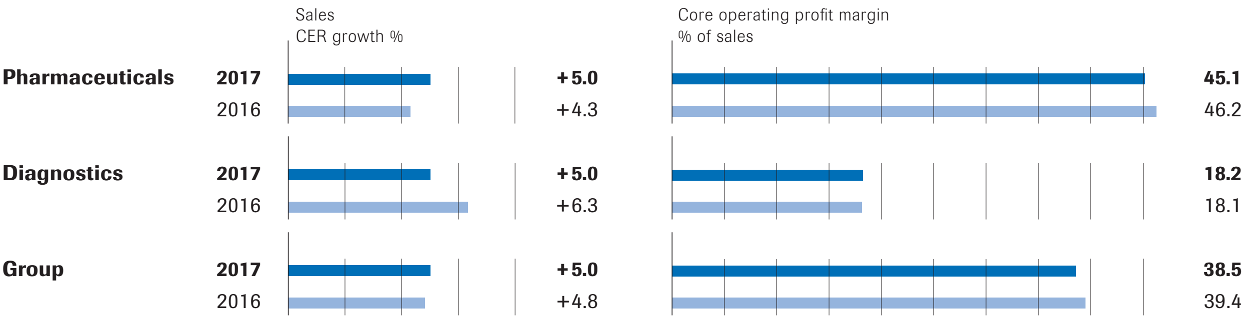
Half-Year Report 2017

Finance in brief

Key interim results



	Six months ended 30 June 2017 (CHF m)	2016 (CHF m)	% change (CHF)	(CER)	% of sales 2017	2016
IFRS results						
Sales	26,344	25,022	+5	+5		
Operating profit	7,795	8,142	–4	–4	29.6	32.5
Net income	5,577	5,467	+2	+2	21.2	21.8
Net income attributable to Roche shareholders	5,477	5,378	+2	+2	20.8	21.5
Diluted EPS (CHF)	6.37	6.24	+2	+2		
Core results						
Research and development	5,025	4,780	+5	+5	19.1	19.1
Core operating profit	10,135	9,854	+3	+3	38.5	39.4
Core EPS (CHF)	8.23	7.74	+6	+6		
Free cash flow						
Operating free cash flow	7,589	5,487	+38	+37	28.8	21.9
Free cash flow	5,605	2,849	+97	+95	21.3	11.4

	30 June 2017 (CHF m)	31 December 2016 (CHF m)	% change (CHF)	% change (CER)
Net debt	(14,180)	(13,248)	+7	+15
Capitalisation	46,394	48,757	–5	–2
– Debt	21,115	22,355	–6	–1
– Equity	25,279	26,402	–4	–2

CER (Constant Exchange Rates): The percentage changes at Constant Exchange Rates are calculated using simulations by reconsolidating both the 2017 and 2016 results at constant exchange rates (the average rates for the year ended 31 December 2016).

Core results and Core EPS (earnings per share): These exclude non-core items such as global restructuring plans and amortisation and impairment of goodwill and intangible assets. This allows an assessment of both the actual results and the underlying performance of the business. A full income statement for the Group and the operating results of the divisions are shown on both an IFRS and core basis. The core concept is fully described on pages 64–67 and reconciliations between the IFRS and core results are given there.

Free cash flow is used to assess the Group's ability to generate the cash required to conduct and maintain its operations. It also indicates the Group's ability to generate cash to finance dividend payments, repay debt and to undertake merger and acquisition activities. The free cash flow concept is used in the internal management of the business. The free cash flow concept is fully described on pages 67–69 and reconciliations between the IFRS cash flow and free cash flow are given there.

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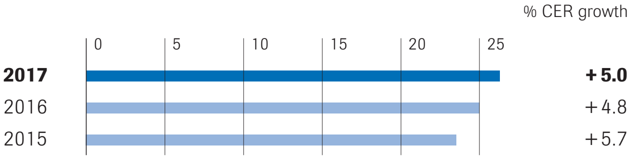
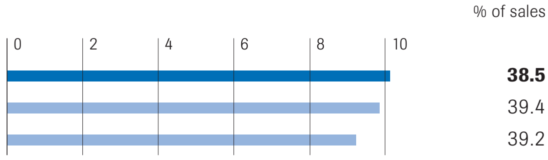
Financial Review

Group results

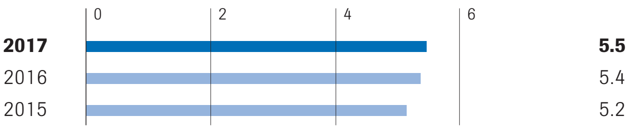
Sales in billions of CHF



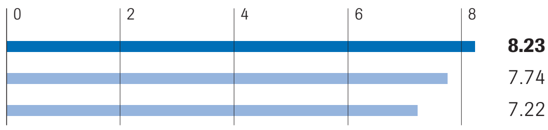
Core operating profit in billions of CHF



Net income attributable to Roche shareholders in billions of CHF



Core EPS in CHF



The Roche Group's results for the first half of 2017 showed sales growth of 5% at constant exchange rates (CER), with core operating profit growing at 3% and Core EPS growing at 6%. The sales growth was driven by the recently launched Pharmaceuticals products Tecentriq and Ocrevus, and by the immunodiagnostics business in the Diagnostics Division. The Group improved profitability while supporting the development and launch of new products. Operating free cash flow was CHF 7.6 billion, an increase of 37%, due to the cash generated from the business coupled with lower increases in net working capital.

Sales in the Pharmaceuticals Division rose by 5% to CHF 20.5 billion with Tecentriq, Ocrevus and Alecensa contributing CHF 0.5 billion of new sales, representing around half of the division's growth. Sales in immunology grew, with Xolair and Actemra/RoActemra increasing by 17% and 13% respectively. In oncology HER2 franchise sales increased by 6% to CHF 5.0 billion, led by Perjeta. MabThera/Rituxan sales were CHF 3.8 billion, a growth of 3%. Interim sales of Avastin were CHF 3.4 billion, a 1% decline due to competitive pressure. Sales of Tamiflu declined following patent expiry in the US. Diagnostics Division sales grew by 5%, with the major growth area being Centralised and Point of Care Solutions where sales increased by 8% led by its immunodiagnostics business.

Core operating profit increased by 3% in the Pharmaceuticals Division and by 5% in the Diagnostics Division. For Pharmaceuticals, marketing and distribution costs grew by 2% due to the launch of new products, notably Tecentriq and Ocrevus. In research and development there were continued investments, especially in the oncology area. In the Diagnostics Division, research and development decreased due to lower spending in Molecular Diagnostics projects. The operating profit growth rates of both divisions were impacted by the base effect of income in 2016 from changes to the Group's Swiss pension plans.

Operating free cash flow was CHF 7.6 billion, an increase of CHF 2.1 billion or 37% at CER. This was due to the high cash generation of the business, with sales growth exceeding the increases in cash expenses. There was also a lower increase in net working capital compared to the first half of 2016, with inventory levels being broadly unchanged compared to the build-up in early 2016. The free cash flow was CHF 5.6 billion, an increase of CHF 2.8 billion, due to the higher operating free cash flow and lower net cash outflows from treasury activities, including lower interest payments.

Net income increased by 2% at CER on an IFRS basis and by 7% on a core basis. The net financial expenses were lower due to lower interest expenses, higher net income from sales of equity securities and the base effect of losses on bond redemption in 2016. In addition to the items described above in the core results, the IFRS results include intangible asset impairment charges totalling CHF 1.5 billion, notably CHF 1.0 billion for the partial impairment of the Esbriet product intangible following from lower-than-expected sales of Esbriet in the first half of 2017. This was offset by income of CHF 0.2 billion from the reversal of some contingent consideration arrangements and CHF 0.2 billion of income from the release of legal provisions. Core EPS increased by 6% at CER.

In the first half of 2017 compared to the first half of 2016, the Swiss franc was weaker against several major currencies, in particular the US dollar, but was stronger against the euro and other European currencies. The net impact on the results expressed in Swiss francs compared to constant exchange rates was negligible.

Income statement

	Six months ended 30 June 2017 (CHF m)	2016 (CHF m)	% change (CHF)	% change (CER)
IFRS results				
Sales	26,344	25,022	+5	+5
Royalties and other operating income	1,204	986	+22	+21
Cost of sales	(8,752)	(7,578)	+15	+14
Marketing and distribution	(4,493)	(4,362)	+3	+3
Research and development	(5,605)	(5,297)	+6	+6
General and administration	(903)	(629)	+44	+44
Operating profit	**7,795**	**8,142**	**–4**	**–4**
Financing costs	(391)	(600)	–35	–35
Other financial income (expense)	59	(23)	–	–
Profit before taxes	**7,463**	**7,519**	**–1**	**–1**
Income taxes	(1,886)	(2,052)	–8	–8
Net income	**5,577**	**5,467**	**+2**	**+2**
Attributable to				
– Roche shareholders	5,477	5,378	+2	+2
– Non-controlling interests	100	89	+12	+12
EPS – Basic (CHF)	6.42	6.31	+2	+2
EPS – Diluted (CHF)	6.37	6.24	+2	+2
Core results [1]				
Sales	26,344	25,022	+5	+5
Royalties and other operating income	1,204	986	+22	+21
Cost of sales	(6,829)	(6,428)	+6	+5
Marketing and distribution	(4,444)	(4,309)	+3	+3
Research and development	(5,025)	(4,780)	+5	+5
General and administration	(1,115)	(637)	+75	+75
Operating profit	**10,135**	**9,854**	**+3**	**+3**
Financing costs	(386)	(573)	–33	–33
Other financial income (expense)	52	(23)	–	–
Profit before taxes	**9,801**	**9,258**	**+6**	**+6**
Income taxes	(2,614)	(2,497)	+5	+4
Net income	**7,187**	**6,761**	**+6**	**+7**
Attributable to				
– Roche shareholders	7,077	6,663	+6	+6
– Non-controlling interests	110	98	+12	+12
Core EPS – Basic (CHF)	8.30	7.82	+6	+6
Core EPS – Diluted (CHF)	8.23	7.74	+6	+6

1) See pages 64–67 for definition of core results and Core EPS.

Sales

In the first half of 2017 sales increased by 5% at CER (+5% in CHF; +4% in USD) to CHF 26.3 billion. Sales in the Pharmaceuticals Division rose 5% to CHF 20.5 billion, driven by growth of CHF 0.5 billion for the recently launched products Tecentriq, Ocrevus and Alecensa, as well as by Perjeta, MabThera/Rituxan, Xolair and Actemra/RoActemra. Sales grew in the US and in the International region where the HER2 franchise grew by 7% and 6% respectively. MabThera/Rituxan sales were CHF 3.8 billion, a growth of 3%. The first biosimilar versions of MabThera/Rituxan were launched in several EU markets in the first half of 2017 but to date these have had a limited impact on sales. Interim sales of Avastin were CHF 3.4 billion but declined relative to 2016 due to competitive pressure. Sales of Tamiflu fell due to competition from generics in the US market. The Diagnostics Division recorded sales of CHF 5.8 billion, an increase of 5% at CER. The major growth area was Centralised and Point of Care Solutions, which represents more than half of the division's sales and which grew by 8%, led by the immunodiagnostics business. Diabetes Care sales decreased by 4% driven by continuing challenging market conditions in the US.

Divisional operating results for the six months ended 30 June 2017

	Pharmaceuticals (CHF m)	Diagnostics (CHF m)	Corporate (CHF m)	Group (CHF m)
Sales	20,521	5,823	–	26,344
Core operating profit	9,257	1,059	(181)	10,135
– margin, % of sales	45.1	18.2	–	38.5
Operating profit	7,213	780	(198)	7,795
– margin, % of sales	35.1	13.4	–	29.6
Operating free cash flow	7,560	260	(231)	7,589
– margin, % of sales	36.8	4.5	–	28.8

Divisional operating results – Development of results compared to the six months ended 30 June 2016

	Pharmaceuticals	Diagnostics	Corporate	Group
Sales				
– % increase at CER	+5	+5	–	+5
Core operating profit				
– % increase at CER	+3	+5	+32	+3
– margin: percentage point change	–0.9	+0.1	–	–0.8
Operating profit				
– % increase at CER	–5	+18	+30	–4
– margin: percentage point change	–3.8	+1.5	–	–2.8
Operating free cash flow				
– % increase at CER	+26	–	–13	+37
– margin: percentage point change	+6.2	+7.8	–	+6.7

Core operating results

Core operating profit for the group increased by 3% at CER, with Pharmaceuticals up by 3% and Diagnostics by 5%. The first half of 2016 included income of CHF 426 million from changes to the Group's pension plans in Switzerland (CHF 341 million, after tax). Excluding this item, core operating profit for the Group grew by 7% compared to the first half of 2016, with growth of 7% for the Pharmaceuticals Division and 14% for the Diagnostics Division.

Pharmaceuticals Division. The division's core operating profit increased by 3% at CER, behind the 5% sales increase. There was increased expenditure on research and development, as well as launch expenses for Tecentriq and Ocrevus and other new products. Gains on product disposals were CHF 231 million compared to CHF 50 million in the first half of 2016. The income from the pension plan changes in the first half of 2016 was CHF 310 million.

Diagnostics Division. Core operating profit increased by 5% at CER, in line with the 5% increase in sales. Research and development decreased due to lower spending in Molecular Diagnostics projects, which largely compensated for the base effect of the 2016 pension plan changes income of CHF 77 million.

Acquisitions

During the first half of 2017 the Group acquired a 100% controlling interest in mySugr GmbH, one of the leading mobile diabetes platforms in the market. The total cash consideration was CHF 70 million.

During the six months ended 30 June 2017 there was CHF 196 million of non-core income from contingent consideration provisions, mainly due to the partial reversal of the provisions related to the Dutalys and Trophos acquisitions. There were impairment charges of CHF 269 million related to these acquisitions, as noted below in the 'Impairment of goodwill and intangible assets' commentary.

During the first half of 2016 there was CHF 147 million of non-core income from contingent consideration provisions and related intangible asset impairment charges of CHF 187 million. Non-core costs in 2016 also included expenses of CHF 166 million from the release of the Esbriet inventory fair value adjustment, which was fully unwound by mid-2016.

See also Notes 8 and 16 to the Interim Financial Statements.

Global restructuring plans

During the first half of 2017 the Group continued with the implementation of several major global restructuring plans initiated in prior years, notably the strategic realignment of the Pharmaceuticals Division's manufacturing network.

Global restructuring plans: costs incurred for the six months ended 30 June 2017 in millions of CHF

	Diagnostics 1)	Site consolidation 2)	Other plans 3)	Total
Global restructuring costs				
– Employee-related costs	53	(68)	7	(8)
– Site closure costs	5	157	0	162
– Divestments of products and businesses	0	94	0	94
– Other reorganisation expenses	43	3	27	73
Total costs	**101**	**186**	**34**	**321**

1) Includes strategy plans in the Diagnostics Division and the Diabetes Care 'Autonomy and Speed' plan.
2) Includes the Pharmaceuticals Division's strategic realignment of its manufacturing network.
3) Includes plans for outsourcing of IT and other functions.

Diagnostics Division. Strategy plans in the Diagnostics Division that were launched in 2016 incurred costs of CHF 62 million mainly for employee-related costs. Spending on other smaller plans within the division was CHF 39 million and included costs related to the 'Autonomy and Speed' initiative in Diabetes Care and certain IT projects.

Site consolidation. On 12 November 2015 the Pharmaceuticals Division announced a strategic realignment of its manufacturing network including exiting from the manufacturing sites at Clarecastle, Ireland; Leganés, Spain; Segrate, Italy; and Florence, US. Costs from this plan in the first half of 2017 were CHF 176 million, of which CHF 126 million were non-cash write-downs and accelerated depreciation of property, plant and equipment. Some employee related provisions were reversed as the most likely scenario for one site was changed from closure to divestment. The divestment of the Roche Carolina subsidiary at the Florence site in the US has been completed and the divestment accounting includes CHF 91 million of accumulated currency translation losses on consolidation that were transferred to the income statement. Roche Carolina had a net positive asset position of around USD 0.5 billion since it was established in the 1990s and that value, expressed in Swiss francs, has decreased over the last twenty years.

Other global restructuring plans. The major item was CHF 30 million for outsourcing of IT and other functions to shared service centres and external providers.

Impairment of goodwill and intangible assets

There were impairment charges of CHF 1,475 million in the Pharmaceuticals Division. The largest item was a charge of CHF 978 million for the partial impairment of the Esbriet product intangible acquired as part of the InterMune acquisition. The main factor leading to this was lower-than-expected sales of Esbriet in the first half of 2017 relative to the most recent long-term forecasts. The next long-term forecasts will be prepared in the second half of 2017 and, depending upon any revised estimates for Esbriet in those forecasts, the intangible asset may require further testing for impairment or reversal of impairment in the 2017 Annual Financial Statements.

In addition there was an impairment of CHF 195 million relating to a compound acquired as part of the Trophos acquisition arising from the launch of a competitor product and an impairment of CHF 74 million due to the decision to stop development of one compound acquired as part of the Dutalys acquisition. There was a related decrease in the contingent consideration provisions, mainly from the Trophos and Dutalys acquisitions, which contributed to the income of CHF 196 million noted above in the 'Acquisitions' commentary. Other impairments in the Pharmaceuticals Division totalled CHF 228 million. There were no impairments in the Diagnostics Division. Further details are given in Notes 8 and 16 to the Interim Financial Statements.

Pensions and other post-employment benefits

During the first half of 2016 operating income of CHF 426 million was recorded for past service costs from changes to the Group's pension plans in Switzerland that were announced in June 2016. This represented the one-time impact of the adjustment of the pension liability for the plan changes. Of this amount, CHF 310 million was recorded in the Pharmaceuticals Division, CHF 77 million in the Diagnostics Division and CHF 39 million in Corporate. The after-tax impact was CHF 341 million. This matter has a base effect on the growth rates shown in the 2017 results.

Further information on the Group's pensions and other post-employment benefits is given in the commentary on page 31 below, in Note 11 to the Interim Financial Statements and in Note 25 to the 2016 Annual Financial Statements.

Legal and environmental cases

Based on the development of the various litigations, notably the Accutane case, some of the provisions previously held were released, resulting in income of CHF 204 million for the six months ended 30 June 2017. Further details are given in Note 9 to the Interim Financial Statements.

Treasury and taxation

Core financing costs were CHF 0.4 billion, a decrease of 33%, due to lower interest expenses and a base effect from CHF 100 million of losses on bond redemption in 2016. Core other financial income was CHF 52 million, including net income from equity securities of CHF 89 million, partly offset by net foreign exchange losses of CHF 55 million. Core tax expenses increased by 4% to CHF 2.6 billion and the Group's effective core tax rate decreased to 26.7% compared to 27.0% in the first half of 2016. This was largely due to the deferred tax impact arising from tax rate changes partially offset by the increased profit contribution coming from tax jurisdictions with tax rates higher than the average Group tax rate, notably the US.

Net income and Earnings per share

IFRS net income and diluted EPS increased by 2% in Swiss franc terms and at CER. Core net income increased by 7% at CER and Core EPS increased by 6% at CER. The core basis excludes non-core items such as global restructuring costs, amortisation and impairment of goodwill and intangible assets, and alliance and business combination costs. Core EPS increased by 12% when excluding the base impact from the changes to the Group's Swiss pension plans in 2016.

Net income

	Six months ended 30 June 2017 (CHF m)	2016 (CHF m)	% change (CHF)	% change (CER)
IFRS net income	**5,577**	**5,467**	**+2**	**+2**
Reconciling items (net of tax)				
– Global restructuring	282	317	–11	–10
– Intangible asset amortisation	656	597	+10	+9
– Goodwill and intangible asset impairment	972	284	+242	+240
– Alliances and business combinations	(199)	4	–	–
– Legal and environmental cases	(104)	21	–	–
– Normalisation of equity compensation plan tax benefit	3	71	–96	–95
Core net income	**7,187**	**6,761**	**+6**	**+7**

Supplementary net income and EPS information is given on pages 64 to 67. This includes calculations of Core EPS and reconciles the core results to the Group's published IFRS results.

Financial position

	30 June 2017 (CHF m)	31 December 2016 (CHF m)	% change (CHF)	% change (CER)
Pharmaceuticals				
Net working capital	5,470	4,582	+19	+22
Long-term net operating assets	24,021	26,174	–8	–4
Diagnostics				
Net working capital	3,308	2,796	+18	+21
Long-term net operating assets	13,116	13,392	–2	+1
Corporate				
Net working capital	(87)	(104)	–16	–16
Long-term net operating assets	(178)	(213)	–16	–15
Net operating assets	**45,650**	**46,627**	**–2**	**+2**
Net debt	(14,180)	(13,248)	+7	+15
Pensions	(6,144)	(6,940)	–11	–11
Income taxes	(599)	(390)	+54	+113
Other non-operating assets, net	552	353	+56	+54
Total net assets	**25,279**	**26,402**	**–4**	**–2**

Compared to the start of the year the Swiss franc appreciated significantly against the US dollar. This had a negative translation impact on net operating assets, which was offset at Group level by the natural hedge from the Group's US dollar-denominated debt. The appreciation of the Swiss franc against the Japanese yen was partly offset by a depreciation against the euro which resulted in a minor negative translation impact on balance sheet positions. The exchange rates used are given on page 26.

In the Pharmaceuticals Division net working capital increased by 22% at CER. There was an increase in trade receivables due to high sales in the second quarter of 2017 and extended payment terms for certain new products. Inventory level decreases were driven by the same sales effect, with stock on-hand being relatively low at the period end, and also by lower production during 2017 to date. Payables decreased since the end of 2016 due to the settlement of year-end accounts payable and accruals, including employee benefits. Long-term net operating assets were lower due to the CHF 1.5 billion of impairments of intangible assets. In the Diagnostics Division the increase in net working capital of 21% at CER was driven by an increase in inventories and a decrease in trade payables. The increase in inventories was due to high demand in emerging markets and the preparation for new launches. Payables decreased since the end of 2016 for similar reasons as described for the Pharmaceuticals Division. Long-term net operating assets were relatively unchanged in total.

The increase in net debt was due to dividend payments of CHF 7.1 billion, partly offset by free cash flow of CHF 5.6 billion. The net pension liability decreased by CHF 0.8 billion to CHF 6.1 billion due to improved asset performance in the Group's Swiss plans and increases in discount rates. The net tax liabilities increased mainly due to tax expenses exceeding taxes paid.

Free cash flow

	Six months ended 30 June 2017 (CHF m)	2016 (CHF m)	% change (CHF)	% change (CER)
Pharmaceuticals	7,560	5,937	+27	+26
Diagnostics	260	(183)	–	–
Corporate	(231)	(267)	–13	–13
Operating free cash flow	**7,589**	**5,487**	**+38**	**+37**
Treasury activities	(351)	(890)	–61	–60
Taxes paid	(1,633)	(1,748)	–7	–8
Free cash flow	**5,605**	**2,849**	**+97**	**+95**

See pages 67–69 for definition of free cash flow.

The Group's operating free cash flow for the first six months of 2017 was CHF 7.6 billion, an increase of CHF 2.1 billion or 37% at CER, due to two major factors. Firstly, the cash generation of the business increased due to improved operating results with sales growth exceeding cash operating expenses. Secondly, the increase in net working capital was lower than in the comparative period. While there was an increase of trade receivables in both periods, the build-up in inventories in the first half of 2016, partly driven by launch preparations was not repeated in the first half of 2017. Capital expenditure and purchases of intangible assets were also both lower than in the comparative period of 2016. The free cash flow in the first half of 2017 was CHF 5.6 billion, an increase of CHF 2.8 billion compared to the first half of 2016, due to the higher operating free cash flow and lower net cash outflows from treasury activities, notably lower interest payments.

Pharmaceuticals operating results

Pharmaceuticals Division interim operating results

	2017 (CHF m)	2016 (CHF m)	% change (CHF)	% change (CER)
IFRS results				
Sales	20,521	19,460	+5	+5
Royalties and other operating income	1,115	926	+20	+19
Cost of sales	(5,917)	(4,809)	+23	+21
Marketing and distribution	(3,116)	(3,048)	+2	+2
Research and development	(4,943)	(4,619)	+7	+7
General and administration	(447)	(279)	+60	+60
Operating profit	**7,213**	**7,631**	**–5**	**–5**
– margin, % of sales	35.1	39.2	–4.1	–3.8
Core results [1]				
Sales	20,521	19,460	+5	+5
Royalties and other operating income	1,115	926	+20	+19
Cost of sales	(4,180)	(3,868)	+8	+6
Marketing and distribution	(3,107)	(3,039)	+2	+2
Research and development	(4,383)	(4,129)	+6	+6
General and administration	(709)	(366)	+94	+94
Core operating profit	**9,257**	**8,984**	**+3**	**+3**
– margin, % of sales	45.1	46.2	–1.1	–0.9
Financial position				
Net working capital	5,470	4,582	+19	+22
Long-term net operating assets	24,021	26,174	–8	–4
Net operating assets	**29,491**	**30,756**	**–4**	**0**
Free cash flow [2]				
Operating free cash flow	7,560	5,937	+27	+26
– margin, % of sales	36.8	30.5	+6.3	+6.2

1) See pages 64–67 for definition of core results.
2) See pages 67–69 for definition of free cash flow.

Sales overview

Pharmaceuticals Division – Interim sales by therapeutic area

Therapeutic area	2017 (CHF m)	2016 (CHF m)	% change (CER)	% of sales (2017)	% of sales (2016)
Oncology	12,995	12,418	+4	63	62
Immunology	3,739	3,414	+9	18	18
Infectious diseases	779	935	–17	4	5
Ophthalmology	727	704	+2	4	4
Neuroscience	526	325	+60	3	2
Other therapeutic areas	1,755	1,664	+4	8	9
Total sales	**20,521**	**19,460**	**+5**	**100**	**100**

Pharmaceuticals Division sales increased by 5% at CER to CHF 20.5 billion with the growth led by oncology and immunology products. Sales growth was primarily driven by the recently launched medicines Tecentriq, Ocrevus and Alecensa which contributed CHF 0.5 billion of new sales; this represents approximately half of the division's growth. Other significant growth drivers were Perjeta, MabThera/Rituxan, Xolair and Actemra/RoActemra. Sales of MabThera/Rituxan, Herceptin and Avastin were over CHF 3.0 billion each. MabThera/Rituxan reported growth in both oncology and immunology. Herceptin sales were higher in particular in the US. Avastin sales declined by 1% under competitive pressure and sales of Tamiflu declined due to competition from generics in the US market. The first biosimilar versions of MabThera/Rituxan were launched in several EU markets in the first half of 2017 although to date these have had a limited impact on sales.

The growth of Tecentriq sales was driven mainly by uptake in the US in metastatic bladder cancer and in metastatic non-small cell lung cancer. The HER2 franchise continued to grow, increasing by 6% in the first half of 2017. A main driver of this growth was increased global demand for Perjeta in the neoadjuvant and metastatic settings. Ocrevus was launched in the US in April 2017 and has had a good uptake. Sales increases in immunology came from Xolair in the US and increasing use of Actemra/RoActemra in the US and in Europe. Alecensa sales were notably higher in the US and in Japan.

Product sales

Pharmaceuticals Division – Interim sales

	2017 (CHF m)	2016 (CHF m)	% change (CER)	% of sales (2017)	% of sales (2016)
Oncology					
Herceptin	3,542	3,434	+3	17	18
Avastin	3,405	3,430	–1	17	18
MabThera/Rituxan [1]	3,048	2,952	+3	15	13
Perjeta	1,065	906	+17	5	5
Kadcyla	443	408	+9	2	2
Tarceva	436	520	–17	2	3
Tecentriq	237	19	Over +500	1	0
Xeloda	229	230	–1	1	1
Alecensa	148	72	+103	1	0
Gazyva/Gazyvaro	133	91	+44	1	0
Others	309	356	–13	1	2
Total Oncology	**12,995**	**12,418**	**+4**	**63**	**62**
Immunology					
Actemra/RoActemra	922	814	+13	4	4
Xolair	866	731	+17	4	4
MabThera/Rituxan [1]	789	750	+7	4	4
Esbriet	418	358	+16	2	2
Pulmozyme	352	337	+4	2	2
CellCept	346	373	–7	2	2
Others	46	51	–13	0	0
Total Immunology	**3,739**	**3,414**	**+9**	**18**	**18**
Infectious diseases					
Tamiflu	364	410	–12	2	2
Rocephin	143	157	–7	1	1
Valcyte/Cymevene	127	160	–21	1	1
Pegasys	92	143	–35	0	1
Others	53	65	–22	0	0
Total Infectious diseases	**779**	**935**	**–17**	**4**	**5**
Ophthalmology					
Lucentis	727	704	+2	4	4
Total Ophthalmology	**727**	**704**	**+2**	**4**	**4**
Neuroscience					
Ocrevus	192	0	–	1	0
Madopar	163	140	+14	1	1
Others	171	185	–8	1	1
Total Neuroscience	**526**	**325**	**+60**	**3**	**2**
Other therapeutic areas					
Activase/TNKase	613	537	+13	3	3
Mircera	236	241	–3	1	1
NeoRecormon/Epogin	156	161	–3	1	1
Others	750	725	+3	3	4
Total other therapeutic areas	**1,755**	**1,664**	**+4**	**8**	**9**
Total sales	**20,521**	**19,460**	**+5**	**100**	**100**

1) Total MabThera/Rituxan sales of CHF 3,837 million (2016: CHF 3,702 million) split between oncology and immunology franchises.

HER2 franchise (Herceptin, Perjeta and Kadcyla). For HER2-positive breast cancer and HER2-positive metastatic gastric cancer (Herceptin only). The HER2 franchise grew 6% overall to CHF 5.0 billion. Herceptin sales were higher by 3%, driven by a 6% growth in the US partly as a result of the phasing of wholesaler purchases due to the launch of a new formulation. There was also growing demand for Herceptin in the International region, particularly in Brazil and China. Perjeta sales grew in all regions following increased demand in the neoadjuvant and metastatic settings, notably in Europe (+21%), the US (+10%) and the International region (+44%). Kadcyla sales increased, especially in the International region (+47%).

MabThera/Rituxan. For non-Hodgkin lymphoma (NHL), chronic lymphocytic leukemia (CLL), follicular lymphoma (FL) and rheumatoid arthritis (RA) as well as certain types of ANCA-associated vasculitis. Sales were 3% higher, driven by growth in the oncology as well as in the immunology segment. In the US, where MabThera/Rituxan is widely used across nearly all approved indications, sales increased by 5%. Sales were also higher in the International region, particularly in China (+10%) with improved reimbursement access. Sales in Europe declined by 1% driven by a price cut in France, with the launch of the first biosimilar versions in several EU markets having so far only a limited impact on sales.

Avastin. For advanced colorectal, breast, lung, kidney, cervical and ovarian cancer, and relapsed glioblastoma (a type of brain tumour). Sales were CHF 3.4 billion, a significant amount which was nevertheless below prior year by 1%. In the US, where Avastin is being broadly used in its approved indications, sales declined by 3% due to competition from immunotherapy medicines in lung cancer. In Europe sales declined 5%, mainly driven by the delisting for breast cancer in France. Sales grew in the International region (+11%), in particular in China where sales increased due to broader market penetration in the lung and colorectal cancer setting. In Japan sales decreased by 3% due to the negative impact from biannual government price cuts in 2016.

Actemra/RoActemra. For rheumatoid arthritis (RA), forms of juvenile idiopathic arthritis and giant cell arteritis (US only). Sales increased by 13%, with growth in all regions, notably in the US (+16%) and Europe (+15%). The growth was driven by continued uptake of the subcutaneous (SC) formulation. In Japan, sales increased by 7% due to steady growth of the subcutaneous formulation.

Xolair. For moderate to severe persistent allergic asthma (AA) and chronic idiopathic urticaria (CIU). Sales grew by 17%, driven by volume growth across both indications in the US.

Lucentis. For wet age-related macular degeneration (wAMD), macular edema following retinal vein occlusion (RVO) and diabetic macular edema (DME). Sales grew 2% in the US driven by the launch of prefilled syringes and overall market growth.

Activase/TNKase. For acute ischemic stroke (AIS) and acute myocardial infarction (AMI). Sales were 13% higher, led by the US, and mainly driven by broader use in hospitals and a higher number of patients being treated.

Other products. Tecentriq and Ocrevus sales grew due to rapid uptake in the US. Sales of Alecensa increased due to growing demand in particular in the US and in Japan. These three newly launched products contributed half of the division's sales growth.

Pharmaceuticals Division – Interim sales by region

Region	2017 (CHF m)	2016 (CHF m)	% change (CER)	% of sales (2017)	% of sales (2016)
United States	10,185	9,273	+8	50	48
Europe	4,539	4,639	0	22	24
Japan	1,771	1,756	0	9	9
International	4,026	3,792	+5	19	19
– *EEMEA* [1]	*756*	*851*	*–9*	*4*	*5*
– *Latin America*	*1,089*	*892*	*+14*	*5*	*5*
– *Asia-Pacific*	*1,734*	*1,627*	*+6*	*8*	*7*
– *Other regions*	*447*	*422*	*+5*	*2*	*2*
Total sales	**20,521**	**19,460**	**+5**	**100**	**100**

1) Eastern Europe, Middle East and Africa.

United States. Sales grew by 8% led by the uptake of Tecentriq and Ocrevus which were recently launched. Xolair sales increased due to growing demand (+17%). MabThera/Rituxan sales also continued to grow (+5%). Tamiflu sales declined mainly due to competition from generics, and sales of Avastin fell by 3% due to competition from immunotherapy medicines. Mandatory discounts to hospitals under the 340B Drug Discount Program increased, although at a lower rate than in 2016. This was mainly due to higher sales of oncology products.

Europe. Sales remained stable overall. The HER2 franchise continued to grow and was driven by Perjeta sales, especially in Spain, Italy and the UK. Actemra/RoActemra sales increased due to growing demand for the subcutaneous formulation. The decrease in Avastin sales was primarily the result from a delisting for breast cancer in France. The first biosimilar versions of MabThera/Rituxan have been launched in several EU markets so far in 2017 and the first Herceptin biosimilars could come to market in Europe later in 2017. The biosimilar impact on sales for the first half of 2017 was minor.

Japan. Sales were in line with the comparative period. There was sales growth for Alecensa (+42%), the osteoporosis medicine Edirol (+10%) and Actemra/RoActemra (+7%). This was offset by lower sales of Avastin (–3%), which were negatively affected by the biannual government price cuts in 2016.

International. Sales increased by 5% driven by the Latin America and Asia-Pacific subregions. Sales in Brazil increased, led by Herceptin, which saw higher demand coupled with some phasing effects from the timing of tenders. Sales in China grew due to additional reimbursement as well as broader market penetration for Avastin, Herceptin and MabThera/Rituxan. In Russia, sales were negatively affected by non-comparable biologics competition for Herceptin and Avastin.

Pharmaceuticals Division – Interim sales for E7 leading emerging markets

Country	2017 (CHF m)	2016 (CHF m)	% change (CER)	% of sales (2017)	% of sales (2016)
Brazil	511	335	+29	2	2
China	912	846	+11	4	4
India	34	43	–23	0	0
Mexico	129	132	+4	1	1
Russia	30	63	–60	0	0
South Korea	184	154	+14	1	1
Turkey	146	153	+17	1	1
Total sales	**1,946**	**1,726**	**+11**	**9**	**9**

Competition from generic medicines and biosimilars. The introduction of a generic, biosimilar or non-comparable biologic version of the same or a similar medicine typically results in a significant reduction in net sales for the relevant product, as other manufacturers typically offer their versions at lower prices.

2017 interim product sales affected by recent patent expiry

	2017 (CHF m)	2016 (CHF m)	% change (CER)	Comment
Pegasys	92	143	–35	US patent expiry in 2018, other major markets from 2017
Tamiflu	364	410	–12	Patent expiry in US and other major markets in 2016
Valcyte/Cymevene	127	160	–21	US patent expiry in 2015, other major markets from 2017

The intellectual property for biologics can involve multiple patents and patent timelines for each individual product and therefore it is more difficult to give an exact date for patent expiry for biologic medicines. The Group currently estimates that some basic, primary patents for its major biologic medicines will begin to expire as follows:

- MabThera/Rituxan: from around mid-2018 in the US.
- Herceptin: from around 2019 in the US.
- Avastin: from around 2020 in the US and from around 2020 in the EU.
- Subcutaneous formulations of MabThera/Rituxan and Herceptin: beyond 2025 (secondary patent rights).

The 'composition of matter' patents for MabThera/Rituxan and Herceptin in the EU have expired. The first biosimilar versions of MabThera/Rituxan were launched in several EU markets in the first half of 2017 although to date these have had a limited impact on sales. Based on publicly available information from competitor companies, the Group currently anticipates that first biosimilar versions of Herceptin could come to market in Europe during the second half of 2017. There are still many uncertainties surrounding when specific biosimilar versions of the Group's biologic medicines will be approved by the US Food and Drug Administration.

Operating results

Pharmaceuticals Division – Royalties and other operating income for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Royalty income	749	766	–4
Income from out-licensing agreements	45	40	+15
Income from disposal of products and other	321	120	+167
Total – IFRS and Core basis	**1,115**	**926**	**+19**

The increase of 19% at CER was due to income of CHF 231 million from product disposals, notably from sale of the worldwide rights for Dilatrend and Kytril (excluding Japan), compared to CHF 50 million in the first half of 2016. Royalty income declined by 4% mainly due to the expiration of the royalty-bearing Eylea patents, partly offset by a net increase in sales across the royalty portfolio.

Pharmaceuticals Division – Cost of sales for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Manufacturing cost of goods sold and period costs	(2,708)	(2,393)	+10
Royalty expenses	(338)	(402)	–16
Collaboration and profit-sharing agreements	(1,147)	(1,069)	+6
Impairment of property, plant and equipment	13	(4)	–
Cost of sales – Core basis	**(4,180)**	**(3,868)**	**+6**
Global restructuring plans	(81)	(121)	–32
Amortisation of intangible assets	(678)	(654)	+3
Impairment of intangible assets	(978)	0	–
Business combinations – inventory fair value adjustment	0	(166)	–100
Total – IFRS basis	**(5,917)**	**(4,809)**	**+21**

Core costs increased by 6% at CER. As a percentage of sales, cost of sales increased by 0.4 percentage points to 20.3%. Manufacturing cost of sales grew by 10%, ahead of the sales growth of 5%. The Pharmaceuticals Division has made considerable investments in its biologics manufacturing network in recent years and as these facilities come on-line, this leads to a certain increase in costs, especially during the ramp-up phases. Royalty expenses were 16% lower due to lower sales for certain products, notably for Tamiflu where there were lower sales in the US following patent expiry. Non-core costs include the amortisation of intangible assets, mainly related to the Esbriet product intangibles acquired in the InterMune acquisition of 2014. The 2017 results additionally include CHF 978 million of impairment of these Esbriet intangibles, due to the lower-than-expected sales of Esbriet in the first half of 2017 relative to the most recent long-term forecast. The 2016 results included the final fair value unwind adjustment of CHF 166 million for the acquired Esbriet inventories.

Pharmaceuticals Division – Marketing and distribution for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Marketing and distribution – Core basis	**(3,107)**	**(3,039)**	**+2**
Global restructuring plans	(6)	(8)	–15
Amortisation of intangible assets	(3)	(1)	+156
Total – IFRS basis	**(3,116)**	**(3,048)**	**+2**

Core costs increased by 2% at CER. As a percentage of sales, they decreased to 15.1% from 15.6% in the comparative period. Costs were incurred to ensure increased patient access and for the launches of Tecentriq, Ocrevus and other products.

Pharmaceuticals Division – Research and development for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Research and development – Core basis	**(4,383)**	**(4,129)**	**+6**
Global restructuring plans	1	(45)	–
Amortisation of intangible assets	(64)	(68)	–7
Impairment of intangible assets	(497)	(377)	+31
Total – IFRS basis	**(4,943)**	**(4,619)**	**+7**

Core costs increased by 6% at CER and, as a percentage of sales increased by 0.2 percentage points to 21.4%. The oncology franchise remained the primary area of research and development with Tecentriq and the cancer immunotherapy portfolio being a key driver. This also applies to the late-stage development spending. In early-stage research and development, oncology represents the main area, with immunology and neuroscience also being significant areas of spending. In addition, the Pharmaceuticals Division in-licensed pipeline compounds and technologies with a total value of CHF 260 million, which are capitalised as intangible assets. The impairment charges of CHF 497 million include an impairment of CHF 195 million of a compound acquired as part of the Trophos acquisition arising from the launch of a competitor product and an impairment of CHF 74 million due to the decision to stop development of one compound acquired as part of the Dutalys acquisition.

Pharmaceuticals Division – General and administration for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Administration	(577)	(556)	+3
Pensions – past service costs	0	311	–100
Business taxes and capital taxes	(169)	(164)	+3
Other general items	37	43	–24
General and administration – Core basis	**(709)**	**(366)**	**+94**
Global restructuring plans	(118)	(61)	+91
Alliances and business combinations	186	152	+22
Legal and environmental cases	194	(4)	–
Total – IFRS basis	**(447)**	**(279)**	**+60**

Core costs increased by 94% at CER and, as a percentage of sales, increased from 1.9% to 3.5% due to income from pension changes in the first half of 2016. Excluding this, core costs increased by 5%. The alliance and business combination income includes the reversal of the contingent consideration provisions for the Trophos and Dutalys acquisitions. Global restructuring costs primarily relate to the divestment of the Florence site in the US. Income of CHF 204 million arose from the release of legal provisions, based on the development of the various litigations, notably the Accutane case.

Roche Pharmaceuticals and Chugai subdivisional operating results

Pharmaceuticals subdivisional interim operating results in millions of CHF

	Roche Pharmaceuticals 2017	Roche Pharmaceuticals 2016	Chugai 2017	Chugai 2016	Pharmaceuticals Division 2017	Pharmaceuticals Division 2016
Sales						
– External customers	18,750	17,704	1,771	1,756	20,521	19,460
– Within division	686	719	326	329	1,012	1,048
Core operating profit	8,928	8,552	436	380	9,257	8,984
– margin, % of sales to external customers	47.6	48.3	24.6	21.6	45.1	46.2
Operating profit	6,901	7,205	419	374	7,213	7,631
– margin, % of sales to external customers	36.8	40.7	23.7	21.3	35.1	39.2
Operating free cash flow	7,203	5,874	357	63	7,560	5,937
– margin, % of sales to external customers	38.4	33.2	20.2	3.6	36.8	30.5

Pharmaceuticals Division total core operating profit and operating profit both include the elimination of minus CHF 107 million of unrealised intercompany gains between Roche Pharmaceuticals and Chugai (2016: plus CHF 52 million).

The increase in the exchange rate of the Japanese yen has a positive impact of approximately 1% on the Chugai results when expressed in Swiss francs. Sales by Chugai to external customers were in line with the previous year in Japanese yen, while sales within the division decreased by 5% in Japanese yen. Chugai core operating profit increased by 14% due to higher gross profit on sales to external customers and higher milestone and product divestment income. This was partially offset by higher research and development costs and lower gross profit on sales within the division. Operating free cash flow at Chugai increased by CHF 294 million, due to the timing of settlements of intercompany payables with Roche Pharmaceuticals, a lower increase of inventories and lower capital expenditure.

Financial position

Pharmaceuticals Division – Net operating assets

	30 June 2017 (CHF m)	31 Dec. 2016 (CHF m)	% change (CHF)	% change (CER)	Movement: Transactions (CHF m)	Movement: CTA (CHF m)
Trade receivables	6,397	5,851	+9	+13	753	(207)
Inventories	5,289	5,634	–6	–4	(219)	(126)
Trade payables	(1,330)	(1,645)	–19	–17	271	44
Net trade working capital	**10,356**	**9,840**	**+5**	**+8**	**805**	**(289)**
Other receivables/(payables)	(4,886)	(5,258)	–7	–4	187	185
Net working capital	**5,470**	**4,582**	**+19**	**+22**	**992**	**(104)**
Property, plant and equipment	13,750	13,944	–1	+2	236	(430)
Goodwill and intangible assets	12,187	14,869	–18	–13	(1,951)	(731)
Provisions	(2,083)	(2,751)	–24	–22	591	77
Other long-term assets, net	167	112	+49	+56	61	(6)
Long-term net operating assets	**24,021**	**26,174**	**–8**	**–4**	**(1,063)**	**(1,090)**
Net operating assets	**29,491**	**30,756**	**–4**	**0**	**(71)**	**(1,194)**

The absolute amount of the movement between the 30 June 2017 and 31 December 2016 consolidated balances reported in Swiss francs is split between actual 2017 transactions (translated at average rates for 2016) and the currency translation adjustment (CTA) that arises on consolidation. The 2017 transactions include non-cash movements and therefore the movements in this table are not the same as the amounts shown in the operating free cash flow (which only includes the cash movements). A full consolidated balance sheet is given on page 38 of the Interim Financial Statements, and a reconciliation between that balance sheet and the information given above is on page 70.

Currency translation effects on balance sheet amounts. Compared to the start of the year the Swiss franc appreciated significantly against the US dollar, resulting in a negative translation impact on net operating assets. The exchange rates used are given on page 26.

Net working capital. There was an increase in trade receivables due to the sales growth in the second quarter of 2017, with sales being 7% higher than in the comparative quarter of 2016, and also due to extended payment terms for certain newly launched products in the US. Inventory level decreases were driven by the same effect with increased shipments to customers in the second quarter of 2017 and also lower production. Payables decreased since the end of 2016 as a result of the settlement of significant year-end accounts payable and accruals, including employee benefits.

Long-term net operating assets. Overall long-term net operating assets decreased by 4%. Intangible assets decreased due to the significant impairments recorded in the first half of 2017. Provisions decreased due to the reversal of contingent consideration and legal provisions and the utilisation of restructuring provisions. Capital expenditure includes manufacturing investments in the US and Germany and by Chugai in Japan, and also site development at the Basel and Kaiseraugst sites in Switzerland and at the South San Francisco campus.

Free cash flow

Pharmaceuticals Division – Operating free cash flow for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CHF)	% change (CER)
Operating profit	**7,213**	**7,631**	**–5**	**–5**
– Depreciation, amortisation and impairment	2,892	1,714	+69	+68
– Provisions	(584)	(242)	+141	+143
– Equity compensation plans	175	165	+6	+6
– Other	200	(2)	–	–
Operating profit cash adjustments	**2,683**	**1,635**	**+64**	**+61**
Operating profit, net of operating cash adjustments	**9,896**	**9,266**	**+7**	**+6**
(Increase) decrease in net working capital	(1,091)	(1,886)	–42	–41
Investments in property, plant and equipment	(987)	(1,068)	–8	–8
Investments in intangible assets	(258)	(375)	–31	–31
Operating free cash flow	**7,560**	**5,937**	**+27**	**+26**
– as % of sales	36.8	30.5	+6.3	+6.2

See pages 67–69 for definition of free cash flow and a detailed breakdown.

The Pharmaceuticals Division's operating free cash flow increased by 26% to CHF 7.6 billion. The main contribution came from operating profit, net of operating cash adjustments, with an increase of 6% at CER. Net working capital absorbed an additional CHF 1.1 billion of cash, for the reasons described above in the 'Financial Position' section. However this increase was lower than in the first half of 2016 and the build-up in inventories in that period was not repeated in the first half of 2017, which has a positive impact on the growth of operating free cash flow. Capital expenditure, with the major items also as described above in the 'Financial Position' section, was lower than in the first half of 2016.

Diagnostics operating results

Diagnostics Division interim operating results

	2017 (CHF m)	2016 (CHF m)	% change (CHF)	% change (CER)
IFRS results				
Sales	5,823	5,562	+5	+5
Royalties and other operating income	89	60	+48	+48
Cost of sales	(2,835)	(2,769)	+2	+3
Marketing and distribution	(1,377)	(1,314)	+5	+5
Research and development	(662)	(678)	–2	–2
General and administration	(258)	(197)	+31	+32
Operating profit	**780**	**664**	**+17**	**+18**
– margin, % of sales	13.4	11.9	+1.5	+1.5
Core results [1]				
Sales	5,823	5,562	+5	+5
Royalties and other operating income	89	60	+48	+48
Cost of sales	(2,649)	(2,560)	+3	+4
Marketing and distribution	(1,337)	(1,270)	+5	+5
Research and development	(642)	(651)	–1	–1
General and administration	(225)	(134)	+68	+70
Core operating profit	**1,059**	**1,007**	**+5**	**+5**
– margin, % of sales	18.2	18.1	+0.1	+0.1
Financial position				
Net working capital	3,308	2,796	+18	+21
Long-term net operating assets	13,116	13,392	–2	+1
Net operating assets	**16,424**	**16,188**	**+1**	**+5**
Free cash flow [2]				
Operating free cash flow	260	(183)	–	–
– margin, % of sales	4.5	(3.3)	+7.8	+7.8

1) See pages 64–67 for definition of core results and Core EPS.
2) See pages 67–69 for definition of free cash flow.

Sales

The Diagnostics Division continued to increase sales with growth of 5% at CER to CHF 5.8 billion. Centralised and Point of Care Solutions, with 8% sales growth, was the main contributor, led by its immunodiagnostics business. Molecular Diagnostics sales increased by 1%, with growth in the underlying molecular business of 2% partially offset by a decrease in the sequencing business. Diabetes Care sales decreased by 4% due to continued challenging market conditions in the US. The growth in Tissue Diagnostics was driven by the advanced staining product portfolio.

Diagnostics Division – Interim sales by business area

Business area	2017 (CHF m)	2016 (CHF m)	% change (CER)	% of sales (2017)	% of sales (2016)
Centralised and Point of Care Solutions	3,456	3,233	+8	59	58
Diabetes Care	962	998	–4	17	18
Molecular Diagnostics	920	903	+1	16	16
Tissue Diagnostics	485	428	+13	8	8
Total sales	**5,823**	**5,562**	**+5**	**100**	**100**

Centralised and Point of Care Solutions. With an increase in sales of 8%, the business area was the major contributor to the divisional performance, with growth being primarily driven by the immunodiagnostics business (+13%), which now represents 31% of divisional sales. Sales growth was also supported by the clinical chemistry business (+3%). The Centralised and Point of Care Solutions business is growing especially in Asia-Pacific (+17%) due to sales growth in China. The growth reported in the EMEA region of 4% was mainly due to the immunodiagnostics business (+7%).

Diabetes Care. Sales decreased by 4%, predominantly due to a continued spillover of Medicare prices to commercial plans for the blood glucose monitoring portfolio in the US, leading to a decline in North American sales of 18%. The decrease of 1% in EMEA was mainly due to competitive pressure in Germany, partially offset by growth in France and the UK. Sales growth in Latin America (+3%) was due to new and renewed tenders and local inflationary effects.

Molecular Diagnostics. Overall sales rose by 1% with 2% growth in the underlying molecular business and a decrease in the sequencing business. The growth in the molecular business sales came from instrument sales and new point of care solutions business, partly offset by a sales decline in the virology business. Regional growth was led by Asia-Pacific (+7%), notably China.

Tissue Diagnostics. Sales rose by 13%, driven by 9% growth in the advanced staining portfolio. Companion diagnostics sales grew by 40% due to external partnerships with other pharmaceutical companies. In addition sales increased in the primary staining business due to the HE 600 instruments. Regionally, growth was led by North America (+12%) and EMEA (+15%). Sales in Asia-Pacific grew by 12%, with China as the main growth market.

Diagnostics Division – Interim sales by region

Region	2017 (CHF m)	2016 (CHF m)	% change (CER)	% of sales (2017)	% of sales (2016)
Europe, Middle East and Africa (EMEA)	2,330	2,314	+3	40	42
North America	1,507	1,466	+1	26	26
Asia-Pacific	1,341	1,192	+13	23	21
Latin America	425	375	+8	7	7
Japan	220	215	+2	4	4
Total sales	**5,823**	**5,562**	**+5**	**100**	**100**

In the EMEA region, the division's largest market, the main driver of the sales increase was Centralised and Point of Care Solutions. In North America sales growth was led by Tissue Diagnostics, which reported a 12% increase, offset by lower sales in the Diabetes Care business, which fell by 18% due to continued price pressure. The sales increase in Asia-Pacific was mainly in China, which grew by 20%. In Latin America sales rose by 8% due to new tender business and local inflationary price increases. Sales growth in Japan was led by the Centralised and Point of Care Solutions business.

Diagnostics Division – Interim sales for E7 leading emerging markets

Country	2017 (CHF m)	2016 (CHF m)	% change (CER)	% of sales (2017)	% of sales (2016)
Brazil	149	99	+27	3	2
China	851	733	+20	14	13
India	77	67	+12	1	1
Mexico	48	68	–25	1	1
Russia	66	51	+7	1	1
South Korea	98	90	+3	2	2
Turkey	61	62	+21	1	1
Total sales	**1,350**	**1,170**	**+16**	**23**	**21**

Operating results

Diagnostics Division – Royalties and other operating income for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Royalty income	53	53	+3
Income from out-licensing agreements	28	0	–
Income from disposal of products and other	8	7	+5
Total – IFRS and Core basis	**89**	**60**	**+48**

The increase of 48% at CER was due to the settlement of a patent dispute.

Diagnostics Division – Cost of sales for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Manufacturing cost of goods sold and period costs	(2,566)	(2,485)	+4
Royalty expenses	(83)	(75)	+10
Cost of sales – Core basis	**(2,649)**	**(2,560)**	**+4**
Global restructuring plans	(30)	(40)	–20
Amortisation of intangible assets	(156)	(169)	–9
Total – IFRS basis	**(2,835)**	**(2,769)**	**+3**

Core costs increased by 4% at CER, with the depreciation of instruments and higher instrument placements offset by a favourable product mix. The core cost of sales ratio decreased to 45.4% compared to 46.1% in the first half of 2016. Global restructuring costs were mainly related to site closures and costs for the initiative to harmonise processes and systems.

Diagnostics Division – Marketing and distribution for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Marketing and distribution – Core basis	**(1,337)**	**(1,270)**	**+5**
Global restructuring plans	(40)	(43)	–10
Amortisation of intangible assets	0	(1)	–100
Total – IFRS basis	**(1,377)**	**(1,314)**	**+5**

Core costs increased by 5% at CER, primarily due to increased spending in the Asia-Pacific and EMEA regions. There was also higher spending in Centralised and Point of Care Solutions partly offset by cost containment in Diabetes Care. On a core basis, marketing and distribution costs as a percentage of sales increased to 23.0% compared to 22.8% in 2016. Global restructuring costs were mainly due to organisational changes in Diabetes Care.

Diagnostics Division – Research and development for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Research and development – Core basis	**(642)**	**(651)**	**–1**
Global restructuring plans	(15)	(24)	–39
Amortisation of intangible assets	(5)	(3)	+64
Total – IFRS basis	**(662)**	**(678)**	**–2**

Core costs decreased by 1% at CER, mainly due to decreased spending in Molecular Diagnostics for projects such as the HPV Surepath trial and cobas Liat system. As a percentage of sales, research and development core costs decreased to 11.0% from 11.7% in 2016.

Diagnostics Division – General and administration for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Administration	(247)	(245)	+2
Pension – past service costs	0	77	–100
Business taxes and capital taxes	8	(10)	–
Other general items	14	44	–69
General and administration – Core basis	**(225)**	**(134)**	**+70**
Global restructuring plans	(16)	(34)	–58
Alliances and business combinations	11	(6)	–
Legal and environmental cases	(28)	(23)	+20
Total – IFRS basis	**(258)**	**(197)**	**+32**

Core costs increased by 70% at CER compared to 2016 due to the base effect of income from changes in the Group's Swiss pension plans in 2016. Excluding this effect, costs increased by 8%. Administration costs increased by 2%. Business taxes include income from a settlement agreement for the Medical Devices Excise Tax in the US. Other general items in 2016 included income from underspending on IT and infrastructure areas. As a percentage of sales, core costs increased to 3.9% from 2.4% in 2016.

Financial position

Diagnostics Division – Net operating assets

	30 June 2017 (CHF m)	31 Dec. 2016 (CHF m)	% change (CHF)	% change (CER)	Movement: Transactions (CHF m)	Movement: CTA (CHF m)
Trade receivables	2,909	3,023	–4	–1	(20)	(94)
Inventories	2,428	2,294	+6	+7	156	(22)
Trade payables	(679)	(1,024)	–34	–33	331	14
Net trade working capital	**4,658**	**4,293**	**+9**	**+11**	**467**	**(102)**
Other receivables/(payables)	(1,350)	(1,497)	–10	–7	110	37
Net working capital	**3,308**	**2,796**	**+18**	**+21**	**577**	**(65)**
Property, plant and equipment	5,912	5,873	+1	+2	125	(86)
Goodwill and intangible assets	8,003	8,459	–5	–1	(66)	(390)
Provisions	(812)	(950)	–15	–11	100	38
Other long-term assets, net	13	10	+30	+68	6	(3)
Long-term net operating assets	**13,116**	**13,392**	**–2**	**+1**	**165**	**(441)**
Net operating assets	**16,424**	**16,188**	**+1**	**+5**	**742**	**(506)**

The absolute amount of the movement between the 30 June 2017 and 31 December 2016 consolidated balances reported in Swiss francs is split between actual 2017 transactions (translated at average rates for 2016) and the currency translation adjustment (CTA) that arises on consolidation. The 2017 transactions include non-cash movements and therefore the movements in this table are not the same as the amounts shown in the operating free cash flow (which only includes the cash movements). A full consolidated balance sheet is given on page 38 of the Interim Financial Statements, and a reconciliation between that balance sheet and the information given above is on page 70.

Currency translation effects on balance sheet amounts. Compared to the start of the year the Swiss franc appreciated significantly against the US dollar, resulting in a negative translation impact on net operating assets. This was partly offset by the depreciation of the Swiss franc against the euro. The exchange rates used are given on page 26.

Net working capital. Net trade working capital increased by 11% at CER. Trade receivables decreased by 1% due to settlement of the high receivables balances at the end of 2016 and due to good collections in general. Inventories increased by 7% due to high demand in emerging markets, notably higher purchases of instruments pending installation and due to preparation for new launches. Trade payables decreased by 33% compared to the start of the year following the settlement of year-end positions. The net liability for other receivables/payables decreased due to lower liabilities for VAT and other business taxes.

Long-term net operating assets. Long-term net operating assets increased by 1% at CER due to higher property, plant and equipment, decreased provisions and lower intangible assets. Property, plant and equipment increased by 2% due to manufacturing site expansion in China and Germany. Provisions decreased by 11% following the payment of milestones related to the Genia, Ariosa and Bina acquisitions. The 1% decrease in goodwill and intangible assets was due to amortisation of intangible assets.

Free cash flow

Diagnostics Division – Operating free cash flow for the six months ended 30 June

	2017 (CHF m)	2016 (CHF m)	% change (CHF)	% change (CER)
Operating profit	**780**	**664**	**+17**	**+18**
– Depreciation, amortisation and impairment	659	638	+3	+4
– Provisions	(10)	9	–	–
– Equity compensation plans	32	29	+10	+9
– Other	79	(2)	–	–
Operating profit cash adjustments	**760**	**674**	**+13**	**+14**
Operating profit, net of operating cash adjustments	**1,540**	**1,338**	**+15**	**+16**
(Increase) decrease in net working capital	(629)	(851)	–26	–27
Investments in property, plant and equipment	(627)	(665)	–6	–5
Investments in intangible assets	(24)	(5)	+380	+364
Operating free cash flow	**260**	**(183)**	**–**	**–**
– as % of sales	+4.5	–3.3	+7.8	+7.8

See pages 67–69 for definition of free cash flow and a detailed breakdown.

The operating free cash flow of the Diagnostics Division was a net cash inflow of CHF 260 million compared to a net cash outflow of CHF 183 million in the first half of 2016. The cash generation of the business, measured by the operating profit, net of operating cash adjustments, increased due to the improved operating results. Net working capital increases absorbed CHF 629 million cash in the first half of 2017, as explained above in the 'Financial Position' section. This increase was lower than that in 2016, in part due to the settlement of year-end payables and inventory build-up in the first half of 2016 not being repeated in 2017 at the same level. Capital expenditure was lower than the comparative period, which included significant site expansions in the first half of 2016.

Corporate operating results

Corporate interim operating results summary

	2017 (CHF m)	2016 (CHF m)	% change (CER)
Administration	(212)	(206)	+3
Pension – past service costs	0	39	–100
Business taxes and capital taxes	(10)	(9)	+7
Other general items	41	39	+7
General and administration costs – Core basis [1]	**(181)**	**(137)**	**+32**
Global restructuring plans	(16)	(15)	+15
Alliances and business combinations	0	(1)	–
Legal and environmental cases	(1)	0	–
Total costs – IFRS basis	**(198)**	**(153)**	**+32**
Financial position			
Net working capital	(87)	(104)	–16
Long-term net operating assets	(178)	(213)	–15
Net operating assets	**(265)**	**(317)**	**–15**
Free cash flow [2]			
Operating free cash flow	(231)	(267)	–13

1) See pages 64–67 for definition of core results.
2) See pages 67–69 for definition of free cash flow and a detailed breakdown.

General and administration costs increased by 32% at CER on a core basis, driven by the income from pension changes in the first half of 2016. Excluding this, core costs were higher by 2% due to certain HR projects. The change in net operating assets was due to the utilisation of provisions for environmental remediation activities in Nutley, US and Grenzach, Germany. Corporate operating free cash flow showed a lower utilisation of provisions, notably related to Nutley.

Foreign exchange impact on operating results

The Group's exposure to movements in foreign currencies affecting its operating results, as expressed in Swiss francs, is summarised by the following key figures and comments.

Growth (reported at CER and in Swiss francs) for the six months ended 30 June

	% change (CER) 2017	2016	% change (CHF) 2017	2016
Pharmaceuticals Division				
Sales	+5	+4	+5	+6
Core operating profit	+3	+5	+3	+7
Diagnostics Division				
Sales	+5	+6	+5	+6
Core operating profit	+5	+1	+5	–1
Group				
Sales	+5	+5	+5	+6
Core operating profit	+3	+5	+3	+7

Exchange rates against the Swiss franc

	30 June 2017	Average to 30 June 2017	31 December 2016	Average to 30 June 2016
1 USD	0.96	0.99	1.02	0.98
1 EUR	1.09	1.08	1.07	1.10
100 JPY	0.85	0.89	0.88	0.88

In the first half of 2017 compared to the first half of 2016, the Swiss franc was weaker against a number of currencies, in particular the US dollar, but was stronger against the euro and other European currencies. The net impact on the results expressed in Swiss francs compared to constant exchange rates was negligible. The sensitivity of Group sales and core operating profit to a 1% change in average foreign currency exchange rates against the Swiss franc during the first half of 2017 is shown in the table below.

Currency sensitivities for the six months ended 30 June 2017

Impact of 1% increase in average exchange rate versus the Swiss franc	Sales (CHF m)	Core operating profit (CHF m)
US dollar	+120	+53
Euro	+48	+22
Japanese yen	+20	+13
All other currencies	+67	+37

Treasury and taxation results

Treasury and taxation interim results

	2017 (CHF m)	2016 (CHF m)	% change (CHF)	% change (CER)
IFRS results				
Operating profit	7,795	8,142	–4	–4
Financing costs	(391)	(600)	–35	–35
Other financial income (expense)	59	(23)	–	–
Profit before taxes	**7,463**	**7,519**	**–1**	**–1**
Income taxes	(1,886)	(2,052)	–8	–8
Net income	**5,577**	**5,467**	**+2**	**+2**
Attributable to				
– Roche shareholders	5,477	5,378	+2	+2
– Non-controlling interests	100	89	+12	+12
Core results [1]				
Operating profit	10,135	9,854	+3	+3
Financing costs	(386)	(573)	–33	–33
Other financial income (expense)	52	(23)	–	–
Profit before taxes	**9,801**	**9,258**	**+6**	**+6**
Income taxes	(2,614)	(2,497)	+5	+4
Net income	**7,187**	**6,761**	**+6**	**+7**
Attributable to				
– Roche shareholders	7,077	6,663	+6	+6
– Non-controlling interests	110	98	+12	+12
Financial position				
Net debt	(14,180)	(13,248)	+7	+15
Pensions	(6,144)	(6,940)	–11	–11
Income taxes	(599)	(390)	+54	+113
Financial non-current assets	556	536	+4	+4
Derivatives, net	(52)	(262)	–80	–81
Collateral, net	121	302	–60	–60
Interest payable	(174)	(289)	–40	–37
Other non-operating assets, net	101	66	+53	+58
Total net assets (liabilities)	**(20,371)**	**(20,225)**	**+1**	**+6**
Free cash flow [2]				
Treasury activities	(351)	(890)	–61	–60
Taxes paid	(1,633)	(1,748)	–7	–8
Total	**(1,984)**	**(2,638)**	**–25**	**–25**

1) See pages 64–67 for definition of core results.
2) See pages 67–69 for definition of free cash flow.

Financing costs

Core financing costs were CHF 386 million, a decrease of 33% at CER compared to the first half of 2016. Interest expenses were lower by CHF 61 million, a decrease of 17% at CER compared to the first half of 2016 due to the continuous repayment and refinancing of debt at lower interest rates. Losses on bond redemptions in the first half of 2016 were CHF 100 million. The net interest cost of defined benefit pension plans decreased by 24% at CER to CHF 72 million due to lower discount rates in Germany at the end of 2016. A full analysis of financing costs is given in Note 3 to the Interim Financial Statements.

Other financial income (expense)

Core other financial income (expense) was a net income of CHF 52 million compared to a net expense of CHF 23 million in the first half of 2016 due to higher net income from equity securities. Core net income from equity securities was CHF 89 million in the first half of 2017 compared to CHF 36 million in the same period of 2016. The net foreign exchange results reflect hedging costs and losses on unhedged positions. Net foreign exchange losses in the first half of 2017 were CHF 55 million compared to net losses of CHF 63 million in 2016. A full analysis of other financial income (expense) is given in Note 3 to the Interim Financial Statements.

Income taxes

The Group's effective core tax rate decreased by 0.3 percentage points to 26.7% in the first half of 2017. This was largely due to the deferred tax impact resulting from tax rate changes partially offset by the increased profit contribution coming from tax jurisdictions with tax rates higher than the average Group tax rate, notably the US. The IFRS results saw the effective tax rate decrease by 2.0 percentage points. In addition to the core tax rate impacts, this decrease includes the deferred tax impact from the significant intangible asset impairments, while the releases of contingent consideration provisions in the 'Alliances and business combinations' line have no deferred tax effect. The 2016 IFRS results include an unfavourable deferred tax impact from equity compensation plans.

Analysis of the Group's effective tax rate for the six months ended 30 June

			2017			2016
	Profit before tax (CHF m)	Income taxes (CHF m)	Tax rate (%)	Profit before tax (CHF m)	Income taxes (CHF m)	Tax rate (%)
Group's effective tax rate – Core basis	**9,801**	**(2,614)**	**26.7**	**9,258**	**(2,497)**	**27.0**
Global restructuring plans	(322)	40	12.4	(392)	75	19.1
Goodwill and intangible assets	(2,381)	753	31.6	(1,273)	392	30.8
Alliances and business combinations	202	(3)	1.5	(42)	38	90.5
Legal and environmental cases	163	(59)	36.2	(32)	11	34.4
Normalisation of equity compensation plan tax benefit	–	(3)	–	–	(71)	–
Group's effective tax rate – IFRS basis	**7,463**	**(1,886)**	**25.3**	**7,519**	**(2,052)**	**27.3**

Financial position

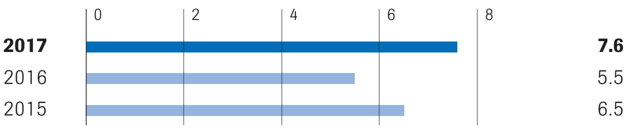
The increase in net debt was due to dividend payments of CHF 7.1 billion partly offset by the free cash flow of CHF 5.6 billion. The net pension liability decreased due to improved asset performance in the Group's Swiss plans and increased discount rates reducing the current value of pension obligations. The net tax liabilities increased mainly due to tax expenses exceeding taxes paid. At 30 June 2017 the Group held financial long-term assets with a market value of CHF 0.6 billion, which consist mostly of holdings in biotechnology and other pharmaceuticals companies which were acquired as part of licensing transactions or scientific collaborations.

Free cash flow

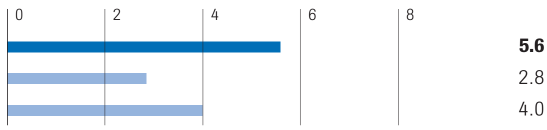
The cash outflow from treasury activities decreased to CHF 0.4 billion due to lower interest payments in 2017, and the base effect of investments in financial long-term assets and higher pension contributions in 2016. Total taxes paid in the first half of 2017 were down by 8% to CHF 1.6 billion due to the timing of tax payments.

Cash flows and net debt

Operating free cash flow in billions of CHF



Free cash flow in billions of CHF



Free cash flow for the six months ended 30 June

	Pharmaceuticals (CHF m)	Diagnostics (CHF m)	Corporate (CHF m)	Group (CHF m)
2017				
Operating profit – IFRS basis	7,213	780	(198)	7,795
Operating profit cash adjustments	2,683	760	(15)	3,428
Operating profit, net of operating cash adjustments	**9,896**	**1,540**	**(213)**	**11,223**
(Increase) decrease in net working capital	(1,091)	(629)	(17)	(1,737)
Investments in property, plant and equipment	(987)	(627)	(1)	(1,615)
Investments in intangible assets	(258)	(24)	–	(282)
Operating free cash flow	**7,560**	**260**	**(231)**	**7,589**
Treasury activities				(351)
Taxes paid				(1,633)
Free cash flow				**5,605**
2016				
Operating profit – IFRS basis	7,631	664	(153)	8,142
Operating profit cash adjustments	1,635	674	(72)	2,237
Operating profit, net of operating cash adjustments	**9,266**	**1,338**	**(225)**	**10,379**
(Increase) decrease in net working capital	(1,886)	(851)	(39)	(2,776)
Investments in property, plant and equipment	(1,068)	(665)	(3)	(1,736)
Investments in intangible assets	(375)	(5)	0	(380)
Operating free cash flow	**5,937**	**(183)**	**(267)**	**5,487**
Treasury activities				(890)
Taxes paid				(1,748)
Free cash flow				**2,849**

See pages 67–69 for definition of free cash flow and a detailed breakdown.

Operating free cash flow increased by CHF 2.1 billion, or 37% at CER, to CHF 7.6 billion. One major factor in this significant increase was the growth in the underlying cash generated from operations, which increased to CHF 11.2 billion, as cash revenues grew more quickly than cash expenses. The other main driver was that the increase in net working capital was lower than in the first half of 2016. This was mainly because the significant build-up in inventories for product launches in the first half of 2016 was not repeated in 2017. Capital expenditure was CHF 1.6 billion.

The cash outflow from treasury activities went down to CHF 0.4 billion due to lower interest payments in 2017 and the base effect of higher investments in financial long-term assets and higher pension contributions in 2016. Taxes paid were 8% lower at CHF 1.6 billion due to the timing of tax payments. The free cash flow of CHF 5.6 billion was significantly higher than in the first half of 2016, due to the higher operating free cash flow and lower net cash outflow from treasury operations.

Net debt – Movement in carrying value in millions of CHF

At 1 January 2017	
Cash and cash equivalents	4,163
Marketable securities	4,944
Long-term debt	(16,992)
Short-term debt	(5,363)
Net debt at beginning of period	**(13,248)**
Change in net debt during interim period 2017	
Free cash flow	5,605
Dividend payments	(7,070)
Transactions in own equity instruments	(175)
Business combinations, net of divestments of subsidiaries	(164)
Hedging and collateral arrangements	132
Currency translation, fair value and other movements	740
Change in net debt	**(932)**
At 30 June 2017	
Cash and cash equivalents	3,453
Marketable securities	3,482
Long-term debt	(16,731)
Short-term debt	(4,384)
Net debt at end of period	**(14,180)**

Net debt – Currency profile in millions of CHF

	Cash and marketable securities		Debt	
	30 June 2017	31 Dec. 2016	30 June 2017	31 Dec. 2016
US dollar [1]	689	1,106	(14,991)	(16,073)
Euro	2,269	2,986	(2,907)	(2,852)
Swiss franc	1,394	2,411	(2,607)	(2,605)
Japanese yen	1,736	1,656	(3)	(6)
Pound sterling	295	271	(247)	(249)
Other	552	677	(360)	(570)
Total	**6,935**	**9,107**	**(21,115)**	**(22,355)**

1) US dollar-denominated debt includes those bonds and notes denominated in euros, Swiss francs and pounds sterling that were swapped into US dollars, and therefore in the financial statements have economic characteristics equivalent to US dollar-denominated bonds and notes.

The net debt position of the Group at 30 June 2017 was CHF 14.2 billion, an increase of CHF 0.9 billion from 31 December 2016, but a significant decrease from the CHF 18.3 billion of net debt at 30 June 2016. The increase during the first half of 2017 was due to annual dividend payments of CHF 7.1 billion, partly offset by the free cash flow of CHF 5.6 billion.

The issuance, redemption and repurchase of bonds and notes for cash (see Note 10 to the Interim Financial Statements) has no impact on the net debt position.

Pensions and other post-employment benefits

Funding status and balance sheet position in millions of CHF

	30 June 2017	31 December 2016
Funded plans		
– Fair value of plan assets	13,935	13,571
– Defined benefit obligation	(15,469)	(15,734)
Over (under) funding	**(1,534)**	**(2,163)**
Unfunded plans		
– Defined benefit obligation	(4,756)	(4,931)
Total funding status	**(6,290)**	**(7,094)**
Limit on asset recognition	0	0
Reimbursement rights	146	154
Net recognised asset (liability)	**(6,144)**	**(6,940)**

During the first half of 2016 operating income of CHF 426 million was recorded for past service costs from changes to the Group's pension plans in Switzerland. This represents the impact of the adjustment of the pension liability for the plan changes announced in 2016.

Overall the funding status on an IFRS basis of the Group's funded defined benefit plans improved to 90% compared to 86% at the start of the year. This came mainly from the Group's Swiss plans with an increase in the fair value of plan assets and a lower defined benefit obligation due to a rise in the discount rate. The funded status of the pension funds is monitored by the local pension fund governance bodies as well as being closely reviewed at a Group level.

The unfunded plans are mainly those in the Group's German affiliates, where the fully reserved pension obligations are invested in the local affiliate's operations. The unfunded liabilities for these plans decreased during the first half of 2017 due to an increase in the discount rate.

Further information on the Group's pensions and other post-employment benefits is given in Note 11 to the Interim Financial Statements and in Note 25 to the 2016 Annual Financial Statements.

Debt

During the first half of 2017 there was the redemption on the due date of 23 March 2017 of CHF 1.5 billion of bonds.

On 23 March 2017 the Group issued CHF 400 million of bonds due on 23 September 2018, CHF 750 million of bonds due on 23 September 2024 and CHF 350 million of bonds due on 23 March 2029. The proceeds were used to refinance the above debt redemption.

The maturity schedule of the Group's bonds and notes outstanding at 30 June 2017 is shown in the table below.

Bonds and notes: nominal amounts at 30 June 2017 by contractual maturity

	US dollar (USD m)	Euro (EUR m)	Pound sterling (GBP m)	Swiss franc (CHF m)	Total [1] (USD m)	Total [1] (CHF m)
2017	1,150	–	–	–	1,150	1,099
2018	–	1,000	–	1,000	2,190	2,094
2019	2,000	–	–	–	2,000	1,912
2020	600	–	–	–	600	573
2021	1,300	1,317 [2]	–	–	2,806	2,682
2022–2026	4,300	1,650	200	1,250	7,756	7,413
2027 and beyond	3,014	–	–	350	3,380	3,231
Total	**12,364**	**3,967**	**200**	**2,600**	**19,882**	**19,004**

1) Total translated at 30 June 2017 exchange rates.
2) Of the proceeds from these bonds and notes, EUR 1.2 billion have been swapped into US dollars, and therefore in the financial statements the bonds and notes have economic characteristics equivalent to US dollar-denominated bonds and notes.

The Group plans to meet its debt obligations using existing liquid funds as well as cash generated from business operations. In the full year 2016 the free cash flow was CHF 9.1 billion, which included the cash generated from operations, as well as payment of interest and tax. In the first half of 2017 free cash flow was CHF 5.6 billion.

For short-term financing requirements, the Group has a commercial paper programme in the US under which it can issue up to USD 7.5 billion of unsecured commercial paper notes and has committed credit lines of USD 7.5 billion available as back-stop lines. Commercial paper notes totalling USD 1.9 billion were outstanding as of 30 June 2017 (31 December 2016: USD 2.1 billion). For longer-term financing the Group maintains strong long-term investment-grade credit ratings of AA by Standard & Poor's and A1 by Moody's which should facilitate efficient access to international capital markets.

Further information on the Group's debt is given in Note 10 to the Interim Financial Statements and Note 20 to the 2016 Annual Financial Statements.

Financial risks

As at 30 June 2017 the Group has a net debt position of CHF 14.2 billion (31 December 2016: CHF 13.2 billion). The financial assets of the Group are managed in a conservative way with the objective to meet the Group's financial obligations at all times.

Asset allocation. A considerable portion of the cash and marketable securities the Group currently holds is being held for debt redemptions. Liquid funds are either held as cash or are invested in high-quality, investment-grade fixed income securities with an investment horizon to meet those liquidity requirements.

Cash and marketable securities

	30 June 2017 (CHF m)	30 June 2017 (% of total)	31 December 2016 (CHF m)	31 December 2016 (% of total)
Cash and cash equivalents	3,453	50	4,163	46
Money market instruments	2,335	34	3,366	36
Debt securities	1,136	16	1,509	17
Equity securities	11	0	69	1
Total cash and marketable securities	**6,935**	**100**	**9,107**	**100**

Credit risk. Credit risk arises from the possibility that counterparties to transactions may default on their obligations causing financial losses for the Group. The rating profile of the Group's CHF 6.9 billion of cash and fixed income marketable securities remained strong with 94% being invested in the A-AAA range. The Group has signed netting and collateral agreements with the counterparties in order to mitigate counterparty risk on derivative positions.

The Group has trade receivables of CHF 9.9 billion. Since the beginning of 2010 there have been financial difficulties in Southern European countries, notably Spain, Italy, Greece and Portugal. The Group is a leading supplier to the healthcare sectors in these countries and at 30 June 2017 has trade receivables of EUR 0.6 billion (CHF 0.7 billion) with public customers in these countries. This is an increase of 31% compared to 31 December 2016 in euro terms due to the substantial collections in late 2016. The Group uses different measures to improve collections in these countries, including intense communication with customers, factoring, negotiations of payment plans, charging of interest for late payments, and legal actions. Since 2011 the Group's trade receivables balance in Southern Europe has decreased by 55% in euro terms.

Liquidity risk. Liquidity risk arises through a surplus of financial obligations over available financial assets due at any point in time. The Group's approach to liquidity risk is to maintain sufficient readily available reserves in order to meet its liquidity requirements at any point in time. In addition to the current liquidity position, the Group has strong cash generation ability. Those future cash flows will be used to repay debt instruments in the coming years.

Roche enjoys strong long-term investment-grade credit ratings of AA by Standard & Poor's and A1 by Moody's. At the same time Roche is rated at the highest available short-term ratings by those agencies. In the event of financing requirements, the ratings and the strong credit of Roche should permit efficient access to international capital markets, including the commercial paper market. The Group has committed credit lines with various financial institutions totalling USD 7.5 billion available as back-stop lines for the commercial paper programme. As at 30 June 2017 no debt has been drawn under these credit lines.

Market risk. Market risk arises from changing market prices of the Group's financial assets or financial liabilities. The exposures are predominantly related to changes in interest rates, foreign exchange rates and equity prices. The Group uses Value-at-Risk (VaR) to assess the impact of market risk on its financial instruments. VaR data indicates the value range within which a given financial instrument will fluctuate with a pre-set probability as a result of movements in market prices. The Group's VaR decreased during the first half of 2017, mainly reflecting redemptions, refinancing and maturity of debt.

Interest rate risk. Interest rate risk arises from movements in interest rates which could affect the Group financial result or the value of the Group equity. The Group may use interest rate derivatives to manage its interest-rate-related exposure and financial result.

Further information on financial risk management and financial risks and the VaR methodology is included in Note 29 to the 2016 Annual Financial Statements.

International Financial Reporting Standards

The Roche Group has been using International Financial Reporting Standards (IFRS) to report its consolidated results since 1990. In 2017 the Group has implemented various minor amendments to existing standards and interpretations, which have no material impact on the Group's overall results and financial position.

The Group is currently assessing the potential impacts of the various new and revised standards and interpretations that will be mandatory from 1 January 2018 and beyond after 2018, as summarised below. See also Note 32 to the 2016 Annual Financial Statements for further details.

IFRS 9 'Financial Instruments'. The Group plans to implement the new standard effective 1 January 2018. The Group does not currently anticipate that the comparative 2017 results will be restated when the new standard is applied. The standard deals with the classification, recognition and measurement (including impairment) of financial instruments, the impairment of financial assets, including trade and lease receivables, and also introduces a new hedge accounting model.

IFRS 15 'Revenues from Contracts with Customers'. The Group plans to implement the new standard effective 1 January 2018. The Group does not anticipate that the new standard will change the amounts of revenue recognised for 2017 and therefore then no restatement should be necessary. The new standard contains a new set of principles on when and how to recognise and measure revenue as well as new requirements related to presentation. The core principle in that framework is that revenue should be recognised dependent on the transfer of promised goods or services to the customer for an amount that reflects the consideration which should be received in exchange for those goods or services.

IFRS 16 'Leases'. The Group plans to implement the new standard effective 1 January 2019 and will apply the cumulative catch-up method option for the transition, meaning that the comparative 2018 results will not be restated when the new standard is applied. The main impact of the new standard will be to bring operating leases on-balance sheet. The Group is assessing the potential impact, but currently anticipates that the new standard will result in the carrying value of property, plant and equipment being increased by at least CHF 1 billion, with debt increased by a similar amount at the date of implementation. The application of the new standard will result in part of what is currently reported as operating lease costs being recorded as interest expenses. Given the leases involved and the prevailing low interest rate environment the Group does not currently expect this effect to be material.

Roche Group Interim Consolidated Financial Statements

The Interim Consolidated Financial Statements have been reviewed by the Group's auditor and their review report is presented on page 63.

Roche Group consolidated income statement for the six months ended 30 June 2017 in millions of CHF

	Pharmaceuticals	Diagnostics	Corporate	Group
Sales [2]	**20,521**	**5,823**	**–**	**26,344**
Royalties and other operating income [2]	1,115	89	–	1,204
Cost of sales	(5,917)	(2,835)	–	(8,752)
Marketing and distribution	(3,116)	(1,377)	–	(4,493)
Research and development [2]	(4,943)	(662)	–	(5,605)
General and administration	(447)	(258)	(198)	(903)
Operating profit [2]	**7,213**	**780**	**(198)**	**7,795**
Financing costs [3]				(391)
Other financial income (expense) [3]				59
Profit before taxes				**7,463**
Income taxes [4]				(1,886)
Net income				**5,577**
Attributable to				
– Roche shareholders				5,477
– Non-controlling interests				100
Earnings per share and non-voting equity security [14]				
Basic (CHF)				6.42
Diluted (CHF)				6.37

Roche Group consolidated income statement for the six months ended 30 June 2016 in millions of CHF

	Pharmaceuticals	Diagnostics	Corporate	Group
Sales [2]	**19,460**	**5,562**	**–**	**25,022**
Royalties and other operating income [2]	926	60	–	986
Cost of sales	(4,809)	(2,769)	–	(7,578)
Marketing and distribution	(3,048)	(1,314)	–	(4,362)
Research and development [2]	(4,619)	(678)	–	(5,297)
General and administration	(279)	(197)	(153)	(629)
Operating profit [2]	**7,631**	**664**	**(153)**	**8,142**
Financing costs [3]				(600)
Other financial income (expense) [3]				(23)
Profit before taxes				**7,519**
Income taxes [4]				(2,052)
Net income				**5,467**
Attributable to				
– Roche shareholders				5,378
– Non-controlling interests				89
Earnings per share and non-voting equity security [14]				
Basic (CHF)				6.31
Diluted (CHF)				6.24

Roche Group consolidated statement of comprehensive income in millions of CHF

	Six months ended 30 June 2017	2016
Net income recognised in income statement	**5,577**	**5,467**
Other comprehensive income		
Remeasurements of defined benefit plans	611	(1,340)
Items that will never be reclassified to the income statement	**611**	**(1,340)**
Available-for-sale investments	(8)	18
Cash flow hedges	(18)	(42)
Currency translation of foreign operations	(360)	856
Items that are or may be reclassified to the income statement	**(386)**	**832**
Other comprehensive income, net of tax	**225**	**(508)**
Total comprehensive income	**5,802**	**4,959**
Attributable to		
– Roche shareholders	5,788	4,598
– Non-controlling interests	14	361
Total	**5,802**	**4,959**

Roche Group consolidated balance sheet in millions of CHF

	30 June 2017	31 December 2016
Non-current assets		
Property, plant and equipment	19,798	19,957
Goodwill [7]	10,768	11,282
Intangible assets [8]	9,422	12,046
Deferred tax assets	3,094	2,826
Defined benefit plan assets	732	738
Other non-current assets	1,362	1,300
Total non-current assets	**45,176**	**48,149**
Current assets		
Inventories	7,717	7,928
Accounts receivable	9,199	8,760
Current income tax assets	327	335
Other current assets	2,494	2,540
Marketable securities	3,482	4,944
Cash and cash equivalents	3,453	4,163
Total current assets	**26,672**	**28,670**
Total assets	**71,848**	**76,819**
Non-current liabilities		
Long-term debt [10]	(16,731)	(16,992)
Deferred tax liabilities	(365)	(838)
Defined benefit plan liabilities	(6,876)	(7,678)
Provisions [9]	(1,504)	(1,777)
Other non-current liabilities	(486)	(532)
Total non-current liabilities	**(25,962)**	**(27,817)**
Current liabilities		
Short-term debt [10]	(4,384)	(5,363)
Current income tax liabilities	(3,655)	(2,713)
Provisions [9]	(1,700)	(2,271)
Accounts payable	(2,691)	(3,375)
Other current liabilities	(8,177)	(8,878)
Total current liabilities	**(20,607)**	**(22,600)**
Total liabilities	**(46,569)**	**(50,417)**
Total net assets	**25,279**	**26,402**
Equity		
Capital and reserves attributable to Roche shareholders	22,816	23,911
Equity attributable to non-controlling interests	2,463	2,491
Total equity	**25,279**	**26,402**

Roche Group consolidated statement of cash flows in millions of CHF

	Six months ended 30 June 2017	2016
Cash flows from operating activities		
Cash generated from operations [15]	11,549	11,005
(Increase) decrease in net working capital	(1,737)	(2,776)
Payments made for defined benefit plans	(297)	(429)
Utilisation of provisions	(311)	(432)
Disposal of products	231	50
Other operating cash flows	(1)	–
Cash flows from operating activities, before income taxes paid	**9,434**	**7,418**
Income taxes paid	(1,633)	(1,748)
Total cash flows from operating activities	**7,801**	**5,670**
Cash flows from investing activities		
Purchase of property, plant and equipment	(1,615)	(1,736)
Purchase of intangible assets	(282)	(380)
Disposal of property, plant and equipment	26	29
Business combinations [5]	(172)	(69)
Divestment of subsidiaries [13]	8	–
Interest and dividends received	15	13
Sales of equity securities and debt securities	621	390
Purchases of equity securities and debt securities	(210)	(324)
Sales (purchases) of money market instruments and time accounts over three months, net	1,000	1,861
Other investing cash flows	(16)	(194)
Total cash flows from investing activities	**(625)**	**(410)**
Cash flows from financing activities		
Proceeds from issue of bonds and notes [10]	1,502	1,690
Redemption and repurchase of bonds and notes [10]	(1,500)	(2,943)
Increase (decrease) in commercial paper [10]	(153)	2,854
Increase (decrease) in other debt	(193)	(68)
Hedging and collateral arrangements	132	51
Changes in non-controlling interests	–	–
Equity contribution by non-controlling interests	–	–
Interest paid	(406)	(601)
Dividends paid [15]	(7,070)	(6,969)
Equity-settled equity compensation plans, net of transactions in own equity	(175)	(289)
Other financing cash flows	–	(1)
Total cash flows from financing activities	**(7,863)**	**(6,276)**
Net effect of currency translation on cash and cash equivalents	(23)	102
Increase (decrease) in cash and cash equivalents	**(710)**	**(914)**
Cash and cash equivalents at beginning of period	4,163	3,731
Cash and cash equivalents at end of period	**3,453**	**2,817**

The Group has expanded the presentation of investing cash flows relating to marketable securities. Sales and purchases of money market instruments and time accounts over three months are now shown separately, on a net basis. The comparative period information has been restated accordingly.

Roche Group consolidated statement of changes in equity in millions of CHF

	Share capital	Retained earnings	Fair value reserves	Hedging reserves	Translation reserves	Total	Non-controlling interests	Total equity
Six months ended 30 June 2016								
At 1 January 2016	**160**	**28,591**	**155**	**27**	**(7,954)**	**20,979**	**2,321**	**23,300**
Net income recognised in income statement	–	5,378	–	–	–	5,378	89	5,467
Available-for-sale investments	–	–	23	–	–	23	(5)	18
Cash flow hedges	–	–	–	(29)	–	(29)	(13)	(42)
Currency translation of foreign operations	–	–	4	(3)	564	565	291	856
Remeasurements of defined benefit plans	–	(1,339)	–	–	–	(1,339)	(1)	(1,340)
Total comprehensive income	**–**	**4,039**	**27**	**(32)**	**564**	**4,598**	**361**	**4,959**
Dividends	–	(6,908)	–	–	–	(6,908)	(69)	(6,977)
Equity compensation plans, net of transactions in own equity	–	(207)	–	–	–	(207)	6	(201)
Changes in non-controlling interests	–	(4)	–	–	–	(4)	4	–
At 30 June 2016	**160**	**25,511**	**182**	**(5)**	**(7,390)**	**18,458**	**2,623**	**21,081**
Six months ended 30 June 2017								
At 1 January 2017	**160**	**31,092**	**185**	**63**	**(7,589)**	**23,911**	**2,491**	**26,402**
Net income recognised in income statement	–	5,477	–	–	–	5,477	100	5,577
Available-for-sale investments	–	–	(9)	–	–	(9)	1	(8)
Cash flow hedges	–	–	–	(10)	–	(10)	(8)	(18)
Currency translation of foreign operations	–	–	(2)	(3)	(276)	(281)	(79)	(360)
Remeasurements of defined benefit plans	–	611	–	–	–	611	–	611
Total comprehensive income	**–**	**6,088**	**(11)**	**(13)**	**(276)**	**5,788**	**14**	**5,802**
Dividends	–	(6,998)	–	–	–	(6,998)	(57)	(7,055)
Equity compensation plans, net of transactions in own equity	–	121	–	–	–	121	9	130
Changes in non-controlling interests	–	(6)	–	–	–	(6)	6	–
At 30 June 2017	**160**	**30,297**	**174**	**50**	**(7,865)**	**22,816**	**2,463**	**25,279**

Notes to the Roche Group Interim Consolidated Financial Statements

1. Accounting policies

Basis of preparation

These financial statements are the unaudited condensed interim consolidated financial statements (hereafter 'the Interim Financial Statements') of Roche Holding Ltd, a company registered in Switzerland, and its subsidiaries (hereafter 'the Group') for the six months ended 30 June 2017 (hereafter 'the interim period'). These Interim Financial Statements should be read in conjunction with the Consolidated Financial Statements for the year ended 31 December 2016 (hereafter 'the Annual Financial Statements'), as they provide an update of previously reported information. They were approved for issue by the Board of Directors on 25 July 2017.

Statement of compliance

The Interim Financial Statements have been prepared in accordance with IAS 34 'Interim Financial Reporting'. They do not include all of the information required for a complete set of IFRS financial statements. However, selected explanatory notes are included to explain events and transactions that are significant to an understanding of the changes in the Group since the Annual Financial Statements.

Management judgements and estimates

The preparation of the Interim Financial Statements requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of revenues, expenses, assets, liabilities and related disclosures. If in the future such estimates and assumptions, which are based on management's best judgement at the date of the Interim Financial Statements, deviate from the actual circumstances, the original estimates and assumptions will be modified as appropriate in the period in which the circumstances change. The significant judgements made by management in applying the Group's accounting policies and the key sources of estimation uncertainty are the same as those applied in the Annual Financial Statements.

Seasonality

The Group operates in industries where significant seasonal or cyclical variations in total sales are not experienced during the financial year.

Significant accounting policies

Except as described below, the accounting policies applied in these Interim Financial Statements are the same as those applied in the Annual Financial Statements. Changes in accounting policies will be reflected in the Group's Consolidated Financial Statements for the year ended 31 December 2017.

Changes in accounting policies

In 2017 the Group has implemented various minor amendments to existing standards and interpretations, which have no material impact on the Group's overall results and financial position. The Group has expanded the presentation of investing cash flows relating to marketable securities. Sales and purchases of money market instruments and time accounts over three months are now shown separately, on a net basis. The comparative period information in the statement of cash flows has been restated accordingly.

Future new and revised standards

The Group is currently assessing the potential impacts of the various new and revised standards and interpretations that will be mandatory from 1 January 2018 and beyond after 2018, notably IFRS 9 'Financial Instruments', IFRS 15 'Revenues from Contracts with Customers' and IFRS 16 'Leases' as summarised in Note 32 to the Annual Financial Statements.

2. Operating segment information

The Group has two divisions, Pharmaceuticals and Diagnostics. Revenues are primarily generated from the sale of prescription pharmaceutical products and diagnostic instruments, reagents and consumables, respectively. Both divisions also derive revenues from the sale or licensing of products or technology to third parties. Residual operating activities from divested businesses and certain global activities are reported as 'Corporate'. These include the Corporate Executive Committee and global group functions for communications, human resources, finance (including treasury, taxes and pension fund management), legal, safety and environmental services. Subdivisional information for Roche Pharmaceuticals and Chugai, operating segments within the Pharmaceuticals Division, is also presented.

Divisional information in millions of CHF

	Pharmaceuticals		Diagnostics		Corporate		Group	
Six months ended 30 June	2017	2016	2017	2016	2017	2016	2017	2016
Revenues from external customers								
Sales	20,521	19,460	5,823	5,562	–	–	26,344	25,022
Royalties and other operating income	1,115	926	89	60	–	–	1,204	986
Total	**21,636**	**20,386**	**5,912**	**5,622**	**–**	**–**	**27,548**	**26,008**
Revenues from other operating segments								
Sales	–	–	7	6	–	–	7	6
Royalties and other operating income	–	–	–	–	–	–	–	–
Elimination of interdivisional revenue							(7)	(6)
Total	**–**	**–**	**7**	**6**	**–**	**–**	**–**	**–**
Segment results								
Operating profit	7,213	7,631	780	664	(198)	(153)	7,795	8,142
Capital expenditure								
Business combinations	–	–	92	–	–	–	92	–
Additions to property, plant and equipment	955	922	625	659	1	3	1,581	1,584
Additions to intangible assets	266	363	3	5	–	–	269	368
Total	**1,221**	**1,285**	**720**	**664**	**1**	**3**	**1,942**	**1,952**
Research and development								
Research and development costs	4,943	4,619	662	678	–	–	5,605	5,297
Other segment information								
Depreciation of property, plant and equipment	571	600	494	445	4	4	1,069	1,049
Amortisation of intangible assets	745	723	161	173	–	–	906	896
Impairment of property, plant and equipment	101	14	4	20	–	–	105	34
Impairment of goodwill	–	–	–	–	–	–	–	–
Impairment of intangible assets	1,475	377	–	–	–	–	1,475	377
Inventory fair value adjustment	–	166	–	–	–	–	–	166
Equity compensation plan expenses	181	171	35	32	16	17	232	220

Pharmaceuticals subdivisional information in millions of CHF

	Roche Pharmaceuticals		Chugai		Pharmaceuticals Division	
Six months ended 30 June	2017	2016	2017	2016	2017	2016
Revenues from external customers						
Sales	18,750	17,704	1,771	1,756	20,521	19,460
Royalties and other operating income	1,069	906	46	20	1,115	926
Total	**19,819**	**18,610**	**1,817**	**1,776**	**21,636**	**20,386**
Revenues from other operating segments						
Sales	686	719	326	329	1,012	1,048
Royalties and other operating income	37	27	96	70	133	97
Elimination of income within division					(1,145)	(1,145)
Total	**723**	**746**	**422**	**399**	**–**	**–**
Segment results						
Operating profit	6,901	7,205	419	374	7,320	7,579
Elimination of results within division					(107)	52
Operating profit	**6,901**	**7,205**	**419**	**374**	**7,213**	**7,631**
Capital expenditure						
Business combinations	–	–	–	–	–	–
Additions to property, plant and equipment	753	813	202	109	955	922
Additions to intangible assets	250	339	16	24	266	363
Total	**1,003**	**1,152**	**218**	**133**	**1,221**	**1,285**
Research and development						
Research and development costs	4,588	4,271	396	362	4,984	4,633
Elimination of costs within division					(41)	(14)
Total	**4,588**	**4,271**	**396**	**362**	**4,943**	**4,619**
Other segment information						
Depreciation of property, plant and equipment	508	535	63	65	571	600
Amortisation of intangible assets	737	716	8	7	745	723
Impairment of property, plant and equipment	101	14	–	–	101	14
Impairment of goodwill	–	–	–	–	–	–
Impairment of intangible assets	1,466	377	9	–	1,475	377
Inventory fair value adjustment	–	166	–	–	–	166
Equity compensation plan expenses	179	169	2	2	181	171

Net operating assets in millions of CHF

	Assets		Liabilities		Net assets	
	30 June 2017	31 December 2016	30 June 2017	31 December 2016	30 June 2017	31 December 2016
Pharmaceuticals	39,673	42,212	(10,182)	(11,456)	29,491	30,756
Diagnostics	19,969	20,329	(3,545)	(4,141)	16,424	16,188
Corporate	160	146	(425)	(463)	(265)	(317)
Total operating	**59,802**	**62,687**	**(14,152)**	**(16,060)**	**45,650**	**46,627**
Non-operating	12,046	14,132	(32,417)	(34,357)	(20,371)	(20,225)
Group	**71,848**	**76,819**	**(46,569)**	**(50,417)**	**25,279**	**26,402**

Net operating assets – Pharmaceuticals subdivisional information in millions of CHF

	Assets		Liabilities		Net assets	
	30 June 2017	31 December 2016	30 June 2017	31 December 2016	30 June 2017	31 December 2016
Roche Pharmaceuticals	36,424	38,783	(9,945)	(11,175)	26,479	27,608
Chugai	4,779	4,897	(956)	(1,025)	3,823	3,872
Elimination within division	(1,530)	(1,468)	719	744	(811)	(724)
Pharmaceuticals Division	**39,673**	**42,212**	**(10,182)**	**(11,456)**	**29,491**	**30,756**

Supplementary revenues information

Revenues from product sales are recorded net of allowances for estimated rebates, chargebacks, cash discounts and estimates of product returns, all of which are established at the time of sale. All product sales allowances are based on estimates of the amounts earned or to be claimed on the related sales. These estimates take into consideration historical experience, current contractual and statutory requirements, specific known market events and trends such as competitive pricing and new product introductions, estimated inventory levels, and the shelf life of products. If actual future results vary, these estimates are adjusted and may have an effect on sales and earnings in the period of the adjustment.

The gross-to-net sales reconciliation for the Pharmaceuticals Division is shown in the table below. The companies in the Diagnostics Division have similar reconciling items, but at much lower amounts.

Pharmaceuticals Division sales gross-to-net reconciliation in millions of CHF

	Six months ended 30 June 2017	2016
Gross sales	24,518	22,785
Government and regulatory mandatory price reductions	(2,616)	(2,148)
Contractual price reductions	(1,017)	(805)
Cash discounts	(202)	(199)
Customer returns reserves	(68)	(128)
Others	(94)	(45)
Net sales	**20,521**	**19,460**

Government and regulatory mandatory price reductions. These consist of mandatory price reductions. The major elements are 340B Drug Discount Program, Medicaid, and other plans in the US, which totalled USD 2.3 billion equivalent to CHF 2.3 billion (six months ended 30 June 2016: USD 1.8 billion equivalent to CHF 1.8 billion).

Contractual price reductions. These include rebates and chargebacks that are the result of contractual agreements that are primarily volume-based and performance-based.

Cash discounts. These include credits offered to wholesalers for remitting payment on their purchases within contractually defined incentive periods.

Customer returns reserves. These are allowances established for expected product returns.

Sales reductions that are expected to be withheld by the customer upon settlement, such as contractual price reductions and cash discounts, are recorded in the balance sheet as a deduction from trade receivables. Sales reductions that are separately payable to customers, governmental health authorities or healthcare regulatory authorities are recorded in the balance sheet as accrued liabilities. Provisions for sales returns are recorded in the balance sheet as other provisions.

Revenues – Royalties and other operating income in millions of CHF

	Six months ended 30 June 2017	2016
Royalty income	802	819
Income from out-licensing agreements	73	40
Income from disposal of products and other	329	127
Total royalty and other operating income	**1,204**	**986**

In 2017 income from disposal of products included the divestment of the worldwide rights for Dilatrend and Kytril (excluding Japan).

3. Net financial expense

Financing costs in millions of CHF

	Six months ended 30 June 2017	2016
Interest expense	(307)	(368)
Amortisation of debt discount [10]	(7)	(10)
Net gains (losses) on redemption and repurchase of bonds and notes [10]	–	(100)
Discount unwind	(5)	(27)
Net interest cost of defined benefit plans	(72)	(95)
Total financing costs	**(391)**	**(600)**

Other financial income (expense) in millions of CHF

	Six months ended 30 June 2017	2016
Net gains (losses) on sale of equity securities	107	42
Net gains (losses) on equity security derivatives	–	–
Dividend income	1	1
Write-downs and impairments of equity securities	(12)	(7)
Net income from equity securities	**96**	**36**
Interest income	16	12
Net gains (losses) on sale of debt securities	3	3
Net interest income and income from debt securities	**19**	**15**
Net foreign exchange gains (losses)	(149)	(7)
Net gains (losses) on foreign currency derivatives	94	(56)
Foreign exchange gains (losses)	**(55)**	**(63)**
Net other financial income (expense)	(1)	(11)
Associates	–	–
Total other financial income (expense)	**59**	**(23)**

Net financial expense in millions of CHF

	Six months ended 30 June 2017	2016
Financing costs	(391)	(600)
Other financial income (expense)	59	(23)
Net financial expense	**(332)**	**(623)**
Financial result from Treasury management	(260)	(528)
Financial result from Pension management	(72)	(95)
Associates	–	–
Net financial expense	**(332)**	**(623)**

4. Income taxes

Income tax expense is recognised based upon management's best estimate of the weighted average annual income tax rate expected for the full financial year multiplied by the pre-tax income for the six months ended 30 June 2017.

Income tax expenses in millions of CHF

	Six months ended 30 June 2017	2016
Current income taxes	(2,843)	(2,326)
Deferred taxes	957	274
Total income tax (expense)	**(1,886)**	**(2,052)**

The Group's effective tax rate for the six months ended 30 June 2017 decreased to 25.3% (six months ended 30 June 2016: 27.3%). The main drivers for the decrease were the deferred tax impact from tax rate changes and the deferred tax impact in respect of equity compensation plans, which varies according to the price of the underlying equities.

5. Business combinations

Acquisitions – 2017

mySugr GmbH. On 29 June 2017 the Group acquired a 100% controlling interest in mySugr GmbH ('mySugr'), a private company based in Vienna, Austria. mySugr is one of the leading mobile diabetes platforms in the market and will become an integral part of the Group's new patient-centred digital health services in diabetes care. The acquisition of mySugr will expand the Group's leading position in the area of diabetes management. mySugr is reported in the Diagnostics operating segment as part of the Diabetes Care business. The total cash consideration was EUR 64 million.

The identifiable assets acquired and liabilities assumed are set out in the table below. The amounts are provisional based on preliminary information and valuations of the assets and liabilities and subject to adjustment during the second half of 2017.

Acquisitions – 30 June 2017: net assets acquired in millions of CHF

	mySugr
Intangible assets	
– Product intangibles: in use	46
Deferred tax liabilities	(11)
Net identifiable assets	**35**
Fair value of previously held interest	(11)
Goodwill	46
Total consideration	**70**
Cash	70
Total consideration	**70**

Goodwill represents a control premium, the acquired work force and the synergies that can be expected from integrating the acquired company into the Group's existing business. None of the goodwill is expected to be deductible for income tax purposes.

The Group recognised a financial gain of CHF 7 million for fair valuing the 12% interest in mySugr held by the Group prior to the transaction. This gain is included in other financial income (expense) during the six months ended 30 June 2017.

Acquisitions – 2016

The Group did not complete any business combinations during the six months ended 30 June 2016.

Cash flows from business combinations

Acquisitions: net cash outflow in millions of CHF

	Six months ended 30 June 2017			Six months ended 30 June 2016		
	Pharmaceuticals	Diagnostics	Total	Pharmaceuticals	Diagnostics	Total
Cash consideration paid	–	(70)	(70)	–	–	–
Deferred consideration paid	–	–	–	–	–	–
Contingent consideration paid [16]	(5)	(97)	(102)	–	(69)	(69)
Cash in acquired company	–	–	–	–	–	–
Transaction costs	–	–	–	–	–	–
Total net cash outflow	**(5)**	**(167)**	**(172)**	**–**	**(69)**	**(69)**

6. Global restructuring plans

During the six months ended 30 June 2017 the Group continued with the implementation of several major global restructuring plans initiated in prior years, notably the strategic realignment of the Pharmaceuticals Division's manufacturing network.

Global restructuring plans: costs incurred in millions of CHF

	Diagnostics [1]	Site consolidation [2]	Other plans [3]	Total
Six months ended 30 June 2017				
Global restructuring costs				
– Employee-related costs	53	(68)	7	(8)
– Site closure costs	5	157	–	162
– Divestment of products and businesses	–	94	–	94
– Other reorganisation expenses	43	3	27	73
Total global restructuring costs	**101**	**186**	**34**	**321**
Six months ended 30 June 2016				
Global restructuring costs				
– Employee-related costs	41	(3)	93	131
– Site closure costs	20	118	2	140
– Other reorganisation expenses	79	13	28	120
Total global restructuring costs	**140**	**128**	**123**	**391**

1) Includes strategy plans in the Diagnostics Division and the Diabetes Care 'Autonomy and Speed' plan.
2) Includes the Pharmaceuticals Division's strategic realignment of its manufacturing network.
3) Includes plans for Pharmaceuticals Division research and development strategic realignment and outsourcing of IT and other functions.

Diagnostics Division

During the six months ended 30 June 2017 strategy plans in the Diagnostics Division that were launched in 2016 incurred costs of CHF 62 million mainly for employee-related costs. Spending on other smaller plans within the division was CHF 39 million and included costs related to the 'Autonomy and Speed' initiative in Diabetes Care and certain IT projects.

Site consolidation

On 12 November 2015 the Pharmaceuticals Division announced a strategic realignment of its manufacturing network including exiting from the manufacturing sites at Clarecastle, Ireland; Leganés, Spain; Segrate, Italy; and Florence, US. Costs from this plan during the six months ended 30 June 2017 were CHF 176 million, of which CHF 126 million were non-cash impairment and accelerated depreciation of property, plant and equipment. Some employee-related provisions were reversed as the most likely scenario for one site was changed from closure to divestment. The divestment of the Roche Carolina subsidiary at the Florence site in the US has been completed with a loss on divestment of CHF 94 million and the divestment accounting includes CHF 91 million of accumulated currency translation losses on consolidation that were transferred to the income statement (see Note 13). Roche Carolina had a net positive asset position of around USD 0.5 billion since it was established in the 1990s and that value, expressed in Swiss francs, has decreased over the last twenty years.

Other global restructuring plans

During the six months ended 30 June 2017 the major item was CHF 30 million for outsourcing of IT and other functions to shared service centres and external providers.

Global restructuring plans: summary of costs incurred in millions of CHF

	Six months ended 30 June 2017	2016
Employee-related costs		
– Termination costs	(28)	105
– Defined benefit plans	–	–
– Other employee-related costs	20	26
Total employee-related costs	**(8)**	**131**
Site closure costs		
– Impairment of property, plant and equipment	116	33
– Accelerated depreciation of property, plant and equipment	22	72
– (Gains) losses on disposal of property, plant and equipment	–	–
– Other site closure costs	24	35
Total site closure costs	**162**	**140**
Loss on divestment of subsidiary [13]	94	–
Total costs on divestment of products and businesses	**94**	**–**
Other reorganisation expenses	73	120
Total global restructuring costs	**321**	**391**

Global restructuring plans: classification of costs in millions of CHF

	Six months ended 30 June 2017			Six months ended 30 June 2016		
	Depreciation, amortisation and impairment	Other costs	Total	Depreciation, amortisation and impairment	Other costs	Total
Cost of sales						
– Pharmaceuticals	134	(53)	81	80	41	121
– Diagnostics	1	29	30	14	26	40
Marketing and distribution						
– Pharmaceuticals	1	5	6	1	7	8
– Diagnostics	–	40	40	–	43	43
Research and development						
– Pharmaceuticals	–	(1)	(1)	2	43	45
– Diagnostics	–	15	15	7	17	24
General and administration						
– Pharmaceuticals	–	118	118	1	60	61
– Diagnostics	2	14	16	–	34	34
– Corporate	–	16	16	–	15	15
Total	**138**	**183**	**321**	**105**	**286**	**391**
Total by operating segment						
– Roche Pharmaceuticals	135	69	204	84	151	235
– Chugai	–	–	–	–	–	–
– Diagnostics	3	98	101	21	120	141
– Corporate	–	16	16	–	15	15
Total	**138**	**183**	**321**	**105**	**286**	**391**

7. Goodwill

Goodwill: movements in carrying value of assets in millions of CHF

Six months ended 30 June 2017	
At 1 January 2017	11,282
Business combinations [5]	46
Currency translation effects	(560)
At 30 June 2017	**10,768**
Allocated by operating segment	
Roche Pharmaceuticals	5,024
Chugai	94
Diagnostics	5,650
Total Group	**10,768**

8. Intangible assets

Intangible assets: movements in carrying value of assets in millions of CHF

	Product intangibles: in use	Product intangibles: not available for use	Marketing intangibles: in use	Technology intangibles: in use	Total
Six months ended 30 June 2017					
At 1 January 2017	8,460	3,319	37	230	12,046
Business combinations [5]	46	–	–	–	46
Additions	3	250	6	10	269
Transfers	462	(497)	–	35	–
Amortisation charge	(860)	–	(3)	(43)	(906)
Impairment charge	(978)	(497)	–	–	(1,475)
Currency translation effects	(395)	(153)	(2)	(8)	(558)
At 30 June 2017	**6,738**	**2,422**	**38**	**224**	**9,422**
Allocated by operating segment					
Roche Pharmaceuticals	5,147	1,663	3	148	6,961
Chugai	21	63	24	–	108
Diagnostics	1,570	696	11	76	2,353
Total Group	**6,738**	**2,422**	**38**	**224**	**9,422**

Classification of intangible asset amortisation and impairment expenses in millions of CHF

	Amortisation		Impairment	
Six months ended 30 June	2017	2016	2017	2016
Cost of sales				
– Pharmaceuticals	(678)	(654)	(978)	–
– Diagnostics	(156)	(169)	–	–
Marketing and distribution				
– Pharmaceuticals	(3)	(1)	–	–
– Diagnostics	–	(1)	–	–
Research and development				
– Pharmaceuticals	(64)	(68)	(497)	(377)
– Diagnostics	(5)	(3)	–	–
Total	**(906)**	**(896)**	**(1,475)**	**(377)**

Impairment charges – 2017

Pharmaceuticals Division. Impairment charges totalling CHF 1,475 million were recorded related to:

- A charge of CHF 978 million for the partial impairment of the product intangible in use acquired as part of the InterMune acquisition. The asset concerned was written down to its estimated recoverable value of CHF 3,961 million as at 30 June 2017. The main factor leading to this was lower-than-expected sales of Esbriet in the first half of 2017 relative to the most recent long-term forecasts. The next long-term forecasts will be prepared in the second half of 2017 and, depending upon any revised estimates for Esbriet in those forecasts, the intangible asset may require further testing for impairment or reversal of impairment in the 2017 Annual Financial Statements. In the meantime the intangible asset continues to be amortised over its remaining estimated useful life of four years.
- A charge of CHF 195 million due to the launch of a competitor product for the compound acquired as part of the Trophos acquisition. The asset concerned, which was not yet being amortised, was written down to its estimated recoverable value of CHF 99 million.
- A charge of CHF 149 million due to the decision to stop development of one compound with an alliance partner following an assessment of clinical and non-clinical data. The asset concerned, which was not yet being amortised, was fully written down.

- A charge of CHF 74 million due to the decision to stop development of one compound acquired as part of the Dutalys acquisition. The asset concerned, which was not yet being amortised, was fully written down.
- A charge of CHF 47 million due to the decision to stop development of one compound acquired as part of the Santaris acquisition following a clinical data assessment. The asset concerned, which was not yet being amortised, was fully written down.
- A charge of CHF 23 million due to the decision to stop development of one compound with an alliance partner. The asset concerned, which was not yet being amortised, was fully written down.
- A charge of CHF 9 million following a clinical data assessment. The asset concerned, which was not yet being amortised, was fully written down.

Impairment charges – 2016

Pharmaceuticals Division. Impairment charges totalling CHF 377 million were recorded related to:
- A delay in the development of the compound acquired as part of the Trophos acquisition following regulatory feedback (CHF 187 million). The asset concerned, which was not yet being amortised, was written down to its estimated recoverable value of CHF 291 million.
- A portfolio reassessment of one compound (CHF 162 million). The asset concerned, which was not yet being amortised, was fully written down.
- A decision to stop development of one compound (CHF 28 million). The asset concerned, which was not yet being amortised, was fully written down.

9. Provisions and contingent liabilities

Provisions in millions of CHF

	30 June 2017	31 December 2016
Legal provisions	486	705
Environmental provisions	476	518
Restructuring provisions	463	674
Contingent consideration provisions [16]	754	1,089
Other provisions	1,025	1,062
Total provisions	**3,204**	**4,048**
Current	1,700	2,271
Non-current	1,504	1,777
Total provisions	**3,204**	**4,048**

The Group has revised the presentation of provisions. Contingent consideration provisions are now presented separately and employee provisions are now included as part of 'Other provisions'. The comparative period information has been restated accordingly.

During the six months ended 30 June 2017 CHF 413 million of provisions were utilised (six months ended 30 June 2016: CHF 501 million), mainly related to the utilisation of restructuring, contingent consideration, environmental and other provisions.

There was CHF 196 million of income from the release of contingent consideration provisions, mainly due to the partial reversal of the provisions related to the Dutalys and Trophos acquisitions. As part of the regular review of litigation matters, management has reassessed the provisions recorded for certain litigation matters. Based on the development of the various litigations, notably the Accutane case, some of the provisions previously held were released, resulting in income of CHF 204 million for the six months ended 30 June 2017.

Further information on the contingent consideration provisions is disclosed in Note 16.

Other than as described below, no significant changes in the Group's contingent liabilities or provisions for legal cases have occurred since the approval of the Annual Financial Statements by the Board of Directors.

Accutane. The litigation related to Accutane is described in Note 19 to the Annual Financial Statements.

At 31 December 2016 there was one case on appeal (USD 25 million) where a jury in the New Jersey Superior Court had ruled in favour of the plaintiff and subsequently had its verdict reversed in favour of Hoffmann-La Roche Inc. ('HLR'). In January 2017 the New Jersey Supreme Court reinstated the case and remanded the case to the Appellate Division for consideration of other issues. In May 2017 the Appellate Division again ruled in favour of HLR, reversed the verdict and remanded for a new trial; plaintiff has appealed that decision.

During February and March 2017, the Superior Court of New Jersey, Law Division, Atlantic County, held an evidentiary hearing on whether plaintiffs' experts can testify that Accutane causes ulcerative colitis. In April 2017, the Superior Court barred plaintiffs' experts because their methods did not meet the requirements for scientific reliability. In May 2017, the Superior Court entered an order dismissing 3,231 ulcerative colitis cases that were subject to the Superior Court's April 2017 order. The plaintiffs have appealed.

As at the date of the Interim Financial Statements HLR was defending 3 actions involving 3 plaintiffs brought in various state courts throughout the US for personal injuries allegedly resulting from their use of Accutane. There are approximately 6,130 cases on appeal. If any cases survive the appeals, additional trials may be scheduled. Individual trial results depend on a variety of factors, including many that are unique to the particular case and therefore the trial results to date may not be predictive of future trial results. The Group continues to defend vigorously the remaining personal injury cases and claims. Based on the development of the litigation some of the provisions previously held were released during the six months ended 30 June 2017.

In addition, the matters listed below do not currently have provisions recorded, but there are potential future obligations which will be confirmed only by the occurrence or non-occurrence of uncertain future events, or present obligations which cannot be measured with sufficient reliability.

Emicizumab litigation. On 4 May 2017 Baxalta Inc. ('Baxalta'), a subsidiary of Shire plc., filed a patent infringement and declaratory judgment of patent infringement suit in the US District Court for the District of Delaware, alleging that Genentech and Chugai Pharmaceutical Co., Ltd. currently or imminently would manufacture, use, sell, offer for sale, or import into the US emicizumab, which would infringe Baxalta's US Patent No. 7,033,590. Baxalta is seeking a judgment of infringement, injunctive and monetary relief, attorneys' fees, costs and expenses. On 11 May 2017 Genentech was served with the complaint. Genentech's response and counterclaims to the complaint were filed on 30 June 2017. The outcome of this matter cannot be determined at this time.

Securities litigation. On 6 June 2017 a class action was filed in the United States District Court for the District of New Jersey against Roche Holding Ltd and two of its current officers. The lawsuit brings claims under the federal securities laws in connection with the Group's public disclosures, in particular with respect to matters relating to two of Roche's drugs, Herceptin and Perjeta. None of the defendants has yet been served. Other substantially similar lawsuits may follow. The Group will vigorously defend itself in this matter. The outcome of this matter cannot be determined at this time.

There have been certain procedural developments in the other significant litigation matters described in Note 19 to the Annual Financial Statements. These do not significantly affect the assessment of the Group's management concerning the adequacy of the total provisions recorded for legal matters.

10. Debt

Debt: movements in carrying value of recognised liabilities in millions of CHF

Six months ended 30 June 2017	
At 1 January 2017	22,355
Proceeds from issue of bonds and notes	1,502
Redemption and repurchase of bonds and notes	(1,500)
Increase (decrease) in commercial paper	(153)
Increase (decrease) in other debt	(193)
Net (gains) losses on redemption and repurchase of bonds and notes [3]	–
Amortisation of debt discount [3]	7
Net foreign currency transaction (gains) losses	117
Currency translation effects and other	(1,020)
At 30 June 2017	**21,115**
Bonds and notes	18,903
Commercial paper	1,830
Amounts due to banks and other financial institutions	360
Finance lease obligations	4
Other borrowings	18
Total debt	**21,115**
Long-term debt	16,731
Short-term debt	4,384
Total debt	**21,115**

Issuance of bonds and notes – 2017

On 23 March 2017 the Group completed an offering of CHF 1.5 billion fixed rate bonds issued in three tranches, of which CHF 400 million for bonds with a zero coupon which will mature on 23 September 2018, CHF 750 million for bonds with a 0.10% coupon which will mature on 23 September 2024, and CHF 350 million for bonds with a 0.45% coupon which will mature on 23 March 2029. These bonds are listed at the SIX Swiss Exchange. The Group received CHF 1,502 million aggregate net proceeds from the issuance and sale of these fixed rate bonds.

Issuance of bonds and notes – 2016

During the six months ended 30 June 2016 the Group issued EUR 650 million fixed rate notes (CHF 703 million) and USD 1.0 billion fixed rate notes (CHF 987 million).

Redemption and repurchase of bonds and notes – 2017

Redemption of Swiss franc bonds. On the due date of 23 March 2017 the Group redeemed the 4.50% fixed rate bonds with a principal amount of CHF 1.5 billion. The cash outflow was CHF 1,500 million, plus accrued interest. The effective interest rate of these bonds was 4.77%.

Redemption and repurchase of bonds and notes – 2016

During the six months ended 30 June 2016 the Group completed the early partial redemption of USD 600 million fixed rate notes (CHF 660 million), completed the redemption of the EUR 2.1 billion fixed rate notes (CHF 2,283 million) and initiated the early partial redemption of USD 857 million fixed rate notes (completed in August 2016).

Cash flows from issuance, redemption and repurchase of bonds and notes

Cash inflows from issuance of bonds and notes in millions of CHF

	Six months ended 30 June	
	2017	2016
Euro Medium Term Note programme – Euro notes	–	703
US dollar notes	–	987
Swiss franc bonds	1,502	–
Total cash inflows from issuance of bonds and notes	**1,502**	**1,690**

Cash outflows from redemption and repurchase of bonds and notes in millions of CHF

	Six months ended 30 June	
	2017	2016
Euro Medium Term Note programme – Euro notes	–	(2,283)
US dollar notes	–	(660)
Swiss franc bonds	(1,500)	–
Total cash outflows from redemption and repurchase of bonds and notes	**(1,500)**	**(2,943)**

Commercial paper

Roche Holdings, Inc. commercial paper program. Roche Holdings, Inc. has an established commercial paper program under which it can issue up to USD 7.5 billion of unsecured commercial paper notes guaranteed by Roche Holding Ltd. A committed credit line of USD 7.5 billion is available as a back-stop line. The maturity of the notes under the program cannot exceed 365 days from the date of issuance. At 30 June 2017 unsecured commercial paper notes with a principal amount of USD 1.9 billion and an average interest rate of 1.02% were outstanding.

Movements in commercial paper obligations in millions of CHF

Six months ended 30 June 2017	
At 1 January 2017	2,116
Net cash proceeds (payments)	(153)
Currency translation effects	(133)
At 30 June 2017	**1,830**

11. Pensions and other post-employment benefits

During the six months ended 30 June 2016 operating income of CHF 426 million was recorded for past service costs from changes to the Group's pension plans in Switzerland that were announced in June 2016. This represented the one-time impact of the adjustment of the pension liability for plan changes. Of this amount, CHF 310 million was recorded in the Pharmaceuticals Division, CHF 77 million in the Diagnostics Division and CHF 39 million in Corporate. The income from past service costs was recorded within general and administration.

12. Equity attributable to Roche shareholders

Share capital and non-voting equity securities *(Genussscheine)*

The authorised and issued share capital of the Group and the number of issued non-voting equity securities have not changed during the first half of 2017. The weighted average number of shares and non-voting equity securities in issue during the six months ended 30 June 2017 was 853 million (six months ended 30 June 2016: 852 million).

Dividends

On 14 March 2017 the shareholders approved the distribution of a dividend of CHF 8.20 per share and non-voting equity security (2016: CHF 8.10) in respect of the 2016 business year. The distribution to holders of outstanding shares and non-voting equity securities totalled CHF 6,998 million (2016: CHF 6,908 million) and has been recorded against retained earnings in the six months ended 30 June 2017.

Own equity instruments

Holdings of own equity instruments in equivalent number of non-voting equity securities

	30 June 2017 (millions)	31 December 2016 (millions)
Shares	0.1	0.1
Non-voting equity securities	9.2	10.5
Total	**9.3**	**10.6**

Own equity instruments are held for the Group's potential conversion obligations that may arise from the Group's equity compensation plans (described in Note 26 to the Annual Financial Statements).

Retained earnings

In addition to net income attributable to Roche shareholders of CHF 5,477 million (six months ended 30 June 2016: CHF 5,378 million) and the dividend payments described above, retained earnings also includes gains on remeasurements of defined benefit plans of CHF 611 million, after tax (2016: losses of CHF 1,339 million, after tax). These were based on updated actuarial calculations for major plans and the gains were mainly due to changes in discount rates as well as to an increase in the fair value of plan assets since the end of 2016.

13. Subsidiaries

Chugai

Chugai is a fully consolidated subsidiary of the Group and at 30 June 2017 the Group's interest in Chugai was 61.3% (31 December 2016: 61.4%). The common stock of Chugai is publicly traded and is listed on the Tokyo Stock Exchange under the stock code 'TSE: 4519'. Chugai prepares financial statements in accordance with International Financial Reporting Standards (IFRS) that are filed on a quarterly basis with the Tokyo Stock Exchange.

The dividends distributed to third parties holding Chugai shares during the six months ended 30 June 2017 totalled CHF 49 million (six months ended 30 June 2016: CHF 59 million) and have been recorded against non-controlling interests. Dividends paid by Chugai to Roche are eliminated on consolidation as intercompany items.

Foundation Medicine, Inc.

Foundation Medicine, Inc. ('FMI') is a fully consolidated subsidiary of the Group and at 30 June 2017 the Group's interest in FMI was 58.5% (31 December 2016: 59.6%). The common stock of FMI is publicly traded and is listed on the Nasdaq under the stock code 'FMI'. FMI prepares financial statements in accordance with US GAAP that are filed on a quarterly basis with the SEC.

Divestment of subsidiary

On 1 February 2017 the Group sold its wholly owned subsidiary Roche Carolina Inc. in Florence, US, to a third party as part of the previously announced Pharmaceuticals Division's strategic realignment of its manufacturing network. The total consideration received was USD 8 million in cash. The total loss on divestment of CHF 94 million, as shown in the table below, was reported as global restructuring costs in the Roche Pharmaceuticals operating segment and included in general and administration.

Loss on divestment of subsidiary – 2017 in millions of CHF

Consideration	**8**
Property, plant and equipment	1
Other net assets (liabilities)	8
Currency translation of foreign operations transferred to income statement	91
Total net assets disposed	**100**
Provisions and accruals for residual obligations retained by the Group	(2)
Loss on divestment of subsidiary [6]	**(94)**

14. Earnings per share and non-voting equity security

Basic earnings per share and non-voting equity security

	Six months ended 30 June 2017	2016
Net income attributable to Roche shareholders (CHF millions)	**5,477**	**5,378**
Number of shares (millions)	160	160
Number of non-voting equity securities (millions)	703	703
Weighted average number of own shares and non-voting equity securities held (millions)	(10)	(11)
Weighted average number of shares and non-voting equity securities in issue (millions)	**853**	**852**
Basic earnings per share and non-voting equity security (CHF)	**6.42**	**6.31**

Diluted earnings per share and non-voting equity security

	Six months ended 30 June 2017	2016
Net income attributable to Roche shareholders (CHF millions)	5,477	5,378
Increase in non-controlling interests' share of Group net income, assuming all outstanding Chugai stock options exercised (CHF millions)	–	–
Net income used to calculate diluted earnings per share (CHF millions)	**5,477**	**5,378**
Weighted average number of shares and non-voting equity securities in issue (millions)	853	852
Adjustment for assumed exercise of equity compensation plans, where dilutive (millions)	7	9
Weighted average number of shares and non-voting equity securities in issue used to calculate diluted earnings per share (millions)	**860**	**861**
Diluted earnings per share and non-voting equity security (CHF)	**6.37**	**6.24**

15. Statement of cash flows

Cash generated from operations in millions of CHF

	Six months ended 30 June 2017	2016
Net income	5,577	5,467
Add back non-operating (income) expense		
– Financing costs [3]	391	600
– Other financial income (expense) [3]	(59)	23
– Income taxes [4]	1,886	2,052
Operating profit	**7,795**	**8,142**
Depreciation of property, plant and equipment [2]	1,069	1,049
Amortisation of intangible assets [2]	906	896
Impairment of goodwill [2]	–	–
Impairment of intangible assets [2]	1,475	377
Impairment of property, plant and equipment [2]	105	34
Operating (income) expense for defined benefit plans	272	(153)
Operating expense for equity-settled equity compensation plans	223	210
Net (income) expense for provisions	(317)	146
Bad debt (reversal) expense	7	6
Inventory write-downs	155	176
Inventory fair value adjustment	–	166
Net (gain) loss on disposal of products	(231)	(50)
Other adjustments	90	6
Cash generated from operations	**11,549**	**11,005**

Dividends paid in millions of CHF

	Six months ended 30 June 2017	2016
Dividends to Roche Group shareholders	(6,998)	(6,908)
Dividends to non-controlling shareholders – Chugai	(49)	(59)
Dividends to non-controlling shareholders – Other	(8)	(10)
Increase (decrease) in dividends payable	6	6
Dividend withholding tax	(21)	2
Total	**(7,070)**	**(6,969)**

16. Financial risk management

The Group's financial risk management objectives and policies are consistent with those disclosed in Note 29 to the Annual Financial Statements.

Fair value hierarchy

The table below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities.
- Level 2 – observable inputs other than quoted prices in active markets for identical assets and liabilities.
- Level 3 – unobservable inputs.

Fair value hierarchy of financial instruments in millions of CHF

	Level 1	Level 2	Level 3	Total
At 30 June 2017				
Marketable securities:				
– Equity securities	11	–	–	11
– Debt securities	1,136	–	–	1,136
– Money market instruments and time accounts over three months	–	2,335	–	2,335
Derivative financial instruments	–	142	–	142
Available-for-sale investments – held at fair value	164	120	–	284
Financial assets recognised at fair value	**1,311**	**2,597**	**–**	**3,908**
Derivative financial instruments	–	(194)	–	(194)
Contingent consideration	–	–	(754)	(754)
Financial liabilities recognised at fair value	**–**	**(194)**	**(754)**	**(948)**

At 30 June 2017 Level 1 financial assets consist of treasury bills, bonds and quoted shares. Level 2 financial assets consist primarily of commercial paper, certificates of deposit and derivative financial instruments.

The Group determines Level 2 fair values using the following valuation techniques:

- Marketable securities and derivative financial instruments are based on valuation models that use observable market data for interest rates, yield curves, foreign exchange rates and implied volatilities for similar instruments at the measurement date.
- Available-for-sale investments using a valuation model derived from the most recently published observable financial prices.

The Group recognises transfers between levels of the fair value hierarchy at the end of the reporting period during which the transfer has occurred. There were no significant transfers between Level 1 and Level 2 during the six months ended 30 June 2017.

Level 3 fair values

Details of the determination of Level 3 fair value measurements are set out below.

Contingent consideration arrangements in millions of CHF

Six months ended 30 June 2017	
At 1 January 2017	(1,089)
Utilised [5]	102
Total unrealised gains and losses included in the income statement	
– Unused amounts reversed – recorded within general and administration	196
– Additional amounts created – recorded within general and administration	–
– Discount unwind included in financing costs	(2)
Total gains and losses included in other comprehensive income	
– Currency translation effects	39
At 30 June 2017	**(754)**

During the six months ended 30 June 2017 contingent consideration provisions decreased mainly due to the partial reversal of some of the provisions and to the payment of milestones. There was CHF 196 million of income from the partial reversal of contingent consideration provisions mainly related to the Dutalys and Trophos acquisitions. Payments of CHF 102 million were made for milestones related to the Genia, Ariosa, Santaris and other acquisitions.

Contingent consideration arrangements

The Group is party to certain contingent consideration arrangements arising from business combinations. The fair values are determined considering the expected payments, discounted to present value using risk-adjusted average discount rate of 3.6% at 30 June 2017 (31 December 2016: 3.2%). The expected payments are determined by considering the possible scenarios of forecast sales and other performance criteria, the amount to be paid under each scenario, and the probability of each scenario. The significant unobservable inputs are the forecast sales, other performance criteria and the risk-adjusted discount rate. The estimated fair value would increase if the forecast sales or other performance criteria rates were higher or the risk-adjusted discount rate were lower. At 30 June 2017 the total potential payments under contingent consideration arrangements could be up to CHF 2.5 billion (31 December 2016: CHF 2.9 billion).

Carrying value and fair value

At 30 June 2017 the carrying value of bonds and notes is CHF 18.9 billion compared to a fair value of CHF 20.1 billion and the carrying value of total debt is CHF 21.1 billion compared to a fair value of CHF 22.3 billion. The carrying values of financial assets are a reasonable approximation of the fair values at 30 June 2017.

KPMG

Independent Auditor's Report on the Review of Interim Consolidated Financial Statements

To the Board of Directors of Roche Holding Ltd, Basel

Introduction

We have been engaged to review the accompanying consolidated balance sheet of Roche Holding Ltd as at 30 June 2017 and the related consolidated statements of income, comprehensive income, cash flows and changes in equity for the six-month period then ended, and selected explanatory notes (the interim consolidated financial statements) on pages 35 to 62. The Board of Directors is responsible for the preparation and presentation of these interim consolidated financial statements in accordance with International Accounting Standard 34 "Interim Financial Reporting". Our responsibility is to express a conclusion on these interim consolidated financial statements based on our review.

Scope of Review

We conducted our review in accordance with the International Standard on Review Engagements 2410, "Review of Interim Financial Information Performed by the Independent Auditor of the Entity". A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the accompanying interim consolidated financial statements as at 30 June 2017 are not prepared, in all material respects, in accordance with International Accounting Standard 34 "Interim Financial Reporting".

KPMG AG

Ian Starkey
Licensed Audit Expert
Auditor in Charge

Marc Ziegler
Licensed Audit Expert

Basel, 25 July 2017

KPMG AG, Viaduktstrasse 42, PO Box 3456, CH-4002 Basel

Supplementary Information

Alternative Performance Measures

The financial information included in the Financial Review includes certain Alternative Performance Measures (APMs) which are not accounting measures as defined by IFRS, in particular, the core results, net working capital, net operating assets, free cash flow and constant exchange rates. These APMs should not be used instead of, or considered as alternatives to, the Group's consolidated interim financial results based on IFRS. These APMs may not be comparable to similarly titled measures disclosed by other companies. All APMs presented in the Financial Review relate to the performance of the current reported period and comparative periods.

Core results

Core results allow for an assessment of both the Group's actual results as defined by IFRS and the underlying performance of the business. The core results concept, which is used in the internal management of the business, is based on the IFRS results, with the following adjustments:

- Global restructuring plans (see Note 6) are excluded.
- Amortisation and impairment of intangible assets (see Note 8) and impairment of goodwill (see Note 7) are excluded.
- Acquisition accounting and other one-time impacts from Alliance arrangements and Business Combinations (see Financial Review) are excluded.
- Discontinued operations (currently none) would be excluded.
- Legal and environmental cases (see Financial Review) are excluded.
- Global issues outside the healthcare sector beyond the Group's control (currently none) would be excluded.
- Material treasury items such as major debt restructurings (currently none) would be excluded.
- Pension plan settlements (currently none) would be excluded.
- The tax benefit recorded under IFRS in respect of Equity Compensation Plans (ECPs), which varies according to the price of the underlying equity, is replaced by a normalised tax benefit, being the IFRS 2 expense multiplied by the applicable tax rate (see Note 4).

The core results concept was further described on 22 October 2010 at an Investor Update teleconference, which is available for download at: http://www.roche.com/investors/ir_agenda/csr_151010.htm

The Group's IFRS results, including the divisional breakdown, are reconciled to the core results in the tables below. The calculation of Core EPS is also given in the tables below. Additional commentary to the adjustment items is given in the Financial Review.

Core results reconciliation – six months ended 30 June 2017 in millions of CHF

	IFRS	Global restructuring	Intangibles amortisation	Intangibles impairment	Alliances & business combinations	Legal & environmental	Pension plan settlements	Normalisation of ECP tax benefit	Core
Sales	26,344	–	–	–	–	–	–	–	26,344
Royalties and other operating income	1,204	–	–	–	–	–	–	–	1,204
Cost of sales	(8,752)	111	834	978	–	–	–	–	(6,829)
Marketing and distribution	(4,493)	46	3	–	–	–	–	–	(4,444)
Research and development	(5,605)	14	69	497	–	–	–	–	(5,025)
General and administration	(903)	150	–	–	(197)	(165)	–	–	(1,115)
Operating profit	**7,795**	**321**	**906**	**1,475**	**(197)**	**(165)**	**–**	**–**	**10,135**
Financing costs	(391)	1	–	–	2	2	–	–	(386)
Other financial income (expense)	59	–	–	–	(7)	–	–	–	52
Profit before taxes	**7,463**	**322**	**906**	**1,475**	**(202)**	**(163)**	**–**	**–**	**9,801**
Income taxes	(1,886)	(40)	(250)	(503)	3	59	–	3	(2,614)
Net income	**5,577**	**282**	**656**	**972**	**(199)**	**(104)**	**–**	**3**	**7,187**
Attributable to									
– Roche shareholders	5,477	282	649	969	(199)	(104)	–	3	7,077
– Non-controlling interests	100	–	7	3	–	–	–	–	110

Core results reconciliation – six months ended 30 June 2016 in millions of CHF

	IFRS	Global restructuring	Intangibles amortisation	Intangibles impairment	Alliances & business combinations	Legal & environmental	Pension plan settlements	Normalisation of ECP tax benefit	Core
Sales	25,022	–	–	–	–	–	–	–	25,022
Royalties and other operating income	986	–	–	–	–	–	–	–	986
Cost of sales	(7,578)	161	823	–	166	–	–	–	(6,428)
Marketing and distribution	(4,362)	51	2	–	–	–	–	–	(4,309)
Research and development	(5,297)	69	71	377	–	–	–	–	(4,780)
General and administration	(629)	110	–	–	(145)	27	–	–	(637)
Operating profit	**8,142**	**391**	**896**	**377**	**21**	**27**	**–**	**–**	**9,854**
Financing costs	(600)	1	–	–	21	5	–	–	(573)
Other financial income (expense)	(23)	–	–	–	–	–	–	–	(23)
Profit before taxes	**7,519**	**392**	**896**	**377**	**42**	**32**	**–**	**–**	**9,258**
Income taxes	(2,052)	(75)	(299)	(93)	(38)	(11)	–	71	(2,497)
Net income	**5,467**	**317**	**597**	**284**	**4**	**21**	**–**	**71**	**6,761**
Attributable to									
– Roche shareholders	5,378	316	590	284	4	21	–	70	6,663
– Non-controlling interests	89	1	7	–	–	–	–	1	98

Divisional core results reconciliation – six months ended 30 June 2017 in millions of CHF

	IFRS	Global restruc-turing	Intangibles amorti-sation	Intangibles impairment	Alliances & business combi-nations	Legal & environ-mental	Pension plan settlements	Core
Pharmaceuticals								
Sales	20,521	–	–	–	–	–	–	20,521
Royalties and other operating income	1,115	–	–	–	–	–	–	1,115
Cost of sales	(5,917)	81	678	978	–	–	–	(4,180)
Marketing and distribution	(3,116)	6	3	–	–	–	–	(3,107)
Research and development	(4,943)	(1)	64	497	–	–	–	(4,383)
General and administration	(447)	118	–	–	(186)	(194)	–	(709)
Operating profit	**7,213**	**204**	**745**	**1,475**	**(186)**	**(194)**	**–**	**9,257**
Diagnostics								
Sales	5,823	–	–	–	–	–	–	5,823
Royalties and other operating income	89	–	–	–	–	–	–	89
Cost of sales	(2,835)	30	156	–	–	–	–	(2,649)
Marketing and distribution	(1,377)	40	–	–	–	–	–	(1,337)
Research and development	(662)	15	5	–	–	–	–	(642)
General and administration	(258)	16	–	–	(11)	28	–	(225)
Operating profit	**780**	**101**	**161**	**–**	**(11)**	**28**	**–**	**1,059**
Corporate								
General and administration	(198)	16	–	–	–	1	–	(181)
Operating profit	**(198)**	**16**	**–**	**–**	**–**	**1**	**–**	**(181)**

Divisional core results reconciliation – six months ended 30 June 2016 in millions of CHF

	IFRS	Global restruc-turing	Intangibles amorti-sation	Intangibles impairment	Alliances & business combi-nations	Legal & environ-mental	Pension plan settlements	Core
Pharmaceuticals								
Sales	19,460	–	–	–	–	–	–	19,460
Royalties and other operating income	926	–	–	–	–	–	–	926
Cost of sales	(4,809)	121	654	–	166	–	–	(3,868)
Marketing and distribution	(3,048)	8	1	–	–	–	–	(3,039)
Research and development	(4,619)	45	68	377	–	–	–	(4,129)
General and administration	(279)	61	–	–	(152)	4	–	(366)
Operating profit	**7,631**	**235**	**723**	**377**	**14**	**4**	**–**	**8,984**
Diagnostics								
Sales	5,562	–	–	–	–	–	–	5,562
Royalties and other operating income	60	–	–	–	–	–	–	60
Cost of sales	(2,769)	40	169	–	–	–	–	(2,560)
Marketing and distribution	(1,314)	43	1	–	–	–	–	(1,270)
Research and development	(678)	24	3	–	–	–	–	(651)
General and administration	(197)	34	–	–	6	23	–	(134)
Operating profit	**664**	**141**	**173**	**–**	**6**	**23**	**–**	**1,007**
Corporate								
General and administration	(153)	15	–	–	1	–	–	(137)
Operating profit	**(153)**	**15**	**–**	**–**	**1**	**–**	**–**	**(137)**

Core EPS (basic)

	Six months ended 30 June 2017	2016
Core net income attributable to Roche shareholders (CHF millions)	7,077	6,663
Weighted average number of shares and non-voting equity securities in issue (millions) [14]	853	852
Core earnings per share (basic) (CHF)	**8.30**	**7.82**

Core EPS (diluted)

	Six months ended 30 June 2017	2016
Core net income attributable to Roche shareholders (CHF millions)	7,077	6,663
Increase in non-controlling interests' share of core net income, assuming all outstanding Chugai stock options exercised (CHF millions)	–	–
Net income used to calculate diluted earnings per share (CHF millions)	**7,077**	**6,663**
Weighted average number of shares and non-voting equity securities in issue used to calculate diluted earnings per share (millions) [14]	**860**	**861**
Core earnings per share (diluted) (CHF)	**8.23**	**7.74**

Free cash flow

Free cash flow is used to assess the Group's ability to generate the cash required to conduct and maintain its operations. It also indicates the Group's ability to generate cash to finance dividend payments, repay debt and to undertake merger and acquisition activities. The free cash flow concept is used in the internal management of the business.

Operating free cash flow is calculated based on the IFRS operating profit and adjusted for certain cash items, movements in net working capital and capital expenditures (investments in property, plant and equipment and intangible assets). Operating free cash flow is different from cash flows from operating activities as defined by IAS 7 in that it includes capital expenditures (which is within the responsibility of divisional management) and excludes income taxes paid (which is not within the responsibility of divisional management). Cash outflows from defined benefit plans are allocated to the operating free cash flow based on the current service cost with the residual allocated to treasury activities.

Free cash flow is calculated as the operating free cash flow adjusted for treasury activities and taxes paid. Free cash flow is different from total cash flows as defined by IAS 7 in that it excludes dividend payments, cash inflows/outflows from financing activities such as issuance/repayment of debt, purchase/sale of marketable securities and cash inflows/outflows from mergers, acquisitions and divestments.

Operating free cash flow and free cash flow are calculated as shown in the tables below. Additional commentary to the adjustment items is given in the Financial Review.

Operating free cash flow reconciliation in millions of CHF

	Six months ended 30 June 2017	2016
Cash flows from operating activities (IFRS basis in accordance with IAS 7)	**7,801**	**5,670**
Add back		
– Income taxes paid	1,633	1,748
Deduct		
– Investments in property, plant and equipment	(1,615)	(1,736)
– Investments in intangible assets	(282)	(380)
– Disposal of property, plant and equipment	26	29
– Disposal of intangible assets	–	–
Pensions and other post-employment benefits		
– Add back total payments for defined benefit plans	297	429
– Deduct allocation of payments to operating free cash flow	(272)	(273)
Other operating items	1	–
Operating free cash flow	**7,589**	**5,487**

Free cash flow reconciliation in millions of CHF

	Six months ended 30 June 2017	2016
Cash flows from operating activities (IFRS basis in accordance with IAS 7)	**7,801**	**5,670**
Deduct		
– Investments in property, plant and equipment	(1,615)	(1,736)
– Investments in intangible assets	(282)	(380)
– Disposal of property, plant and equipment	26	29
– Disposal of intangible assets	–	–
– Interest paid	(406)	(601)
Other operating items	1	–
Other treasury items	80	(133)
Free cash flow	**5,605**	**2,849**

Supplementary information used to calculate the divisional operating free cash flow is shown in the table below.

Divisional operating free cash flow information in millions of CHF

Six months ended 30 June	Pharmaceuticals 2017	Pharmaceuticals 2016	Diagnostics 2017	Diagnostics 2016	Corporate 2017	Corporate 2016	Group 2017	Group 2016
Depreciation, amortisation and impairments								
Depreciation of property, plant and equipment	571	600	494	445	4	4	1,069	1,049
Amortisation of intangible assets	745	723	161	173	–	–	906	896
Impairment of property, plant and equipment	101	14	4	20	–	–	105	34
Impairment of goodwill	–	–	–	–	–	–	–	–
Impairment of intangible assets	1,475	377	–	–	–	–	1,475	377
Total	**2,892**	**1,714**	**659**	**638**	**4**	**4**	**3,555**	**2,356**
Other adjustments								
Add back								
– Expenses for equity-settled equity compensation plans	175	165	32	29	16	16	223	210
– Net (income) expense for provisions	(375)	71	55	69	3	6	(317)	146
– Net (gain) loss from disposals	(138)	(46)	5	(1)	–	–	(133)	(47)
– Non-cash working capital and other items	104	(13)	51	(23)	(1)	(39)	154	(75)
Deduct								
– Utilisation of provisions	(209)	(313)	(65)	(60)	(37)	(59)	(311)	(432)
– Proceeds from disposals	234	57	23	22	–	–	257	79
Total	**(209)**	**(79)**	**101**	**36**	**(19)**	**(76)**	**(127)**	**(119)**
Operating profit cash adjustments	**2,683**	**1,635**	**760**	**674**	**(15)**	**(72)**	**3,428**	**2,237**

EBITDA

The Group does not use Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA) in either its internal management reporting or its external communications. In the opinion of the Group's management, operating free cash flow gives a more useful and consistent measurement of 'cash earnings' than EBITDA, which includes many non-cash items such as provisions, allowances for trade receivables and inventories, and certain non-cash entries arising from acquisition accounting and pension accounting.

For the convenience of those readers that do use EBITDA, this is provided in the table below. As the starting point this uses the core results, which already exclude the amortisation and impairment of goodwill and intangible assets.

EBITDA (using core results) in millions of CHF

Six months ended 30 June	Pharmaceuticals 2017	Pharmaceuticals 2016	Diagnostics 2017	Diagnostics 2016	Corporate 2017	Corporate 2016	Group 2017	Group 2016
EBITDA								
Core operating profit	9,257	8,984	1,059	1,007	(181)	(137)	10,135	9,854
Depreciation and impairment of property, plant and equipment – Core basis	537	529	495	445	4	4	1,036	978
EBITDA	**9,794**	**9,513**	**1,554**	**1,452**	**(177)**	**(133)**	**11,171**	**10,832**
– margin, % of sales	47.7	48.9	26.7	26.1	–	–	42.4	43.3

Net operating assets

Net operating assets allow for an assessment of the Group's operating performance of the business independently from financing and tax activities. Net operating assets are calculated as property, plant and equipment, goodwill, intangible assets, net working capital and long-term net operating assets minus provisions.

The calculation of the net operating assets disclosed in Note 2 is shown in the table below.

Net operating assets to balance sheet reconciliation – 30 June 2017 in millions of CHF

	Pharmaceuticals	Diagnostics	Corporate	Taxation and Treasury	Group
Property, plant and equipment	13,750	5,912	136	–	19,798
Goodwill	5,118	5,650	–	–	10,768
Intangible assets	7,069	2,353	–	–	9,422
Inventories	5,289	2,428	–	–	7,717
Provisions	(2,083)	(812)	(309)	–	(3,204)
Current income tax net liabilities	–	–	–	(3,328)	(3,328)
Deferred tax net assets	–	–	–	2,729	2,729
Defined benefit plan net liabilities	–	–	–	(6,144)	(6,144)
Marketable securities	–	–	–	3,482	3,482
Cash and cash equivalents	–	–	–	3,453	3,453
Debt	–	–	–	(21,115)	(21,115)
Other net assets (liabilities)					
– Net working capital	181	880	(87)	–	974
– Long-term net operating assets	167	13	(5)	–	175
– Other	–	–	–	552	552
Total net assets	**29,491**	**16,424**	**(265)**	**(20,371)**	**25,279**

Net debt

Net debt is used to monitor the Group's overall short- and long-term liquidity. Net debt is calculated as the sum of total debt (long-term and short-term) less marketable securities, cash and cash equivalents.

Net debt calculations, including details of movements during the current reported period, are shown in the table on page 30 in the Financial Review.

Net working capital

Net working capital is used to assess the Group's efficiency in utilising assets and short-term liquidity. Net trade working capital is calculated as trade receivables and inventories minus trade payables. Net working capital is calculated as net trade working capital adjusted for other receivables and other payables.

Net working capital and net trade working capital calculations are shown in the tables on page 18 (Pharmaceuticals Division), page 23 (Diagnostics Division) and page 25 (Corporate) in the Financial Review.

Constant exchange rates

Certain percentage changes in the Financial Review have been calculated using constant exchange rates (CER) which allow for an assessment of the Group's financial performance with the effects of exchange rate fluctuations eliminated. The percentage changes at constant exchange rates are calculated using simulations by reconsolidating both the current reported period and the prior period numbers at constant currency exchange rates, equalling the average exchange rates for the prior year. For example, a CER change between a 2017 line item and its 2016 equivalent is calculated using the average exchange rate for the year ended 31 December 2016 for both the 2017 line item and the 2016 line item and subsequently calculating the change in percent with respect to the two recalculated numbers.

Foreign exchange gains and losses are excluded from the calculation of CER growth rates in the earning per share calculations. In countries where there is a significant devaluation in the local currency in the current reported period, the simulations use the average exchange rate of the current reported period instead of the prior period to avoid that CER growth rates are artificially inflated.

Roche Securities

Number of shares and non-voting equity securities[a]

	30 June 2017	31 December 2016
Number of shares (nominal value: CHF 1.00)	160,000,000	160,000,000
Number of non-voting equity securities *(Genussscheine)* (no nominal value)	702,562,700	702,562,700
Total	**862,562,700**	**862,562,700**
Number of own shares and non-voting equity securities *(Genussscheine)* held	(9,265,108)	(10,635,070)
Total in issue	**853,297,592**	**851,927,630**

Data per share and non-voting equity security in CHF

		Six months ended 30 June	
		2017	2016
Earnings (basic)		6.42	6.31
Earnings (diluted)		6.37	6.24
Core earnings (basic)		8.30	7.82
Core earnings (diluted)		8.23	7.74
Stock price of share[b]	Opening	238.00	276.75
	High	271.75	276.75
	Low	233.90	238.20
	Period end	247.00	258.25
Stock price of non-voting equity security *(Genussscheine)*[b]	Opening	232.60	276.40
	High	272.60	276.40
	Low	231.40	233.20
	Period end	244.20	256.10

Market capitalisation in millions of CHF

	30 June 2017	31 December 2016	30 June 2016
Period end	208,823	199,022	218,594

a) Each non-voting equity security *(Genussschein)* confers the same rights as any of the shares to participate in the available earnings and any remaining proceeds from liquidation following repayment of the nominal value of the shares and the participation certificate capital (if any). Shares and non-voting equity securities are listed on the SIX Swiss Exchange. Roche Holding Ltd has no restrictions as to ownership of its shares or non-voting equity securities.

b) All stock price data reflect daily closing prices.

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Cautionary statement regarding forward-looking statements

This Half-Year Report contains certain forward-looking statements. These forward-looking statements may be identified by words such as 'believes', 'expects', 'anticipates', 'projects', 'intends', 'should', 'seeks', 'estimates', 'future' or similar expressions or by discussion of, among other things, strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this Report, among others: (1) pricing and product initiatives of competitors; (2) legislative and regulatory developments and economic conditions; (3) delay or inability in obtaining regulatory approvals or bringing products to market; (4) fluctuations in currency exchange rates and general financial market conditions; (5) uncertainties in the discovery, development or marketing of new products or new uses of existing products, including without limitation negative results of clinical trials or research projects, unexpected side effects of pipeline or marketed products; (6) increased government pricing pressures; (7) interruptions in production; (8) loss of or inability to obtain adequate protection for intellectual property rights; (9) litigation; (10) loss of key executives or other employees; and (11) adverse publicity and news coverage.

The statement regarding earnings per share growth is not a profit forecast and should not be interpreted to mean that Roche's earnings or earnings per share for 2017 or any subsequent period will necessarily match or exceed the historical published earnings or earnings per share of Roche.

The Roche Half-Year Report is published in German and English. In case of doubt or differences of interpretation, the English version shall prevail over the German text.

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