material.

Innovative Medicines – Acquisition of Reprixys Pharmaceuticals Corporation
On November 18, 2016, Novartis acquired Reprixys Pharmaceuticals Corporation (Reprixys), a privately held, US-based company specializing in development of therapeutics in certain hematologic and inflammatory disorders following receipt of results of the SUSTAIN study. The initial interest of 19% was adjusted to its fair value of USD 64 million through the consolidated income statement at acquisition date. This re-measurement resulted in a gain of USD 53 million.

The fair value of the total purchase consideration for acquiring the 81% stake Novartis did not already own amounted to USD 268 million. The amount consisted of an initial cash payment of USD 194 million and the net present value of the contingent consideration of USD 74 million due to the Reprixys shareholders, which they are eligible to receive upon achievement of specified development and commercialization milestones. The purchase price allocation resulted in net identifiable assets of USD 332 million. No goodwill was recognized. Results of operations since the date of acquisition were not material.

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)		
	2017	2016	Change	**H1 2017**	H1 2016	Change
Balance at beginning of year	**2 374.1**	**2 373.9**	**0.2**	**74 832**	**77 046**	**-2 214**
Shares acquired to be cancelled	-41.4	-3.0	-38.4	-3 180	-219	-2 961
Other share purchases	-2.3	-2.0	-0.3	-174	-159	-15
Exercise of options and employee transactions	4.2	4.0	0.2	235	214	21
Equity-based compensation	8.3	8.3	0.0	341	397	-56
Increase of treasury share repurchase obligation under a share buyback trading plan				-2 287		-2 287
Dividends to shareholders of Novartis AG				-6 495	-6 475	-20
Net income of the period attributable to shareholders of Novartis AG				3 646	3 815	-169
Other comprehensive income attributable to shareholders of Novartis AG				3 001	-2 163	5 164
Balance at June 30	**2 342.9**	**2 381.2**	**-38.3**	**69 919**	**72 456**	**-2 537**

In 2017, Novartis entered into an irrevocable, non-discretionary arrangement with a bank to repurchase own shares on the second trading line under its up to USD 5 billion share buyback, as well as to mitigate dilution from equity-based participation plans. The commitment under this arrangement amounted to USD 2.3 billion as of June 30, 2017, reflecting the expected purchases by the bank under such trading plan over a rolling 90 days period.

5. Consolidated income statements – Segmentation

The businesses of Novartis are divided operationally on a worldwide basis into three identified reporting segments, Innovative Medicines, Sandoz and Alcon. 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.

Innovative Medicines researches, develops, manufactures, distributes and sells patented prescription medicines. The Innovative Medicines Division is organized into two global business units: Novartis Oncology, which consists of the global business franchises Oncology and Novartis Pharmaceuticals, which consists of the global business franchises Ophthalmology, Neuroscience, Immunology and Dermatology, Respiratory, Cardio-Metabolic and Established Medicines.

Sandoz develops, manufactures, distributes and sells prescription medicines, as well as pharmaceutical active substances, that are not protected by valid and enforceable third-party patents. Sandoz is organized globally in 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 dermatology, respiratory, oncology, ophthalmics, cardiovascular, metabolism, central nervous system, pain, gastrointestinal, and hormonal therapies, as well as finished dosage form anti-infectives sold to third parties. In Anti-Infectives, Sandoz manufactures 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.

Alcon researches, discovers, develops, manufactures, distributes and sells eye care products. Alcon is the global leader in eye care with product offerings in eye care devices and vision care. Alcon is organized into two global business franchises: Surgical and Vision Care. The Surgical franchise includes technologies and devices for cataract, retinal, glaucoma and refractive surgery, as well as intraocular lenses to treat cataract and refractive errors, like presbyopia and astigmatism. Alcon also provides viscoelastics, surgical solutions, surgical packs, and other disposable products for cataract and vitreoretinal surgery. The Vision Care franchise comprises daily disposable, monthly replacement, and color-enhancing contact lenses, as well as a complete line of contact lens care products including multi-purpose and hydrogen-peroxide based solutions, rewetting drops and daily protein removers.

The divisions are supported by Novartis Institute for BioMedical Research, Novartis Business Services, Global Drug Development and Novartis Technical Operations. Corporate activities include Group headquarter functions 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 2016.

Segmentation –Second quarter (unaudited)

	Innovative Medicines		Sandoz		Alcon		Corporate (including eliminations)		Group	
(USD millions)	**Q2 2017**	Q2 2016	**Q2 2017**	Q2 2016	**Q2 2017**	Q2 2016	**Q2 2017**	Q2 2016	**Q2 2017**	Q2 2016
Net sales to third parties	**8 275**	**8 387**	**2 451**	**2 577**	**1 516**	**1 506**			**12 242**	**12 470**
Sales to other segments	157	142	35	17	1		-193	-159		
Net sales	**8 432**	**8 529**	**2 486**	**2 594**	**1 517**	**1 506**	**-193**	**-159**	**12 242**	**12 470**
Other revenues	220	189	9	12	1		22	8	252	209
Cost of goods sold	-2 251	-2 376	-1 415	-1 488	-806	-783	214	196	-4 258	-4 451
Gross profit	**6 401**	**6 342**	**1 080**	**1 118**	**712**	**723**	**43**	**45**	**8 236**	**8 228**
Marketing & Sales	-2 297	-2 168	-447	-427	-496	-472			-3 240	-3 067
Research & Development	-1 744	-1 844	-195	-206	-123	-140			-2 062	-2 190
General & Administration	-248	-254	-77	-78	-104	-104	-137	-146	-566	-582
Other income	272	65	41	36	7	9	160	129	480	239
Other expense	-309	-275	-72	-63	-15	-9	-172	-188	-568	-535
Operating income	**2 075**	**1 866**	**330**	**380**	**-19**	**7**	**-106**	**-160**	**2 280**	**2 093**
as % of net sales	*25.1%*	*22.2%*	*13.5%*	*14.7%*	*-1.3%*	*0.5%*			*18.6%*	*16.8%*
Income from associated companies	-1		21	2			195	201	215	203
Interest expense									-192	-180
Other financial income and expense									12	-3
Income before taxes									**2 315**	**2 113**
Taxes									-336	-307
Net income									**1 979**	**1 806**

Segmentation –First half (unaudited)

	Innovative Medicines		Sandoz		Alcon		Corporate (including eliminations)		Group	
(USD millions)	**H1 2017**	H1 2016	**H1 2017**	H1 2016	**H1 2017**	H1 2016	**H1 2017**	H1 2016	**H1 2017**	H1 2016
Net sales to third parties	**15 967**	**16 116**	**4 881**	**5 022**	**2 933**	**2 932**			**23 781**	**24 070**
Sales to other segments	331	306	62	42	2		-395	-348		
Net sales	**16 298**	**16 422**	**4 943**	**5 064**	**2 935**	**2 932**	**-395**	**-348**	**23 781**	**24 070**
Other revenues	437	366	19	21	1	4	41	28	498	419
Cost of goods sold	-4 406	-4 616	-2 805	-2 926	-1 587	-1 546	435	425	-8 363	-8 663
Gross profit	**12 329**	**12 172**	**2 157**	**2 159**	**1 349**	**1 390**	**81**	**105**	**15 916**	**15 826**
Marketing & Sales	-4 392	-4 086	-882	-837	-955	-885			-6 229	-5 808
Research & Development	-3 607	-3 576	-381	-401	-243	-254			-4 231	-4 231
General & Administration	-483	-498	-151	-158	-206	-223	-209	-267	-1 049	-1 146
Other income	557	606	51	74	21	27	296	309	925	1 016
Other expense	-608	-572	-121	-111	-28	-17	-373	-413	-1 130	-1 113
Operating income	**3 796**	**4 046**	**673**	**726**	**-62**	**38**	**-205**	**-266**	**4 202**	**4 544**
as % of net sales	*23.8%*	*25.1%*	*13.8%*	*14.5%*	*-2.1%*	*1.3%*			*17.7%*	*18.9%*
Income from associated companies	-1		22	4			409	326	430	330
Interest expense									-372	-365
Other financial income and expense									2	-44
Income before taxes									**4 262**	**4 465**
Taxes									-618	-648
Net income									**3 644**	**3 817**

6. Financial instruments

The following table illustrates the three hierarchical levels for valuing financial instruments at fair value and also those measured at amortized cost or at cost as of June 30, 2017 and December 31, 2016. For additional information on the hierarchies and other matters, please refer to the Consolidated Financial Statements in the 2016 Annual Report, published on January 25, 2017.

	Level 1		Level 2		Level 3		Valued at amortized cost or cost		Total	
(USD millions)	**Jun 30, 2017**	Dec 31, 2016	**Jun 30, 2017**	Dec 31, 2016	**Jun 30, 2017**	Dec 31, 2016	**Jun 30, 2017**	Dec 31, 2016	**Jun 30, 2017**	Dec 31, 2016
Debt securities	291	284	24	22					315	306
Fund investments	32	31							32	31
Total available-for-sale marketable securities	**323**	**315**	**24**	**22**					**347**	**337**
Time deposits with original maturity more than 90 days							115	108	115	108
Derivative financial instruments			16	230					16	230
Accrued interest on debt securities							1	1	1	1
Total marketable securities, time deposits and derivative financial instruments	**323**	**315**	**40**	**252**			**116**	**109**	**479**	**676**
Financial investments and long-term loans										
Available-for-sale financial investments	588	513			449	476			1 037	989
Fund investments					125	107			125	107
Contingent consideration receivables					606	586			606	586
Long-term loans and receivables from customers and finance lease, advances, security deposits							477	514	477	514
Financial investments and long-term loans	**588**	**513**			**1 180**	**1 169**	**477**	**514**	**2 245**	**2 196**
Associated companies at fair value through profit or loss					**188**	**188**			**188**	**188**
Contingent consideration payables					-800	-889			-800	-889
Other financial liabilities					-105	-129			-105	-129
Derivative financial instruments			-151	-116					-151	-116
Total financial liabilities at fair value			**-151**	**-116**	**-905**	**-1 018**			**-1 056**	**-1 134**

There were no changes in the first six months of the year in the valuation techniques used for financial instruments nor significant transfers from one level to the other nor significant transactions associated with level 3 financial instruments.

The fair value of straight bonds amounted to USD 23.5 billion at June 30, 2017 (USD 17.9 billion at December 31, 2016) compared to the balance sheet value of USD 22.7 billion at June 30, 2017 (USD 17.3 billion at December 31, 2016). For all other financial assets and liabilities, the carrying amount is a reasonable approximation of the fair value. The carrying amount of financial assets included in the line financial investments and long-term loans of USD 2.2 billion at June 30, 2017 (USD 2.2 billion at December 31, 2016) is included in line “financial and other non-current assets” of the condensed consolidated balance sheets.

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.

Effective April 1, 2017, a portion of the Group’s euro denominated straight bonds amounting to EUR 1.85 billion has been designated as a hedge of the net investment in certain of the Group’s subsidiaries with euro functional currency. The foreign exchange loss of USD 138 million on translation of the bond to USD at June 30, 2017 has been recognized in other comprehensive income. There was no ineffective portion.

7. 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 20 to the Consolidated Financial Statements in our 2016 Annual Report and 2016 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, 2017 of significant developments in those proceedings, as well as any new significant proceedings commenced since the date of the 2016 Annual Report and 2016 Form 20-F.

Investigations and related litigations

Asia/Russia investigation

In the second quarter of 2017, Novartis Group companies received document requests and subpoenas from the US Department of Justice and the US Securities and Exchange Commission requesting information concerning Alcon's business practices in Asia and Russia, both before and after Alcon became part of the Novartis Group. Novartis is cooperating with this investigation.

In addition to the matter described above, there have been other developments in the other legal matters described in Note 20 to the Consolidated Financial Statements contained in our 2016 Annual Report and 2016 Form 20-F. These do not significantly affect the assessment of management concerning the adequacy of the total provisions recorded for legal proceedings.

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, and certain acquisition 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 exchanges 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. The definition of free cash flow used by Novartis does not include amounts related to changes in investments in associated companies nor related to acquisitions or divestments of subsidiaries. Free cash flow is not intended to be a substitute measure for cash flow from operating activities as determined under IFRS.

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

	Innovative Medicines		Sandoz		Alcon		Corporate		Group	
(USD millions)	**Q2 2017**	Q2 2016	**Q2 2017**	Q2 2016	**Q2 2017**	Q2 2016	**Q2 2017**	Q2 2016	**Q2 2017**	Q2 2016
IFRS Operating income	**2 075**	**1 866**	**330**	**380**	**-19**	**7**	**-106**	**-160**	**2 280**	**2 093**
Amortization of intangible assets	**551**	**614**	**112**	**114**	**224**	**226**			**887**	**954**
Impairments										
Intangible assets	4	3	30	3					34	6
Property, plant & equipment related to the Group-wide rationalization of manufacturing sites			1	2					1	2
Other property, plant & equipment	-8	60	13	3					5	63
Financial assets		10					28	30	28	40
Total impairment charges	**-4**	**73**	**44**	**8**			**28**	**30**	**68**	**111**
Acquisition or divestment of businesses and related items										
- Income		-3					-29	-62	-29	-65
- Expense	5	8					45	60	50	68
Total acquisition or divestment of businesses and related items, net	**5**	**5**					**16**	**-2**	**21**	**3**
Other items										
Divestment gains	-159	-12							-159	-12
Restructuring and related items										
- Income	-9	-5	-2	-2				-3	-11	-10
- Expense	87	99	13	35	6	5	5	8	111	147
Legal-related items										
- Income										
- Expense	16								16	
Additional income	-40	-11						-2	-40	-13
Additional expense	54	40					8	19	62	59
Total other items	**-51**	**111**	**11**	**33**	**6**	**5**	**13**	**22**	**-21**	**171**
Total adjustments	**501**	**803**	**167**	**155**	**230**	**231**	**57**	**50**	**955**	**1 239**
Core operating income	**2 576**	**2 669**	**497**	**535**	**211**	**238**	**-49**	**-110**	**3 235**	**3 332**
as % of net sales	*31.1%*	*31.8%*	*20.3%*	*20.8%*	*13.9%*	*15.8%*			*26.4%*	*26.7%*
Income from associated companies	-1		21	2			195	201	215	203
Core adjustments to income from associated companies, net of tax	1						109	103	110	103
Interest expense									-192	-180
Other financial income and expense									12	-3
Taxes (adjusted for above items)									-514	-525
Core net income									**2 866**	**2 930**
Core net income attributable to shareholders of Novartis AG									**2 867**	**2 928**
Core basic EPS (USD) [1]									**1.22**	**1.23**

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

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

	Innovative Medicines		Sandoz		Alcon		Corporate		Group	
(USD millions)	**H1 2017**	H1 2016	**H1 2017**	H1 2016	**H1 2017**	H1 2016	**H1 2017**	H1 2016	**H1 2017**	H1 2016
IFRS Operating income	**3 796**	**4 046**	**673**	**726**	**-62**	**38**	**-205**	**-266**	**4 202**	**4 544**
Amortization of intangible assets	**1 084**	**1 223**	**223**	**230**	**449**	**447**			**1 756**	**1 900**
Impairments										
Intangible assets	503	5	31	6		4			534	15
Property, plant & equipment related to the Group-wide rationalization of manufacturing sites				2						2
Other property, plant & equipment	-8	60	13	10					5	70
Financial assets		10					50	50	50	60
Total impairment charges	**495**	**75**	**44**	**18**		**4**	**50**	**50**	**589**	**147**
Acquisition or divestment of businesses and related items										
- Income	-1	-10					-69	-130	-70	-140
- Expense	13	13					84	127	97	140
Total acquisition or divestment of businesses and related items, net	**12**	**3**					**15**	**-3**	**27**	**0**
Other items										
Divestment gains	-340	-338							-340	-338
Restructuring and related items										
- Income	-15	-20	-2	-20	-1	-1		-4	-18	-45
- Expense	161	198	19	66	17	6	13	25	210	295
Legal-related items										
- Income	-1	-99							-1	-99
- Expense	16	136							16	136
Additional income	-343	-11			-5	-13		-10	-348	-34
Additional expense	137	58					15	29	152	87
Total other items	**-385**	**-76**	**17**	**46**	**11**	**-8**	**28**	**40**	**-329**	**2**
Total adjustments	**1 206**	**1 225**	**284**	**294**	**460**	**443**	**93**	**87**	**2 043**	**2 049**
Core operating income	**5 002**	**5 271**	**957**	**1 020**	**398**	**481**	**-112**	**-179**	**6 245**	**6 593**
as % of net sales	*31.3%*	*32.7%*	*19.6%*	*20.3%*	*13.6%*	*16.4%*			*26.3%*	*27.4%*
Income from associated companies	-1		22	4			409	326	430	330
Core adjustments to income from associated companies, net of tax	1						246	229	247	229
Interest expense									-372	-365
Other financial income and expense									2	-44
Taxes (adjusted for above items)									-996	-1 025
Core net income									**5 556**	**5 718**
Core net income attributable to shareholders of Novartis AG									**5 558**	**5 716**
Core basic EPS (USD) [1]									**2.35**	**2.40**

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

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

(USD millions)	Q2 2017 IFRS results	Amortization of intangible assets [1]	Impairments [2]	Acquisition or divestment of businesses and related items [3]	Other items [4]	Q2 2017 Core results	Q2 2016 Core results
Gross profit	**8 236**	**863**	**30**		**18**	**9 147**	**9 207**
Operating income	**2 280**	**887**	**68**	**21**	**-21**	**3 235**	**3 332**
Income before taxes	**2 315**	**980**	**69**	**21**	**-5**	**3 380**	**3 455**
Taxes [5]	-336					-514	-525
Net income	**1 979**					**2 866**	**2 930**
Basic EPS (USD) [6]	**0.84**					**1.22**	**1.23**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-4 258	863	30		18	-3 347	-3 472
The following are adjustments to arrive at Core Operating Income							
Research & Development	-2 062	24	4		5	-2 029	-2 138
General & Administration	-566				-3	-569	-566
Other income	480		-9	-29	-210	232	139
Other expense	-568		43	50	169	-306	-243
The following are adjustments to arrive at Core Income before taxes							
Income from associated companies	215	93	1		16	325	306

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms; Income from associated companies includes USD 93 million for the Novartis share of the estimated Roche core items.

[2] Impairments: Cost of goods sold and Research & Development include impairment charges related to intangible assets; Other income and Other expense include reversals and charges related to the impairment of property, plant and equipment; Other expense also includes impairment charges related to financial assets.

[3] 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.

[4] Other items: Cost of goods sold and Other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; General & Administration, Research & Development, Other income and Other expense include other restructuring income, charges, reversals and related items; Other income also includes gains from product divestments and an income from a settlement of a contract dispute; Other expense also includes legal-related items and a provision for contract termination costs; Income from associated companies includes an adjustment of USD 16 million for the Novartis share of the estimated GSK Consumer Healthcare Holdings Ltd. core items.

[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 178 million. The average tax rate on the adjustments is 16.7%, since the estimated full year core tax charge of 15.2% has been applied to the pre-tax income of the period.

[6] 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

(USD millions)	H1 2017 IFRS results	Amortization of intangible assets [1]	Impairments [2]	Acquisition or divestment of businesses and related items [3]	Other items [4]	H1 2017 Core results	H1 2016 Core results
Gross profit	**15 916**	**1 715**	**62**		**28**	**17 721**	**17 769**
Operating income	**4 202**	**1 756**	**589**	**27**	**-329**	**6 245**	**6 593**
Income before taxes	**4 262**	**1 985**	**590**	**27**	**-312**	**6 552**	**6 743**
Taxes [5]	-618					-996	-1 025
Net income	**3 644**					**5 556**	**5 718**
Basic EPS (USD) [6]	**1.54**					**2.35**	**2.40**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-8 363	1 715	62		28	-6 558	-6 720
The following are adjustments to arrive at Core Operating Income							
Research & Development	-4 231	41	472		-295	-4 013	-4 149
Other income	925		-9	-70	-404	442	373
Other expense	-1 130		64	97	342	-627	-473
The following are adjustments to arrive at Core Income before taxes							
Income from associated companies	430	229	1		17	677	559

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms; Income from associated companies includes USD 229 million for the Novartis share of the estimated Roche core items.

[2] Impairments: Cost of goods sold and Research & Development include impairment charges related to intangible assets; Other income and Other expense include reversals and charges related to the impairment of property, plant and equipment; Other expense also includes impairment charges related to financial assets.

[3] 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.

[4] Other items: Cost of goods sold and Other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; Research & Development, Other income and Other expense include other restructuring income and charges and related items; Other income and Other expense include legal-related items; Research & Development includes the release of a contingent consideration and Other expense includes a charge for onerous contracts, both related to the impairment of an IPR&D intangible asset; Other income also includes gains from product divestments, a partial reversal of a prior period charge and an income from a settlement of a contract dispute; Other expense also includes a provision for contract termination costs; Income from associated companies includes an adjustment of USD 17 million for the Novartis share of the estimated GSK Consumer Healthcare Holdings Ltd. core items.

[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 2.3 billion, to arrive at the core results before tax, amounts to USD 378 million. The average tax rate on the adjustments is 16.5%, since the estimated full year core tax charge of 15.2% has been applied to the pre-tax income of the period.

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

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

(USD millions)	Q2 2017 IFRS results	Amortization of intangible assets [1]	Impairments [2]	Acquisition or divestment of businesses and related items [3]	Other items [4]	Q2 2017 Core results	Q2 2016 Core results
Gross profit	**6 401**	**529**			**14**	**6 944**	**6 968**
Operating income	**2 075**	**551**	**-4**	**5**	**-51**	**2 576**	**2 669**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-2 251	529			14	-1 708	-1 750
The following are adjustments to arrive at Core Operating Income							
Research & Development	-1 744	22	4		5	-1 713	-1 801
Other income	272		-9		-208	55	34
Other expense	-309		1	5	138	-165	-110

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms.
[2] Impairments: Research & Development includes impairment charges related to intangible assets; Other income and Other expense include reversals and charges related to the impairment of property, plant and equipment.
[3] Acquisition or divestment of businesses and related items, including restructuring and integration charges: Other expense includes transitional service-fee expenses and other items related to the portfolio transformation.
[4] Other items: Cost of goods sold and Other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; Research & Development, Other income and Other expense include other restructuring income and charges and related items; Other income also includes gains from product divestments and an income from a settlement of a contract dispute; Other expense also includes legal-related items and a provision for contract termination costs.

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

(USD millions)	H1 2017 IFRS results	Amortization of intangible assets [1]	Impairments [2]	Acquisition or divestment of businesses and related items [3]	Other items [4]	H1 2017 Core results	H1 2016 Core results
Gross profit	**12 329**	**1 048**	**31**		**23**	**13 431**	**13 414**
Operating income	**3 796**	**1 084**	**495**	**12**	**-385**	**5 002**	**5 271**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-4 406	1 048	31		23	-3 304	-3 374
The following are adjustments to arrive at Core Operating Income							
Research & Development	-3 607	36	472		-295	-3 394	-3 506
Other income	557		-9	-1	-396	151	128
Other expense	-608		1	13	283	-311	-181

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms.

[2] Impairments: Cost of goods sold and Research & Development include impairment charges related to intangible assets; Other income and Other expense include reversals and charges related to the impairment of property, plant and equipment.

[3] 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.

[4] Other items: Cost of goods sold and Other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; Research & Development, Other income and Other expense include other restructuring income and charges and related items; Other income and Other expense include legal-related items; Research & Development includes the release of a contingent consideration and Other expense includes a charge for onerous contracts, both related to the impairment of an IPR&D intangible asset; Other income also includes gains from product divestments and an income from a settlement of a contract dispute; Other expense also includes a provision for contract termination costs.

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

(USD millions)	Q2 2017 IFRS results	Amortization of intangible assets[1]	Impairments[2]	Acquisition or divestment of businesses and related items	Other items[3]	Q2 2017 Core results	Q2 2016 Core results
Gross profit	**1 080**	**112**	**30**		**4**	**1 226**	**1 252**
Operating income	**330**	**112**	**44**		**11**	**497**	**535**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-1 415	112	30		4	-1 269	-1 354
The following are adjustments to arrive at Core Operating Income							
Other income	41				-2	39	34
Other expense	-72		14		9	-49	-42

[1] Amortization of intangible assets: Cost of goods sold includes recurring 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 expense includes impairment charges related to property, plant and equipment.
[3] Other items: Cost of goods sold includes net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; Other income and Other expense include other restructuring income and charges and related items.

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

(USD millions)	H1 2017 IFRS results	Amortization of intangible assets[1]	Impairments[2]	Acquisition or divestment of businesses and related items	Other items[3]	H1 2017 Core results	H1 2016 Core results
Gross profit	**2 157**	**223**	**31**		**5**	**2 416**	**2 432**
Operating income	**673**	**223**	**44**		**17**	**957**	**1 020**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-2 805	223	31		5	-2 546	-2 653
The following are adjustments to arrive at Core Operating Income							
Other income	51				-2	49	54
Other expense	-121		13		14	-94	-72

[1] Amortization of intangible assets: Cost of goods sold includes recurring 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 expense includes charges and a partial reversal of 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; Other income and Other expense include other restructuring income and charges and related items.

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

(USD millions)	Q2 2017 IFRS results	Amortization of intangible assets[1]	Impairments	Acquisition or divestment of businesses and related items	Other items[2]	Q2 2017 Core results	Q2 2016 Core results
Gross profit	**712**	**222**				**934**	**942**
Operating loss/income	**-19**	**224**			**6**	**211**	**238**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-806	222				-584	-564
The following are adjustments to arrive at Core Operating Income							
Research & Development	-123	2				-121	-133
Other expense	-15				6	-9	-4

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms.
[2] Other items: Other expense includes restructuring charges and related items.

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

(USD millions)	H1 2017 IFRS results	Amortization of intangible assets[1]	Impairments	Acquisition or divestment of businesses and related items	Other items[2]	H1 2017 Core results	H1 2016 Core results
Gross profit	**1 349**	**444**				**1 793**	**1 818**
Operating loss/income	**-62**	**449**			**11**	**398**	**481**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-1 587	444				-1 143	-1 118
The following are adjustments to arrive at Core Operating Income							
Research & Development	-243	5				-238	-244
Other income	21				-6	15	26
Other expense	-28				17	-11	-11

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms.
[2] Other items: Other income and Other expense include restructuring income and charges and related items; Other income also includes the partial reversal of a prior period charge.

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

(USD millions)	Q2 2017 IFRS results	Amortization of intangible assets	Impairments [1]	Acquisition or divestment of businesses and related items [2]	Other items [3]	Q2 2017 Core results	Q2 2016 Core results
Gross profit	**43**					**43**	**45**
Operating loss	**-106**		**28**	**16**	**13**	**-49**	**-110**
The following are adjustments to arrive at Core Operating Loss							
General & Administration	-137				-3	-140	-130
Other income	160			-29		131	62
Other expense	-172		28	45	16	-83	-87

[1] Impairments: Other expense includes impairment charges related to financial assets.
[2] 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.
[3] Other items: General & Administration and Other expense include restructuring charges, reversals and related items, and other costs.

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

(USD millions)	H1 2017 IFRS results	Amortization of intangible assets	Impairments [1]	Acquisition or divestment of businesses and related items [2]	Other items [3]	H1 2017 Core results	H1 2016 Core results
Gross profit	**81**					**81**	**105**
Operating loss	**-205**		**50**	**15**	**28**	**-112**	**-179**
The following are adjustments to arrive at Core Operating Loss							
Other income	296			-69		227	165
Other expense	-373		50	84	28	-211	-209

[1] Impairments: Other expense includes impairment charges related to financial assets.
[2] 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.
[3] Other items: Other expense includes restructuring charges and related items, and other costs.

Condensed consolidated changes in net debt

Second quarter

(USD millions)	**Q2 2017**	Q2 2016
Change in cash and cash equivalents	**284**	**579**
Change in marketable securities, commodities, financial debt and financial derivatives	612	1 801
Reduction in net debt	**896**	**2 380**
Net debt at April 1	-23 020	-23 008
Net debt at June 30	**-22 124**	**-20 628**

First half

(USD millions)	**H1 2017**	H1 2016
Change in cash and cash equivalents	**849**	**362**
Change in marketable securities, commodities, financial debt and financial derivatives	-6 948	-4 506
Increase in net debt	**-6 099**	**-4 144**
Net debt at January 1	-16 025	-16 484
Net debt at June 30	**-22 124**	**-20 628**

Components of net debt

(USD millions)	**Jun 30, 2017**	Jun 30, 2016
Current financial debts and derivative financial instruments	-7 562	-10 092
Non-current financial debts	-22 999	-16 276
Less liquidity:		
Cash and cash equivalents	7 856	5 036
Marketable securities, commodities and derivative financial instruments	581	704
Net debt at June 30	**-22 124**	**-20 628**

Share information

	Jun 30, 2017	Jun 30, 2016
Number of shares outstanding	**2 342 890 231**	2 381 221 094
Registered share price (CHF)	**79.80**	80.15
ADR price (USD)	**83.47**	82.51
Market capitalization (USD billions)	**195.2**	194.7
Market capitalization (CHF billions)	**187.0**	190.9

Free cash flow

Second quarter

(USD millions)	**Q2 2017**	Q2 2016	Change
Operating income	**2 280**	**2 093**	**187**
Reversal of non-cash items			
Depreciation, amortization and impairments	1 354	1 466	-112
Change in provisions and other non-current liabilities	101	227	-126
Other	-71	165	-236
Operating income adjusted for non-cash items	**3 664**	**3 951**	**-287**
Interest and other financial receipts	419	245	174
Interest and other financial payments	-216	-373	157
Taxes paid	-467	-462	-5
Payments out of provisions and other net cash movements in non-current liabilities	-142	-501	359
Change in inventory and trade receivables less trade payables	-188	-160	-28
Change in other net current assets and other operating cash flow items	512	411	101
Cash flows from operating activities	**3 582**	**3 111**	**471**
Purchase of property, plant & equipment	-332	-448	116
Purchase of intangible, financial and other non-current assets	-262	-227	-35
Proceeds from sales of property, plant & equipment, intangible and financial assets	255	90	165
Free cash flow	**3 243**	**2 526**	**717**

First half

(USD millions)	**H1 2017**	H1 2016	Change
Operating income	**4 202**	**4 544**	**-342**
Reversal of non-cash items			
Depreciation, amortization and impairments	3 130	2 835	295
Change in provisions and other non-current liabilities	32	488	-456
Other	-166	-28	-138
Operating income adjusted for non-cash items	**7 198**	**7 839**	**-641**
Interest and other financial receipts	906	696	210
Interest and other financial payments	-346	-507	161
Taxes paid	-904	-981	77
Payments out of provisions and other net cash movements in non-current liabilities	-290	-1 013	723
Change in inventory and trade receivables less trade payables	-771	-1 524	753
Change in other net current assets and other operating cash flow items	-166	143	-309
Cash flows from operating activities	**5 627**	**4 653**	**974**
Purchase of property, plant & equipment	-676	-833	157
Purchase of intangible, financial and other non-current assets	-651	-551	-100
Proceeds from sales of property, plant & equipment, intangible and financial assets	608	619	-11
Total free cash flow	**4 908**	**3 888**	**1 020**

Net sales of the top 20 Innovative Medicines products in 2017 – Second quarter

			US		Rest of world		Total		
Brands	**Business Franchise**	**Indication**	**USD m**	**% change in constant currencies**	**USD m**	**% change in constant currencies**	**USD m**	**% change in USD**	**% change in constant currencies**
Gilenya	Neuroscience	Relapsing multiple sclerosis	476	7	361	2	**837**	**3**	**5**
Gleevec/Glivec	Oncology	Chronic myeloid leukemia and GIST	178	-48	328	-39	**506**	**-43**	**-42**
Lucentis	Ophthalmology	Age-related macular degeneration			477	5	**477**	**0**	**5**
Cosentyx	Immunology and Dermatology	Psoriasis, ankylosing spondylitis and psoriatic arthritis	308	71	182	134	**490**	**88**	**90**
Tasigna	Oncology	Chronic myeloid leukemia	207	12	256	4	**463**	**1**	**7**
Sandostatin	Oncology	Carcinoid tumors and Acromegaly	209	-4	195	2	**404**	**-5**	**-1**
Afinitor/Votubia	Oncology	Breast cancer / TSC	211	8	174	6	**385**	**5**	**7**
Galvus	Cardio-Metabolic	Diabetes			310	3	**310**	**1**	**3**
Exjade/Jadenu	Oncology	Chronic iron overload	131	7	136	7	**267**	**5**	**7**
Diovan/Co–Diovan	Established Medicines	Hypertension	21	-48	219	-7	**240**	**-15**	**-12**
Exforge	Established Medicines	Hypertension	5	nm	234	0	**239**	**1**	**3**
Xolair[1]	Respiratory	Asthma			226	12	**226**	**7**	**12**
Tafinlar + Mekinist	Oncology	Melanoma	86	10	130	43	**216**	**26**	**28**
Promacta/Revolade	Oncology	Immune thrombocytopenic purpura	109	42	101	28	**210**	**33**	**35**
Votrient	Oncology	Renal cell carcinoma	107	15	97	6	**204**	**9**	**10**
Jakavi	Oncology	Myelofibrosis			186	32	**186**	**27**	**32**
Travoprost Group	Ophthalmology	Reduction of elevated intraocular pressure	49	-8	93	-7	**142**	**-9**	**-8**
Neoral/Sandimmun(e)	Immunology and Dermatology	Transplantation	10	-9	113	-6	**123**	**-10**	**-6**
Voltaren/Cataflam	Established Medicines	Inflammation/pain			109	-10	**109**	**-19**	**-10**
***Exelon/Exelon* Patch**	Established Medicines	Alzheimer's disease	18	-5	83	-7	**101**	**-8**	**-6**
Top 20 products total			**2 125**	**3**	**4 010**	**1**	**6 135**	**-1**	**2**
Rest of portfolio			728	-8	1 412	3	**2 140**	**-3**	**-1**
Total Division sales			**2 853**	**0**	**5 422**	**2**	**8 275**	**-1**	**1**

[1] Net sales reflect *Xolair* sales for all indications (e.g. including *Xolair* SAA and *Xolair* CSU, which is managed by the Immunology and Dermatology franchise).

nm = not meaningful

Net sales of the top 20 Innovative Medicines products in 2017 – First half

			US		Rest of world		Total		
Brands	**Business Franchise**	**Indication**	**USD m**	**% change in constant currencies**	**USD m**	**% change in constant currencies**	**USD m**	**% change in USD**	**% change in constant currencies**
Gilenya	Neuroscience	Relapsing multiple sclerosis	848	4	711	6	**1 559**	**3**	**5**
Gleevec/Glivec	Oncology	Chronic myeloid leukemia and GIST	357	-46	693	-33	**1 050**	**-39**	**-38**
Lucentis	Ophthalmology	Age-related macular degeneration			922	4	**922**	**-1**	**4**
Cosentyx	Immunology and Dermatology	Psoriasis, ankylosing spondylitis and psoriatic arthritis	566	87	334	159	**900**	**106**	**109**
Tasigna	Oncology	Chronic myeloid leukemia	387	11	487	6	**874**	**4**	**8**
Sandostatin	Oncology	Carcinoid tumors and Acromegaly	415	-3	374	-2	**789**	**-4**	**-2**
Afinitor/Votubia	Oncology	Breast cancer / TSC	391	2	338	1	**729**	**0**	**1**
Galvus	Cardio-Metabolic	Diabetes			596	4	**596**	**1**	**4**
Exjade/Jadenu	Oncology	Chronic iron overload	244	7	270	12	**514**	**8**	**10**
Diovan/Co–Diovan	Established Medicines	Hypertension	44	-44	438	-4	**482**	**-13**	**-10**
Exforge	Established Medicines	Hypertension	16	nm	451	2	**467**	**2**	**5**
Xolair[1]	Respiratory	Asthma			428	11	**428**	**6**	**11**
Tafinlar + Mekinist	Oncology	Melanoma	159	10	244	42	**403**	**25**	**28**
Promacta/Revolade	Oncology	Immune thrombocytopenic purpura	199	43	186	27	**385**	**33**	**35**
Votrient	Oncology	Renal cell carcinoma	196	13	186	6	**382**	**8**	**9**
Jakavi	Oncology	Myelofibrosis			348	33	**348**	**29**	**33**
Travoprost Group	Ophthalmology	Reduction of elevated intraocular pressure	106	-2	184	-6	**290**	**-6**	**-4**
Neoral/Sandimmun(e)	Immunology and Dermatology	Transplantation	20	-5	218	-5	**238**	**-8**	**-5**
Voltaren/Cataflam	Established Medicines	Inflammation/pain			228	0	**228**	**-12**	**0**
***Exelon/Exelon* Patch**	Established Medicines	Alzheimer's disease	34	-31	164	-6	**198**	**-12**	**-11**
Top 20 products total			**3 982**	**3**	**7 800**	**3**	**11 782**	**0**	**3**
Rest of portfolio			1 413	-7	2 772	1	**4 185**	**-4**	**-2**
Total Division sales			**5 395**	**0**	**10 572**	**2**	**15 967**	**-1**	**2**

[1] Net sales reflect *Xolair* sales for all indications (e.g. including *Xolair* SAA and *Xolair* CSU, which is managed by the Immunology and Dermatology franchise).

nm = not meaningful

Innovative Medicines net sales by business franchise – Second quarter

	Q2 2017 USD m	Q2 2016 USD m	% change USD	% change cc
Oncology				
Gleevec/Glivec	506	891	-43	-42
Tasigna	463	458	1	7
Sandostatin	404	424	-5	-1
Afinitor/Votubia	385	365	5	7
Exjade/Jadenu	267	254	5	7
Tafinlar + Mekinist	216	172	26	28
Promacta/Revolade	210	158	33	35
Votrient	204	188	9	10
Jakavi	186	146	27	32
Kisqali	8	0	nm	nm
Other	225	263	-14	-12
Total Oncology business unit	**3 074**	**3 319**	**-7**	**-5**
Ophthalmology				
Lucentis	477	475	0	5
Travoprost Group	142	156	-9	-8
Systane Group	104	92	13	14
Topical Olopatadine Group	76	63	21	22
Other	579	618	-6	-6
Total Ophthalmology	**1 378**	**1 404**	**-2**	**0**
Immunology and Dermatology				
Cosentyx	490	260	88	90
Neoral/Sandimmun(e)	123	136	-10	-6
Zortress/Certican	100	102	-2	0
Myfortic	98	91	8	10
Ilaris	98	73	34	37
Other	70	72	-3	-1
Total Immunology and Dermatology	**979**	**734**	**33**	**36**
Neuroscience				
Gilenya	837	811	3	5
Other	27	31	-13	-13
Total Neuroscience	**864**	**842**	**3**	**4**
Respiratory				
Ultibro Breezhaler	99	100	-1	2
Seebri Breezhaler	36	39	-8	-1
Onbrez Breezhaler/Arcapta Neohaler	28	37	-24	-18
Subtotal COPD[1] portfolio	**163**	**176**	**-7**	**-3**
Xolair[2]	226	212	7	12
Other	4	9	-56	-33
Total Respiratory	**393**	**397**	**-1**	**5**
Cardio-Metabolic				
Entresto	110	32	244	240
Other	3	3	0	13
Total Cardio-Metabolic	**113**	**35**	**223**	**217**
Established Medicines				
Galvus	310	306	1	3
Diovan/Co-Diovan	240	283	-15	-12
Exforge	239	236	1	3
Voltaren/Cataflam	109	134	-19	-10
Exelon/Exelon Patch	101	110	-8	-6
Ritalin/Focalin	61	77	-21	-22
Other	414	510	-19	-16
Total Established Medicines	**1 474**	**1 656**	**-11**	**-8**
Total Pharmaceuticals business unit	**5 201**	**5 068**	**3**	**5**
Total Division net sales	**8 275**	**8 387**	**-1**	**1**

[1] Chronic Obstructive Pulmonary Disease
[2] Net sales reflect *Xolair* sales for all indications (e.g. including *Xolair* SAA and *Xolair* CSU, which is managed by the Immunology and Dermatology franchise).

nm = not meaningful

Innovative Medicines net sales by business franchise – First half

	H1 2017 USD m	H1 2016 USD m	% change USD	% change cc
Oncology				
Gleevec/Glivec	1 050	1 725	-39	-38
Tasigna	874	840	4	8
Sandostatin	789	825	-4	-2
Afinitor/Votubia	729	732	0	1
Exjade/Jadenu	514	477	8	10
Tafinlar + Mekinist	403	322	25	28
Promacta/Revolade	385	289	33	35
Votrient	382	354	8	9
Jakavi	348	270	29	33
Kisqali	15	0	nm	nm
Other	441	514	-14	-12
Total Oncology business unit	**5 930**	**6 348**	**-7**	**-5**
Ophthalmology				
Lucentis	922	927	-1	4
Travoprost Group	290	307	-6	-4
Systane Group	192	181	6	6
Topical Olopatadine Group	176	199	-12	-11
Other	1 119	1 160	-4	-3
Total Ophthalmology	**2 699**	**2 774**	**-3**	**-1**
Immunology and Dermatology				
Cosentyx	900	436	106	109
Neoral/Sandimmun(e)	238	259	-8	-5
Zortress/Certican	191	193	-1	2
Myfortic	180	195	-8	-1
Ilaris	180	135	33	35
Other	134	136	-1	0
Total Immunology and Dermatology	**1 823**	**1 354**	**35**	**38**
Neuroscience				
Gilenya	1 559	1 509	3	5
Other	51	64	-20	-20
Total Neuroscience	**1 610**	**1 573**	**2**	**4**
Respiratory				
Ultibro Breezhaler	190	178	7	10
Seebri Breezhaler	72	74	-3	2
Onbrez Breezhaler/Arcapta Neohaler	56	70	-20	-15
Subtotal COPD[1] portfolio	**318**	**322**	**-1**	**3**
Xolair[2]	428	404	6	11
Other	11	17	-35	-13
Total Respiratory	**757**	**743**	**2**	**7**
Cardio-Metabolic				
Entresto	194	49	296	300
Other	7	6	17	21
Total Cardio-Metabolic	**201**	**55**	**265**	**268**
Established Medicines				
Galvus	596	589	1	4
Diovan/Co-Diovan	482	555	-13	-10
Exforge	467	457	2	5
Voltaren/Cataflam	228	258	-12	0
Exelon/Exelon Patch	198	226	-12	-11
Ritalin/Focalin	118	147	-20	-20
Other	858	1 037	-17	-15
Total Established Medicines	**2 947**	**3 269**	**-10**	**-7**
Total Pharmaceuticals business unit	**10 037**	**9 768**	**3**	**6**
Total Division net sales	**15 967**	**16 116**	**-1**	**2**

[1] Chronic Obstructive Pulmonary Disease
[2] Net sales reflect *Xolair* sales for all indications (e.g. including *Xolair* SAA and *Xolair* CSU, which is managed by the Immunology and Dermatology franchise).

nm = not meaningful

Net sales by region[1] – Second quarter

	Q2 2017	Q2 2016	% change		**Q2 2017**	Q2 2016
	USD m	USD m	USD	cc	**% of total**	% of total
Innovative Medicines						
Europe	2 768	2 890	-4	-1	33	34
US	2 853	2 846	0	0	34	34
Asia/Africa/Australasia	1 961	1 961	0	3	24	23
Canada and Latin America	693	690	0	11	9	9
Total	**8 275**	**8 387**	**-1**	**1**	**100**	**100**
Of which in Established Markets	6 183	6 343	-3	-1	75	76
Of which in Emerging Growth Markets	2 092	2 044	2	8	25	24
Sandoz						
Europe	1 096	1 078	2	4	45	42
US	820	965	-15	-15	33	37
Asia/Africa/Australasia	340	360	-6	-3	14	14
Canada and Latin America	195	174	12	14	8	7
Total	**2 451**	**2 577**	**-5**	**-4**	**100**	**100**
Of which in Established Markets	1 800	1 940	-7	-6	73	75
Of which in Emerging Growth Markets	651	637	2	3	27	25
Alcon						
Europe	391	402	-3	0	26	27
US	645	654	-1	-1	43	43
Asia/Africa/Australasia	364	333	9	11	24	22
Canada and Latin America	116	117	-1	8	7	8
Total	**1 516**	**1 506**	**1**	**3**	**100**	**100**
Of which in Established Markets	1 183	1 217	-3	-1	78	81
Of which in Emerging Growth Markets	333	289	15	20	22	19
Group						
Europe	4 255	4 370	-3	0	35	35
US	4 318	4 465	-3	-3	35	36
Asia/Africa/Australasia	2 665	2 654	0	3	22	21
Canada and Latin America	1 004	981	2	11	8	8
Total	**12 242**	**12 470**	**-2**	**0**	**100**	**100**
Of which in Established Markets	9 166	9 500	-4	-2	75	76
Of which in Emerging Growth Markets	3 076	2 970	4	8	25	24

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

Net sales by region[1] – First half

	H1 2017	H1 2016	% change		H1 2017	H1 2016
	USD m	USD m	USD	cc	**% of total**	% of total
Innovative Medicines						
Europe	5 393	5 588	-3	0	34	35
US	5 395	5 391	0	0	34	33
Asia/Africa/Australasia	3 835	3 807	1	3	24	24
Canada and Latin America	1 344	1 330	1	8	8	8
Total	**15 967**	**16 116**	**-1**	**2**	**100**	**100**
Of which in Established Markets	11 881	12 129	-2	-1	74	75
Of which in Emerging Growth Markets	4 086	3 987	2	8	26	25
Sandoz						
Europe	2 165	2 154	1	3	44	43
US	1 684	1 830	-8	-8	35	36
Asia/Africa/Australasia	660	713	-7	-4	14	14
Canada and Latin America	372	325	14	12	7	7
Total	**4 881**	**5 022**	**-3**	**-2**	**100**	**100**
Of which in Established Markets	3 601	3 745	-4	-2	74	75
Of which in Emerging Growth Markets	1 280	1 277	0	1	26	25
Alcon						
Europe	768	778	-1	2	26	27
US	1 254	1 261	-1	-1	43	43
Asia/Africa/Australasia	690	662	4	5	24	23
Canada and Latin America	221	231	-4	5	7	7
Total	**2 933**	**2 932**	**0**	**2**	**100**	**100**
Of which in Established Markets	2 306	2 341	-1	0	79	80
Of which in Emerging Growth Markets	627	591	6	10	21	20
Group						
Europe	8 326	8 520	-2	1	35	35
US	8 333	8 482	-2	-2	35	35
Asia/Africa/Australasia	5 185	5 182	0	3	22	22
Canada and Latin America	1 937	1 886	3	9	8	8
Total	**23 781**	**24 070**	**-1**	**1**	**100**	**100**
Of which in Established Markets	17 788	18 215	-2	-1	75	76
Of which in Emerging Growth Markets	5 993	5 855	2	7	25	24

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

Principal currency translation rates

Second quarter

	Average rates Q2 2017	Average rates Q2 2016	**Period-end rates Jun 30, 2017**	Period-end rates Jun 30, 2016
1 CHF	**1.015**	1.030	**1.044**	1.020
1 CNY	**0.146**	0.153	**0.148**	0.151
1 EUR	**1.100**	1.129	**1.142**	1.111
1 GBP	**1.279**	1.435	**1.301**	1.343
100 JPY	**0.900**	0.926	**0.893**	0.974
100 RUB	**1.749**	1.519	**1.683**	1.559

First half

	Average rates H1 2017	Average rates H1 2016	**Period-end rates Jun 30, 2017**	Period-end rates Jun 30, 2016
1 CHF	**1.005**	1.018	**1.044**	1.020
1 CNY	**0.145**	0.153	**0.148**	0.151
1 EUR	**1.083**	1.116	**1.142**	1.111
1 GBP	**1.258**	1.433	**1.301**	1.343
100 JPY	**0.890**	0.897	**0.893**	0.974
100 RUB	**1.726**	1.428	**1.683**	1.559

Income from associated companies

(USD millions)	**Q2 2017**	Q2 2016	**H1 2017**	H1 2016
Share of estimated Roche reported results	*155*	*181*	*329*	*360*
Prior-year adjustment			*-67*	*-68*
Amortization of additional intangible assets recognized by Novartis on initial accounting for the equity interest	*-36*	*-37*	*-72*	*-73*
Net income effect from Roche Holding AG	119	144	190	219
Share of estimated GSK Consumer Healthcare Holdings Ltd. reported results	*79*	*81*	*176*	*134*
Prior-year adjustment		*-22*	*47*	*-22*
Amortization of additional intangible assets recognized by Novartis on initial accounting for the equity interest	*-3*	*-2*	*-4*	*-5*
Net income effect from GlaxoSmithKline Consumer Healthcare Holdings Ltd.	76	57	219	107
Others	20	2	21	4
Income from associated companies	**215**	**203**	**430**	**330**

Core income from associated companies

(USD millions)	**Q2 2017**	Q2 2016	**H1 2017**	H1 2016
Income from associated companies	**215**	**203**	**430**	**330**
Share of estimated Roche core adjustments	93	56	159	108
Roche prior year adjustment			70	36
Share of estimated GSK Consumer Healthcare Holdings Ltd. core adjustments	16	32	36	70
GSK Consumer Healthcare Holdings Ltd. prior year adjustment		15	-19	15
Others	1		1	
Core income from associated companies	**325**	**306**	**677**	**559**

Disclaimer

This press release contains forward-looking statements, including "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 "potential," "guidance," "growth drivers," "continues," "pipeline," "growth prospects," "positive CHMP opinion," "outlook," "expected," "on track," "trajectory," "confidence," "growth phase," "expect," "launch," "growth plan," "initiate," "continued focus," "launch trajectory," "pipelines," "recommended," "launched," "next-generation," "to be filed," "proposed," "ongoing," "driven," "option," "to accelerate," "launches," "strategic review," "to maximize," "under consideration," "will," "towards the end of 2017," "for the future," "continue," "to further strengthen," "priorities," "improving," "reviewing," "remains a priority," "to be executed," "aims," "re-confirm," "continued," "would," "estimated," "Priority Review," "investigational," "Breakthrough Therapy designation," "evaluating," "investigating," "commitment," "planned," "subject to," "Fast Track designation," "being co-commercialized," "growing," "underway," "filed," "submitted," "can," or similar expressions, or by express or implied discussions regarding potential new products, potential new indications for existing products, or regarding potential future revenues from any such products; potential shareholder returns or credit ratings; or regarding the potential outcome of the announced review of options being undertaken to maximize shareholder value of the Alcon Division; or regarding the potential financial or other impact on Novartis or any of our divisions of the significant reorganizations of recent years, including the creation of the Pharmaceuticals and Oncology business units to form the Innovative Medicines Division, the creation of the Global Drug Development organization and Novartis Operations (including Novartis Technical Operations and Novartis Business Services), the transfer of the Ophthalmic Pharmaceuticals products of our Alcon Division to the Innovative Medicines Division, the transfer of selected mature, non-promoted pharmaceutical products from the Innovative Medicines Division to the Sandoz Division, and the transactions with GSK, Lilly and CSL; or regarding the potential impact of the share buyback plan; or regarding potential future sales or earnings of the Novartis Group or any of its divisions; or by discussions of strategy, plans, expectations or intentions. You should not place undue reliance on these statements. Such forward looking statements are based on our current beliefs and expectations 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. There can be no guarantee that any new products will be approved for sale in any market, or that any new indications will be approved for any existing products in any market, or that any approvals which are obtained will be obtained at any particular time, or that any such products will achieve any particular revenue levels. Nor can there be any guarantee that the review of options being undertaken to maximize shareholder value of the Alcon Division will reach any particular results, or at any particular time. Neither can there be any guarantee that Novartis will be able to realize any of the potential strategic benefits, synergies or opportunities as a result of the significant reorganizations of recent years, including the creation of the Pharmaceuticals and Oncology business units to form the Innovative Medicines Division, the creation of the Global Drug Development organization and Novartis Operations (including Novartis Technical Operations and Novartis Business Services), the transfer of the Ophthalmic Pharmaceuticals products of our Alcon Division to the Innovative Medicines Division, the transfer of selected mature, non-promoted pharmaceutical products from the Innovative Medicines Division to the Sandoz Division, and the transactions with GSK, Lilly and CSL. Neither can there be any guarantee that shareholders will achieve any particular level of shareholder returns. Nor can there be any guarantee that the Group, or any of its divisions, will be commercially successful in the future, or achieve any particular credit rating or financial results. In particular, our expectations could be affected by, among other things: regulatory actions or delays or government regulation generally; the potential that the strategic benefits, synergies or opportunities expected from the significant reorganizations of recent years, including the creation of the Pharmaceuticals and Oncology business units to form the Innovative Medicines Division, the creation of the Global Drug Development organization and Novartis Operations (including Novartis Technical Operations and Novartis Business Services), the transfer of the Ophthalmic Pharmaceuticals products of our Alcon Division to the Innovative Medicines Division, the transfer of selected mature, non-promoted pharmaceutical products from the Innovative Medicines Division to the Sandoz Division, and the transactions with GSK, Lilly and CSL may not be realized or may take longer to realize than expected; the inherent uncertainties involved in predicting shareholder returns or credit ratings; 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 which commenced in prior years and will continue this year; safety, quality or manufacturing issues; global trends toward health care cost containment, including government, payor and general public pricing and reimbursement pressures; the particular prescribing preferences of physicians and patients; uncertainties regarding actual or potential legal proceedings, including, among others, actual or potential product liability litigation, litigation and investigations regarding sales and marketing practices, intellectual property disputes and government investigations generally; general economic and industry conditions, including uncertainties regarding the effects of the persistently weak economic and financial environment in many countries; uncertainties regarding future global exchange rates; uncertainties regarding future demand for our products; and 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.

About Novartis
Novartis provides innovative healthcare solutions that address the evolving needs of patients and societies. Headquartered in Basel, Switzerland, Novartis offers a diversified portfolio to best meet these needs: innovative medicines, cost-saving generic and biosimilar pharmaceuticals and eye care. Novartis has leading positions globally in each of these areas. In 2016, the Group achieved net sales of USD 48.5 billion, while R&D throughout the Group amounted to approximately USD 9.0 billion. Novartis Group companies employ approximately 119,000 full-time-equivalent associates. Novartis products are sold in approximately 155 countries around the world. For more information, please visit http://www.novartis.com.

Important dates
October 24, 2017 Third quarter results 2017