Financial Report
2016

syngenta

Key information

Operating and Financial Review and Prospects

Syngenta Group Consolidated Financial Statements

Financial Statements of Syngenta AG

Key information

Selected financial data

Syngenta has prepared the consolidated financial statements in US dollars ($) and in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS). Financial figures are presented in millions of dollars ($m) except where otherwise stated. The basis of preparation of the consolidated financial statements and the key accounting policies are discussed in Note 1 and in Notes 2 and 29, respectively, to the consolidated financial statements.

The selected financial highlights information in accordance with IFRS presented below has been extracted from the consolidated financial statements of Syngenta. Investors should read the entire consolidated financial statements and not rely on the summarized information. The information includes the results of operations and the net assets of Pasteuria Bioscience Inc. from November 8, 2012, Sunfield Seeds Inc. from November 29, 2012, Devgen N.V. from December 12, 2012, MRI Seed Zambia Ltd and MRI Agro Zambia Ltd from October 31, 2013, Società Produttori Sementi S.p.A. from April 4, 2014, Lantmännen SW Seed Hadmersleben GmbH, Lantmännen SW Seeds GmbH and SW Winter Oilseed AB from July 21, 2014 and Land.db Enterprises Inc. from October 15, 2015. For further information about 2015 acquisitions, see Note 3 to the consolidated financial statements.

Financial highlights

($m, except where otherwise stated)	Year ended December 31, 2016	2015	2014	2013	2012
Amounts in accordance with IFRS					
Income statement data:					
Sales	**12,790**	13,411	15,134	14,688	14,202
Cost of goods sold	**(6,507)**	(7,042)	(8,192)	(7,986)	(7,223)
Gross profit	**6,283**	6,369	6,942	6,702	6,979
Operating expenses	**(4,636)**	(4,528)	(4,837)	(4,616)	(4,723)
Operating income	**1,647**	1,841	2,105	2,086	2,256
Income before taxes	**1,361**	1,592	1,895	1,934	2,116
Net income	**1,181**	1,344	1,622	1,649	1,850
Net income attributable to Syngenta AG shareholders	**1,178**	1,339	1,619	1,644	1,847
Number of shares – basic	**92,020,494**	91,908,128	91,674,127	91,952,222	91,644,190
Number of shares – diluted	**92,092,649**	92,206,535	92,007,089	92,459,306	92,132,922
Basic earnings per share ($)	**12.80**	14.57	17.66	17.88	20.16
Diluted earnings per share ($)	**12.79**	14.52	17.60	17.78	20.05
Cash dividends paid:					
Swiss franc (“CHF”) per share	**11.00**	11.00	10.00	9.50	8.00
$ per share equivalent	**11.32**	11.73	11.25	10.01	8.82
Cash flow data:					
Cash flow from operating activities	**1,807**	1,190	1,931	1,214	1,359
Cash flow used for investing activities	**(521)**	(462)	(729)	(772)	(1,218)
Cash flow used for financing activities	**(1,134)**	(1,188)	(420)	(1,114)	(232)
Capital expenditure on tangible fixed assets	**(425)**	(453)	(600)	(625)	(508)
Balance sheet data:					
Current assets less current liabilities	**5,089**	5,537	4,858	3,990	4,537
Total assets	**19,068**	18,977	19,929	20,216	19,438
Total non-current liabilities	**(4,830)**	(4,896)	(4,317)	(3,356)	(4,226)
Total liabilities	**(11,097)**	(10,557)	(11,024)	(10,712)	(10,653)
Share capital	**(6)**	(6)	(6)	(6)	(6)
Total shareholders’ equity	**(7,950)**	(8,401)	(8,889)	(9,491)	(8,774)
Other supplementary income data:					
Diluted earnings per share from continuing operations, excluding restructuring and impairment ($)[1]	**17.03**	17.78	19.42	19.30	22.03

All activities were in respect of continuing operations.

Note

1 Diluted earnings per share from continuing operations, excluding restructuring and impairment is a non-GAAP measure.

A non-GAAP measure is a numerical measure of financial performance, financial position or cash flow that either:

- includes, or is subject to adjustments that have the effect of including, amounts that are excluded in the most directly comparable measure calculated and presented under IFRS, or
- excludes, or is subject to adjustments that have the effect of excluding, amounts that are included in the most directly comparable measure calculated and presented under IFRS.

Restructuring represents the effect on reported performance of initiating and enabling business changes that are considered major and that, in the opinion of management, will have a material effect on the nature and focus of Syngenta's operations, and therefore require separate disclosure to provide a more thorough understanding of business performance. Restructuring includes the incremental costs of closing, restructuring or relocating existing operations, and gains or losses from related asset disposals. Restructuring also includes the effects of analyzing and preparing for potential industry consolidation transactions, including costs associated with the ChemChina Tender Offer, as well as the effects of completing and integrating significant business combinations and divestments, including related transaction costs, gains and losses. Recurring costs of normal business operations and routine asset disposal gains and losses are excluded. Impairment includes impairment losses associated with major restructuring as well as impairment losses and reversals of impairment losses resulting from major changes in the markets in which a reported segment operates.

Further discussion on the reason for including disclosure of this and other non-GAAP measures is included in Appendix A at the end of the Operating and Financial Review and Prospects.

Restructuring and impairment charges for 2016 and 2015 are analyzed in Note 6 to the consolidated financial statements. In 2016, Diluted earnings per share from continuing operations, excluding restructuring and impairment also excludes the incremental effect of applying cash-settled share based payment accounting due to the share plan amendments related to the ChemChina Tender Offer described in Note 3 to the consolidated financial statements.

Restructuring for 2014 partly related to the Accelerating Operational Leverage ("AOL") program announced in 2014 to drive further improvement in operating income margins and accelerate delivery of operational leverage as sales grow.

Restructuring for 2014, 2013 and 2012 partly related to the program announced in 2011 to integrate global commercial operations for Crop Protection and Seeds in order to enable operational synergies from the commercial integration, additional cost savings from procurement and supply chain efficiencies and the presentation of an integrated offer to growers.

Restructuring for 2012 also related to the Operational Efficiency program announced in 2004 representing the costs of closure of certain manufacturing and research and development sites and refocusing of other continuing sites and also to the further phase of the Operational Efficiency program announced in 2007 to drive cost savings to offset increased expenditure in research and technology, marketing and product development in the growth areas of Seeds, professional products and emerging country markets.

A detailed reconciliation of net income and earnings per share before restructuring and impairment to net income and earnings per share according to IFRS is presented in Appendix A at the end of the Operating and Financial Review and Prospects.

Operating and Financial Review and Prospects

Introduction

The following discussion includes forward-looking statements subject to risks and uncertainty. See "Forward-looking statements" at the end of this document. This discussion also includes non-GAAP financial data in addition to GAAP results. See Appendix A to this section and Note 1 to the financial highlights for a reconciliation of this data and explanation of the reasons for presenting such data.

Constant exchange rates

Approximately 48 percent of Syngenta's sales and 65 percent of Syngenta's costs in 2016 were denominated in currencies other than US dollars. Therefore, Syngenta's results for the period covered by the review were significantly impacted by movements in exchange rates. Sales in 2016 were 5 percent lower than 2015 on a reported basis, but were 2 percent lower when calculated at constant rates of exchange. The Company therefore provides analysis of results calculated at constant exchange rates ("CER") and also actual results to allow an assessment of performance before and after taking account of currency fluctuations. To present CER information, current period results for entities reporting in currencies other than US dollars are converted into US dollars at the prior period's exchange rates, rather than the exchange rates for this year. An example of this calculation is included in Appendix A of this section.

Overview

Syngenta is a world leading agribusiness operating in the crop protection, seeds and lawn and garden markets. Crop protection chemicals include herbicides, insecticides, fungicides and seed treatments to control weeds, insects and diseases in crops, and are essential inputs enabling growers around the world to improve agricultural productivity and food quality. In Seeds, Syngenta operates in the high value commercial sectors of field crops (including corn, oilseeds, cereals and sugar beet) and vegetables. The Lawn and Garden business provides professional growers and consumers with flowers, turf and landscape, and professional pest management products.

Syngenta's results are affected, both positively and negatively, by, among other factors: general economic conditions; weather conditions, which can influence the demand for certain products over the course of a season and the quantity and cost of seeds supply; commodity crop prices; and exchange rate fluctuations. Government measures, such as subsidies or rules regulating the use of agricultural products, genetically modified seeds, or areas allowed to be planted with certain crops, also can have an impact on Syngenta's industry. Syngenta's results are also affected by the growing importance of biotechnology to agriculture and the use of genetically modified crops. In future years, climate change may have both positive and negative impacts on Syngenta's results. Climate change may make growing certain crops more or less viable in different geographic areas, but is not likely to reduce overall demand for food and feed. Syngenta currently sells and is developing products to improve the water productivity of plants and increase tolerance to drought and heat. Legislation may be enacted in the future that limits carbon dioxide emissions in the manufacture of Syngenta's products or increases the costs associated with such emissions. Syngenta works actively to make its production operations more energy efficient and to reduce the rate of carbon dioxide emissions per unit of sales revenue.

Syngenta operates globally to capitalize on its technology and marketing base. Syngenta's largest market in 2016 was Europe, Africa and the Middle East, which represented approximately 31 percent of consolidated sales (2015: 31 percent) followed by North America at 28 percent (2015: 27 percent), Latin America at 26 percent (2015: 27 percent) and Asia Pacific at 15 percent (2015: 15 percent). Markets for agricultural products in Europe, Africa and the Middle East and North America are seasonal resulting in both sales and operating profit for Syngenta in these markets being weighted towards the first half of the calendar year, which largely reflects the northern hemisphere planting and growing cycle. Latin America has its main selling season in the second half of the year due to its location in the southern hemisphere. Asia Pacific sales and operating profit are more uniform throughout the year.

Syngenta's most significant manufacturing and research and development sites are located in Switzerland, the United Kingdom ("UK"), the United States of America ("USA" or "US"), China and India. Syngenta has major research centers focused on identifying new active ingredients in Stein, Switzerland and Jealott's Hill, UK. Syngenta's primary center for agricultural genomics and biotechnology research is in the USA.

References in this document to market share estimates are based where possible on global agrochemical and biotechnology industry information provided by a third party or on information published by major competitors and are supplemented by Syngenta marketing staff estimates.

The consolidated financial statements are presented in US dollars, as this is the major currency in which revenues are denominated. However, significant, but differing proportions of Syngenta's revenues, costs, assets and liabilities are denominated in currencies other than US dollars. Approximately 16 percent of sales in 2016 were denominated in Euros, while a significant proportion of costs for research and development, administration, general overhead and manufacturing were denominated in Swiss francs and British pounds sterling (approximately 19 percent in total). Sales in Swiss francs and British pounds sterling together made up approximately 2 percent of total sales. Marketing and distribution costs are more closely linked to the currency split of the sales. As a result, operating profit in US dollars can be significantly affected by movements in exchange rates, in particular movements of the Swiss franc, British pound sterling, Euro and Brazilian real, relative to the US dollar, and the relative impact on operating profit may differ from that on sales. Sales in emerging markets are over 50 percent of Syngenta's total sales. Where it is not commercially disadvantageous, Syngenta sets sales prices in these markets in US dollars, particularly in parts of Latin America and the CIS. However, in many emerging territories Syngenta sells in the local currency of the countries

Introduction continued

Overview continued

in the territory and as a result has a long exposure to multiple emerging market currencies. The effects of currency fluctuations within any one year have been reduced by risk management strategies such as hedging and the aforementioned US dollar sales pricing. For further information on these strategies please refer to Note 27 of the consolidated financial statements.

The consolidated financial statements are based upon Syngenta's accounting policies and, where necessary, the results of management estimations. Syngenta believes that the critical accounting policies and estimations underpinning the financial statements are in the areas of (i) royalty and license income, (ii) impairment, (iii) classification of assets and liabilities to be divested, (iv) share based payment, (v) foreign currency translation, (vi) adjustments to revenue and trade receivables, (vii) deferred tax assets, (viii) uncertain tax positions, (ix) seeds inventory valuation and allowances, (x) environmental provisions and (xi) defined benefit post-employment benefits. These policies are described in more detail in Notes 2 and 29 to the consolidated financial statements.

Summary of results

Net income in 2016 was 12 percent lower than 2015 as cost savings from the ongoing restructuring and local currency sales price increases were more than offset by the inclusion in 2015 of the favorable impact of a change in selling terms in Brazil that brought forward the recognition of sales and $200 million royalty income from the signing of a trait license agreement with KWS and Limagrain, together with the impact of generally weaker currencies relative to the US dollar and increased charges to restructuring and impairment.

Sales in 2016 were 5 percent lower, 2 percent at constant exchange rates, with a 4 percent reduction in sales volumes offset by 2 percent higher local currency sales prices, driven by increases to offset declines in emerging market currencies. The adverse impact on sales of generally weaker currencies relative to the US dollar was approximately $0.3 billion. The lower sales volume reflected the inclusion in 2015 of the favorable impact of a change in selling terms in Brazil that brought forward the recognition of sales and $200 million royalty income from the signing of a trait license agreement with KWS and Limagrain together with the final year of deliberate reduction in sales of low margin solo glyphosate and a stop on sales into Venezuela due to non-payment. Excluding these factors, sales volumes were marginally higher in a market that continued to be challenging. Local currency sales price increases included price increases in Russia and the Ukraine, significantly offsetting currency weakness in those countries, partially offset by lower prices in solo glyphosate, which reflected lower purchase prices for the active ingredient; otherwise, local currency sales prices overall increased by approximately 2 percent, with increases particularly in Brazil to mitigate exchange rate weakness seen in 2015.

Operating costs as a percentage of sales increased by 0.8 percentage points in 2016. Excluding restructuring costs and the incremental share based payment costs associated with the ChemChina Tender Offer, described below, operating costs as a percentage of sales were flat in 2016 compared with 2015 and were 0.7 percentage points lower at constant exchange rates. Restructuring and impairment costs, combined with the incremental effect of applying cash-settled share based payment accounting due to share plan amendments related to the ChemChina Tender Offer, were $89 million higher than in 2015 due to the costs associated with the ChemChina Tender Offer and increased impairments of non-current assets. Currency exchange rate impacts from the general strength of the US dollar reduced operating income by approximately $153 million, including losses on related hedges in 2016 compared to gains in 2015, with a further negative impact from the significantly weaker Russian ruble and Ukrainian hryvnia that was offset significantly by increased local currency sales prices; excluding these price increases, the net adverse impact of currency movements on operating income, including hedging, was approximately $45 million adverse.

Cash flow from operating activities was $617 million higher due to a continued decrease in inventories and a lower build in trade receivables in Brazil than in 2015. Income before taxes, adjusted for the reversal of non-cash items was $134 million lower than 2015, reflecting the lower level of income before taxes. Taxes paid were lower following the settlement in 2015 of several outstanding tax years for an entity in Switzerland, and cash paid against restructuring provisions decreased due to a lower level of severance and pension charges under the AOL program. Cash flow used for investing activities in 2016 was $59 million higher than in 2015, with the purchases of $53 million of marketable securities and lower proceeds from the disposal of non-current assets more than offsetting a $57 million increase in proceeds from business divestments. Cash flow used for financing activities was $54 million lower than in 2015 due to a lower dividend payment when translated into US dollars; no bonds were repaid in 2016, and in 2015 bond repayments were broadly matched by a new bond issue. Subject to the ChemChina Tender Offer to acquire Syngenta shares becoming unconditional, Syngenta will pay a special dividend of CHF 5.00 per share immediately before the first settlement of the ChemChina Tender Offer. No regular dividend is proposed.

Regional sales of Crop Protection and Seeds products were 5 percent lower, 2 percent lower at constant exchange rates. As noted above, 2015 Seeds sales included $200 million royalty income from the license agreement with KWS and Limagrain, while Crop Protection sales included $239 million additional sales related to the change in sales terms in Brazil, which brought forward the sales recognition to the point of delivery to distributors. Crop Protection product sales were 4 percent lower, 2 percent at constant exchange rates, with 4 percent lower sales volumes from the 2015 Brazil revenue recognition change noted above, the impact of adverse weather conditions in parts of Western Europe in the second quarter of the year and of a stop in sales to Venezuela due to overdue receivables, partly offset by increased sales volumes in Russia, the Ukraine and India. Local currency sales prices were 2 percent higher, with price increases particularly in Russia, the Ukraine and Brazil to offset currency weakness in 2015 and 2016 more than offsetting a further decline in glyphosate sales

Introduction continued

Summary of results continued

prices as product costs reduced. Seeds sales declined in 2016 by 6 percent, 3 percent at constant exchange rates as a 1 percent increase in local currency sales prices, with local currency price increases in Russia and the Ukraine but reduced prices in the US, was more than offset by a 4 percent decrease in sales volume, where growth in sunflower sales in Russia and the Ukraine and corn seed sales in Latin America was more than offset by the aforementioned 2015 royalty.

Sales of Crop Protection and Seeds products were 2 percent lower in Europe, Africa and Middle East, but were 5 percent higher at constant exchange rates. Sales in Russia and the Ukraine benefited from both significant local currency price increases to offset currency declines and sales volume growth and in US dollar terms were more than 10 percent higher than 2015; excluding these countries, sales in the region were lower at constant exchange rates due to the adverse weather conditions seen in Western Europe. Sales in North America were 6 percent lower, 6 percent at constant exchange rates, with 5 percent lower sales volumes and sales prices 1 percent lower. The $145 million income from the KWS and Limagrain license increased 2015 volumes by 4 percent; otherwise, growth in sales of new products, particularly ACURON™ and SOLATENOL™ was offset by the deliberate reduction in glyphosate volumes and weaker sales of Seedcare and soybean seeds. Latin America sales were 9 percent lower, 9 percent at constant exchange rates. 2015 revenue in the region included $55 million from the KWS and Limagrain agreement and an additional $239 million from the change in sales terms noted above, which together increased reported sales volumes by 8 percent; sales volumes otherwise reflected continued difficult market conditions and a stop in sales to Venezuela, with some offset from a strong performance in Seeds. Sales in Asia Pacific were flat, but 2 percent higher at constant exchange rates, with flat local currency sales prices and a 2 percent increase in sales volumes driven by growth in India and a strong second half recovery from El Niño in the Association of Southeast Asian Nations (ASEAN).

Lawn and Garden sales were 2 percent above the 2015 level, 4 percent higher at constant exchange rates with growth driven by increased vector control sales.

Gross profit margin increased by 1.6 percentage points, 1.7 percentage points excluding restructuring and impairment. The license agreement signed with KWS and Limagrain increased 2015 gross profit margin by 0.8 percentage points; excluding this, gross profit margin was approximately 2.5 percentage points higher, with improved margins in both Crop Protection and Seeds products, but particularly Crop Protection as a result of higher sales prices and lower product costs from savings under the AOL program and lower oil related costs.

Marketing and distribution expenses decreased by 4 percent; expenses excluding restructuring and impairment decreased by 5 percent, 2 percent at constant exchange rates, with savings under the AOL restructuring program and reduced charges for doubtful receivables in Eastern Europe and Brazil.

Research and development expense decreased by 5 percent, 2 percent at constant exchange rates, due to cost savings and productivity improvements delivered under the AOL restructuring program.

General and administrative, including restructuring and impairment, the components of which are described under the Restructuring and impairment heading within this section, increased by $264 million compared with 2015. General and administrative excluding restructuring and impairment was 38 percent higher, including foreign exchange hedging losses of $73 million compared with gains of $21 million in 2015. Excluding currency effects, General and administrative excluding restructuring and impairment was 30 percent higher. General and administrative costs in global support functions, including Business Services, are charged out to the segments and to the global Research and development and Production and supply operations in US dollars at amounts fixed at the start of the year. As a result of general currency weakness relative to the US dollar, an excess recharge was recorded in 2015 compared to gross costs incurred, which was not repeated in 2016. 2015 also included higher gains on the disposal of non-current assets, in particular land in Switzerland, than were recorded in 2016 and litigation expenses in 2016 increased from the level of 2015, particularly in the US.

Restructuring and impairment expenses in 2016, including the $70 million incremental effect of applying cash-settled share based payment accounting due to the share plan amendments related to the ChemChina Tender Offer described below, increased by $89 million over 2015. The AOL program, announced in February 2014, continued to progress, with charges of $223 million in 2016 compared with $240 million in 2015. Charges in 2016 increased due to transaction costs associated with the ChemChina Tender Offer, as well as incremental share based payments as noted above, and an increased level of impairment of non-current assets in 2016.

Financial expense, net was $35 million higher than 2015 mainly due to increased exposures in emerging markets, particularly in Latin America and some currency losses where hedging is not available. The tax rate, excluding taxes related to restructuring and impairment, reduced by 2 percentage points to 15 percent, partly from the settlement of a tax case in India with a more favorable outcome than anticipated.

Together, these factors resulted in 2016 net income attributable to Syngenta AG shareholders and diluted earnings per share decreasing by 12 percent, compared with 2015.

Introduction continued

Acquisitions, divestments and other significant transactions

2016

On March 15, 2016, Syngenta divested Syngenta Bioline Ltd. ("Bioline"), its beneficial insect breeding business. On June 1, 2016, Syngenta divested its manufacturing operations in Goa, India to Deccan Fine Chemicals India Private Ltd. Neither transaction had individually material proceeds nor led to a material gain or loss.

As of March 23, 2016, CNAC Saturn (NL) B.V. ("the Offeror"), a subsidiary of China National Chemical Corporation (ChemChina), a state-owned enterprise of the People's Republic of China, launched public tender offers in Switzerland and in the United States to acquire all the publicly held Ordinary Shares and, in the US offer, also all American Depositary Shares (ADSs) of Syngenta AG ("the ChemChina Tender Offer") for $465 per Ordinary Share in cash. Syngenta and its Board of Directors have agreed to support the ChemChina Tender Offer. The Main Offer Period has been extended until March 2, 2017, with further extension likely to follow until all offer conditions are fulfilled. At such time, the Offeror will extend the ChemChina Tender Offer for the last time by a period of up to 20 trading days. The ChemChina Tender Offer is conditional among other things on acceptance by shareholders owning 67 percent of Syngenta AG issued shares and on regulatory approval by the competent merger control and other authorities. For detailed discussion of the ChemChina Tender Offer, see Note 3 to the consolidated financial statements.

2015

On October 15, 2015, Syngenta acquired 100 percent of the shares of Land.db Enterprises Inc. in exchange for cash, including contingent consideration. The primary reason for the acquisition was to gain exclusive control of the AgriEdge Excelsior® farm management software program, which integrates products, services, risk management and technology for growers.

Restructuring programs

In February 2014, Syngenta announced a restructuring program, the AOL program to drive further improvement in operating income margins and accelerate delivery of operational leverage. The program targets an improvement in profitability as a percentage of sales over the period up to 2018 from a reduction in the ratios of cost of goods sold, marketing and distribution, research and development and general and administrative expenses to sales. The program includes plans to further improve efficiency in customer facing operations, research and development and production and to enable an improvement in the ratio of trade working capital to sales. The cash cost of the restructuring program is estimated at approximately $900 million, including the costs of implementing new systems, but excluding related capital expenditures, and significant benefits began to be realized in 2015 and 2016. During 2016, cash costs of $214 million were charged under the program (2015: $228 million) and cash spent was $229 million (2015: $168 million). Non-cash charges of $9 million were incurred to write down assets whose values were reduced by programs improving production and supply and research and development efficiencies (2015: asset impairments of $33 million and a pension curtailment gain of $21 million relating to employees impacted by restructuring). Cumulative costs incurred for the program through December 31, 2016 total $491 million and cumulative spending totals $440 million.

The program announced in 2011 to integrate global commercial operations for Crop Protection and Seeds is substantially complete. The program has enabled operational synergies from the commercial integration, additional cost savings from procurement and supply chain efficiencies and the presentation of an integrated product offer to grower customers. During 2016, costs of $1 million were charged under the program relating to the completion of projects initiated before the end of 2015 (2015: $27 million) and cash spent was $4 million (2015: $29 million). Cumulative costs incurred for the program through December 31, 2016 total $400 million, in line with the $400 million of cash costs estimated in the 2015 report, and cumulative spending totals $379 million.

The operational efficiency cost saving programs announced in 2004 and 2007 are now complete. Cash spent under the programs in 2016 and 2015 totaled $3 million and $7 million, respectively. Cumulative spending on the programs to the end of 2016 totals $1,063 million and non-cash charges total $371 million, broadly in line with the projected $1,050 million cash costs and $380 million of non-cash charges previously indicated.

Results of operations
2016 compared with 2015

Sales commentary

Syngenta's consolidated sales for 2016 were $12,790 million, compared with $13,411 million in 2015, a 5 percent decrease year on year. At constant exchange rates sales decreased by 2 percent. The analysis by segment is as follows:

($m, except change %)			Change				
Segment	**2016**	2015	Volume %	Local price %	CER %	Currency %	Actual %
Europe, Africa and Middle East	**3,793**	3,884	+1	+4	+5	-7	-2
North America	**3,202**	3,410	-5	-1	-6	–	-6
Latin America	**3,293**	3,632	-13	+4	-9	–	-9
Asia Pacific	**1,839**	1,837	+2	–	+2	-2	–
Total regional	**12,127**	12,763	-4	+2	-2	-3	-5
Lawn and Garden	**663**	648	+4	–	+4	-2	+2
Group sales	**12,790**	13,411	-4	+2	-2	-3	-5

Europe, Africa and Middle East

Sales decreased by 2 percent, but increased 5 percent at constant exchange rates with volume and local currency price increases of 1 percent and 4 percent respectively. Full year sales growth was achieved despite exceptionally difficult weather conditions affecting north-west Europe in the second quarter. The main growth driver was an excellent performance in the CIS, with an expansion of strong market positions in both crop protection and seeds. Volumes increased in both Russia and Ukraine, with further price increases implemented to offset the impact of currency depreciation. In the fourth quarter, Ukraine made a major contribution with an early start to the 2016/17 season. Sales volumes recovered strongly in Africa Middle East in the final quarter as drought conditions eased.

North America

Sales in North America declined by 6 percent with volume decreases of 5 percent and local currency price declines of 1 percent. Crop protection sales were unchanged despite challenging grower economics and the deliberate reduction in glyphosate. A total of 16 new products were introduced, including the launch of the fungicides TRIVAPRO™ and ORONDIS™. In the corn herbicide market, ACURON™ continued to win recognition for its control of resistant weeds, and full year sales exceeded $200 million. Seeds sales were lower, largely due to the non-recurrence of the corn trait royalty.

Latin America

Sales decreased by 9 percent, also at constant exchange rates. Reported volumes declined by 13 percent, but local currency prices increased by 4 percent. Excluding the impact of the change in sales terms, sales were 3 percent lower. While sales were curtailed in Venezuela, business improved significantly in Argentina as the new government implemented reforms to support agriculture. In Brazil, conditions improved in the Cerrados in the second half but worsened in other growing areas as dry weather moved south. Insecticides sales continue to be constrained by a high level of channel inventories and by soybean trait adoption. Corn seed sales progressed strongly, underpinned by the success of the VIPTERA™ trait.

Asia Pacific

Sales in Asia Pacific were flat year on year with volume increases of 2 percent offset by currency impacts. El Niño receded towards the end of the second quarter and the business recovered strongly in the second half. Channel inventory in ASEAN was reduced, contributing to a rebound in demand, particularly for fungicides and insecticides. Sales in South Asia also saw a strong second half, benefiting from product launches in crop protection and expansion of vegetables and corn seeds.

Lawn and Garden: major brands ICON®, GOLDFISCH®, GOLDSMITH SEEDS, YODER®, SYNGENTA FLOWERS

Sales increased by 2 percent with volume increases of 4 percent partially offset by currency impacts. At constant exchange rates, sales increased by 4 percent. Sales growth was driven by high demand for vector controls, including ACTELLIC CS, a longer-lasting, more effective product to prevent the spread of malaria. Growth in turf was mainly driven by golf course sales in North America.

Results of operations 2016 compared with 2015 continued

Sales commentary continued

Sales by product line are set out below:

($m, except change %)			Change				
Product line	**2016**	2015	Volume %	Local price %	CER %	Currency %	Actual %
Selective herbicides	**2,853**	2,894	-1	+3	+2	-3	-1
Non-selective herbicides	**773**	913	-5	-8	-13	-2	-15
Fungicides	**3,157**	3,357	-8	+4	-4	-2	-6
Insecticides	**1,643**	1,705	-4	+2	-2	-2	-4
Seedcare	**1,003**	994	+3	+2	+5	-4	+1
Other crop protection	**142**	142	+1	-1	–	–	–
Total Crop Protection	**9,571**	10,005	-4	+2	-2	-2	-4
Corn and soybean	**1,375**	1,564	-10	-1	-11	-1	-12
Diverse field crops	**666**	658	+9	+2	+11	-10	+1
Vegetables	**616**	616	-1	+4	+3	-3	–
Total Seeds	**2,657**	2,838	-4	+1	-3	-3	-6
Elimination*	**(101)**	(80)	n/a	n/a	n/a	n/a	n/a
Total regional	**12,127**	12,763	-4	+2	-2	-3	-5
Lawn and Garden	**663**	648	+4	–	+4	-2	+2
Group sales	**12,790**	13,411	-4	+2	-2	-3	-5

* Crop Protection sales to Seeds

Crop Protection

Selective herbicides: major brands ACURON™, AXIAL®, CALLISTO® family, DUAL MAGNUM®, BICEP® II MAGNUM, FUSILADE®Max, FLEX®, TOPIK®

Sales decreased by 1 percent, but increased by 2 percent at constant exchange rates with a volume decline of 1 percent offset by local currency price increases of 3 percent. Sales growth was driven by EAME and North America. In Europe, AXIAL® continued its success on cereals and CALLISTO® expanded on corn in Africa and the CIS. In North America the main growth driver was the continued adoption by US growers of the novel corn herbicide ACURON™, combining three modes of action and four active ingredients.

Non-selective herbicides: major brands GRAMOXONE®, TOUCHDOWN®

Sales decreased by 15 percent, 13 percent at constant exchange rates. Volumes declined by 5 percent and local currency prices decreased by 8 percent. Performance reflected the deliberate reduction in solo glyphosate, now complete, undertaken in order to improve profitability. At the same time glyphosate prices continue to decline. Sales of GRAMOXONE® were also lower, with volumes in the first half affected by dry weather in ASEAN, and some price pressure from generics in North America.

Fungicides: major brands ALTO®, AMISTAR®, BONTIMA®, BRAVO®, ELATUS®, MIRAVIS™ (based on ADEPIDYN™), MODDUS®, REVUS®, RIDOMIL® GOLD, SCORE®, SEGURIS®, UNIX®

Fungicide sales decreased by 6 percent, 4 percent at constant exchange rates. Volume declines of 8 percent were partially offset by local currency price increases of 4 percent. North America saw good growth as new products ORONDIS™ and TRIVAPRO™ (based on SOLATENOL™) gained momentum. EAME sales were higher at constant exchange rates despite a difficult first half, when wet weather resulted in missed sprays; the second half saw a strong recovery, with late season demand in cereals and good demand on specialty crops. Innovation continued to expand the portfolio with the launch in the fourth quarter of ELATUS® PLUS in France and MIRAVIS™ Duo (based on ADEPIDYN™) in Argentina.

Insecticides: major brands ACTARA®, DURIVO®, FORCE®, KARATE®, PROCLAIM®, VERTIMEC®

Sales fell by 4 percent and were 2 percent lower at constant exchange rates with volumes declining by 4 percent and local currency prices 2 percent higher. Insecticides saw growth across the northern hemisphere, with particularly good performances by ACTARA®, DURIVO® and KARATE®. In Brazil, sales were affected by low insect pressure and soybean trait penetration, with channel inventories remaining high. Sales in Asia Pacific, which were affected by drought in the first half of the year, rebounded strongly in the second half.

Results of operations 2016 compared with 2015 continued

Sales commentary continued

Seedcare: major brands AVICTA®, CRUISER®, DIVIDEND®, CELEST®/MAXIM®, VIBRANCE®

Seedcare sales were 1 percent higher, 5 percent higher at constant exchange rates. Volumes grew by 3 percent and local currency prices were 2 percent higher. CRUISER® showed good growth in a number of European markets despite limitations on its use for certain crops. Sales in Canada staged a strong recovery, led by the fungicide VIBRANCE®, which was more than offset in North America by lower treatment intensity and higher inventory in the USA.

Seeds

Corn and soybean: major brands AGRISURE®, GOLDEN HARVEST®, NK®

Sales declined by 12 percent and were down 11 percent at constant exchange rates. Volumes were 10 percent lower and local currency prices were 1 percent lower. Sales in the fourth quarter were affected by the non-recurrence of the $200 million corn trait royalty received from KWS/Limagrain in the fourth quarter of 2015. This revenue was recorded in North America ($145 million) and Latin America ($55 million). Full year branded corn seed sales were slightly higher in the USA but lower in Europe due to reduced acreage. In Latin America there was strong underlying growth in both Brazil and Argentina supported by the adoption of VIPTERA™ trait technology. Soybean sales were lower in a competitive environment.

Diverse field crops: major brands NK® oilseeds, HILLESHÖG® sugar beet

Sales increased by 1 percent and were 11 percent higher at constant exchange rates with volumes increasing by 9 percent and local currency prices 2 percent. Sunflower sales grew strongly in Russia and Ukraine. In addition to increased acreage, growers continue to adopt superior genetics with a proven track record on the field. Sugar beet sales also increased.

Vegetables: major brands ROGERS®, S&G®

Vegetables sales were flat year on year, but 3 percent higher at constant exchange rates with local currency price increases of 4 percent partially offset by a volume decline of 1 percent. Demand was strong in Latin America, notably in Brazil and Mexico, as favorable currency rates improved growers' profitability in export markets. South Asia sales also performed well in crops such as cabbage, cauliflower and okra. Price increases were achieved in all regions, reflecting the ability to capture value from a high quality portfolio of hybrids.

Operating income

Variances in the tables below reflect the profit impact of changes year on year. For example, an increase of sales or a decrease in costs is a positive variance and a decrease in sales or increase in costs is a negative variance.

Group Operating Income	Total as reported under IFRS		Change		Restructuring and impairment		Before restructuring and impairment[1]		Change before restructuring and impairment[1]	
($m, except change %)	2016	2015	Actual %	CER %	2016	2015	2016	2015	Actual %	CER %
Sales	12,790	13,411	-5%	-2%	–	–	12,790	13,411	-5%	-2%
Cost of goods sold	(6,507)	(7,042)	8%	6%	(6)	–	(6,501)	(7,042)	8%	6%
Gross profit	6,283	6,369	-1%	2%	(6)	–	6,289	6,369	-1%	2%
as a percentage of sales	49%	48%					49%	48%		
Marketing and distribution	(2,117)	(2,210)	4%	1%	(26)	–	(2,091)	(2,210)	5%	2%
Research and development	(1,299)	(1,362)	5%	1%	(8)	–	(1,291)	(1,362)	5%	2%
General and administrative	(1,220)	(956)	-28%	-24%	(437)	(388)	(783)	(568)	-38%	-30%
Operating income	1,647	1,841	-11%	-3%	(477)	(388)	2,124	2,229	-5%	2%
as a percentage of sales	13%	14%					17%	17%		

Operating Income/(Loss) ($m, except change %)	2016	2015	Change %
Europe, Africa and Middle East	1,204	1,155	4%
North America	793	973	-18%
Latin America	933	890	5%
Asia Pacific	508	484	5%
Unallocated	(1,908)	(1,781)	-7%
Total regional	1,530	1,721	-11%
Lawn and Garden	117	120	-2%
Group	1,647	1,841	-11%

The two tables above do not represent income statements prepared under IFRS. Please refer to the information reported in the consolidated financial statements.

1 Amounts before restructuring and impairment are non-GAAP measures. Please refer to Appendix A of the Operating and Financial Review for a more detailed description

Results of operations 2016 compared with 2015 continued

Overall Group operating income

Operating income decreased by 11 percent to $1,647 million as the inclusion in 2015 of $200 million of license income received from KWS and Limagrain and the impact of the change in sales terms in Brazil, together with the adverse impact of generally weaker currencies versus the US dollar and increased charges to Restructuring more than offset cost savings and local currency sales price increases. Overall, weaker currencies reduced operating income by approximately $153 million, including a significant adverse impact from the Russian ruble and Ukrainian hryvnia. The ruble and hryvnia currency impact was significantly offset by local currency sales price increases in Russia and the Ukraine. Excluding these currencies in the CIS, the adverse impact on operating income of exchange rate movements, including the net hedging result from the hedging program for forecast foreign currency transactions ("EBITDA hedging program"), is estimated at approximately $45 million. Excluding restructuring and impairment, the ratio of operating income to sales was broadly flat.

Sales declined by 5 percent, 2 percent at constant exchange rates with sales volumes 4 percent lower; license income received from KWS and Limagrain and the impact of the change in selling terms in Brazil in 2015 increased reported 2015 volumes by 3 percent. Volumes were reduced in 2016 by the stop in sales to Venezuela due to delayed payment from the previous season and the final year of deliberate reduction in sales of low margin solo glyphosate, which together reduced sales volumes by 1 percent. Overall local currency sales prices were 2 percent higher, driven by price increases in Russia and the Ukraine to significantly offset currency weakness in those countries and after absorbing lower prices for solo glyphosate; prices otherwise were approximately 1 percent higher, with price increases in Brazil to mitigate the currency weakness in 2015. Exchange rate movements reduced sales by $344 million, or 3 percent. Gross profit margin increased by 1.6 percentage points, 1.7 percentage points excluding restructuring and impairment. The license agreement signed with KWS and Limagrain increased 2015 gross profit margin by 0.8 percentage points; excluding this, gross profit margin was approximately 2.5 percentage points higher, with higher margins in both Crop Protection and Seeds products, but particularly Crop Protection as a result of higher sales prices and lower product costs from savings under the AOL program and lower oil related costs.

Marketing and distribution costs were 4 percent lower; costs were 5 percent lower excluding restructuring and impairment, 2 percent at constant exchange rates, with lower charges for doubtful receivables, particularly in Eastern Europe and Brazil, and marketing and distribution cost savings from restructuring activities. Research and development expense decreased by 5 percent and excluding restructuring and impairment was 2 percent lower at constant exchange rates with cost savings and productivity increases from ongoing AOL restructuring. Research and development expense remained broadly flat as a percentage of sales.

General and administrative including restructuring and impairment was 28 percent higher than 2015, 38 percent higher excluding restructuring and impairment. General and administrative is reported net of the result of currency hedging programs, which in 2016 was a net expense of $73 million compared with a net income of $21 million in 2015. At constant exchange rates, taking into account both variances in underlying costs and the change in the net hedging result from year to year, General and administrative excluding restructuring and impairment was 30 percent higher than 2015. General and administrative costs in global support functions, including Business Services, are charged out to the segments and to the global Research and development and Production and supply operations in US dollars at amounts fixed at the start of the year and are then reported in Cost of goods sold, Research and development expense and Marketing, sales and distribution expense; as a result, the impact of currency movements on reported General and administrative is calculated based on the gross expenditure before these recharges. As a result of general currency weakness relative to the US dollar, an excess recharge was recorded in 2015 compared to gross costs incurred, which was not repeated in 2016. 2015 also included higher gains on the disposal of non-current assets, in particular land in Switzerland, than were recorded in 2016 and litigation expenses in 2016 increased from the level of 2015, particularly in the US.

Restructuring and impairment, together with the incremental effect of applying cash-settled share based payment accounting due to the share plan amendments related to the ChemChina Tender Offer, is described in the Restructuring and impairment section in this Operating and Financial Review and increased by $89 million in 2016 to $477 million due to the advisory and share based payment costs related to the ChemChina Tender Offer and increased impairments of non-current assets.

Results of operations
2016 compared with 2015 continued

Operating income by segment

Europe, Africa and Middle East	Total as reported under IFRS		Change		Restructuring and impairment		Before restructuring and impairment[1]		Change before restructuring and impairment[1]	
($m, except change %)	2016	2015	Actual %	CER %	2016	2015	2016	2015	Actual %	CER %
Sales	3,793	3,884	-2%	5%	–	–	3,793	3,884	-2%	5%
Cost of goods sold	(1,801)	(1,889)	5%	2%	–	–	(1,801)	(1,889)	5%	2%
Gross profit	1,992	1,995	–	11%	–	–	1,992	1,995	–	11%
as a percentage of sales	53%	51%					53%	51%		
Marketing and distribution	(554)	(586)	6%	2%	(9)	–	(545)	(586)	7%	4%
General and administrative	(234)	(254)	8%	5%	(98)	(128)	(136)	(126)	-8%	-10%
Operating income	1,204	1,155	4%	21%	(107)	(128)	1,311	1,283	2%	17%
as a percentage of sales	32%	30%					35%	33%		

This table does not represent an income statement prepared under IFRS. Please refer to the segmental information reported in Note 4 to the consolidated financial statements.

1 Amounts before restructuring and impairment are non-GAAP measures. Please refer to Appendix A of the Operating and Financial Review for a more detailed description

Reported sales in Europe, Africa and Middle East were 2 percent below 2015, but had been reduced by approximately 7 percent due to generally weaker exchange rates relative to the US dollar, particularly the Russian ruble and Ukrainian hryvnia. At constant exchange rates, sales were 5 percent above 2015, with local currency price increases of 4 percent, principally in the CIS to compensate the currency weakness, and 1 percent higher sales volumes. See the Sales commentary section above for further information on sales in the region.

Gross profit margin was 1.1 percentage points higher, 2.9 percentage points at constant exchange rates. The local currency price increases in Russia and the Ukraine offset the adverse impact of exchange rate weakness and together with product cost savings drove an improved gross profit margin.

Marketing and distribution costs, excluding restructuring and impairment, were 7 percent lower, 4 percent at constant exchange rates, with lower charges for doubtful receivables in Eastern Europe and cost savings realized under the AOL restructuring program.

General and administrative was 8 percent lower including decreased restructuring charges. Excluding restructuring and impairment, General and administrative was 8 percent higher, 10 percent at constant exchange rates due to a gain recorded in 2015 on the disposal of land in Switzerland.

Restructuring and impairment charges were $107 million in 2016 compared with $128 million in 2015. Charges in 2016 include $100 million related to progressing the AOL restructuring program, including restructuring the marketing organization, the relocation of certain support activities to lower cost countries and associated tangible asset write-downs, $9 million of share-based payment charges related to the ChemChina Tender Offer and $7 million for integration projects, including costs related to the divestment of the Bioline beneficial insects breeding business. The gain from the divestment is also reported in restructuring and impairment. Charges in 2015 include $107 million related to progressing the AOL restructuring program, and $7 million for the integration of acquisitions completed in previous years.

Operating income as a percentage of sales was 2 percentage points higher in 2016, approximately 4 percentage points higher at constant exchange rates excluding restructuring and impairment, driven by the improved gross profit margin.

North America	Total as reported under IFRS		Change		Restructuring and impairment		Before restructuring and impairment[1]		Change before restructuring and impairment[1]	
($m, except change %)	2016	2015	Actual %	CER %	2016	2015	2016	2015	Actual %	CER %
Sales	3,202	3,410	-6%	-6%	–	–	3,202	3,410	-6%	-6%
Cost of goods sold	(1,720)	(1,779)	3%	3%	(2)	–	(1,718)	(1,779)	3%	3%
Gross profit	1,482	1,631	-9%	-8%	(2)	–	1,484	1,631	-9%	-8%
as a percentage of sales	46%	48%					46%	48%		
Marketing and distribution	(528)	(537)	2%	1%	(8)	–	(520)	(537)	3%	3%
General and administrative	(161)	(121)	-33%	-34%	(58)	(37)	(103)	(84)	-23%	-23%
Operating income	793	973	-18%	-17%	(68)	(37)	861	1,010	-15%	-14%
as a percentage of sales	25%	29%					27%	30%		

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1 Amounts before restructuring and impairment are non-GAAP measures. Please refer to Appendix A of the Operating and Financial Review for a more detailed description

Reported sales decreased by 6 percent, 6 percent at constant exchange rates, with sales volumes 5 percent lower and 1 percent lower local currency sales prices. See the Sales commentary section above for further information on sales in the region. Sales in 2015 included $145 million from the license agreement with KWS and Limagrain, which increased the gross profit margin by approximately 2.3 percentage points; excluding this, gross profit margin was approximately 0.8 percentage points higher in 2016, approximately 1.3 percentage points at constant exchange rates, with higher margins in Crop Protection, partly due to the further reduction in sales volumes of lower margin solo glyphosate sales and improved margins in Corn Seeds.

Results of operations 2016 compared with 2015 continued

Operating income by segment continued

Marketing and distribution costs excluding restructuring and impairment were 3 percent lower, 3 percent at constant exchange rates, with savings from restructuring within both the marketing and distribution functions.

General and administrative excluding restructuring and impairment was 23 percent higher than 2015, 23 percent at constant exchange rates, due to increased litigation expenses in 2016, a settlement gain in 2015 relating to the US defined benefit pension plan and the realization of insurance proceeds relating to claims made in prior years, where recovery had not previously been assumed.

Restructuring and impairment costs were $31 million higher than 2015 and in 2016 included $26 million from AOL projects, $13 million of share based payment charges related to the ChemChina Tender Offer and $25 million of impairments related to two sites now classified as held-for-sale. Charges in 2015 included $23 million under the AOL program, including a minor impairment related to the closure of a seeds plant in the US, and $7 million of impairment of exclusive distribution rights where an agreement was terminated.

Operating income as a percentage of sales decreased by 4 percentage points, 3 percentage points excluding restructuring and impairment largely from the favorable impact in 2015 of the $145 million license income from the agreement with KWS and Limagrain and increased litigation expenses in 2016.

Latin America	Total as reported under IFRS		Change		Restructuring and impairment		Before restructuring and impairment[1]		Change before restructuring and impairment[1]	
($m, except change %)	2016	2015	Actual %	CER %	2016	2015	2016	2015	Actual %	CER %
Sales	3,293	3,632	-9%	-9%	–	–	3,293	3,632	-9%	-9%
Cost of goods sold	(1,766)	(2,118)	17%	14%	(1)	–	(1,765)	(2,118)	17%	14%
Gross profit	1,527	1,514	1%	-3%	(1)	–	1,528	1,514	1%	-3%
as a percentage of sales	46%	42%					46%	42%		
Marketing and distribution	(492)	(557)	12%	4%	(4)	–	(488)	(557)	12%	5%
General and administrative	(102)	(67)	-53%	-12%	(45)	(28)	(57)	(39)	-47%	41%
Operating income	933	890	5%	-3%	(50)	(28)	983	918	7%	–
as a percentage of sales	28%	25%					30%	25%		

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1 Amounts before restructuring and impairment are non-GAAP measures. Please refer to Appendix A of the Operating and Financial Review for a more detailed description

Sales decreased by 9 percent, 9 percent at constant exchange rates with 13 percent lower sales volumes partially offset by 4 percent higher local currency sales prices. See the Sales commentary section above for further information on sales in the region.
Gross profit margin increased by approximately 4.7 percentage points, approximately 2.9 percentage points at constant exchange rates. Sales in 2015 included $55 million from the license agreement with KWS and Limagrain, which increased the gross profit margin by approximately 0.9 percentage points. Gross profit margin was higher in 2016 due to the increased sales prices, reduced inventory provisions in seeds and lower product costs, more than offsetting the impact of the stop in higher margin sales to Venezuela.

Marketing and distribution costs excluding restructuring and impairment were 12 percent lower than 2015, 5 percent at constant exchange rates, with lower charges to provisions for doubtful receivables in Brazil than recorded in 2015.

General and administrative excluding restructuring and impairment was 47 percent higher than 2015, but 41 percent lower at constant exchange rates largely due to cost reductions in the support functions. General and administrative in 2016 was net of currency hedging losses of $8 million, compared with gains of $27 million in 2015.

Restructuring and impairment costs increased by $22 million to $50 million in 2016. The 2016 amount includes $37 million for AOL restructuring projects, mainly related to improving efficiencies in local processes and effectiveness of back office support services, including the establishment of an integrated system platform in Brazil, and $7 million of share based payment charges related to the ChemChina Tender Offer. Charges in 2015 included $22 million related to the AOL restructuring program, including restructuring of marketing operations and initial costs to establish an integrated system and support platform in Brazil.

Operating income was $43 million higher, $65 million excluding restructuring and impairment, due to the improved gross margin and reduction in charges to provisions for doubtful receivables. Operating income as a percentage of sales increased by nearly 4 percentage points. Excluding restructuring and impairment, operating income as a percentage of sales increased by 5 percentage points and by 3 percentage points at constant exchange rates.

Results of operations
2016 compared with 2015 continued

Operating income by segment continued

Asia Pacific	Total as reported under IFRS		Change		Restructuring and impairment		Before restructuring and impairment[1]		Change before restructuring and impairment[1]	
($m, except change %)	2016	2015	Actual %	CER %	2016	2015	2016	2015	Actual %	CER %
Sales	**1,839**	1,837	**–**	**2%**	**–**	–	**1,839**	1,837	**–**	**2%**
Cost of goods sold	**(986)**	(1,012)	**3%**	**2%**	**–**	–	**(986)**	(1,012)	**3%**	**2%**
Gross profit	**853**	825	**3%**	**6%**	**–**	–	**853**	825	**3%**	**6%**
as a percentage of sales	**46%**	45%					**46%**	45%		
Marketing and distribution	**(279)**	(286)	**2%**	**1%**	**(2)**	–	**(277)**	(286)	**3%**	**2%**
General and administrative	**(66)**	(55)	**-19%**	**-21%**	**(25)**	(20)	**(41)**	(35)	**-15%**	**-16%**
Operating income	**508**	484	**5%**	**9%**	**(27)**	(20)	**535**	504	**6%**	**10%**
as a percentage of sales	**28%**	26%					**29%**	28%		

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1 Amounts before restructuring and impairment are non-GAAP measures. Please refer to Appendix A of the Operating and Financial Review for a more detailed description

Reported sales were flat, but 2 percent higher at constant exchange rates, with 2 percent higher sales volumes and flat local currency sales prices. See the Sales commentary section above for further information regarding sales in the region. Gross profit margin improved by 1.5 percentage points, 1.9 percentage points at constant exchange rates, with increased volumes of higher margin fungicides, insecticides and seedcare, combined with product cost savings.

Marketing and distribution costs excluding restructuring and impairment were 3 percent lower, 2 percent at constant exchange rates, with savings from restructuring in the marketing function.

General and administrative excluding restructuring and impairment increased by $6 million, due to a lower level of government grants received and gains from an intangible asset disposal recorded in 2015.

Restructuring and impairment charges in 2016 increased by $7 million to $27 million. The 2016 amount includes $17 million for AOL restructuring projects including projects to improve effectiveness of back office support services and the net result on the sale of the Goa manufacturing site together with associated costs. Charges in 2015 included $16 million for implementation of AOL programs and $3 million final charges under a previous restructuring program.

Operating income margin increased by 2 percentage points to 28 percent, and excluding restructuring and impairment improved by 1 percentage point to 29 percent, a 2 percentage point improvement at constant exchange rates, driven by the improved gross profit margin.

Unallocated

Income and expense transactions in the Regional business have been attributed to the geographic regions based on the market destination to which they relate, rather than on the region in which they originated. Some costs of the Regional organization do not relate to a geographic destination and are reported as unallocated. These include global marketing teams, research and development and corporate headquarter functions. In addition, regions' gross profit performance is based on standard product costs, with variances from the standard reported as unallocated in order to align the reported results with organizational responsibility. Unallocated also includes results of centrally managed currency and commodity hedging programs.

Unallocated costs increased by $127 million, or 7 percent from 2015, to $1,908 million. Restructuring and impairment charges increased by $46 million; excluding this, unallocated costs increased by $81 million, or 5 percent. Research and development expense was 5 percent lower, 2 percent at constant exchange rates as cost savings and productivity improvements under the AOL program were delivered. General and administrative is reported including currency hedging losses of $62 million compared with losses of $30 million in 2015. Excluding restructuring and impairment, General and administrative increased by $132 million. At constant exchange rates, taking into the account the net hedging result, these costs were approximately $146 million higher. Total gross costs of the global support function functions were lower than 2015 at constant exchange rates. However, a significant portion of service costs are recharged to the regional and Lawn and Garden segments at amounts fixed in US dollars at the start of the year. In 2015, general dollar strength reduced actual costs below the level of the recharge, with a surplus recorded in Unallocated. This surplus was not repeated in 2016. Restructuring and impairment charges reported within Unallocated increased by $46 million to $214 million. The 2016 amount includes $61 million for the impairment of product rights where production challenges have increased the uncertainties of commercializing a product profitably, $16 million for the write-down of a building now classified as held-for-sale, $10 million to impair the assets of a seeds crop where expectations of future operating profitability have reduced and $33 million from AOL projects, mainly related to research and development productivity. In addition, 2016 restructuring charges include $50 million of transaction costs and $36 million of costs for the incremental effect of applying cash-settled share based payment accounting due to share plan amendments related to the ChemChina Tender Offer; both these items are discussed in detail in Note 3 to the consolidated financial statements. Charges in 2015 included $66 million related to the AOL program, including impairments at two manufacturing sites, a further impairment related to a seeds crop where expectations of future profitability have reduced and approximately $77 million of acquisition, divestment and related costs, including advisory costs associated with possible corporate transactions. Details of restructuring and impairment for 2016 and 2015 are shown further below.

Results of operations 2016 compared with 2015 continued

Operating income by segment continued

Lawn and Garden	Total as reported under IFRS		Change		Restructuring and impairment		Before restructuring and impairment[1]		Change before restructuring and impairment[1]	
($m, except change %)	2016	2015	Actual %	CER %	2016	2015	2016	2015	Actual %	CER %
Sales	663	648	2%	4%	–	–	663	648	2%	4%
Cost of goods sold	(282)	(298)	5%	3%	–	–	(282)	(298)	6%	3%
Gross profit	381	350	9%	10%	–	–	381	350	9%	10%
as a percentage of sales	57%	54%					58%	54%		
Marketing and distribution	(162)	(161)	-1%	-2%	(1)	–	(161)	(161)	–	-1%
Research and development	(52)	(52)	1%	1%	–	–	(52)	(52)	1%	1%
General and administrative	(50)	(17)	-191%	-47%	(10)	(7)	(40)	(10)	-316%	-60%
Operating income	117	120	-2%	21%	(11)	(7)	128	127	1%	22%
as a percentage of sales	18%	19%					19%	20%		

This table does not represent an income statement prepared under IFRS. Please refer to the segmental information reported in Note 4 to the consolidated financial statements.
1 Amounts before restructuring and impairment are non-GAAP measures. Please refer to Appendix A of the Operating and Financial Review for a more detailed description

Lawn and Garden sales were 2 percent higher, 4 percent at constant exchange rates, with flat local currency sales prices and a 4 percent increase in sales volumes. See the Sales commentary section above for further information on sales in the segment. Gross profit margin increased by 3.5 percentage points, 3.5 percentage points at constant exchange rates, from increased volumes of higher margin Vector Control products.

Marketing and distribution costs, excluding restructuring and impairment, were flat but increased by 1 percent at constant exchange rates. Research and development expense was 1 percent lower, 1 percent at constant exchange rates, with restructuring activities at the Netherlands site having started in the final quarter of 2015. General and administrative is reported net of a $3 million currency hedging loss under the EBITDA hedging program compared with a $24 million gain in 2015. General and administrative excluding restructuring and impairment was significantly higher than 2015 including the hedging result; at constant exchange rates costs were 60 percent higher due to increased charges for support services.

Restructuring costs in 2016 increased by $4 million compared with 2015 and in both years related largely to the AOL program.

Operating income as a percentage of sales decreased by approximately 1 percentage point to 18 percent. Excluding restructuring and impairment, operating income as a percentage of sales decreased by approximately 1 percentage point to 19 percent due to the adverse relative hedging result in 2016 compared to 2015; at constant exchange rates, operating income excluding restructuring and impairment as a percentage of sales increased by 4 percentage points.

Defined Benefit Pensions

Defined benefit pension expense was a charge of $145 million in 2016 compared with a charge of $165 million in 2015. 2016 expense was lower because of non-recurrence of $11 million of early retirement costs incurred in 2015 in implementing the AOL restructuring program in Switzerland, and reduced pension expense in the UK resulting from the 2014 plan amendment to freeze pensionable pay at January 1, 2016 levels. Syngenta expects 2017 defined benefit pension expense, excluding costs associated with restructuring, to be similar to 2016 expense at constant exchange rates, with the impact of a further reduction in the real discount rate in the UK from 0.67 percent to minus 0.76 percent offset by reduced expenses from the Swiss pension plan due to the impact of the AOL restructuring actions and to the full impact of the benefit changes introduced in 2014.

Syngenta contributions to defined benefit pension plans were $161 million in 2016 compared with $168 million in 2015. These included early retirement contributions of $11 million in 2016 and $12 million in 2015. In 2017, Syngenta expects contributions to defined benefit pension plans, excluding early retirement contributions associated with restructuring actions, to be approximately $150 million.

Results of operations
2016 compared with 2015 continued

Restructuring and impairment

Restructuring and impairment charges for the years ended December 31, 2016 and 2015, broken down into the main restructuring initiatives, consist of the following:

For the years ended December 31, ($m)	2016	2015
Accelerating operational leverage programs:		
Cash costs	214	228
Non-cash costs	9	12
Integrated crop strategy programs:		
Cash costs	1	27
Acquisition, divestment and related costs:		
Cash costs		
Associated with industry consolidation, including ChemChina	50	62
Other acquisition and related integration costs	24	29
Non-cash items	(12)	1
Other non-cash restructuring and impairment:		
Other non-current asset impairments	121	29
Total	**407**	388

The above costs are presented within Restructuring in the consolidated income statement.

In addition to the above, of the $141 million share based payment expense charged to the 2016 condensed consolidated income statement, $70 million (2015: $ nil) is the incremental effect of applying cash-settled share based payment accounting due to the share plan amendments related to the ChemChina Tender Offer, as described in Note 3. The $70 million is presented as costs of the following functions: Cost of goods sold $6 million, Marketing and distribution $26 million, Research and development $8 million, Other general and administrative $30 million.

The total of the above material items is presented within the condensed consolidated income statement as follows:

($m)	2016	2015
Cost of goods sold	6	–
Marketing and distribution	26	–
Research and development	8	–
Other general and administrative	30	–
Restructuring	407	388
Total	**477**	388

Restructuring represents the effect on reported performance of initiating and enabling business changes that are considered major and that, in the opinion of management, will have a material effect on the nature and focus of Syngenta's operations, and therefore require separate disclosure to provide a more thorough understanding of business performance. Restructuring includes the incremental costs of closing, restructuring or relocating existing operations, and gains or losses from related asset disposals.

Restructuring also includes the costs of analyzing and preparing for potential industry consolidation transactions, including costs associated with the ChemChina Tender Offer, as well as the effects of completing and integrating significant business combinations and divestments, including related transaction costs, gains and losses. Recurring costs of normal business operations and routine asset disposal gains and losses are excluded.

Impairment includes impairment losses associated with major restructuring as well as impairment losses and reversals of impairment losses resulting from major changes in the markets in which a reported segment operates.

The incidence of these business changes may be periodic and the effect on reported performance of initiating them will vary from period to period. Because each such business change is different in nature and scope, there will be little continuity in the detailed composition and size of the reported amounts which affect performance in successive periods. Separate disclosure of these amounts facilitates the understanding of performance including and excluding items affecting comparability. Syngenta's definition of restructuring and impairment may not be comparable to similarly titled line items in financial statements of other companies.

Analysis of restructuring costs
2016

Accelerating operational leverage programs

Cash costs of $214 million, including $36 million of severance and pension charges and $35 million of information systems projects, consist of $95 million for initiatives to restructure marketing and commercial operations, $61 million for projects to improve the effectiveness of back office support, $30 million for Research and Development productivity projects, $23 million for activity to optimize production and supply and $5 million for project management. Non-cash costs include tangible asset write-downs associated with the above projects.

Integrated crop strategy programs

The integrated crop strategy programs announced in 2011 are substantially complete and final costs in 2016 relate to the completion of certain projects initiated before the end of 2015.

Acquisition, divestment and related costs

Cash costs include $50 million of transaction costs related to the ChemChina Tender Offer. Other cash costs include $13 million of transaction costs and $11 million incurred for integration projects, including the divestments of the Goa manufacturing site and the Bioline beneficial insects breeding business and the subsequently canceled projects to divest the Flowers and Vegetables businesses. Non-cash items consist of aggregate gains of $12 million on sale of the Bioline beneficial insects breeding business and the manufacturing site in Goa.

Other non-cash restructuring

Other non-current asset impairments include $61 million for the impairment of product rights where production challenges have increased the uncertainties of commercializing a product profitably, $31 million for the impairment of two sites and $16 million for the write-down of a building, both in the US and now classified as held-for-sale, $10 million to impair the assets of a seeds crop where expectations of future operating profitability have reduced and various other individually small write-downs.

Results of operations 2016 compared with 2015 continued

Analysis of restructuring costs continued

2015

Accelerating operational leverage programs

Cash costs of $228 million, including $127 million of severance and pension charges, consisted of $77 million for initiatives to restructure marketing and commercial operations, $43 million for projects to drive efficiencies in territory commercial operations, $48 million to rationalize logistical operations and optimize production capacity, $36 million for Research and Development productivity projects, $17 million for projects to increase the effectiveness of back office support services and $7 million for project management.

Non-cash costs of $12 million included $33 million of tangible asset write-downs at three sites resulting from projects to rationalize logistical operations and optimize production capacity and a $21 million pension curtailment gain related to the Swiss defined benefit pension plan. The pension curtailment gain represents the difference between the cash costs for early retirements and the calculation of net pension curtailment costs according to IFRS. Cash costs for early retirements are included in the cash costs of various projects described above.

Integrated crop strategy programs

Cash costs of $27 million included $20 million of charges for the transfer of certain system and process management activities to the internal service center in India, including $11 million for information system projects, $1 million to restructure the integrated Research and Development function, $1 million to restructure the Human Resource organization and $5 million of corporate headquarter and other costs.

Acquisition, divestment and related costs

Costs associated with industry consolidation represented transaction charges related to potential transactions, such as the proposals received from Monsanto Company and ChemChina. Further cash costs included $21 million of transaction costs and $8 million incurred to integrate previous acquisitions, mainly the German and Polish winter wheat and winter oilseed rape breeding and business operations of Lantmännen, PSB and MRI, as well as costs associated with the separation and planned divestments of the Flowers and Vegetables Seeds businesses announced during 2015, which were subsequently canceled. The non-cash item was an impairment related to fixed assets acquired with the German and Polish winter wheat and winter oilseed rape breeding and business operations of Lantmännen.

Other non-cash restructuring

Other non-current asset impairments of $29 million included $20 million to impair the assets of a seeds crop where expectations of future operating profitability had reduced, $7 million of impairment of exclusive distribution rights where the distribution agreement was terminated and $2 million for two other intangible asset impairments.

Financial expense, net

Financial expense, net increased to $291 million in 2016 from $256 million in 2015. Currency-related financial expenses in 2016 of $253 million were $38 million higher than 2015 due to increased exposures in Latin American countries from the higher average trade working capital and currency losses in certain emerging market countries where hedging is not available. Net interest expense was flat at $19 million in 2016 with average net debt broadly stable over the two years.

Taxes

Syngenta's effective tax rate in 2016 was 13 percent, 3 percent lower than the 16 percent effective tax rate for 2015. Syngenta's Swiss statutory tax rate was 22 percent in both years. Income taxed at different rates increased the effective tax rate by 2 percent in 2016, compared with an 8 percent reduction in 2015 due to differences in the mix of jurisdictions in which estimated taxable profits arose in the respective years, and to the impact of the changes made to require cash settlement of share awards contingent on completion of the ChemChina Tender Offer. The percentage of income before taxes recorded in Switzerland reduced from 53 percent in 2015 to 40 percent in 2016. The tax deduction for amortization and impairments not recognized for IFRS reduced the tax rate by 1 percent (2 percent in 2015) from the impairment of shares held by several group companies in subsidiaries resulting from a decrease in the value of those subsidiaries as determined under local GAAP, due in part to weaker exchange rates of the functional currency of the subsidiaries. An improvement in profitability in operations in Argentina, Brazil and the Philippines contributed to a 4 percent reduction in the tax rate from recognition of previously unrecognized deferred tax assets (2 percent in 2015). Changes in prior year estimates and other items reduced the tax rate by 6 percent in 2016, compared with a 4 percent increase in 2015, due to the release of several prior year related tax risk provisions as further disclosed in Note 2 to the consolidated financial statements. Non-recognition of deferred tax assets was not material and did not impact the tax rate in 2016, but increased the tax rate by 5 percent in 2015 mainly due to deferred tax assets in parts of Latin America and Africa where the criteria for recognizing deferred tax assets was not met because of local currency weakness and weak economic conditions.

The tax rate on restructuring and impairment was 18 percent in 2016, compared with 23 percent for 2015 due to the different mix of gains and losses included in the net charge over the period and the varying tax treatments applied in different countries. Future rates applicable to restructuring and impairment will be dependent on the nature and size of the charges and may vary from year to year.

Net income for the period and other supplementary income data

Net income attributable to Syngenta shareholders in 2016 was $1,178 million, 12 percent lower than the 2015 amount of $1,339 million. Sales were 5 percent lower, 2 percent lower at constant exchange rates, with 3 percent due to weaker foreign currency exchange rates relative to the US dollar. Operating income margin was 0.8 percentage points lower in 2016 than 2015, with increased restructuring and impairment charges and the incremental effect of applying cash-settled share based payment accounting following the ChemChina Tender Offer; excluding these factors, operating income margin was broadly flat in 2016 and 2015. Following higher financial expense, income before taxes was 15 percent lower in 2016. With a lower effective tax rate, net income was 12 percent below 2015.

Results of operations
2016 compared with 2015 continued

Net income for the period and other supplementary income data continued

After related taxation, restructuring and impairment charges (including the incremental share based payment charges noted above) were $390 million in 2016 compared with $300 million in 2015 largely due to costs associated with the ChemChina Tender Offer and increased impairments of non-current assets.

Foreign operations and foreign currency transactions

Syngenta's subsidiaries use their local currency as their functional currency for accounting purposes except where the use of a different currency more fairly reflects their actual circumstances.

Syngenta operates worldwide and its business has grown significantly in emerging markets, with a broadening of the currency effects that need to be closely monitored. Syngenta regularly analyzes how currency fluctuations will impact its operating results and manages the impact with a combination of commercial actions, such as product pricing, and financial risk management strategies, such as hedging. Next to the euro, the Swiss franc and the British pound, the Brazilian real gives rise to a major currency exposure due to the large size of Syngenta's business activities in Brazil. Sales prices to customers in Brazil largely are linked to the US dollar, which limits the impact of fluctuations in the US dollar/Brazilian real exchange rate, including the significant devaluation of the Brazilian real that occurred in 2015 and the subsequent strengthening during 2016. Similarly, Syngenta manages its currency exposure in the CIS, mainly Russia and Ukraine, by increasing local currency sales prices to compensate the loss in sales value from the currency devaluation. Russia and the Ukraine experienced significant currency volatility and a devaluation in 2015; in 2016 the Russian ruble stabilized against the US dollar, while the Ukrainian hryvnia weakened further.

Syngenta has manufacturing and research and development facilities in the United Kingdom and net of sales revenues has a short exposure in British pounds sterling of less than $500 million. The British pound weakened relative to the US dollar in 2016 following the "Brexit" vote, but the short exposure had been largely matched by currency hedges in line with normal policy and only a minor net gain was recorded in 2016 relative to 2015. At current exchange rates, a further minor year-on-year gain will be recorded in 2017.

Syngenta regularly monitors receivables exposure in all countries in which it operates. In the Eurozone, Greece, Italy, Portugal and Spain have been experiencing weak macro-economic conditions since 2010. Parts of Latin America, including Argentina and Brazil are also experiencing economic and financial difficulties and this has led to constraints in the availability of credit; in Venezuela, exchanging local currency into US dollars to pay for imported goods can be difficult. Receivables exposure from customers in Russia and the Ukraine has increased during 2016, with 73 percent of 2016 sales in those countries having been collected as of December 31, 2016 compared with 85 percent of 2015 sales. The increased exposure is largely due to the timing of sales; in 2016, 13 percent of total sales in the CIS were made in the fourth quarter whereas in 2015, fourth quarter sales were 8 percent of the total for the year. Sales in the CIS were 6 percent of Syngenta's total sales in 2016 (2015: 5 percent).

The following table outlines for the above-named countries the aggregate, gross trade receivables, those past due for more than 180 days and the related provision for doubtful receivables at December 31, 2016 and 2015.

($m)	2016	2015
Gross trade receivables	**2,789**	2,363
Past due for more than 180 days	**360**	216
Provision for doubtful trade receivables	**274**	209

The increases in receivables past due for more than 180 days and provision for doubtful trade receivables includes increased exposures in Latin America. In Brazil, poor economic conditions, commodity price weakness and the impact of adverse weather constrained grower liquidity and the availability of credit, and in Venezuela the general economic conditions and availability of US dollars deteriorated further. A major proportion of growers in Argentina using Syngenta's products export their crops, which enables them to generate income that is economically linked to the US dollar. Because of this, Syngenta is able to price most of its sales in Argentina in US dollars through to cash collection, which reduces its exposure to the Argentine peso. However, future legislation, competitors' behavior or central bank restrictions may limit or remove this protection or further limit the ability of Syngenta to access US dollars in, or remit US dollars from, Argentina. Sales in Argentina were 3 percent of Syngenta's total sales in 2016.

At December 31, 2016, approximately 62 percent of Syngenta's cash and cash equivalents were held in US dollars, approximately 14 percent in Indian rupees, approximately 4 percent in Ukrainian hryvnia, and approximately 3 percent in Thai baht. No other individual currency made up more than 2 percent.

Liquidity and capital resources

Syngenta's principal source of liquidity is cash generated from operations. This has been more than sufficient to cover cash used for investment activities in all years since 2006, except in 2012 when the higher level of cash used for investing activities resulting from increased business acquisitions required funding with a combination of cash generated from operations and the issuance of unsecured non-current bonds. Except for any significant business acquisitions or a significant deterioration in the rate of receivables collections from that currently expected by management, cash generated from operations is expected to be more than sufficient to cover cash expected to be used for investment activities in 2017.

Working capital fluctuations are supported by short-term funding available through commercial paper and related syndicated committed credit facilities. Operating in a seasonal business, Syngenta typically obtains funds from its short-term facilities during the first half of the year to fund operations during the northern hemisphere growing season and repays these funds during the second half when receivables are collected. Longer-term capital resources include unsecured non-current bonds issued under a Euro Medium Term Note (EMTN) program, unsecured non-current Notes issued under a Note Purchase Agreement in the US Private Placement market and unsecured non-current bonds issued in the US public debt market. See Capital markets and credit facilities for details of outstanding debt.

For information on Syngenta's funding and treasury policies and objectives in terms of the manner in which treasury activities are controlled, see Note 27 to the consolidated financial statements.

Liquidity and capital resources continued

Syngenta reported cash and cash equivalents on December 31, 2016 and 2015 of $1,284 million and $1,141 million, respectively. At December 31, 2016 and 2015, Syngenta had current financial debt of $767 million and $547 million, respectively, and non-current financial debt of $2,854 million and $3,183 million, respectively.

Capital markets and credit facilities

Funds for Syngenta's working capital needs were available during the year from its $2,500 million Global Commercial Paper program supported by a committed, revolving, multi-currency, syndicated credit facility. Syngenta entered into its Global Commercial Paper program in 2000 and amended it in 2007. In January 2016, the amount of the syndicated credit facility was increased from $1.5 billion to $2.5 billion. Its contractual expiry date is in 2019 but it has a change of control clause which allows each lender to cancel its commitment unless renegotiated terms are agreed within 30 days of a change of control occurring. In order to address the risk of early termination, ChemChina has provided cover for the backstop facility and also for other financing needs arising from the change of control via a committed Target Facilities Agreement that Syngenta expects to be able to access on successful completion of the ChemChina Tender Offer (see Note 3 to the consolidated financial statements for further discussion of the ChemChina Tender Offer). At December 31, 2016 Syngenta had $100 million of commercial paper issuances outstanding (2015: $nil) and there were no borrowings outstanding under the syndicated credit facility (2015: $nil). Absent major acquisitions, Syngenta targets maintaining an investment grade credit rating, as recognized by major third-party rating agencies, which it currently believes provides an optimal balance between financial flexibility and the cost of capital. Syngenta's short- and long-term credit facilities and outstanding bond note instruments do not contain any significant covenants affecting its ability to pay dividends or borrow additional funds. In addition, there are no material legal or economic restrictions on the ability of subsidiaries to transfer funds to the Company in the form of cash dividends except as disclosed in the consolidated cash flow statement.

The table below summarizes Syngenta's unsecured notes in issuance at December 31, 2016:

($m)	Issuance date	Carrying amount	Value at issue
Euro floating rate note 2017	March 2014	263	344
0.750% CHF bond 2019	March 2014	344	396
5.110% US dollar private placement 2020	December 2005	83	75
1.875% Eurobond 2021	March 2014	526	689
3.125% US dollar bond 2022	March 2012	515	500
1.625% CHF bond 2024	March 2014	245	283
5.350% US dollar private placement 2025	December 2005	75	75
1.250% Eurobond 2027	March 2015	523	559
2.125% CHF bond 2029	March 2014	147	170
5.590% US dollar private placement 2035	December 2005	100	100
4.375% US dollar bond 2042	March 2012	248	250
Total		**3,069**	**3,441**

Other than as a result of the ChemChina transaction, management is of the opinion that, absent a major business acquisition or a very significant deterioration in working capital or the rate of receivables collections from that currently expected, the funding available from the sources described above will be sufficient to satisfy Syngenta's working capital, capital expenditures and debt service requirements for the foreseeable future, including cash expenditures relating to restructuring programs. In the event of a major business acquisition, Syngenta would seek additional funding from capital markets or other sources. Except for the Target Facilities Agreement, noted above, to cover any refinancing needs that may arise as a consequence of the completion of the ChemChina transaction, Syngenta regards as sufficiently remote the likelihood that a very significant deterioration in working capital or unexpected decline in the rate of receivables collections will occur as not to require the development of a detailed contingency funding plan.

Cash flow

The following table sets out certain information about cash flow for each of the periods indicated:

	Year ended December 31,	
($m)	2016	2015
Cash flow from operating activities	**1,807**	1,190
Cash flow used for investing activities	**(521)**	(462)
Cash flow used for financing activities	**(1,134)**	(1,188)

Cash flow from operating activities

Cash flow from operating activities increased by $617 million to $1,807 million in 2016 from $1,190 million in 2015 largely due to changes in net working capital. Cash inflows from inventory reduction in 2015 were $252 million compared with $32 million in 2015; year end inventories as a percentage of sales decreased from 32 percent in 2015 to 30 percent in 2016. Outflows from trade and other working capital assets decreased by $494 million in 2016 due to a significantly lower build-up in trade receivables in Brazil than in 2015 and the receipt of royalty income in 2016 under agreements signed in previous years. Cash inflows from trade and other working capital liabilities decreased by $139 million in 2016; trade accounts payable as a percentage of sales increased by 1 percentage point in 2016, but had increased by 2 percentage points in 2015. Income before taxes in 2016 decreased by $231 million from 2015 for the reasons described above. Non-cash items were $97 million higher in 2016 mainly due to higher impairment charges and charges in respect of share based compensation and lower gains on disposal of non-current assets. Adjusted for non-cash items, income before taxes was $134 million lower than 2015. Cash outflows for financial expense, net increased from 2015 to 2016 largely due to timing differences between underlying realized foreign exchange gains and losses and the cash flows from the related hedges.

Liquidity and capital resources continued

Cash paid in respect of income taxes was $263 million lower than in 2015 due to payments in 2015 in respect of several tax years for an entity in Switzerland and lower advance tax payments in the United States. Cash paid in 2016 in respect of restructuring provisions was $52 million lower than 2015 largely due to lower severance payments in 2016.

Cash flow used for investing activities

Cash flow used for investing activities was $521 million in 2016, $59 million more than in 2015. Additions to property, plant and equipment were broadly flat; a similar level is currently expected in 2017. An increase in purchases of intangibles was due partly to capitalized software development costs and software license purchases related to projects within the AOL restructuring programs. Cash outflows from purchases of marketable securities increased by $53 million, mainly due to investments in Brazil. Proceeds from disposals decreased by $73 million in 2016, due to the sale of land in Switzerland and the US in 2015. The cash inflows for business divestments increased from $1 million in 2015 to $58 million in 2016, which related to the divestments of Bioline and the Goa manufacturing site in India.

Cash flow used for financing activities

Cash flow used for financing activities of $1,134 million was $54 million lower than in 2015. No bonds were issued or repaid in 2016; in 2015, bonds were issued and repaid at maturity as described below. The dividend paid to shareholders in 2016 decreased by $38 million compared with 2015 due largely to a weaker Swiss franc.

There were no share repurchases in 2016; in 2015, Syngenta repurchased 389,500 of its own shares, with 158,000 shares then expected to be used for future requirements of share based payment plans and 231,500 related to a share repurchase program. Sales of treasury shares in all years related to employee share and share option plans.

Research and Development ("R&D")

Syngenta's Research and Development organization is dedicated to developing quality crop protection and seeds products, as well as crop-focused solutions which integrate multiple technologies. R&D focuses on taking a holistic approach to help customers grow their specific crop using the best technology to address their needs, be it a single technology, a combination of technologies, or technologies and services.

Syngenta is committed to improving crop yield and quality in a sustainable way and, through its global product safety group and global regulatory team, is committed to developing and registering products that are safe and effective. Syngenta maximizes its innovation potential by leveraging its industry expertise and partnering with other technology leaders across the globe.

The total spent on R&D was $1,299 million in 2016 and $1,362 million in 2015. Attribution of R&D costs for 2016 was $1,247 million for Syngenta's Regional Crop Protection and Seeds business and $52 million in Lawn and Garden. In 2015, the attribution was $1,310 million for the Regional Crop Protection and Seeds business and $52 million in Lawn and Garden.

There are no off-balance sheet financing transactions associated with R&D activity.

Contractual obligations, commitments and contingent liabilities

At December 31, 2016, Syngenta had contractual obligations to make future payments in the periods indicated in the following:

($m)	Notes to the financial statements reference	Total	Less than 1 year	1–3 years	3–5 years	5–10 years	More than 10 years
Financial debt	16, 18	3,563	756	345	609	835	1,018
Interest on fixed rate financial debt	27	712	66	132	122	162	230
Other non-current liabilities	18	19	17	2	–	–	–
Capital lease payments	25	62	17	31	6	8	–
Operating lease payments	25	227	67	99	42	19	–
Capital expenditures	25	176	158	18	–	–	–
Pension contribution commitments	22	134	34	69	31	–	–
Unconditional purchase obligations	25	1,206	784	296	126	–	–
Long-term research agreements and other long-term commitments	25	123	62	38	16	7	–
Total		6,222	1,961	1,030	952	1,031	1,248

Of the total financial debt, floating rate financial debt is $504 million (mainly local bank loans and overdraft facilities), all of which is due within one year. No interest obligation in respect of this debt is included in the table above. There is no contractual obligation to renew this debt. The debt amount, and the interest payments associated with it, will vary over time according to Syngenta's funding requirements and future interest rates.

Fixed rate debt of $3,059 million is comprised primarily of the outstanding Eurobonds, Swiss franc domestic bonds and US dollar bonds, and private placement notes. Fixed rate interest payments of $712 million on these are included above.

Other non-current liabilities arise from deferred payments related to acquisitions and license agreements.

Provisions for long-term liabilities totaling $1,143 million shown in Syngenta's consolidated balance sheet have not been included in the above table because the timing of their payment is not contractually fixed and cannot be estimated with sufficient certainty within the context of the time periods in the table. This applies particularly to those amounts which are not expected to be paid during 2016. Note 19 to the consolidated financial statements presents the components of the estimated $182 million of provisions that are expected to be paid during 2016.

Contractual obligations, commitments and contingent liabilities continued

The supply agreements for materials giving rise to the unconditional purchase obligations are entered into by Syngenta to ensure availability of materials meeting the specifications required by Syngenta. Where suppliers have made significant capital investment, these agreements generally provide for Syngenta to pay penalties in the event that it terminates the agreements before their expiry dates.

Pension contribution commitments totaling $134 million represent unconditional fixed payments to the UK pension fund according to the schedule of contributions agreed during 2015. Not included in the above table are:

- Additional UK Pension Fund contributions of up to $19 million per year which are required to be paid if the actual return on UK pension plan assets over the period to November 30, 2020 is less than the agreed assumption.
- Swiss Pension Fund contributions for future service. The rules of Syngenta's main Swiss defined benefit pension fund commit Syngenta to contributing a fixed percentage of employees' pensionable pay to the fund.

As disclosed in Note 22 to the consolidated financial statements, Syngenta expects to pay $150 million of contributions to its defined benefit pension plans in 2017 excluding restructuring costs and excluding any accelerated payments which Syngenta may decide to make as business and financial market conditions develop during 2016. $34 million of these contributions are included as commitments in the table above. The remaining $116 million represents 2017 service contributions, which are not included as commitments in the table above.

The above table excludes income tax liabilities of $400 million in respect of uncertain tax positions. These are presented within current income tax liabilities in the consolidated balance sheet because it is not possible to make a reasonably reliable estimate of the actual period of cash settlement with the respective taxing authorities.

Off-balance sheet arrangements

Syngenta had no off-balance sheet arrangements as at December 31, 2016, other than the above contractual obligations, commitments and contingent liabilities. Syngenta has no unconsolidated special purpose entities that are likely to create material contingent obligations.

Critical accounting estimates

Critical accounting estimates and new accounting pronouncements are discussed in Notes 2 and 29 to the consolidated financial statements.

Recent developments

Note 30 to the consolidated financial statements provides details of events which occurred between the balance sheet date and February 7, 2017 that would require adjustment to or disclosure in the consolidated financial statements.

Trend and outlook

The prices of a basket of the key field crops of corn, soybean, wheat and rice further declined in 2016, remaining below the levels seen in the immediate aftermath of the global financial crisis in the 2009 to 2011 period. Global stocks of these key crops relative to consumption remain above the longer-term historic average and this is likely to constrain near-term price increases in these crop commodities. The level of crop prices in turn constrains farm incomes and reduces the incentive for farmers to increase planted area or use new technology, either in seed or crop protection, to maximize yield and/or crop quality. Poor liquidity and lack of available credit in certain geographies, particularly in Latin America, has also negatively impacted on demand. Given this market context, Syngenta currently anticipates low agribusiness market growth in 2017. Longer term, Syngenta continues to expect that population growth and dietary change, particularly due to increasing wealth in emerging markets, will drive demand for new technology and agribusiness growth.

Weaker foreign exchange rates relative to the US dollar, particularly in the first half of the year, reduced reported sales in 2016 by approximately 3 percent, with sales in Euro reduced by approximately 2 percent and sales in emerging markets reduced by approximately 6 percent. In some markets, particularly Russia and the Ukraine, where currency decline was approximately 25 percent, the adverse impact was substantially offset by local currency sales price increases to maintain US dollar prices. A stronger US dollar is expected to continue to reduce reported sales in 2017; if exchange rates at the end of 2016 continued through 2017, Syngenta estimates a further adverse impact to reported sales of approximately 2 percent. The impact of exchange rate movements on operating income is discussed below.

At the regional level, the market in North America in 2016 continued to reflect low farmer profitability, reducing the demand for crop protection and seeds products. Syngenta's sales in the region in 2016 were 6 percent lower than in 2015, but sales in 2015 included $145 million from a license with KWS and Limagrain; excluding this, 2016 sales were 1 percent lower. A planned reduction of sales of low margin solo glyphosate reduced 2016 sales volumes in the region by approximately 3 percent; no similar reduction is planned for 2017. In Europe, Africa and the Middle East, lower commodity prices and adverse weather conditions in Western Europe in the second quarter reduced the crop protection market in 2016. Reported sales in 2016 were impacted by currency weakness relative to the US dollar, which reduced reported sales by 7 percent; sales price increases were implemented to partially offset this, particularly in Russia and the Ukraine, which increased sales in the region by 3 percent. A low level of market growth is expected in 2017 and at exchange rates prevailing at the start of the year, the adverse impact of weaker exchange rates and also the offsetting increase to sales prices in parts of Eastern Europe are both expected at a lower level in 2017; price increases to offset weaker currencies are generally not expected to be achievable in the Eurozone and other developed markets. In Latin America, reported sales in 2016 were 9 percent lower than in 2015. In 2015, Syngenta modified sales

Trend and outlook continued

terms in Brazil, which changed the point of revenue recognition and resulted in a one-time increase in reported sales of $239 million. Syngenta's sales in the region in 2015 also included $55 million from the aforementioned license with KWS and Limagrain. In addition, Syngenta stopped sales in Venezuela in 2016 as a result of not receiving payment for prior year shipments. Adjusting for these items, sales in 2016 would have been 1 percent higher than in 2015. Market growth in 2016 was constrained by the lower crop prices discussed above, and the strengthening of the Brazilian real through the year further impacted farmer profitability. Sales in Brazil were further impacted by reducing high channel inventories through 2016 owing to adverse weather conditions and continuing credit constraints. A low level of market growth is expected in 2017. Sales were flat in Asia Pacific in 2016, but were 2 percent higher at constant exchange rates. The full year performance included growth of 15 percent in the second half of the year as key markets recovered from the impact of the El Niño weather conditions. For 2017, Syngenta currently expects market growth in mid-single digits.

Lawn and Garden sales in 2016 increased by 2 percent, 4 percent at constant exchange rates, with strong growth in the Controls business offsetting lower sales in Flowers. Syngenta currently expects growth in Controls sales to moderate, but a return to a low level of growth in Flowers, with a continued focus on cost control to maintain operating margins at constant exchange rates.

Syngenta has a strong pipeline of new crop protection products at various stages of development and, with market leadership in crop protection chemicals, a strong position in several key seeds crops and leading commercial organizations in all four regions, Syngenta believes it has a clear competitive advantage to deliver above market sales growth over the longer term. In 2017, crop protection product sales growth is expected to be driven by the growth in ACURON™ and SOLATENOL™, with expansion in the United States and launches in Europe, Africa and the Middle East and growing contributions from the recently launched ADEPIDYN™ and ORONDIS™. This is expected to more than offset lower sales in some older technologies. In Seeds, growth will be driven by sales of corn seeds, particularly including traits, increased license income (subject to regulatory approvals) and above market growth in sales of vegetable seeds.

Syngenta will continue to drive savings and productivity in 2017 through the AOL program. These savings, net of reinvestment in increased Research and development and Marketing and distribution costs are expected to offset inflation. In Research and development, further savings under the AOL program 2017 will be offset by cost inflation and additional expenditure both on new active ingredient development and increased regulatory costs and overall are expected to be marginally higher in 2017 than 2016. Savings from the AOL program in Marketing and distribution costs and General and administrative costs (excluding restructuring) are planned to be reinvested in increased marketing expenditure to drive future market share growth, for example in the Vegetables business, and overall expenditure is planned to be higher in 2017 than 2016.

Excluding impairments, which cannot be forecast, the progression of the AOL program noted above is expected to result in increased restructuring charges related to this program in 2017. In general the timing of the recognition of charges for particular restructuring events, which is dependent on when irreversible commitments to the events occur, makes it difficult to predict such costs with certainty. Expenses in 2017 are also expected to include further charges to cash-settle employee share plans following completion of the ChemChina Tender Offer noted above.

In 2016, oil prices traded in a range of $30–55 per barrel, being towards the upper end of the range in the latter part of the year and remaining around that level through January 2017. With its current product mix, Syngenta estimates that each $10 movement in the price of a barrel of oil impacts its cost of goods sold by approximately $30–35 million. However, due to supplier production chains and Syngenta's own inventory, it can take from 9 to 12 months for movements in the oil price to feed through into cost of goods sold. As at the end of January 2017, the impact of movements in the price of oil is not expected to have a significant impact on 2017 compared with 2016.

In 2016, 53 percent of Syngenta's sales were in emerging markets, up from around 35 percent 10 years ago. Emerging markets continue to have higher long-term growth potential because significant crop yield gaps exist versus developed markets; this growth potential is further supported by ongoing technology adoption. Managing volatility in such markets, in particular credit and currency exposures, is integral to Syngenta's business model.

Overall, Syngenta has significant currency exposures, which at a high level can be summarized as:

- a short position against the US dollar in Swiss francs and British pounds
- a net long position in euros over the course of a full year, relatively minor compared with sales in euros, but with a long position in the first half selling season and a short position in the second half from more evenly spread euro-based operating costs including raw material costs
- a long position in Japanese yen, Australian and Canadian dollars and many emerging market currencies
- in Brazil and Argentina, a significant portion of sales are effectively priced in US dollars, resulting in a net short local currency exposure, though the linkage has weakened in Brazil and there can be a time lag before local currency prices are adjusted.

As noted above, following the recent exchange rate volatility in Russia and the Ukraine, Syngenta has acted to link pricing of sales in these countries (both of which export grain to the global market) to US dollars to reduce the long exposure to these currencies. More than 50 percent of the currency impact was recovered through sales price in 2016 and, combined with a recovery in sales volumes, drove US dollar operating income in the territory above the level of 2015.

Trend and outlook continued

Forecast transaction exposures in the major currencies are hedged under a rolling 12-month program, largely through forward contracts. In 2016, Syngenta estimates the impact on underlying sales and operating costs of exchange rate movements to have been approximately $59 million adverse to 2015, which together with a net hedging cost of $73 million compared with a gain of $21 million in 2015, resulted in an adverse year-on-year impact on operating income from exchange rate movements of approximately $153 million when compared with 2015. The major driver of the adverse net impact was weaker emerging market currencies, particularly the Russian ruble and Ukrainian hryvnia, where the impact of these two currencies was partly recovered in sales prices; excluding the sales price recovery in the ruble and hryvnia, the adverse net impact was estimated to be approximately $45 million. At rates prevailing in January 2017, Syngenta expects a relatively minor net impact on operating income relative to 2016 from the currency movements. This is due to the adverse impact on underlying exposures of a generally stronger US dollar on sales net of the favorable impact of the weaker Swiss franc and British pound sterling on operating costs, offset by a favorable net hedging result compared with 2016. A significant portion of emerging market currency exposures in particular are unhedged, so the actual impact may differ positively or negatively from the above estimate. The net hedging result is reported within General and administrative in the consolidated income statement.

ChemChina Tender Offer

As of March 23, 2016, CNAC Saturn (NL) B.V., a subsidiary of China National Chemical Corporation, a state-owned enterprise of the People's Republic of China, launched public tender offers in Switzerland and the United States to acquire all the publicly held Ordinary Shares and, in the US offer, also all American Depositary Shares (ADSs) of Syngenta AG for $465 per Ordinary Share in cash. Syngenta and its Board of Directors have agreed to support the ChemChina Tender Offer. ChemChina has announced that, as of 5:00 p.m., New York City time, on December 16, 2016, approximately 19,222,302 Syngenta AG Ordinary Shares (including those represented by ADSs) had been validly tendered in, and not withdrawn from, the ChemChina Tender Offer. The Main Offer Period has been extended until March 2, 2017, with further extension likely to follow until all offer conditions are fulfilled, in particular regulatory approval by all competent merger control and other authorities, but excluding the Minimum Acceptance Rate condition. At such time, the Offeror will extend the ChemChina Tender Offer for the last time by a period of up to 20 trading days. The ChemChina Tender Offer is conditional, among other things, on acceptance by shareholders owning 67 percent of Syngenta AG issued shares and on regulatory approval by the competent merger control and other authorities.

The Transaction Agreement between ChemChina and Syngenta AG may be terminated in specified circumstances, including by either party if all conditions are not satisfied by June 30, 2017, provided the Swiss Takeover Board no longer requires the ChemChina Tender Offer to remain open. Pursuant to the Transaction Agreement, ChemChina has agreed to pay Syngenta an amount equal to $3 billion if, despite all other conditions of the ChemChina Tender Offer having been satisfied or still being capable of being satisfied, the ChemChina Tender Offer does not become unconditional and/or is terminated as a result of the failure to obtain Chinese regulatory approvals or antitrust approvals, subject to certain exceptions. In certain circumstances, including if the Syngenta AG Board of Directors were to withdraw its support for the ChemChina Tender Offer and as a result the ChemChina Tender Offer is not successful or does not become unconditional, Syngenta would be required to pay ChemChina $848 million.

Regulatory approval for the transaction was received from the Committee on Foreign Investment in the United States (CFIUS) on August 19, 2016. At December 31, 2016, clearance for the transaction had been received from antitrust authorities in respect of Australia, COMESA (Common Market for Eastern and Southern Africa), Israel, Japan, Kenya, Macedonia, Pakistan, Russia, Serbia, the Republic of South Africa, South Korea, Turkey and Ukraine.

If the ChemChina Tender Offer becomes unconditional, Syngenta AG will pay a special dividend of CHF 5.00 per share immediately before the first settlement of the ChemChina Tender Offer. The offer price will not be adjusted for this dividend. The Transaction Agreement provides that after the first settlement, 4 out of 10 members of Syngenta's board of directors shall be persons who have no affiliation with ChemChina or its affiliates (each, an Independent Director). Certain matters will require the affirmative vote of at least two Independent Directors, including, among others, (i) any change in the location of Syngenta's headquarters, (ii) any raising of new debt or making of distributions which would lower the rating of Syngenta to a level below investment grade (by Moody's and Standard & Poor's), (iii) any reduction in Syngenta's Research and Development budget in any given year to a level below 80 percent of the average Research and Development spend in the years 2012–2015, (iv) any material change in the agricultural sustainability programs or reduction of funding of the Syngenta Foundation for Sustainable Agriculture to a level below 80 percent of the average funding per year 2012–2015, (v) any material change to Syngenta's Health, Safety and Environment Policy and Standards and (vi) any material change to Syngenta's Code of Conduct. Approval by the Independent Directors will also be required, subject to certain exceptions, for any transaction between any member of the ChemChina group, on the one hand, and any member of the Syngenta group, on the other hand, if the transaction is not made at market terms. The above corporate governance arrangements shall remain in place until the earlier of (i) 5 years following the first settlement of the ChemChina Tender Offer and (ii) a re-listing of Syngenta Shares through an initial public offering.

In the event that ChemChina and/or its Subsidiaries hold between 90 percent and 98 percent of the voting rights in Syngenta after the second settlement of the ChemChina Tender Offer, ChemChina intends to merge Syngenta with a Swiss company directly or indirectly controlled by ChemChina in accordance with articles 8 para. 2 and 18 para. 5 of the Swiss Merger Act, whereby the remaining public shareholders of Syngenta will be compensated (in cash or otherwise) and not receive any shares in the surviving company. In the event that ChemChina and/or its Subsidiaries hold more than 98 percent of the voting rights in Syngenta after the second settlement, the Offeror intends to request the cancellation of the remaining publicly held Syngenta Shares in accordance with article 137 of the Financial Markets Infrastructure Act (FMIA).

Quantitative and qualitative disclosure about market risk

For quantitative and qualitative disclosure about market risk, see Notes 27 and 28 to the consolidated financial statements.

Appendix A
Reconciliation of non-GAAP measures to equivalent GAAP measures

A non-GAAP measure is a numerical measure of financial performance, financial position or cash flows that either:

– includes, or is subject to adjustments that have the effect of including, amounts that are excluded in the most directly comparable measure calculated and presented under IFRS, or
– excludes, or is subject to adjustments that have the effect of excluding, amounts that are included in the most directly comparable measure calculated and presented under IFRS.

Syngenta uses non-GAAP measures in this report where they are regarded by management as important for the investor to fully understand Syngenta's performance. The non-GAAP measures presented in this report are measures adjusted for exchange rate movements and to exclude restructuring gains and losses, impairment losses and divestment gains and losses. The Company presents these measures because:

– movements in exchange rates historically have had, and in the future are expected to have, a significant impact on sales and operating income from period to period, and
– restructuring and impairment charges historically have fluctuated, and in the future are expected to fluctuate, significantly from period to period and thereby have a volatile impact on results.

Syngenta has been engaged in significant restructuring activities since the formation of the Company in 2000, including programs to integrate and extract synergies from the combined operations of the Zeneca agrochemicals business and the Novartis agribusiness, the integration of business combinations, the Operational Efficiency programs, the implementation of the integrated crop strategy and, beginning in 2014, the AOL program. The incidence of restructuring charges is periodic and volatile, reflecting the timing of irrevocable commitments related to specific sites and operations. Therefore the impact on reported performance varies from period to period and there is limited continuity in the specific composition or size of such charges. In 2016, measures excluding restructuring and impairment also exclude the incremental effect of applying cash-settled share based payment accounting due to the share plan amendments related to the ChemChina Tender Offer described in Note 3 to the consolidated financial statements. Internal financial reporting and management and employee incentive plans are substantially based on financial measures excluding the charges for restructuring and impairment so that management is incentivized to deliver the benefits of the associated restructuring and not to achieve short-term financial targets by deferring implementation of restructuring plans. Restructuring programs typically deliver benefits with a payback over several years, similar to capital investments, and control over restructuring expenditures is performed on a similar project basis to that applied with capital investments.

Syngenta presents non-GAAP measures on operating income before restructuring and impairment at both the segmental and group levels. Restructuring and impairment charges have had a material effect on operating income in the period covered by the review. In the opinion of management, reporting operating performance excluding restructuring and impairment in addition to the GAAP measures provides a more thorough understanding of business performance. Together with disclosure of the material elements within restructuring and impairment and of the overall anticipated size and timeframe of restructuring programs, these measures may assist investors in forecasting future operating performance. In addition to GAAP measures, Syngenta uses measures of operating performance excluding restructuring and impairment in internal reporting to management and the Board of Directors, and these measures are used in the incentive plans for Syngenta management and other employees. Restructuring and impairment charges have been incurred in all the periods covered by the review and are expected to continue to arise and have a material effect on operating performance in future periods. Consequently, non-GAAP measures of operating income before restructuring and impairment do not present a complete picture of operating performance and these measures should be seen only as supplementary to the GAAP measure.

Syngenta presents non-GAAP information on income before taxes excluding restructuring and impairment together with income tax expense before restructuring and impairment to assist investors to calculate the Group tax rate both including and excluding the impact of restructuring and impairment charges. The tax rate on restructuring and impairment charges has been volatile and different from the tax rate on income before taxes excluding restructuring and impairment, due in part to many categories of restructuring or impairment charges not being deductible for tax purposes. In addition to GAAP measures, measures of income before taxes excluding restructuring and impairment and income tax expense excluding restructuring and impairment are used in internal reporting to management and the Board of Directors. Restructuring and impairment charges have been incurred in all the periods covered by the review and are expected to continue to arise and have a material effect on operating performance in future periods. Consequently, non-GAAP measures of income before taxes excluding restructuring and impairment and income tax expense before restructuring and impairment do not present a complete picture of financial performance and these measures should be seen only as supplementary to the GAAP measure.

Syngenta presents non-GAAP information on net income and earnings per share before restructuring and impairment and, where relevant, on net income and earnings per share from continuing operations before restructuring and impairment. As above, restructuring and impairment charges have had a material effect on operating income in the period covered by the review. In the opinion of management, reporting net income and earnings per share excluding restructuring and impairment in addition to the GAAP measures provides a more thorough understanding of business performance. Together with disclosure of the material elements within restructuring and impairment and of the overall anticipated size and timeframe of restructuring programs, this disclosure may assist investors in forecasting future performance. In addition to net income and earnings per share prepared in accordance with GAAP, Syngenta uses net income and earnings per share excluding restructuring and impairment in internal reporting to management and the Board of Directors, and the measure is used in the incentive plans for Syngenta management and other employees. Restructuring and impairment charges have been incurred in all the periods covered by the review and are expected to continue to arise and have a material effect on financial performance in future periods. Consequently, the non-GAAP measures of net income and earnings per share before restructuring and impairment do not present a complete picture of financial performance and these measures should be seen only as supplementary to the GAAP measures.

Appendix A continued

For improved clarity, the definitions of these non-GAAP measures and reconciliations of non-GAAP measures to the appropriate GAAP measure are provided below. The tables below are included to show the reconciliation of the GAAP measures to the non-GAAP measures used in the report and do not represent income statements prepared under IFRS.

Reconciliation of net income excluding restructuring and impairment (non-GAAP measure) to profit for the period (GAAP measure)

2016 ($m, except percentage, share and per share amounts)	Total	Restructuring and impairment	Before restructuring and impairment
Operating income	1,647	(477)	2,124
Income/(loss) from associates and joint ventures	5	–	5
Financial expense, net	(291)	–	(291)
Income before taxes	1,361	(477)	1,838
Income tax expense	(180)	87	(267)
Net income	1,181	(390)	1,571
Attributable to non-controlling interests	(3)	–	(3)
Net income attributable to Syngenta AG shareholders	1,178	(390)	1,568
Tax rate	13%	18%	15%
Number of shares – basic (millions)	92		92
Number of shares – diluted (millions)	92		92
Basic earnings per share	12.80	(4.24)	17.04
Diluted earnings per share	12.79	(4.24)	17.03

2015 ($m, except percentage, share and per share amounts)	Total	Restructuring and impairment	Before restructuring and impairment
Operating income	1,841	(388)	2,229
Income/(loss) from associates and joint ventures	7	–	7
Financial expense, net	(256)	–	(256)
Income before taxes	1,592	(388)	1,980
Income tax expense	(248)	88	(336)
Net income	1,344	(300)	1,644
Attributable to non-controlling interests	(5)	–	(5)
Net income attributable to Syngenta AG shareholders	1,339	(300)	1,639
Tax rate	16%	23%	17%
Number of shares – basic (millions)	92		92
Number of shares – diluted (millions)	92		92
Basic earnings per share	14.57	(3.26)	17.83
Diluted earnings per share	14.52	(3.26)	17.78

2014 ($m, except percentage, share and per share amounts)	Total	Restructuring and impairment	Before restructuring and impairment
Operating income	2,105	(206)	2,311
Income/(loss) from associates and joint ventures	7	–	7
Financial expense, net	(217)	–	(217)
Income before taxes	1,895	(206)	2,101
Income tax expense	(273)	38	(311)
Net income	1,622	(168)	1,790
Attributable to non-controlling interests	(3)	–	(3)
Net income attributable to Syngenta AG shareholders	1,619	(168)	1,787
Tax rate	14%	18%	15%
Number of shares – basic (millions)	92		92
Number of shares – diluted (millions)	92		92
Basic earnings per share	17.66	(1.83)	19.49
Diluted earnings per share	17.60	(1.82)	19.42

Appendix A continued

Reconciliation of net income excluding restructuring and impairment (non-GAAP measure) to profit for the period (GAAP measure) continued

2013 ($m, except percentage, share and per share amounts)	Total	Restructuring and impairment	Before restructuring and impairment
Operating income	2,086	(179)	2,265
Income/(loss) from associates and joint ventures	48	–	48
Financial expense, net	(200)	–	(200)
Income before taxes	1,934	(179)	2,113
Income tax expense	(285)	38	(323)
Net income	1,649	(141)	1,790
Attributable to non-controlling interests	(5)	–	(5)
Net income attributable to Syngenta AG shareholders	1,644	(141)	1,785
Tax rate	15%	22%	15%
Number of shares – basic (millions)	92		92
Number of shares – diluted (millions)	92		92
Basic earnings per share	17.88	(1.53)	19.41
Diluted earnings per share	17.78	(1.52)	19.30

2012 ($m, except percentage, share and per share amounts)	Total	Restructuring and impairment	Before restructuring and impairment
Operating income	2,256	(265)	2,521
Income/(loss) from associates and joint ventures	7	–	7
Financial expense, net	(147)	–	(147)
Income before taxes	2,116	(265)	2,381
Income tax expense	(266)	83	(349)
Net income	1,850	(182)	2,032
Attributable to non-controlling interests	(3)	–	(3)
Net income attributable to Syngenta AG shareholders	1,847	(182)	2,029
Tax rate	13%	31%	15%
Number of shares – basic (millions)	92		92
Number of shares – diluted (millions)	92		92
Basic earnings per share	20.16	(1.98)	22.14
Diluted earnings per share	20.05	(1.98)	22.03

Constant exchange rates

Syngenta compares results from one period with another period in this report using variances calculated at constant exchange rates (“CER”). To present that information, current period results for entities reporting in currencies other than US dollars are converted into US dollars at the prior period’s exchange rates, rather than the exchange rates for the current year. See Note 26 to the consolidated financial statements for information on average exchange rates in 2016 and 2015. For example, if a European entity reporting in CHF sold CHF 100 million of products in 2016 and 2015, Syngenta’s financial statements would report $101 million of revenues in 2016 (using 0.99 as the rate, which was the average exchange rate in 2016) and $104 million in revenues in 2015 (using 0.96 as the rate, which was the average exchange rate in 2015). The CER presentation would translate the 2016 results using the 2015 exchange rates and indicate that underlying revenues were flat. Syngenta presents this CER variance information in order to assess how its underlying business performed before taking into account currency exchange fluctuations. Syngenta also presents its actual reported results in order to provide the most directly comparable data under GAAP.

Syngenta Group
Consolidated Financial Statements

Consolidated Income Statement

(for the years ended December 31, 2016 and 2015)

($m, except share and per share amounts)	Notes	2016	2015
Sales	4, 5	**12,790**	13,411
Cost of goods sold		**(6,507)**	(7,042)
Gross profit		**6,283**	6,369
Marketing and distribution		**(2,117)**	(2,210)
Research and development		**(1,299)**	(1,362)
General and administrative:			
Restructuring	6	**(407)**	(388)
Other general and administrative		**(813)**	(568)
Operating income		**1,647**	1,841
Income from associates and joint ventures		**5**	7
Interest income	28	**181**	150
Interest expense	28	**(200)**	(169)
Other financial expense		**(19)**	(22)
Currency gains/(losses), net	28	**(253)**	(215)
Financial expense, net		**(291)**	(256)
Income before taxes		**1,361**	1,592
Income tax expense	7	**(180)**	(248)
Net income		**1,181**	1,344
Attributable to:			
Syngenta AG shareholders	8	**1,178**	1,339
Non-controlling interests		**3**	5
Net income		**1,181**	1,344
Earnings per share ($):			
Basic	8	**12.80**	14.57
Diluted	8	**12.79**	14.52
Weighted average number of shares:			
Basic		**92,020,494**	91,908,128
Diluted		**92,092,649**	92,206,535

The accompanying notes form an integral part of the consolidated financial statements.

All activities were in respect of continuing operations.

Consolidated Statement of Comprehensive Income

(for the years ended December 31, 2016 and 2015)

($m)	Notes	**2016**	2015
Net income		**1,181**	1,344
Components of other comprehensive income (OCI)			
Items that will not be reclassified to profit or loss:			
Losses on equity investments at fair value through OCI	28	**–**	(3)
Actuarial losses of defined benefit post-employment plans	14, 22	**(520)**	(61)
Income tax relating to items that will not be reclassified to profit or loss	7	**114**	10
		(406)	(54)
Items that may be reclassified subsequently to profit or loss:			
Unrealized gains/(losses) on derivatives designated as cash flow and net investment hedges and related hedging costs	27	**34**	38
Currency translation effects		**(301)**	(698)
Income tax relating to items that may be reclassified subsequently to profit or loss	7	**37**	(74)
		(230)	(734)
Total OCI		**(636)**	(788)
Total comprehensive income		**545**	556
Attributable to:			
Syngenta AG shareholders		**543**	553
Non-controlling interests		**2**	3
Total comprehensive income		**545**	556

The accompanying notes form an integral part of the consolidated financial statements.

All activities were in respect of continuing operations.

Consolidated Balance Sheet
(at December 31, 2016 and 2015)

($m, except share amounts)	Notes	2016	2015
Assets			
Current assets:			
Cash and cash equivalents	28	**1,284**	1,141
Trade receivables	9, 28	**4,543**	4,128
Other accounts receivable	9, 28	**570**	721
Inventories	11	**3,884**	4,345
Derivative and other financial assets	28	**500**	401
Other current assets	10	**386**	338
Income taxes recoverable		**189**	124
Total current assets		**11,356**	11,198
Non-current assets:			
Property, plant and equipment	12	**3,298**	3,383
Intangible assets	13	**2,863**	3,040
Deferred tax assets	7	**941**	783
Financial and other non-current assets	14, 28	**440**	396
Investments in associates and joint ventures	14	**170**	177
Total non-current assets		**7,712**	7,779
Total assets		**19,068**	18,977
Liabilities and equity			
Current liabilities:			
Trade accounts payable	15, 28	**(3,338)**	(3,311)
Current financial debt and other financial liabilities	16, 28	**(1,047)**	(730)
Income taxes payable		**(526)**	(444)
Other current liabilities	17, 28	**(1,174)**	(983)
Provisions	19	**(182)**	(193)
Total current liabilities		**(6,267)**	(5,661)
Non-current liabilities:			
Financial debt and other non-current liabilities	18, 28	**(3,077)**	(3,501)
Deferred tax liabilities	7	**(610)**	(668)
Provisions	19	**(1,143)**	(727)
Total non-current liabilities		**(4,830)**	(4,896)
Total liabilities		**(11,097)**	(10,557)
Shareholders' equity:			
Issued share capital: 2016: 92,578,149 ordinary shares (2015: 92,945,649)	20	**(6)**	(6)
Retained earnings		**(6,018)**	(6,500)
Reserves		**(2,051)**	(2,316)
Treasury shares: 2016: 357,658 ordinary shares (2015: 1,161,397)	20	**125**	421
Total shareholders' equity		**(7,950)**	(8,401)
Non-controlling interests		**(21)**	(19)
Total equity		**(7,971)**	(8,420)
Total liabilities and equity		**(19,068)**	(18,977)

The accompanying notes form an integral part of the consolidated financial statements.

Consolidated Cash Flow Statement

(for the years ended December 31, 2016 and 2015)

($m)	Notes	2016	2015
Income before taxes		**1,361**	1,592
Reversal of non-cash and other reconciling items	21	**1,300**	1,203
Cash (paid)/received in respect of:			
Interest received		**174**	138
Interest paid		**(179)**	(163)
Other financial receipts		**189**	334
Other financial payments		**(505)**	(460)
Income taxes		**(219)**	(482)
Restructuring costs	19	**(73)**	(125)
Contributions to pension plans, excluding restructuring costs	19	**(150)**	(156)
Other provisions	19	**(55)**	(80)
Operating cash flow before change in net working capital		**1,843**	1,801
Change in net working capital:			
Change in inventories		**252**	32
Change in trade and other working capital assets		**(374)**	(868)
Change in trade and other working capital liabilities		**86**	225
Cash flow from operating activities		**1,807**	1,190
Additions to property, plant and equipment	12	**(425)**	(453)
Proceeds from disposals of property, plant and equipment		**30**	74
Purchases of intangible assets	13	**(132)**	(90)
Purchases of investments in associates and other financial assets		**(71)**	(29)
Proceeds from disposals of intangible and financial assets		**17**	46
Business acquisitions (net of cash acquired) and business divestments		**60**	(10)
Cash flow used for investing activities		**(521)**	(462)
Proceeds from increase in third party interest-bearing debt		**400**	1,098
Repayments of third party interest-bearing debt		**(586)**	(1,174)
Sales of treasury shares and options over own shares	23	**92**	85
Purchases of treasury shares		**–**	(119)
Distributions paid to shareholders		**(1,040)**	(1,078)
Cash flow used for financing activities		**(1,134)**	(1,188)
Net effect of currency translation on cash and cash equivalents		**(9)**	(37)
Net change in cash and cash equivalents		**143**	(497)
Cash and cash equivalents at the beginning of the year		**1,141**	1,638
Cash and cash equivalents at the end of the year		**1,284**	1,141

Of total cash and cash equivalents of $1,284 million (2015: $1,141 million), $123 million (2015: $157 million) is required to meet insurance solvency requirements of the Group's insurance subsidiaries. These amounts therefore were not readily available for the general purposes of the Group. There are no other significant restrictions on Syngenta's ability to use assets or settle liabilities.

At December 31, 2016, cash equivalents totaled $931 million (2015: $839 million) and consisted of bank and money market fund deposits.

The accompanying notes form an integral part of the consolidated financial statements.

Consolidated Statement of Changes in Equity

(for the years ended December 31, 2016 and 2015)

($m)	Par value of ordinary shares	Additional paid-in capital	Treasury shares, at cost	Fair value reserves	Cumulative translation adjustment	Retained earnings	Total share-holders' equity	Non-controlling interests	Total equity
	Attributable to Syngenta AG shareholders								
January 1, 2015	6	3,430	(458)	(96)	(282)	6,289	8,889	16	8,905
Net income						1,339	1,339	5	1,344
OCI				24	(760)	(50)	(786)	(2)	(788)
Total comprehensive income	–	–	–	24	(760)	1,289	553	3	556
Transactions with owners as owners:									
Share based compensation			171			(10)	161		161
Dividends paid						(1,078)	(1,078)		(1,078)
Share repurchases			(134)				(134)		(134)
Income taxes on share based compensation						10	10		10
December 31, 2015	6	3,430	(421)	(72)	(1,042)	6,500	8,401	19	8,420
Net income						**1,178**	**1,178**	**3**	**1,181**
OCI				**23**	**(274)**	**(384)**	**(635)**	**(1)**	**(636)**
Total comprehensive income	**–**	**–**	**–**	**23**	**(274)**	**794**	**543**	**2**	**545**
Transactions with owners as owners:									
Share based compensation			**168**			**(102)**	**66**		**66**
Dividends paid						**(1,040)**	**(1,040)**		**(1,040)**
Cancellation of treasury shares		**(14)**	**128**			**(114)**	**–**		**–**
Income taxes on share based compensation						**(20)**	**(20)**		**(20)**
December 31, 2016	**6**	**3,416**	**(125)**	**(49)**	**(1,316)**	**6,018**	**7,950**	**21**	**7,971**

The accompanying notes form an integral part of the consolidated financial statements.

The amount available for dividend distribution is based on Syngenta AG's shareholders' equity determined in accordance with the legal provisions of the Swiss Code of Obligations. In 2015, a dividend of CHF 11.00 ($11.73) per share was paid in respect of 2014. In 2016, a dividend of CHF 11.00 ($11.32) per share was paid in respect of 2015.

Included within the fair value reserves are (i) cash flow hedge reserves, which comprise the effective portion of the cumulative net change in the fair value of cash flow hedging instruments related to hedged items that have not yet been recognized in profit or loss, and (ii) fair value reserves, which comprise the cumulative net change in the fair value of investments at fair value through OCI. Movements in the cash flow hedge reserves are shown in Note 27. Movements in the fair value reserves for equity investments are shown in Note 28. Amounts within OCI related to actuarial gains and losses of defined benefit post-employment plans are presented within retained earnings.

The cumulative translation adjustment comprises all foreign currency differences arising from the translation of the financial statements of foreign operations, as well as from the translation of long-term monetary items that are part of net investments in foreign subsidiaries.

Notes to the Syngenta Group Consolidated Financial Statements

1. Basis of preparation of the consolidated financial statements

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS or IFRSs) as issued by the International Accounting Standards Board (IASB). The consolidated financial statements have been prepared on an historical cost basis, except for items that are required by IFRSs to be measured at fair value, principally certain financial instruments and biological assets, which are valued at fair value less costs to sell.

The consolidated financial statements incorporate the financial statements of Syngenta AG, a company domiciled and incorporated in Switzerland, and all of its more than 150 subsidiaries globally (together referred to as "Syngenta") and Syngenta's interests in associates and joint ventures. Approximately 40 subsidiaries are considered to be significant legal entities. There are no material non-controlling interests or structured entities. Syngenta's main research and development facilities are located in Switzerland, UK and USA and its main production sites are in Switzerland, UK, USA, France, China and Brazil. Syngenta AG's principal executive offices are at Schwarzwaldallee 215, 4058 Basel, Switzerland.

The consolidated financial statements are presented in United States dollars ("$") as this is the major currency in which revenues are denominated. "$m" refers to millions of United States dollars. The functional currency of Syngenta AG is the Swiss franc ("CHF").

Syngenta is a world leading agribusiness operating in the crop protection, seeds and lawn and garden markets. Crop protection chemicals include herbicides, insecticides, fungicides and seed treatments to control weeds, insects and diseases in crops, and are essential inputs enabling growers around the world to improve agricultural productivity and food quality. In Seeds, Syngenta operates in the high value commercial sectors of field crops (including corn, oilseeds, cereals and sugar beet) and vegetables. The Lawn and Garden business provides professional growers and consumers with flowers, turf and landscape, and professional pest management products.

The preparation of financial statements requires management to exercise judgment when applying accounting policies and to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimated. Note 2 below includes further discussion of certain critical accounting estimates.

The consolidated financial statements were approved for issue by the Board of Directors on February 7, 2017 and are subject to approval by the 2017 Annual General Meeting of Syngenta AG shareholders.

2. Significant accounting policy judgments and estimates

This note describes the impact on Syngenta's consolidated financial statements of significant accounting judgments made when applying IFRSs and critical assumptions and accounting estimates.

Application of critical accounting policies

Royalty and license income

Individual agreements licensing to third parties the right to use Syngenta technology can and do have unique terms and, consequently, the accounting judgments required to apply IAS 18 "Revenue" to each such agreement can differ significantly.

In 2015, Syngenta entered into license agreements with KWS SAAT SE ("KWS"), Vilmorin & Cie S.A. ("Limagrain") and their joint ventures AgReliant Genetics LLC, AgReliant Genetics Inc. (collectively "AgReliant") and Genective S.A. ("Genective"), granting worldwide non-exclusive rights to its corn germplasm and traits portfolio, including in-licensed third party traits. Syngenta received a $200 million non-refundable license payment in 2015 in accordance with the agreement. Syngenta determined that it had no substantive future performance obligations in respect of this amount and therefore recognized it in full as revenue in 2015. No further revenue was recognized from this agreement in 2016. Further contingent milestone payments may become receivable, and would be recognized at that time as license income, dependent upon future regulatory approvals and agreements. Additional sales-based royalties may also become receivable if sales of licensed products exceed thresholds defined in the agreement, and would be recognized as revenue at the time that the licensees make the related sales.

Impairment

For purposes of testing goodwill for impairment, goodwill is allocated to cash generating units (CGUs). Syngenta generally defines each crop protection product active ingredient and each seed crop as a CGU. However, where one active ingredient is sold in mixture with other active ingredients to a significant extent, the active ingredients concerned are grouped together into a single CGU because independent cash inflows only exist at this higher level. Each CGU is generally defined on a global basis, reflecting the international nature of the business, and contains tangible assets such as plant and equipment as well as intangible assets such as product and patent rights.

North America corn and soybean seeds are defined as a single CGU because of common intellectual property and other interdependencies between these two crops, which do not apply to other crops. Goodwill on certain major acquisitions, principally Zeneca agrochemicals business goodwill of $548 million, was allocated to each Syngenta operating segment in proportion to each such segment's relative value at the time Syngenta established its current basis of segmentation, and is tested for impairment at those levels by relating the allocated amount for each segment to the total cash flows of the respective segment. The goodwill amounts allocated to segments and significant other CGUs are disclosed in Note 13.

2. Significant accounting policy judgments and estimates continued

For CGUs to which no goodwill is allocated, a reduction in forecast sales within management's five year forecast horizon compared with the previous year's five year forecast cycle, combined with a reduction in latest forecasts of current year sales compared with the current year budget, is generally considered an indicator of market related impairment and results in the performance of detailed impairment tests. Syngenta also performs detailed impairment tests when there are asset specific indicators of impairment such as withdrawal of or restrictions placed upon product registrations, plans to divest products or, for property, plant and equipment, plans to restructure or close a site. Higher discount rates are used to test property, plant and equipment for impairment in the case of restructuring because of the higher risk associated with remaining cash flows when operations are being physically relocated. The value in use calculation takes account of cash flows from the remaining period of operations and includes decommissioning costs.

If a CGU becomes impaired, the impairment loss is allocated first to any goodwill in the CGU, and then to reduce the CGU's other assets pro rata.

Classification of assets and liabilities to be divested
IFRS 5 requires non-current assets and liabilities that are to be divested to be classified as held-for-sale in the consolidated balance sheet if they are immediately available for sale in their current condition and the divestment transaction is highly probable and is expected to occur within one year of the balance sheet date. Such classification leads to significant changes in how assets are measured and how assets and liabilities are presented in the consolidated financial statements, and requires significant judgment to estimate the probability and timing of completing a divestment transaction. While significant uncertainty still exists whether a business unit will be divested, retained or closed, Syngenta does not reclassify assets and liabilities as held-for-sale.

On August 18, 2015, Syngenta announced that it intended to divest its Flowers seeds business, which is reported as part of its Lawn and Garden operating segment. On September 3, 2015, Syngenta announced actions to accelerate shareholder value creation, including an intention to divest its global Vegetables seeds business, which is reported within the regional operating segments of its Crop Protection and Seeds business, as a means to demonstrate the value of its global seeds portfolio. At December 31, 2015, Syngenta had initiated an internal review of the proposed divestments to take account of market conditions and the complexity of separating the businesses from Syngenta. In view of this, Syngenta concluded that a sale of these businesses was no longer highly probable and therefore did not classify them as held-for-sale at December 31, 2015. On February 2, 2016, Syngenta formally decided not to pursue the proposed divestments of Flowers and Vegetables.

Share based payment
Syngenta's application of share based payment accounting in 2016 is described in Note 3.

Critical accounting estimates

Foreign currency translation
As Syngenta moves its inventories through a complex international supply chain, several group entities incur related purchase, manufacturing and distribution costs during the inventory holding period, which may be up to nine months for crop protection chemicals and longer for certain crop seeds. The amounts of consolidated cost of goods sold in the consolidated income statement and of inventories in the consolidated balance sheet include all relevant costs incurred from the time raw materials are purchased until the finished products reach their final location and condition before sale to third party customers or their location and condition at the balance sheet date, respectively, after eliminating profits and losses arising from intercompany transactions. In 2015, following the removal by the Swiss National Bank of the cap on the Swiss franc value versus the Euro, Syngenta refined the method it uses to translate inventories. Syngenta determines historical inventory cost in US dollars by translating original currency amounts of cost directly into US dollars using the exchange rates that applied when those costs were incurred, and upon sale to third parties, determines consolidated cost of goods sold by translating these amounts to US dollars at the average exchange rates of the period in which the sale occurs. Inventories at each period end are measured by translating these amounts directly into US dollars at the exchange rates at the balance sheet date. Foreign currency translation gains and losses that result from these translations are recognized in OCI. Prior to 2015, Syngenta translated costs into US dollars indirectly via the currencies of the Syngenta entities which had held the inventories over the period since their initial recognition. Under that method, reported product costs varied according to the route the products had taken through Syngenta's supply chain. In the opinion of Syngenta, the refined method it adopted in 2015 better reflects economic reality when currency exchange rates fluctuate during the inventory holding period, because it ensures that inventories sourced with the same cost profile and which are at the same stage of manufacture are valued consistently regardless of which Syngenta entity purchases and holds them. Syngenta applied this refined method prospectively as a change in estimate. Had Syngenta continued to apply its previous method, 2016 and 2015 net income would have been approximately $6 million and $73 million lower than reported, respectively, with the 2015 impact being largely due to the removal of the Swiss franc cap.

Adjustments to revenue and trade receivables
Syngenta's products are consumed mainly by growers, but Syngenta invoices the majority of its sales to distributors. The timing and amount of cash inflows received by growers is impacted by a broad range of economic and political risks, including crop yields and prices, the availability of credit, and the cost of agricultural inputs such as the products sold by Syngenta and its competitors. The cash flows of distributors that supply Syngenta's products to growers and represent the majority of Syngenta's customers are also impacted by these factors. These distributors vary in size and nature from large publicly owned entities to small or medium sized owner-managed businesses. Syngenta's customer base reflects the geographical diversity of its operations, which encompass more than 90 countries and all significant agriculture areas. Considerable management effort and judgment is applied to actively manage and mitigate the risks to Syngenta from these factors and to determine the accounting estimates associated with them, which are set out below:

2. Significant accounting policy judgments and estimates continued

- the estimated cost of incentive programs that provide rebates and discounts dependent upon achievement of sales targets, as well as cash discounts for punctual payment of accounts receivable. Syngenta records the estimated cost of these programs when the related sales are made, based on the programs' terms, market conditions and historical experience. At December 31, 2016, trade accounts payable includes $1,366 million (2015: $1,371 million) of accruals for customer rebates and incentive programs
- commercial terms in certain markets also provide a right of return, subject to eligibility restrictions by product and either an annual cap equal to a percentage of sales in the immediately prior year, or a return period typically extending up to the end of the agricultural season in which the product was originally sold, which can be nine months. Accruals for estimated product returns are based on contractual sales terms and on historical experience of actual returns where Syngenta considers these to be reliable estimates of future returns. At December 31, 2016, trade accounts payable includes $160 million (2015: $177 million) of accruals for sales returns. Actual returns can vary significantly from estimates in market segments where the distribution channel holds several months' sales of Syngenta products at the reporting date, forecast consumption of those products by growers could be materially affected if market or weather conditions after the reporting date were significantly different from those expected and the volume of products returned by distributors varies with changes in grower consumption. This is especially relevant to Brazil and certain other markets in the southern hemisphere given the Group's financial reporting year-end falls in the middle of the peak demand season for the Group's crop protection products. Until Syngenta changed contractual sales terms for crop protection products in Brazil in 2015 and in Argentina and Paraguay in 2016, Syngenta judged that sales returns could not be estimated reliably at the time of sale to distributors in those markets and deferred recognition until distributors had sold the related Syngenta products to growers. Syngenta used to estimate the amounts to be deferred by collecting from its distributors data that shows the quantities of Syngenta products held by them at the reporting date and applying average actual sales prices to those quantities. At January 1, 2015, $437 million of revenue and trade receivables was deferred, of which $372 million related to Brazil. Because the changes made to contractual sales terms reduced the flexibility of distributors in those markets to return crop protection products and thus reduced uncertainty about the amount of sales returns, amounts deferred under this method reduced to $35 million at December 31, 2015 and $nil at December 31, 2016. The effect of earlier revenue recognition due to the change in contractual sales terms to distributors in Brazil, as measured by the difference between the $345 million balance of receivables that had not yet been recognized as sales at the date Syngenta announced the change to customers and the $106 million sales returns provision at December 31, 2015, was to increase reported 2015 sales by $239 million. Syngenta has estimated that the consequent effect on 2015 net income was $80 million. No comparable changes were made to contractual sales terms in Brazil in 2016. Sales made after the changes in terms have been recognized in accordance with contractual delivery terms, subject to allowances for returns. However, accruals for estimated product returns still require judgment and estimation by management and actual returns may vary from such estimates. Actual sales returns in 2016 in Brazil of crop protection products Syngenta sold during 2015 were $161 million, which exceeded the $106 million provided at December 31, 2015, mainly due to the severe drought conditions in parts of northern Brazil during February and March 2016. At December 31, 2016, the allowance for sales returns of crop protection products in Brazil was $87 million, reflecting the more stable market conditions observed at the end of 2016 compared to 2015, with higher prices in several commodities, lower exchange rate volatility and normal disease pressure levels, together with reduced channel inventories held by distributors in northern Brazil
- allowances for doubtful receivables, which are estimated by critically analyzing individual receivable account balances, taking into account historical levels of recovery and the value of any security held, the economic condition of individual customers, and the overall economic and political environment in relevant countries. As shown in Note 9 below, the provision for doubtful receivables at December 31, 2016 amounted to $396 million, or 8 percent (2015: $319 million or 7 percent) of total trade receivables, of which $168 million, $44 million and $60 million (2015: $140 million, $47 million and $10 million) related to sales made to the Brazilian, Argentinian and Venezuelan markets respectively. In 2016, Syngenta reported $67 million bad debt expense (2015: $75 million). In 2015, bad debt expense arose principally because oil and commodity price and local currency weakness led to constraints on the availability of credit and foreign currency at both customer and country level in Brazil, Argentina and Venezuela, as well as from general changes in local crop conditions in those markets, as mitigated by barter programs and appropriate security. In 2016, $49 million bad debt expense related to further deterioration in the economic position in Venezuela.

Syngenta records these estimates as separate allowances, but its estimation process recognizes their interdependency, as the level of credits to accounts receivable for discounts and product returns may affect the probability of receiving full payment of the net receivable balances.

Deferred tax assets

At December 31, 2016, Syngenta's deferred tax assets are $941 million (2015: $783 million), as further analyzed in Note 7. Included in this balance are deferred tax assets for unused tax losses and tax credits of $35 million (2015: $40 million), of which $19 million (2015: $25 million) relates to tax losses. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible or in which tax losses can be utilized. The tax effect of unused tax losses is recognized as a deferred tax asset when it becomes probable that the tax losses will be utilized. In making assessments regarding deferred tax assets, management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies. At December 31, 2016, based upon the level of historical taxable income and projections for future taxable income over the periods in which deferred tax assets are deductible, management believes that it is more likely than not that Syngenta will realize the benefits of these deductible differences. The amount of deferred tax assets considered realizable could however be reduced in subsequent years if estimates of future taxable income during their carry forward periods are reduced, or rulings by the tax authorities are unfavorable. Estimates are therefore subject to change due to both market related

2. Significant accounting policy judgments and estimates continued

and government related uncertainties, as well as Syngenta's own future decisions on restructuring and other matters. Syngenta is unable to accurately quantify the future adjustments to deferred income tax expense that may occur as a result of these uncertainties.

The principal jurisdictions where deferred tax assets have not been recognized at December 31, 2016 and 2015 are Argentina, Belgium and Brazil. For Argentina, no net deferred tax assets have been recognized. Non-recognition in Belgium relates to the impact of the post-acquisition integration of Devgen on actual tax losses and expected future taxable profits. At December 31, 2016, Syngenta has recognized $160 million (2015: $167 million) of net deferred tax assets in Brazil and has not recognized $24 million (2015: $46 million) of deferred tax assets. Local profitability in Brazil was reduced in 2015 and 2016 by challenging weather and market conditions, which included falls in commodity prices and credit restrictions, and local currency weakness. The amount of deferred tax assets Syngenta has recognized for Brazil at December 31, 2016 assumes moderate recovery in market conditions in 2017 and future years, resulting in local profitability similar to the historical average. Syngenta also plans a legal merger of its two principal Brazilian entities during 2017. As Brazilian tax regulations assess each entity under common ownership separately, the ability to combine the taxable profits of the entities after their merger increases the amount of deferred tax assets that can be recognized. However, future taxable profits are still not sufficient to recognize the deferred tax asset in full. In making this assessment, the forecast horizon used for taxable profits is five years. Taxable profits that may arise beyond the five year horizon are subject to greater uncertainty and have not been considered.

Uncertain tax positions

Syngenta estimates and accrues taxes that will ultimately be payable when reviews or audits by tax authorities of tax returns are completed. These estimates include significant management judgments about the eventual outcome of the reviews and audits of all open years based on the latest information available about the positions expected to be taken by each tax authority. Actual outcomes and settlements may differ significantly from the estimates recorded in these consolidated financial statements. This may affect income tax expense reported in future years' consolidated income statements.

Syngenta has a global supply chain, and intellectual property rights owned by Syngenta are used internationally within the Group. Transfer prices for the delivery of goods and charges for the provision of services, which include contract research and development, contract manufacturing and internal financing arrangements, by one Syngenta subsidiary to another may be subject to challenge by the national tax authorities in any of the jurisdictions in which Syngenta operates. Syngenta has a global transfer pricing policy in place and applies, to the maximum extent possible, a consistent methodology on a global basis. Transfer pricing determination in general, and the benchmarking process in particular, involve significant judgment and therefore a certain level of uncertainty remains as to whether tax authorities will challenge the pricing applied in the light of the new, complex transfer pricing guidelines in connection with the Base Erosion and Profit Shifting (BEPS) initiative.

At December 31, 2016, Syngenta's balance sheet includes assets of $189 million (2015: $124 million), and liabilities of $526 million (2015: $444 million), for current income taxes. These liabilities include $400 million in respect of the uncertain tax positions described above (2015: $382 million).

Releases of uncertain tax liabilities during 2016 related to favorable tax court decisions in India (among others taxation of so called location specific advantages and tax deduction of royalties). The liability for uncertain income tax positions that Syngenta expects will be resolved in 2017 is approximately 10 percent of total recognized current income tax liabilities.

In Brazil, Syngenta received an adverse ruling at administrative court level in a transfer pricing dispute for fiscal year 2003, and has filed an appeal at civil court level. Syngenta believes its appeal will succeed and has recognized no liability for the estimated $74 million contingent liability in this dispute, or for the estimated $19 million contingent liability in a similar transfer pricing dispute relating to fiscal year 2011 which is still at administrative court level and is expected to have a similar outcome.

Seeds inventory valuation and allowances

Inventories of $3,884 million (2015: $4,345 million) reported in Note 11 include $1,146 million (2015: $1,252 million) of seeds, which are subject to the risk of loss through physical deterioration at all stages of the operating cycle. Syngenta accounts for normal losses that occur during production, both in the pre-harvest growing and the post-harvest processing stages, as part of the cost of inventories of in-process and finished seeds. Normal losses in production, which include the cost of seeds discarded before processing because they do not meet Syngenta's quality standards, are therefore expensed when the related finished seed is sold to customers. Losses of finished seeds are expensed as incurred. Syngenta records allowances against the cost of seeds inventories for both quality and obsolescence. Syngenta records allowances for quality for finished seed which is currently of defective quality and for finished seed which is expected to deteriorate physically before sale, based on past experience. Syngenta records allowances for obsolescence for excess seed for which there is insufficient forecast customer demand over the expected remaining commercial life of each seed variety. For excess seeds that Syngenta is likely to be able to sell in the commodity market, the allowance is the cost of the seed minus its net realizable value, which is estimated as the expected net proceeds of commodity sale. If commodity sale is not probable, the allowance is the full cost of the excess seed inventories.

To determine the allowances required, management effort and judgment is applied to analyze at crop, variety and batch level seed inventory quantity, quality and forecast sales data, developing commercial practices, available markets and the speed of expected product portfolio changes. The rapidly evolving combination of corn seed genetics and trait stacks in North America and Latin America result in shorter commercial lives of a typical hybrid seed variety than in other crops and regions, with variation between actual and previously forecast sales and consequent greater risk of excess seed at individual hybrid level. Excess seed quantities are also affected by harvest yield, which is influenced by unpredictable weather and growing conditions. Seeds inventory allowance expense for 2016 was $170 million (2015: $181 million), and the allowance balance at December 31, 2016 was $263 million (2015: $279 million), with decreased provisions in North America corn and soybean and Latin America corn and sunflower.

2. Significant accounting policy judgments and estimates continued

Impairment review

At December 31, 2016, Syngenta has reported intangible assets of $1,627 million (2015: $1,639 million) for goodwill and $1,236 million (2015: $1,401 million) for intangible assets other than goodwill, as reported in Note 13. The recoverable amount for goodwill has been determined based on value in use of the relevant operating segment, CGU or group of CGUs to which the goodwill is allocated, except where mentioned below. The recoverable amounts of all material intangible assets and property, plant and equipment (PP&E) have also been based on their value in use, except where mentioned below.

The main assumptions used in determining the recoverable amounts for operating segments and other CGUs include market size and Syngenta's market share, future sales prices and volumes, future development expenditures required to maintain products' marketability and registration in the relevant jurisdictions, and products' lives. At operating segment level, the key assumptions related to sales volume and value are expressed separately for each product line, market segment and crop, and assumptions related to expenses are expressed by region. At CGU level, assumptions are expressed by product. The assumptions are reviewed annually as part of management's budgeting and strategic planning cycles. These assumptions can be subject to significant adjustment from such factors as changes in crop growing patterns in major markets (for example, as a result of movements in crop prices), changes in product registration, or pressure from competitor products. Estimated cash flows for operating segments and other CGUs are based on Syngenta management forecasts, cover a five year horizon except where a longer horizon is required to reflect cash flows from the development and introduction of new products due to the length of the product development cycle, and include a terminal value which assumes a 2.0 percent long-term growth rate (2015: 2.0 percent). Syngenta's forecasts for the North America corn and soybean seed CGU also include the following key assumptions for revenue from seed sales:

- for each of the two crops, market size expressed as acres planted, Syngenta's market share, crop commodity prices, and licensing revenues
- for new genetic traits, the timing of regulatory approval and marketing launch, and seed pricing compared with existing products.

Management believes, based on recent and expected future growth in agricultural markets, that there are long-term prospects for continued growth in Syngenta's business.

The key inputs used to calculate the pre-tax discount rates used to discount the estimated future cash flows included in the value in use calculations are as follows:

- post-tax weighted average cost of capital: 6.5 percent (2015: 7.1 percent)
- risk-free rate: 2.3 percent (2015: 2.9 percent) equal to market yields on 30-year government bonds at the date of performing the annual impairment test
- equity risk premium 5.0 percent (2015: 5.0 percent).

The discount rate determined in this way is considered to include market estimates of industry sector risk premium. Syngenta's CGUs generally reflect the global nature of its Crop Protection and Seeds product sales, and a country risk premium is applied only to those CGUs where the geographical scope of operations and cash flows is limited. The pre-tax discount rates used for all segments, CGUs and groups of CGUs ranged from 7.4 percent to 14.6 percent (2015: 8.2 percent to 14.3 percent).

At December 31, 2016 and 2015, the largest amounts of goodwill were allocated to the Asia Pacific operating segment (2016: $325 million; 2015: $338 million) and the North America corn and soybean CGU (2016 and 2015: $315 million). The pre-tax discount rate used to test Asia Pacific goodwill for impairment was 8.3 percent (2015: 8.8 percent) and the forecast terminal growth rate was 2.0 percent (2015: 2.0 percent), except where mentioned below. The pre-tax discount rate used to test the North America corn and soybean CGU for impairment was 8.1 percent (2015: 8.5 percent) and the forecast terminal growth rate was 2.0 percent (2015: 2.0 percent).

In the opinion of Syngenta, the outcomes of the impairment tests are not sensitive to reasonably likely changes in any of the assumptions underlying the cash flow projections used for the impairment tests or in the discount rate in the periods presented for any segment, CGU or group of CGUs for which the carrying amount of goodwill is significant.

For the year ended December 31, 2016, impairment losses for intangible assets were $65 million, relating mainly to a crop protection product CGU which has been affected by reduced demand due to low commodity prices and by manufacturing issues which have delayed achievement of targeted savings in production costs. Based on an updated cash flow forecast covering a 10-year horizon and an annual 5 percent decline in sales thereafter, the recoverable amount and remaining carrying amount of non-current assets in this CGU is $12 million. For the year ended December 31, 2015, impairment losses for intangible assets were $22 million, relating to a discontinued trademark, a termination of distribution rights and one CGU where expectation of future profitability reduced during 2015. The $77 million (2015: $68 million) recoverable amount of this CGU at December 31, 2016 was determined based on fair value less selling costs, which is higher than value in use because the latter does not take into account the cost and revenue benefits from potential future restructuring of the business (2015: recoverable amount was based on value in use). The recoverable amount was measured using a 13.0 percent pre-tax discount rate (2015: 8.2 percent), resulting in recognition of a further $10 million impairment loss which reduced the carrying amount to $14 million (2015: $17 million). The other key assumption in determining the fair value less selling costs for this CGU at December 31, 2016 is the value of achievable future cost and revenue benefits. This represents a level 3 measurement in the fair value hierarchy. Reasonably possible changes in this assumption or in the discount rate could result in full impairment of the $14 million remaining carrying amount of non-current assets in the CGU or reversal of part of the impairment losses recognized in 2016 and 2015. Impairments of property, plant and equipment were $69 million (2015: $43 million) as a result of decisions to restructure operations at several sites, including sites in the USA, Switzerland, China, India and Israel. In 2016, $47 million of this impairment relates to land, buildings and other PP&E items at three sites with a recoverable

2. Significant accounting policy judgments and estimates continued

amount of $24 million, measured at fair value less selling costs based on offers received from potential buyers. This is equivalent to a level 3 fair value measurement. These assets have been classified as held-for-sale at December 31, 2016 and are presented in Note 10, Other current assets.

Environmental provisions

At December 31, 2016, Syngenta reported in Note 19 provisions for environmental remediation of $194 million (2015: $210 million). Remediation of environmental damage at sites with which Syngenta is associated typically takes a long time to complete due to the substantial amount of planning and regulatory approvals normally required before remediation activities can begin. The assumptions used by Syngenta to estimate its environmental provisions may change significantly before or during the remediation period due to changes in the extent of remediation required or the method used to remediate the damage. In addition, increases in or releases of environmental provisions may be necessary whenever new developments occur or additional information becomes available. The major uncertainties that impact the outcome of remediation are:

- the extent of the contaminated land area, which is not always limited to land occupied by the Syngenta site. Ongoing monitoring or remediation work may identify changes in the area believed to be contaminated
- the nature of the work Syngenta will be obliged to perform or pay for. This depends upon the current or proposed use of contaminated land, substantively enacted legislation, and land zoning by and negotiation with the relevant regulatory authorities. In Switzerland, proposed remediation plans at certain sites may be subject to public referenda
- sharing of costs with other past and present occupiers of Syngenta's sites. At certain shared sites, Syngenta is responsible for an agreed proportion of remediation costs, which may change following discussions with authorities and the affected third parties. At other sites, third parties have agreed to reimburse Syngenta for some or all of the costs it incurs.

Consequently, environmental provisions can change significantly. Because of the inherent uncertainties in estimating such long-term future obligations, Syngenta periodically supplements its internal expertise with external expertise when determining environmental provisions.

In 2016 and 2015, except for $16 million (2015: $28 million) of cash outflows reflecting remediation activity, there were no significant changes to environmental provisions.

Proposals have been made suggesting remediation of the existing contamination on certain shared sites in preference to monitoring and containment. Syngenta will negotiate the proposals with the relevant authorities but the final adopted solution is subject to regulatory uncertainty and the ultimate liability may be higher or lower than the amount provided. Taken together, the provisions at December 31, 2016, for these shared sites comprise approximately 25 percent of total environmental provisions. The top 10 exposures at the end of 2016 comprise approximately 80 percent of the total environmental provisions. In the opinion of management, reasonably possible increases in the provisions related to these top 10 exposures would not exceed 70 percent of the total environmental provision recognized at December 31, 2016.

At Syngenta's Monthey, Switzerland, production site, the work needed to remediate groundwater and soil contamination that exists under and around the site, including investigation, assessment, control and monitoring activities, is ongoing. The responsibility for these activities lies with Syngenta and one other chemical enterprise. In management's opinion, based on its current knowledge, Syngenta's environmental provisions are adequate to cover Syngenta's share of the expected costs to perform this remediation and no significant change to the provision has been made in 2016 or 2015. However, the extent of the remediation work required, the cost estimates and their allocation are subject to uncertainty.

Defined benefit post-employment benefits

At December 31, 2016, Syngenta has reported other non-current assets of $nil (2015: $21 million) and provisions of $833 million (2015: $408 million) as net defined benefit (DB) pension assets and liabilities, respectively, as set out in Note 22. These amounts may change significantly from one accounting period end to another due not only to expense recognized in profit and loss and cash payments, but also to changes in the actuarial assumptions used to measure the defined benefit obligation (DBO) and to variances between those assumptions and actual outcomes ("experience variances"), both of which are recognized in OCI. Significant judgment is required when selecting key assumptions for measuring post-employment benefit expense for a period and the DBO at the period end for each defined benefit plan. The specific assumptions used and experience variances are disclosed in Note 22. These variances were caused principally by external financial market movements in corporate bond yields used to benchmark the discount rate, and in asset prices affecting the actual return on assets. These factors are outside Syngenta's direct control, and it is reasonably possible that future variances will be at least as great as past variances.

2. Significant accounting policy judgments and estimates continued

At December 31, 2016 and 2015, for each of Syngenta's three largest defined benefit pension plans, the sensitivity of the DBO to a change in each significant actuarial assumption is as follows:

($m)	2016			2015		
Increase (decrease) in DBO	**Switzerland**	**UK**	**USA**	Switzerland	UK	USA
Discount rate – 25 basis point decrease in rate	**100**	**133**	**19**	102	111	18
Discount rate – 25 basis point increase in rate	**(93)**	**(130)**	**(19)**	(96)	(109)	(17)
Pension increase – 25 basis point increase in rate	**n/a**	**105**	**n/a**	n/a	83	n/a
Pension increase – 25 basis point decrease in rate	**n/a**	**(103)**	**n/a**	n/a	(81)	n/a
Interest credit rate – 25 basis point increase in rate	**19**	**n/a**	**n/a**	22	n/a	n/a
Interest credit rate – 25 basis point decrease in rate	**(19)**	**n/a**	**n/a**	(21)	n/a	n/a
Life expectancy[1]	**60**	**119**	**9**	70	91	8

1 The life expectancy sensitivity is calculated using the difference between the reported DBO amount and the DBO amount projected using a one year increase, compared with the assumptions actually used, in the life expectancy for each plan member. This alternative projection is calculated using mortality rates that produce an immediate increase of one year for a plan member at normal retirement date, with corresponding changes at other ages

Each sensitivity amount is calculated assuming that all other assumptions are held constant. It should be noted that economic factors and conditions often affect multiple assumptions simultaneously. For the UK pension plan, the discount rate and pension increase sensitivities shown are relative to price inflation, because limited price indexation of pensions in payment and deferred pension rights is required both by the Syngenta UK pension plan rules and by UK statutory pension regulations. For Syngenta's Swiss and US plans, the sensitivities are for changes in the nominal discount rates, because the rules and statutory regulations applicable to those plans contain no inflation linkage and indexation of benefits to inflation is not general market practice in those countries. Syngenta is not able to predict the extent of likely future changes in the discount rate or life expectancy assumptions, but based on past experience, the discount rate for each plan could change by up to 150 basis points (bp) within a 12 month period. Pensionable pay is now permanently frozen for the UK DB pension plan as explained below, and the sensitivity of the DBO to the assumed rate of increase in pensionable pay is not material for the Swiss or US plans.

To select the discount rate, Syngenta uses yields of AA rated corporate bonds. The relevant yield is determined either by analyzing a population of bonds whose cash flows collectively approximate the estimated cash flow profile of benefit payments by a Syngenta plan (UK and USA), or by using the yield of a published bond index and adjusting it in line with the relevant market yield curve to the extent that the average maturity of the bonds in the index is different from that of the relevant Syngenta benefits (Switzerland). Nominal discount rates at December 31, 2016 are as follows:

Switzerland	0.71 percent	(2015: 0.75 percent)
UK	2.52 percent	(2015: 3.70 percent)
USA	3.95 percent	(2015: 4.35 percent)

In valuing the UK DBO at December 31, 2016, the UK long-term rate of retail price inflation (RPI) is assumed to be 3.28 percent (2015: 3.05 percent). Future statutory pension increases are based on consumer price inflation (CPI). Most Syngenta UK pension plan members have benefits specifically linked to RPI in accordance with the plan rules, but some members will see increases linked to CPI. CPI is assumed to be 100 basis points (2015: 100 basis points) below RPI.

In recent years, life expectancy has increased in all major countries in which Syngenta sponsors pension plans. Syngenta sets mortality assumptions after considering the most recent statistics practicable. Syngenta uses generational mortality tables to estimate probable future mortality improvements. These tables assume that the trend of increasing life expectancy will continue, resulting in pension benefit payments to younger members being likely to be paid for longer time periods than older members' pensions, given that assumed retirement ages are those defined in the rules of each plan. At December 31, 2016 and 2015, the UK DBO was estimated using mortality rates based on the UK Institute and Faculty of Actuaries' CMI SAPS Pensioner Amounts Light tables reflecting long cohort improvements from 2002-2012, with assumed future improvement of 1.25 percent per annum in line with the CMI Core Projections model 2015 (2015: CMI Core Projections model 2015). Syngenta's adoption of these mortality assumptions in 2015 reduced the benefit obligation by $17 million (less than 1.0 percent).

At December 31, 2016, Syngenta valued the benefit obligation for its Swiss pension plan using mortality, disability and employee turnover assumptions from the BVG 2015 generational table (2015: BVG 2010 generational table). In 2016, changes to demographic assumptions, largely resulting from adoption of this table, increased the Swiss DBO by $75 million (3.4 percent). At December 31, 2016 and 2015, Syngenta valued the benefit obligation for its US pension plan using mortality assumptions from the RP-2014 generational mortality table published in October 2014 with modified Scale MP-2014 mortality improvements using a 0.5 percent per annum long-term improvement rate for all purposes other than calculation of lump sums.

2. Significant accounting policy judgments and estimates continued

Syngenta's major pension plans give members lump sum or annuity benefit payment options. Syngenta values its pension liabilities on the assumption that the choices made by members who will retire in the future will be consistent with choices made by members who have retired recently. For the US pension plan, the benefit obligation has been valued assuming that current eligible members will take the lump sum option at normal retirement or other permissible commencement dates. This assumption is consistent with historical and expected future member choices.

Syngenta amended the benefits of the UK plan so that pensionable pay will remain frozen at January 1, 2016 levels. The plan remains open to benefit accrual for existing members, and pay increases awarded after January 1, 2016, which are not part of defined benefit pensionable pay, are pensionable under the Syngenta Group Personal Pension (GPP), a separate defined contribution plan, for those who choose to join. Employees who choose to leave the defined benefit section of the UK pension plan will also be able to join the GPP.

At December 31, 2016 and 2015, Syngenta reduced the assumption relating to opt-outs from the UK plan to 10 percent of members because during 2015 it agreed to increase benefit accrual rates for service in 2016 and future years, thus providing an additional incentive for existing members to remain in the defined benefit section of the plan. The effect of this change was not material. Numbers of members who opted out during 2016 were not significant; however, members retain the right to opt out at any future time.

3. Acquisitions, divestments and other significant transactions

The following significant transactions occurred during 2016 and 2015.

2016

On March 15, 2016, Syngenta completed the divestiture of Syngenta Bioline Ltd. ("Bioline"), its beneficial insect breeding business. On June 1, 2016, Syngenta completed the divestiture of its manufacturing operations in Goa, India to Deccan Fine Chemicals India Private Ltd. Neither transaction had individually material proceeds nor led to a material gain or loss; the aggregate net gains on these divestments were $12 million.

Payments and receipts in 2016 of deferred and contingent consideration related to acquisitions and divestments completed in prior periods are not material.

Public tender offer for Syngenta AG shares by CNAC Saturn (NL) B.V. ("the Offeror")

As of March 23, 2016, CNAC Saturn (NL) B.V. ("the Offeror"), a subsidiary of China National Chemical Corporation (ChemChina), a state-owned enterprise of the People's Republic of China, launched public tender offers in Switzerland and the United States to acquire all the publicly held Ordinary Shares and, in the U.S. offer, also all American Depositary Shares (ADSs) of Syngenta AG ("the ChemChina Tender Offer") for $465 per Ordinary Share in cash. Syngenta and its Board of Directors have agreed to support the ChemChina Tender Offer. ChemChina has announced that, as of 5:00 p.m., New York City time, on December 16, 2016, approximately 19,222,302 Syngenta AG Ordinary Shares (including those represented by ADSs) had been validly tendered in, and not withdrawn from, the ChemChina Tender Offer. The Main Offer Period has been extended until March 2, 2017, with further extension likely to follow until all offer conditions are fulfilled, in particular regulatory approval by all competent merger control and other authorities, but excluding the Minimum Acceptance Rate condition. At such time, the Offeror will extend the ChemChina Tender Offer for the last time by a period of up to 20 trading days. The ChemChina Tender Offer is conditional, among other things, on acceptance by shareholders owning 67 percent of Syngenta AG issued shares and on regulatory approval by the competent merger control and other authorities.

The Transaction Agreement between ChemChina and Syngenta AG may be terminated in specified circumstances, including by either party if all conditions are not satisfied by June 30, 2017, provided the Swiss Takeover Board no longer requires the ChemChina Tender Offer to remain open. Pursuant to the Transaction Agreement, ChemChina has agreed to pay Syngenta an amount equal to $3 billion if, despite all other conditions of the ChemChina Tender Offer having been satisfied or still being capable of being satisfied, the ChemChina Tender Offer does not become unconditional and/or is terminated as a result of the failure to obtain Chinese regulatory approvals or antitrust approvals, subject to certain exceptions. In certain circumstances, including if the Syngenta AG Board of Directors were to withdraw its support for the ChemChina Tender Offer and as a result the ChemChina Tender Offer is not successful or does not become unconditional, Syngenta would be required to pay ChemChina $848 million.

Regulatory approval for the transaction was received from the Committee on Foreign Investment in the United States (CFIUS) on August 19, 2016. At December 31, 2016, clearance for the transaction had been received from antitrust authorities in respect of Australia, COMESA (Common Market for Eastern and Southern Africa), Israel, Japan, Kenya, Macedonia, Pakistan, Russia, Serbia, the Republic of South Africa, South Korea, Turkey and Ukraine.

If the ChemChina Tender Offer becomes unconditional, Syngenta AG will pay a special dividend of CHF 5.00 per share immediately before the first settlement of the ChemChina Tender Offer. The Offer price will not be adjusted for this dividend. The Transaction Agreement provides that after the first settlement, 4 out of 10 members of Syngenta's Board of Directors shall be persons who have no affiliation with ChemChina or its affiliates (each, an Independent Director). Certain matters will require the affirmative vote of at least two Independent Directors, including, among others, (i) any change in the location of Syngenta's headquarters, (ii) any raising of new debt or making of distributions which would lower the rating of Syngenta to a level below investment grade (by Moody's and Standard & Poor's), (iii) any reduction in Syngenta's Research and Development budget in any given year to a level below 80 percent of the average Research and Development spend in the years 2012–2015, (iv) any material change in the agricultural sustainability programs or reduction of funding of the Syngenta Foundation for Sustainable Agriculture to a level below 80 percent of the average funding per year 2012–2015, (v) any material change to Syngenta's Health, Safety and Environment Policy and Standards and (vi) any material change to Syngenta's Code of Conduct. Approval by the Independent Directors will also be required, subject to certain exceptions, for any transaction between any member of the ChemChina group, on the one hand, and any member of the Syngenta group, on the other hand, if the transaction is not made at market terms. The above corporate governance arrangements shall remain in place until the earlier of (i) five years following the first settlement of the ChemChina Tender Offer and (ii) a re-listing of Syngenta Shares through an initial public offering.

3. Acquisitions, divestments and other significant transactions continued

In the event that ChemChina and/or its Subsidiaries hold between 90 percent and 98 percent of the voting rights in Syngenta after the second settlement of the ChemChina Tender Offer, ChemChina intends to merge Syngenta with a Swiss company directly or indirectly controlled by ChemChina in accordance with articles 8 para. 2 and 18 para. 5 of the Swiss Merger Act, whereby the remaining public shareholders of Syngenta will be compensated (in cash or otherwise) and not receive any shares in the surviving company. In the event that ChemChina and/or its Subsidiaries hold more than 98 percent of the voting rights in Syngenta after the second settlement, the Offeror intends to request the cancellation of the remaining publicly held Syngenta Shares in accordance with article 137 of the Financial Markets Infrastructure Act (FMIA).

Impact of the ChemChina Tender Offer on the consolidated financial statements

Given the conditional status of the ChemChina Tender Offer at December 31, 2016, accounting judgments have been required as to the likelihood that the ChemChina Tender Offer will complete and how its completion may affect the presentation, classification or measurement of the financial statement items referred to below. Syngenta has considered the possible scenarios in which the ChemChina Tender Offer might not complete successfully, which include failure to obtain those regulatory approvals that are still outstanding. While there can be no certainty that one or more of these scenarios will not occur, in the opinion of Syngenta, successful completion of the ChemChina Tender Offer is probable, and Syngenta has no indications that the ChemChina Tender Offer could not be successfully executed, before June 30, 2017.

Transaction Costs incurred by Syngenta in 2016 in connection with the ChemChina Tender Offer were $50 million and have been expensed as incurred within Restructuring in the consolidated income statement, as further disclosed in Note 6.

Change of control

Syngenta has identified the following material items where completion of the ChemChina Tender Offer could trigger an impact:

Special dividend

Completion of the ChemChina Tender Offer will require Syngenta to obtain financing to pay the CHF 5.00 per share special dividend immediately before the first settlement. Because the approval given by the Syngenta AG Annual General Meeting on April 26, 2016 is conditional on the ChemChina Tender Offer being declared unconditional, no liability has been recognized for the dividend in the consolidated balance sheet at December 31, 2016. Based on the total number of shares in issue including Treasury shares held by Syngenta AG at that date, the special dividend would amount to $454 million at the December 31, 2016 exchange rate.

Financial debt

Syngenta has the following long-term debt instruments outstanding which have change of control clauses under which holders may require early repayment if the credit rating of Syngenta falls below Investment grade:

– Two US (SEC registered) bonds issued in March 2012 (face values $250 million and $500 million); on occurrence of a change of control, holders have the right to require Syngenta to purchase all or a portion of the outstanding notes at a price equal to 101 percent of the principal amount plus accrued and unpaid interest to the date of purchase if Syngenta's credit rating according to at least two out of the three rating agencies (Moody's, Standard & Poor's and Fitch) has fallen below investment grade on any date during the period starting 60 days prior to the first public announcement of any change of control and ending 60 days following consummation of the change of control and upon the confirmation that the changed rating is attributable to the change of control.
– Three US private placements issued in December 2005 (face values $75 million, $75 million and $100 million); holders have the option to require Syngenta to prepay its notes at par together with interest thereon to the prepayment date selected by Syngenta if within 90 days after the public announcement of the change of control having occurred, any of Moody's, Standard & Poor's, or any other rating agency of equivalent international standing specified from time to time by Syngenta (i) withdraws the rating, (ii) changes the rating so that it falls below investment grade or (iii) in case the rating is already below investment grade, the rating is lowered by one full rating category.

At December 31, 2016, no such fall in credit rating had occurred, and the above instruments have been presented within non-current financial debt in the December 31, 2016 consolidated balance sheet.

The current syndicated committed loan facility of $2,500 million (which serves as a backstop facility for the $2,500 million Global Commercial Paper program) has a change of control clause that allows each lender to cancel its commitment unless renegotiated terms are agreed within 30 days of a change of control occurring. In order to address the risk of early termination, ChemChina has provided cover for the backstop facility and also for other financing needs arising from the change of control, via a committed Target Facilities Agreement that Syngenta expects to be able to access on successful completion of the ChemChina Tender Offer.

Non-current assets

In prior years, Syngenta entered into certain agreements which give the respective counterparties early termination rights on a change of control of Syngenta. Syngenta has recognized payments made under certain agreements as intangible assets. Exercise of termination rights on change of control could result in impairment losses or changes to amortization in future periods. Syngenta does not believe that such losses or changes will have a material impact on its consolidated income statement and balance sheet.

Regulatory authorities who are still considering the ChemChina Tender Offer may impose conditions which require Syngenta to divest as yet unspecified intangible assets or property, plant and equipment, and the proceeds that Syngenta can obtain from their disposal may not be sufficient to cover the carrying amount of these assets at December 31, 2016. This could lead to Syngenta recognizing additional asset impairments or divestment losses in 2017. Syngenta cannot reasonably determine the assets impacted (if any) or estimate the amounts of such impairments or divestment losses until it is informed of the decisions of the regulatory authorities.

3. Acquisitions, divestments and other significant transactions continued

Amendments to Syngenta's Equity Plans

On February 1 and 2, 2016 the Syngenta Board of Directors and the Compensation Committee of the Board of Directors, amended Syngenta's Equity Plans for Directors and Employees, respectively. Under the amended terms of the Equity Plans, on the ChemChina Tender Offer being declared unconditional, all blocking and holding periods for vested shares held in the plans will be waived to enable holders of these shares, if they wish, to tender them into the ChemChina Tender Offer during the Additional Acceptance Period. Effective as of the ChemChina Tender Offer becoming successful (i.e., pursuant to the Transaction Agreement, withdrawal rights of shareholders have lapsed and the minimum acceptance condition has been satisfied), all outstanding share awards and Restricted Share Units will be converted into Syngenta shares and deferral and vesting periods will be waived and matching shares will be granted, Performance Share Units will vest at target levels of performance and will be converted into Syngenta shares, options will vest and their exercise periods will lapse, and performance options will vest at target levels of performance and their exercise periods will lapse. Phantom awards and ADSs will be treated in an analogous way to the above. Syngenta AG, and if applicable, its respective subsidiary will settle all outstanding awards, other than Syngenta shares to which the Equity Plan participants have acquired valid title before the ChemChina Tender Offer became unconditional, in cash instead of Syngenta shares on the date of the second settlement.

In order to determine the appropriate accounting treatment of its equity plans in the light of these amendments, Syngenta is required to estimate at each reporting date whether it is more likely than not that outstanding awards will be equity-settled or cash-settled, and apply the corresponding accounting treatment in accordance with IFRS 2. Under equity-settled share based payment accounting, the fair value of awards granted is determined at grant date and this value is recognized on a straight-line basis over the vesting period, so that the expense recognized in each period varies according to the extent to which the service and performance conditions applicable to each award are expected to be met by the end of the vesting period. On settlement of the awards, the cumulative expense recognized for awards that vest is equal to their fair value when granted. Under cash-settled share based payment accounting, a fair valuation of outstanding awards is carried out using current assumptions at each reporting date, so that the expense recognized in each period also varies according to changes in the Syngenta share price and other valuation assumptions during the period. This results in greater fluctuation in expense recognized from one period to another than under equity-settled accounting. On settlement of the awards, the cumulative expense recognized since grant is equal to the cash paid on settlement. Because of the requirement for Syngenta AG to settle outstanding awards in cash on completion of the ChemChina Tender Offer, and having judged that successful completion of the ChemChina Tender Offer is probable, Syngenta changed the accounting for all outstanding awards made under its Equity Plans, except for awards of Syngenta shares that have vested or will equity vest before the ChemChina Tender Offer is expected to complete, from equity-settled share based payment arrangements to cash-settled share based payment arrangements with effect from February 2, 2016, and has continued to account for them as cash-settled awards at December 31, 2016.

The effect of this change in accounting for the plans was as follows:

- $47 million credited to equity under equity-settled share based payment accounting up to February 2, 2016 in respect of those outstanding awards which Syngenta would settle in cash assuming the ChemChina Tender Offer completes on March 31, 2017, has been reclassified as a liability;
- in respect of those awards, $70 million share based payment expense was recognized as a liability and recorded in function expenses according to where the related personnel costs are charged for the year ended December 31, 2016, in addition to the $71 million charge that would have been made under equity-settled share based payment accounting, had the change to cash-settled share based payment accounting not occurred;
- at December 31, 2016, $178 million share based payment liabilities (2015: $2 million) were presented within Other current liabilities.

The principal assumptions used to measure the share based payment expense and the fair value of the share based payment liability at December 31, 2016 were as follows:

- Syngenta AG share price at December 31, 2016: ordinary shares: CHF 402.50; ADS: $79.04.
- Vesting period remaining at December 31, 2016: three months.
- Expected option term remaining at December 31, 2016: three months.
- Risk-free interest rate: CHF: -0.63%; $: 0.48%.
- Share price volatility: 17.91%.
- Dividend yield: 0.0%.

Under cash-settled share based payment accounting, the fair value of the awards is charged to profit or loss and no equity instruments are assumed to be issued on settlement. Therefore, for the purposes of calculating diluted earnings per share in respect of those awards which have been accounted for as cash-settled, basic and diluted numbers of shares are the same.

The expected amount to be paid by Syngenta AG to settle awards on completion of the ChemChina Tender Offer is $318 million at December 31, 2016 exchange rates, which would result in a further $140 million expense being recognized in the 2017 consolidated income statement for awards outstanding at December 31, 2016.

2015

On October 15, 2015, Syngenta acquired 100 percent of the shares of Land.db Enterprises Inc. in exchange for cash, including contingent consideration. The primary reason for the acquisition was to gain exclusive control of the AgriEdge Excelsior® farm management software program, which integrates products, services, risk management and technology for growers. The assets, liabilities, acquisition-date fair value of consideration and related costs for the acquisition were not material.

Payments and receipts in 2015 of deferred and contingent consideration related to acquisitions and divestments completed in prior periods were not material.

4. Segmental breakdown of key figures for the years ended December 31, 2016 and 2015

Syngenta is organized on a worldwide basis into five operating segments: the four geographic regions, comprising the Crop Protection and Seeds businesses, and the global Lawn and Garden business. Income and expense transactions in the regional business have been attributed to the geographic regions based on the market destination to which they relate, rather than on the region in which they originated. Some costs do not relate to a geographic destination and are unallocated. Segment performance is managed based on segment operating income, which is the measure of segment profit or loss presented, and is based on the same accounting policies as consolidated operating income. No operating segments have been aggregated to form the reportable segments.

2016 ($m)	Europe, Africa, Middle East	North America	Latin America	Asia Pacific	Un-allocated	Total regional	Lawn and Garden	Group
Product sales – to third parties	3,752	3,062	3,265	1,834	–	11,913	660	12,573
Royalty and license income – from third parties	41	140	28	5	–	214	3	217
Total segment sales	3,793	3,202	3,293	1,839	–	12,127	663	12,790
Cost of goods sold	(1,801)	(1,720)	(1,766)	(986)	48	(6,225)	(282)	(6,507)
Gross profit	1,992	1,482	1,527	853	48	5,902	381	6,283
Marketing and distribution	(554)	(528)	(492)	(279)	(102)	(1,955)	(162)	(2,117)
Research and development	–	–	–	–	(1,247)	(1,247)	(52)	(1,299)
General and administrative:								
Restructuring	(98)	(55)	(43)	(24)	(178)	(398)	(9)	(407)
Other general and administrative	(136)	(106)	(59)	(42)	(429)	(772)	(41)	(813)
Operating income/(loss) – continuing operations	1,204	793	933	508	(1,908)	1,530	117	1,647
Included in the above operating income from continuing operations are:								
Personnel costs	(534)	(455)	(435)	(268)	(1,040)	(2,732)	(152)	(2,884)
Depreciation of property, plant and equipment					(309)	(309)	(19)	(328)
Amortization of intangible assets					(183)	(183)	(17)	(200)
Impairment of property, plant and equipment, intangible and financial assets	(12)	(25)	(3)	(3)	(91)	(134)	–	(134)
Other non-cash items including charges in respect of provisions					(170)	(170)	(14)	(184)
Gains/(losses) on hedges reported in operating income	7	(7)	38	–	(62)	(24)	(3)	(27)

Segment operating income/(loss) reconciles to consolidated income before taxes as follows:

2016 ($m)	
Segment operating income	1,647
Income from associates and joint ventures	5
Financial expense, net	(291)
Income before taxes	1,361

4. Segmental breakdown of key figures for the years ended December 31, 2016 and 2015 continued

2015 ($m)	Europe, Africa, Middle East	North America	Latin America	Asia Pacific	Un-allocated	Total regional	Lawn and Garden	Group
Product sales – to third parties	3,843	3,117	3,569	1,830	–	12,359	645	13,004
Royalty and license income – from third parties	41	293	63	7	–	404	3	407
Total segment sales	3,884	3,410	3,632	1,837	–	12,763	648	13,411
Cost of goods sold	(1,889)	(1,779)	(2,118)	(1,012)	54	(6,744)	(298)	(7,042)
Gross profit	1,995	1,631	1,514	825	54	6,019	350	6,369
Marketing and distribution	(586)	(537)	(557)	(286)	(83)	(2,049)	(161)	(2,210)
Research and development	–	–	–	–	(1,310)	(1,310)	(52)	(1,362)
General and administrative:								
Restructuring	(128)	(37)	(28)	(20)	(168)	(381)	(7)	(388)
Other general and administrative	(126)	(84)	(39)	(35)	(274)	(558)	(10)	(568)
Operating income/(loss) – continuing operations	1,155	973	890	484	(1,781)	1,721	120	1,841
Included in the above operating income from continuing operations are:								
Personnel costs	(590)	(446)	(469)	(267)	(1,042)	(2,814)	(158)	(2,972)
Depreciation of property, plant and equipment					(332)	(332)	(17)	(349)
Amortization of intangible assets					(175)	(175)	(15)	(190)
Impairment of property, plant and equipment, intangible and financial assets	(3)	(11)		(1)	(51)	(66)	–	(66)
Other non-cash items including charges in respect of provisions					(270)	(270)	(15)	(285)
Gains/(losses) on hedges reported in operating income	1	(14)	30	–	(31)	(14)	24	10

Segment operating income/(loss) reconciles to consolidated income before taxes as follows:

2015 ($m)	
Segment operating income	1,841
Income from associates and joint ventures	7
Financial expense, net	(256)
Income before taxes	1,592

Revenues by product group for the years ended December 31, 2016 and 2015 are as follows:

($m)	**2016**	2015
Crop Protection	**9,470**	9,925
Seeds	**2,657**	2,838
Lawn and Garden	**663**	648
Total	**12,790**	13,411

Summarized additional information on the nature of expenses for the years ended December 31, 2016 and 2015 is as follows:

($m)	**2016**	2015
Salaries, short-term employee benefits and other personnel expense	**2,549**	2,685
Pension and other post-employment benefit expense	**194**	220
Share based payment expense	**141**	67
Total personnel costs	**2,884**	2,972
Depreciation of property, plant and equipment	**328**	349
Impairment of property, plant and equipment	**69**	43
Amortization of intangible assets	**200**	190
Impairment of intangible assets	**65**	22

There were no amendments or settlements of pension plans in 2016. Pension and other post-employment benefit expense for 2015 includes $10 million of losses on amendment and settlement of pension plans recognized within General and administrative and allocated across the segments. Further information relating to these gains is given in Note 22.

5. Regional breakdown of key figures for the years ended December 31, 2016 and 2015

The following countries individually accounted for more than 5 percent of one or more of the respective Syngenta totals for the years ended December 31, 2016 and 2015 or at December 31, 2016 and 2015.

($m, except %)	Sales[1]				Total non-current assets[2]			
Country	**2016**	**%**	2015	%	**2016**	**%**	2015	%
Brazil	**2,227**	**17**	2,519	19	**293**	**4**	226	3
France	**562**	**4**	605	4	**127**	**2**	128	2
Switzerland	**52**	**–**	63	–	**2,661**	**40**	2,680	39
UK	**185**	**2**	204	2	**439**	**7**	530	8
USA	**3,084**	**24**	3,303	25	**1,883**	**28**	1,968	28
Rest of world	**6,680**	**53**	6,717	50	**1,326**	**19**	1,400	20
Total	**12,790**	**100**	13,411	100	**6,729**	**100**	6,932	100

1 Sales by location of third party customer
2 Excluding deferred tax assets, defined benefit pension assets and derivative financial assets

No single customer accounted for 10 percent or more of Syngenta's total sales.

6. Restructuring

Restructuring for the years ended December 31, 2016 and 2015, broken down into the main restructuring initiatives, consists of the following:

($m)	2016	2015
Accelerating operational leverage programs:		
Cash costs		
Charged to provisions	**54**	166
Expensed as incurred	**160**	62
Non-cash costs	**9**	12
Integrated crop strategy programs:		
Cash costs		
Charged to provisions	**–**	6
Expensed as incurred	**1**	21
Acquisition, divestment and related costs:		
Cash costs		
Associated with industry consolidation, including ChemChina	**50**	62
Other, expensed as incurred	**24**	29
Non-cash items	**(12)**	1
Other non-cash restructuring:		
Other non-current asset impairments	**121**	29
Total restructuring	**407**	388

The above costs for the years ended December 31, 2016 and 2015 are presented within Restructuring in the consolidated income statement.

In addition to the above, of the $141 million share based payment expense charged to the 2016 consolidated income statement, $70 million (2015: $ nil) is the incremental effect of applying cash-settled share based payment accounting due to the share plan amendments related to the ChemChina Tender Offer, as described in Note 3. The $70 million is presented as costs of the following functions: Cost of goods sold $6 million, Marketing and distribution $26 million, Research and development $8 million, Other general and administrative $30 million. Total share based payment expense charged to the consolidated income statement is disclosed in Note 23.

The total of the above material items is as follows by income statement line:

($m)	2016	2015
Cost of goods sold	**6**	–
Marketing and distribution	**26**	–
Research and development	**8**	–
Other general and administrative	**30**	–
Restructuring	**407**	388
Total	**477**	388

Analysis of restructuring costs

2016

Accelerating operational leverage programs
Cash costs of $214 million, including $36 million of severance and pension charges and $35 million of information systems projects, consist of $95 million for initiatives to restructure marketing and commercial operations, $61 million for projects to improve the effectiveness of back office support, $30 million for Research and Development productivity projects, $23 million for activity to optimize production and supply and $5 million for project management.

Non-cash costs include tangible asset write-downs associated with the above projects.

Integrated crop strategy programs
The integrated crop strategy programs announced in 2011 are substantially complete and final costs in 2016 relate to the completion of certain projects initiated before the end of 2015.

Acquisition, divestment and related costs
Cash costs include $50 million of transaction costs related to the ChemChina Tender Offer. Other cash costs include $13 million of transaction costs and $11 million incurred for integration projects, including the divestment of the Goa manufacturing site and the Bioline beneficial insects breeding business and the subsequently canceled projects to divest the Flowers and Vegetables businesses.

Non-cash items consist of aggregate gains of $12 million on sale of the Bioline beneficial insects breeding business and the manufacturing site in Goa.

6. Restructuring continued

Other non-cash restructuring

Other non-current asset impairments include $61 million for the impairment of product rights where production challenges have increased the uncertainties of commercializing a product profitably, $31 million for the impairment of two sites and $16 million for the write-down of a building, both in the US and now classified as held-for-sale, $10 million to impair the assets of a seeds crop where expectations of future operating profitability have reduced and various other small write-downs.

2015

Accelerating operational leverage programs

Cash costs of $228 million, including $127 million of severance and pension charges, consisted of $77 million for initiatives to restructure marketing and commercial operations, $43 million for projects to drive efficiencies in territory commercial operations, $48 million to rationalize logistical operations and optimize production capacity, $36 million for Research and Development productivity projects, $17 million for projects to increase the effectiveness of back office support services and $7 million for project management.

Non-cash costs of $12 million included $33 million of tangible asset write-downs at three sites resulting from projects to rationalize logistical operations and optimize production capacity and a $21 million pension curtailment gain related to the Swiss defined benefit pension plan. The pension curtailment gain represents the difference between the cash costs for early retirements and the calculation of net pension curtailment costs according to IFRS. Cash costs for early retirements are included in the cash costs of various projects described above.

Integrated crop strategy programs

Cash costs of $27 million included $20 million of charges for the transfer of certain system and process management activities to the internal service center in India, including $11 million for information system projects, $1 million to restructure the integrated Research and Development function, $1 million to restructure the Human Resource organization and $5 million of corporate headquarter and other costs.

Acquisition, divestment and related costs

Costs associated with industry consolidation represented transaction charges related to transactions such as the proposals received from Monsanto Company and ChemChina. Further cash costs included $21 million of transaction costs and $8 million incurred to integrate previous acquisitions, mainly the German and Polish winter wheat and winter oilseed rape breeding and business operations of Lantmännen, PSB and MRI, as well as costs associated with the separation and planned divestments of the Flowers and Vegetables Seeds businesses announced during 2015, which were subsequently canceled. The non-cash cost was an impairment related to fixed assets acquired with the German and Polish winter wheat and winter oilseed rape breeding and business operations of Lantmännen.

Other non-cash restructuring

Other non-current asset impairments of $29 million included $20 million to impair the assets of a seeds crop where expectations of future operating profitability had reduced, $7 million of impairment of exclusive distribution rights where the distribution agreement was terminated and $2 million for two other intangible asset impairments.

7. Income taxes

Income before taxes from continuing operations for the years ended December 31, 2016 and 2015 consists of the following:

($m)	2016	2015
Switzerland	**543**	849
Foreign	**818**	743
Total income before taxes	**1,361**	1,592

Income tax (expense)/benefit on income from continuing operations for the years ended December 31, 2016 and 2015 consists of the following:

($m)	2016	2015
Current income tax (expense):		
Switzerland	**(65)**	(47)
Foreign	**(180)**	(117)
Total current income tax (expense)	**(245)**	(164)
Deferred income tax (expense)/benefit:		
Switzerland	**(4)**	(4)
Foreign	**69**	(80)
Total deferred income tax (expense)/benefit	**65**	(84)
Total income tax (expense):		
Switzerland	**(69)**	(51)
Foreign	**(111)**	(197)
Total income tax (expense)	**(180)**	(248)

The components of current income tax (expense) on income from continuing operations for the years ended December 31, 2016 and 2015 are:

($m)	2016	2015
Current tax (expense) relating to current years	**(334)**	(271)
Adjustments to current tax for prior periods	**81**	90
Utilization of tax losses against taxable income	**8**	15
Benefit of previously unrecognized tax losses	**–**	2
Total current income tax (expense)	**(245)**	(164)

The components of deferred income tax (expense)/benefit on income from continuing operations for the years ended December 31, 2016 and 2015 are:

($m)	2016	2015
Origination and reversal of temporary differences	**34**	27
Changes in tax rates or legislation	**4**	5
Other adjustments to deferred tax for prior periods	**(4)**	(50)
Utilization of tax losses previously recognized as deferred tax assets	**(8)**	(15)
Benefit of previously unrecognized deferred tax assets	**43**	34
Non-recognition of deferred tax assets	**(4)**	(85)
Total deferred income tax (expense)/benefit	**65**	(84)

7. Income taxes continued

OCI and Income tax relating thereto, for each component of equity, for the years ended December 31, 2016 and 2015 are as follows:

	2016			2015		
($m)	**Pre-tax**	**Tax**	**Post-tax**	Pre-tax	Tax	Post-tax
Items that will not be reclassified to profit or loss:						
Fair value reserves: Equity investments at fair value through OCI	**–**	**(2)**	**(2)**	(3)	(1)	(4)
Retained earnings: Actuarial gains/(losses)	**(520)**	**116**	**(404)**	(61)	11	(50)
Items that may be reclassified to profit or loss:						
Fair value reserves: Cash flow and net investment hedges	**34**	**(9)**	**25**	38	(10)	28
Currency translation effects	**(301)**	**46**	**(255)**	(698)	(64)	(762)
Total	**(787)**	**151**	**(636)**	(724)	(64)	(788)

Income tax (charges)/credits recognized in OCI on cash flow and net investment hedges were $5 million (2015: $13 million). Income tax charges/(credits) reclassified to profit or loss were $(14) million (2015: $(23) million).

The following tax was (charged)/credited to shareholders' equity for the years ended December 31, 2016 and 2015:

($m)	**2016**	2015
Current tax[1]	**–**	12
Deferred tax[1]	**(20)**	(3)
Total income tax (charged)/credited to equity	**(20)**	9

1 Current and deferred tax related to share based payments

Analysis of tax rate

The table below presents the main elements causing Syngenta's effective tax rate to differ from the statutory tax rate for the years ended December 31, 2016 and 2015. Syngenta's statutory rate consists of the domestic Swiss tax rate. Syngenta applies the domestic Swiss tax rate as it is more meaningful than using the weighted average tax rate.

The domestic Swiss tax rate consists of the Swiss federal income tax rate (8.50 percent) and the income tax rate of the canton Basel (20.00 percent). Federal and canton tax rates are deductible from the tax basis, therefore the Swiss domestic tax rate is 22.18 percent in 2016 and 2015.

	2016 %	2015 %
Statutory tax rate	**22**	22
Effect of income taxed at different rates	**2**	(8)
Tax deduction for amortization and impairments not recognized for IFRS	**(1)**	(2)
Effect of other non tax deductible expenditures and income not subject to tax	**–**	(3)
Effect of recognition of previously unrecognized deferred tax assets	**(4)**	(2)
Changes in prior year estimates and other items	**(6)**	4
Effect of non-recognition of deferred tax assets	**–**	5
Effective tax rate	**13**	16

Effect of income taxed at different rates includes rate differences from the domestic Swiss tax rate attributable to income generated from intellectual property that is taxed at reduced rates and the effect of lower tax rates in certain countries with regard to treasury, investment, group funding and regional management activities as well as logistical operations management. In most of these countries, Syngenta has entered into advanced pricing agreements.

7. Income taxes continued

The movements in deferred tax assets and liabilities during the year ended December 31, 2016 are as follows:

2016 ($m)	January 1	Recognized in net income	Recognized in equity and OCI	Currency translation effects	Other movements and acquisitions	December 31
Assets associated with:						
Inventories	413	16	51	3	–	483
Accounts receivable	179	25	–	6	–	210
Pensions and employee costs	161	6	96	(15)	–	248
Provisions	338	11	–	17	–	366
Unused tax losses and tax credits	40	(3)	–	(2)	–	35
Financial instruments, including derivatives	18	21	(7)	(4)	–	28
Other	36	7	–	–	–	43
Deferred tax assets	1,185	83	140	5	–	1,413
Liabilities associated with:						
Property, plant and equipment	(345)	30	–	7	–	(308)
Intangible assets	(277)	16	–	2	–	(259)
Inventories	(104)	(66)	–	7	–	(163)
Financial instruments, including derivatives	(42)	1	(14)	1	–	(54)
Other provisions and accruals	(195)	(15)	–	6	–	(204)
Other	(107)	16	–	(3)	–	(94)
Deferred tax liabilities	(1,070)	(18)	(14)	20	–	(1,082)
Net deferred tax asset	115	65	126	25	–	331

The movements in deferred tax assets and liabilities during the year ended December 31, 2015 are as follows:

2015 ($m)	January 1	Recognized in net income	Recognized in equity and OCI	Currency translation effects	Other movements and acquisitions	December 31
Assets associated with:						
Inventories	544	5	(100)	(36)	–	413
Accounts receivable	264	(40)	–	(45)	–	179
Pensions and employee costs	161	9	8	(16)	(1)	161
Provisions	342	30	–	(32)	(2)	338
Unused tax losses and tax credits	38	–	–	4	(2)	40
Financial instruments, including derivatives	21	(5)	–	2	–	18
Other	24	6	–	(9)	15	36
Deferred tax assets	1,394	5	(92)	(132)	10	1,185
Liabilities associated with:						
Property, plant and equipment	(322)	(19)	–	5	(9)	(345)
Intangible assets	(293)	19	–	5	(8)	(277)
Inventories	(147)	(24)	35	32	–	(104)
Financial instruments, including derivatives	(42)	(1)	1	–	–	(42)
Other provisions and accruals	(183)	(13)	–	1	–	(195)
Other	(64)	(51)	–	7	1	(107)
Deferred tax liabilities	(1,051)	(89)	36	50	(16)	(1,070)
Net deferred tax asset/(liability)	343	(84)	(56)	(82)	(6)	115

7. Income taxes continued

The deferred tax assets and liabilities at December 31, 2016 and 2015 reconcile to the amounts presented in the consolidated balance sheet as follows:

($m)	2016	2015
Deferred tax assets	**1,413**	1,185
Adjustment to offset deferred tax assets and liabilities[1]	**(472)**	(402)
Adjusted deferred tax assets	**941**	783
Deferred tax liabilities	**(1,082)**	(1,070)
Adjustment to offset deferred tax assets and liabilities[1]	**472**	402
Adjusted deferred tax liabilities	**(610)**	(668)

1 Deferred tax assets and liabilities relating to income taxes levied by the same taxation authority on the same taxable entity or on entities which intend to settle current tax assets and liabilities on a net basis or to realize the assets and settle the liabilities simultaneously are offset for presentation on the face of the consolidated balance sheet where a legal right of set-off exists

The gross value at December 31, 2016 and 2015 of unused tax loss carry forwards for which no deferred tax asset has been recognized, by expiration date, is as follows:

($m)	2016	2015
One year	**1**	2
Two years	**–**	2
Three years	**–**	–
Four years	**1**	3
Five years	**8**	13
More than five years	**623**	772
No expiry	**68**	64
Total	**701**	856

The above losses consist mainly of US state tax loss carry forwards. The applicable tax rate for these US state tax carry forwards is 0.2 percent (2015: 5 percent) of the gross amounts.

Deferred tax assets, other than those related to unused tax losses, are not subject to expiry.

A deferred tax asset or liability has not been recognized at December 31, 2016 and 2015 on the following items:

($m)	2016	2015
Temporary differences for which no deferred tax assets have been recognized	**197**	342
Temporary differences associated with investments in subsidiaries for which deferred tax liabilities have not been recognized	**795**	695

There are no income tax consequences for Syngenta of paying a dividend to its shareholders.

8. Earnings per share

Basic earnings per share amounts are calculated by dividing net income for the year attributable to ordinary shareholders of Syngenta AG by the weighted average number of ordinary shares outstanding during the year.

Diluted earnings per share amounts are calculated by dividing the net income attributable to ordinary shareholders of Syngenta AG by the sum of the weighted average number of ordinary shares outstanding during the year plus the weighted average number of ordinary shares that would be issued on the conversion of all the dilutive potential ordinary shares into ordinary shares. For each year presented, unvested share awards subject to Syngenta specific performance conditions are included in potential ordinary shares only if those conditions would have been met based on cumulative actual performance from the start of the performance period up to December 31 in the year concerned.

Treasury shares are deducted from total shares in issue for the purposes of calculating earnings per share.

As disclosed in Note 3, the majority of outstanding awards under employee share participation plans were accounted for as cash-settled with effect from February 2, 2016. Under cash-settled share based payment accounting, the fair value of the awards is charged to profit or loss and no equity instruments are assumed to be issued on settlement. Therefore, 2016 adjustments for dilutive potential ordinary shares include only those shares that will vest prior to the cash settlement. The calculation of diluted earnings per share for the years ended December 31, 2016 and 2015 excluded nil and 713,803 of Syngenta AG shares and options granted to employees, respectively, as their inclusion would have been antidilutive.

($m, except number of shares)	2016	2015
Net income attributable to Syngenta AG shareholders	**1,178**	1,339
Weighted average number of shares		
Weighted average number of shares – basic	**92,020,494**	91,908,128
Adjustments for dilutive potential ordinary shares:		
Grants of options over Syngenta AG shares under employee share participation plans	**–**	120,317
Grants of Syngenta AG shares under employee share participation plans	**72,155**	178,090
Weighted average number of shares – diluted	**92,092,649**	92,206,535

9. Trade and other accounts receivable

Trade receivables at December 31, 2016 and 2015 are as follows:

($m)	2016	2015
Trade receivables, gross	4,939	4,447
Provision for doubtful trade receivables	(396)	(319)
Trade receivables, net	4,543	4,128

Movements in the provision for doubtful trade receivables for the years ended December 31, 2016 and 2015 are as follows:

($m)	2016	2015
January 1	(319)	(251)
Amounts charged to income	(67)	(75)
Amounts written off	9	7
Currency translation effects and other	(19)	–
December 31	(396)	(319)

The ages of trade and other accounts receivable at December 31, 2016 and 2015 that were past due, but not impaired, are as follows:

2016 ($m)	Total past due	0–90 days	90–180 days	More than 180 days
Trade receivables, gross	960	391	131	438
Provision for doubtful trade receivables	(346)	(6)	(20)	(320)
Other accounts receivable	395	191	53	151
Total	1,009	576	164	269

2015 ($m)	Total past due	0–90 days	90–180 days	More than 180 days
Trade receivables, gross	670	277	109	284
Provision for doubtful trade receivables	(259)	(8)	(26)	(225)
Other accounts receivable	395	277	49	69
Total	806	546	132	128

At the reporting date there are no indications that debtors whose accounts are neither overdue nor impaired will not meet their payment obligations. The carrying amount of trade receivables includes $13 million (2015: $46 million) that are due more than one year from the balance sheet date.

The carrying amount of trade receivables transferred in full and partial recourse factoring arrangements, but not derecognized is $136 million (2015: $144 million). Related liabilities of $132 million (2015: $144 million) are disclosed in Note 16. The amount of these receivables before the transfer transactions was $145 million (2015: $151 million). Additionally, in 2015 Syngenta transferred $102 million of trade receivables to a securitization entity and received $81 million cash from third party investors in that entity. Those investors had recourse for repayment of their investment only to the cash flows from the securitized Syngenta receivables. Syngenta was exposed to expected losses on these receivables through its subordinated first loss interest in the securitization issuance and continued to recognize the full $102 million carrying amount of the receivables at December 31, 2015. The net position of $21 million represented Syngenta's maximum exposure to losses, subject to compliance with the terms of this arrangement. Syngenta recognized the $81 million cash received in current financial debt. The fair value of these receivables and liabilities at December 31, 2015 was not significantly different from their carrying amounts. At December 31, 2016, amounts relating to this securitization have been fully settled.

The fair value of trade receivables containing embedded exchange rate options that Syngenta has classified as at fair value through profit or loss at December 31, 2016 was $103 million (2015: $105 million). These amounts represent Syngenta's maximum exposure to credit risk relating to these types of trade receivables. Amounts charged to profit or loss in relation to these trade receivables for the years ended December 31, 2016 and 2015 were not material.

10. Other current assets

Other current assets at December 31, 2016 and 2015 are as follows:

($m)	2016	2015
Prepaid expenses	245	168
Non-current assets classified as held-for-sale	29	39
Assets held under barter agreements	59	81
Other	53	50
Total	386	338

Non-current assets classified as held-for-sale relate to assets at two sites and a building in the US and two buildings in Europe, all of which are expected to be sold during 2017 (2015: one manufacturing site that was sold during 2016).

11. Inventories

Inventories at December 31, 2016 and 2015 are as follows:

($m)	2016	2015
Raw materials and consumables	582	895
Biological assets	30	29
Work in progress	1,112	1,019
Finished products	2,160	2,402
Total	**3,884**	4,345

Movements in inventory write-downs for the years ended December 31, 2016 and 2015 are as follows:

($m)	2016	2015
January 1	(333)	(422)
Additions charged to income	(233)	(285)
Reversals of inventory write-downs	34	74
Amounts utilized on disposal of related inventories	143	259
Currency translation effects and other	70	41
December 31	**(319)**	(333)

Reversals of inventory write-downs arise in the normal course of business when actual outcomes are more favorable than assumptions made in prior periods about Syngenta's future ability to sell inventories that are subject to risks of degradation and obsolescence, such as germination of seeds.

Movements in biological assets for the years ended December 31, 2016 and 2015 are as follows. These include amounts classified as other non-current assets.

($m)	2016	2015
January 1	31	32
Changes in fair value	136	135
Additions to cost	7	7
Sales and harvest	(143)	(140)
Currency translation effects and other	–	(3)
December 31	**31**	31
Of which: carried at fair value less costs to sell	**29**	29

Syngenta's inputs for measuring the fair value of those assets that are carried at fair value less costs to sell include both market data from actual sales and inputs based on the stage of growth of immature assets, which is not observable in the market. The fair values therefore represent a level 3 measurement in the fair value hierarchy as defined by IFRS 13. Their sensitivity to changes in the unobservable inputs is not material to the consolidated financial statements.

Quantities of biological assets in inventories at December 31, 2016 and 2015 are:

	2016	2015
(Millions of plants)		
Plants	78	65
Cuttings	547	530
(Thousands of hectares cultivated)		
Growing crops	1	1

12. Property, plant and equipment

Movements in property, plant and equipment for the year ended December 31, 2016 are as follows:

2016 ($m)	Land	Buildings	Machinery and equipment	Assets under construction	Total
Cost					
January 1	178	2,011	4,885	412	7,486
Additions	–	37	148	267	452
Disposals	(8)	(67)	(105)	–	(180)
Classified as held-for-sale	(16)	(71)	(44)	–	(131)
Transfers between categories	5	131	185	(321)	–
Currency translation effects and other	(3)	(54)	(205)	2	(260)
December 31	156	1,987	4,864	360	7,367
Accumulated depreciation and impairment losses					
January 1	–	(1,080)	(3,023)	–	(4,103)
Depreciation charge	–	(66)	(262)	–	(328)
Impairment losses	–	(42)	(27)	–	(69)
Depreciation on disposals	–	68	92	–	160
Classified as held-for-sale	–	67	35	–	102
Currency translation effects and other	–	46	123	–	169
December 31	–	(1,007)	(3,062)	–	(4,069)
Net book value – December 31	156	980	1,802	360	3,298

Additions to property, plant and equipment of $452 million (2015: $478 million) comprise $425 million (2015: $453 million) of cash purchases and $27 million (2015: $25 million) of other additions, including business combinations, initial recognition of finance leases and capitalized borrowing costs.

The net book value of property, plant and equipment accounted for as finance lease assets at December 31, 2016 was $63 million (2015: $72 million) of which $53 million is classified as Machinery and equipment (2015: $61 million) and $10 million is classified as Buildings (2015: $11 million).

Movements in property, plant and equipment for the year ended December 31, 2015 were as follows:

2015 ($m)	Land	Buildings	Machinery and equipment	Assets under construction	Total
Cost					
January 1	181	2,012	4,961	552	7,706
Additions	2	47	200	229	478
Disposals	(2)	(8)	(130)	(4)	(144)
Classified as held-for-sale	(1)	(17)	(74)	(6)	(98)
Transfers between categories	6	75	222	(303)	–
Currency translation effects and other	(8)	(98)	(294)	(56)	(456)
December 31	178	2,011	4,885	412	7,486
Accumulated depreciation and impairment losses					
January 1	–	(1,072)	(3,072)	–	(4,144)
Depreciation charge	–	(66)	(283)	–	(349)
Impairment losses	–	(8)	(35)	–	(43)
Depreciation on disposals	–	6	113	–	119
Classified as held-for-sale	–	6	49	–	55
Currency translation effects and other	–	54	205	–	259
December 31	–	(1,080)	(3,023)	–	(4,103)
Net book value – December 31	178	931	1,862	412	3,383

13. Intangible assets

Movements in intangible assets for the year ended December 31, 2016 are as follows:

2016 ($m)	Goodwill	Product rights	Trademarks	Patents	Software	Other intangibles	Total
Cost							
January 1	1,909	2,967	84	48	441	364	5,813
Additions	–	17	–	–	75	41	133
Retirements and disposals	–	(25)	(1)	–	(44)	1	(69)
Currency translation effects	(15)	(40)	(1)	(1)	(13)	(5)	(75)
December 31	1,894	2,919	82	47	459	401	5,802
Accumulated amortization and impairment losses							
January 1	(270)	(1,979)	(51)	(28)	(304)	(141)	(2,773)
Amortization charge	–	(129)	(4)	(3)	(33)	(31)	(200)
Impairment losses	–	(63)	(1)	–	–	(1)	(65)
Retirements and disposals	–	25	–	–	44	(1)	68
Currency translation effects	3	19	1	1	7	–	31
December 31	(267)	(2,127)	(55)	(30)	(286)	(174)	(2,939)
Net book value – December 31	1,627	792	27	17	173	227	2,863

Additions in 2016 and Other additions in 2015 include intangible assets arising from license agreements involving non-monetary exchanges or where the cash flows related to the acquisition of the asset are payable over several years. Internally developed intangible assets of $104 million (2015: $62 million) are included within Additions and Other additions, respectively. Cash paid to acquire and develop intangible assets was $132 million (2015: $90 million).

Amortization is included partly within cost of goods sold and partly within general and administrative expenses.

Other intangibles consist principally of values assigned to leases, supply contracts, production know-how and customer relationships acquired in business combinations.

Movements in intangible assets for the year ended December 31, 2015 were as follows:

2015 ($m)	Goodwill	Product rights	Trademarks	Patents	Software	Other intangibles	Total
Cost							
January 1	1,934	2,958	85	52	399	358	5,786
Additions from business combinations	8	16	1	–	16	(16)	25
Other additions	–	13	–	–	41	38	92
Retirements and disposals	–	(2)	(1)	(4)	(10)	(10)	(27)
Currency translation effects	(33)	(18)	(1)	–	(5)	(6)	(63)
December 31	1,909	2,967	84	48	441	364	5,813
Accumulated amortization and impairment losses							
January 1	(274)	(1,858)	(38)	(27)	(289)	(114)	(2,600)
Amortization charge	–	(125)	(5)	(4)	(28)	(28)	(190)
Impairment losses	–	–	(9)	(3)	–	(10)	(22)
Retirements and disposals	–	–	1	5	10	8	24
Currency translation effects	4	4	–	1	3	3	15
December 31	(270)	(1,979)	(51)	(28)	(304)	(141)	(2,773)
Net book value – December 31	1,639	988	33	20	137	223	3,040

13. Intangible assets continued

The net book value at December 31, 2016 and 2015 of goodwill is allocated to Syngenta's operating segments and other CGUs as summarized below:

($m)	2016	2015
Allocated to operating segments:		
Europe, Africa and Middle East (EAME)	**235**	235
North America	**197**	197
Latin America	**173**	173
Asia Pacific	**325**	338
Lawn and Garden	**34**	35
Total allocated to operating segments	**964**	978
Allocated to other individual CGUs:		
North America Corn and Soybean seed	**315**	315
Other, not individually significant	**348**	346
Total allocated to other individual CGUs	**663**	661
Total goodwill	**1,627**	1,639

14. Financial and other non-current assets

Financial and other non-current assets at December 31, 2016 and 2015 are as follows:

($m)	2016	2015
Equity securities	**76**	73
Precious metal catalysts	**72**	75
Royalties receivable	**113**	54
Other non-current receivables	**137**	130
Defined benefit post-employment benefit asset (Note 22)	**18**	35
Long-term derivative financial assets (Note 28)	**24**	29
Total financial and other non-current assets	**440**	396
Investments in associates and joint ventures	**170**	177
Total	**610**	573

None of Syngenta's investments in associates and joint ventures are publicly quoted. At December 31, 2016, these investments consist mainly of $94 million (2015: $101 million) for a 50 percent ownership of the joint venture CIMO Compagnie Industrielle de Monthey SA, Switzerland (CIMO), which provides utility services to Syngenta and other occupants of the Monthey manufacturing site, $40 million (2015: $41 million) for a 49 percent ownership of the associate Sanbei Seeds Co. Ltd., China and $25 million (2015: $27 million) for a 40 percent ownership of the associate Maisadour Semences SA, France (Maisadour). The latter two entities produce and sell seeds. Maisadour sells seeds to Syngenta.

Effects on Syngenta's consolidated income statement for the periods presented, or any financial statement line items of the above associates and joint ventures themselves, are not material.

Transactions between Syngenta and its associates and joint ventures during the year ended December 31, 2016 are as follows:

- Goods and services provided by Syngenta to its associates and joint ventures $13 million (2015: $14 million).
- Goods and services provided by associates and joint ventures to Syngenta $100 million (2015: $117 million).
- Non-current assets and research and development provided by Syngenta to an associate of $2 million (2015: $3 million).

At December 31, 2016, Syngenta has accounts receivable and accrued income from associates and joint ventures of $6 million (2015: $4 million) and accrued liabilities to associates and joint ventures of $5 million (2015: $15 million).

A bank overdraft guarantee of $8 million (2015: $7 million) has been provided to an associate.

On November 12, 2013, Syngenta agreed to advance EUR 9 million ($9 million at December 31, 2016 currency translation rates) to Maisadour for seven years to help finance the planned expansion of corn seed processing capacity in Maisadour Ukraine LLC, a subsidiary of Maisadour, which is a supplier of corn seeds to Syngenta. This current account advance will be made in installments when called by Maisadour and bears a market rate of interest. At December 31, 2016, the balance outstanding was $6 million (2015: $6 million). By a deed between Syngenta, Maisadour and the European Bank for Reconstruction and Development (EBRD), repayment of the principal is subordinated to a loan between the EBRD and Maisadour Ukraine LLC which is guaranteed by Maisadour.

15. Trade accounts payable

The contractual maturities of trade accounts payable at December 31, 2016 and 2015 are as follows:

($m)	Total	0–90 days	90–180 days	180 days–1 year
2016	**3,338**	**2,131**	**160**	**1,047**
2015	3,311	2,167	212	932

16. Current financial debt and other financial liabilities

Current financial debt at December 31, 2016 and 2015 is as follows:

($m)	2016	2015
Bank and other financial debt	**359**	308
Receivables factored with recourse	**132**	225
Current portion of financial debt (Note 18)	**276**	14
Total current financial debt	**767**	547
Short-term derivative and other financial liabilities	**280**	183
Total	**1,047**	730

16. Current financial debt and other financial liabilities continued

The following table presents additional information related to short-term borrowings at December 31, 2016:

2016 ($m)	Amount outstanding at December 31	Weighted average interest rate on outstanding balance	Average amount outstanding for the year	Weighted average interest rate on average outstanding balance	Maximum month-end amount during the year
Bank and other financial debt	**359**	**4.8%**	**1,509**	**3.0%**	**2,330**
Receivables factored with recourse	**132**	**4.5%**	**186**	**5.7%**	**268**
Current portion of financial debt (Note 18)	**276**	**0.7%**	**76**	**0.7%**	**282**
Total	**767**	**3.3%**	**1,771**	**3.2%**	
2015	547	10.2%	1,117	5.2%	

The contractual maturities of current financial debt at December 31, 2016 and 2015 are as follows:

($m)	Total	0–90 days	90–180 days	180 days–1 year
2016	**767**	**324**	**99**	**344**
2015	547	216	136	195

The maturities of short-term derivative and other financial liabilities are presented in Note 27.

Information about fair values of financial liabilities is presented in Note 28.

17. Other current liabilities

Other current liabilities at December 31, 2016 and 2015 consist of the following:

($m)	2016	2015
Accrued short-term employee benefits	**466**	303
Taxes other than income taxes	**112**	132
Accrued utility costs	**68**	56
Social security and pension contributions	**66**	74
Liabilities related to barter agreements	**145**	73
Other payables	**110**	111
Other accrued expenses	**207**	234
Total	**1,174**	983

The maturities of other current liabilities are as follows. For liabilities without a contractual maturity date, the analysis represents the estimated timing of cash outflows.

($m)	Total	0–90 days	90–180 days	180 days-1 year
2016	**1,174**	**735**	**240**	**199**
2015	983	644	147	192

18. Financial debt and other non-current liabilities

Financial debt and other non-current liabilities at December 31, 2016 and 2015 are as follows:

($m)	2016	2015
Floating Eurobond 2017	**263**	272
0.750% CHF bond 2019	**344**	353
$ private placement notes	**258**	260
1.875% Eurobond 2021	**526**	543
3.125% $ Notes 2022	**515**	519
1.625% CHF bond 2024	**245**	251
1.250% Eurobond 2027	**523**	540
2.125% CHF bond 2029	**147**	151
4.375% $ Notes 2042	**248**	248
Unsecured bond issues and US private placement notes	**3,069**	3,137
Liabilities to banks and other financial institutions	**1**	1
Finance lease obligations	**60**	59
Total financial debt (including current portion)	**3,130**	3,197
Less: current portion of financial debt (Note 16)	**(276)**	(14)
Non-current derivative financial liabilities	**190**	267
Other non-current liabilities and deferred income	**33**	51
Total	**3,077**	3,501

Information about fair values of financial liabilities is presented in Note 28.

Other non-current liabilities and deferred income relates to license and acquisition agreements with several counterparties. Related cash flows of $2 million (2015: $14 million) are payable between one and five years and $31 million of deferred income at December 31, 2016 (2015: $37 million) will be recognized in income as related licensed product sales occur.

The weighted average interest rate on non-current bank and other financial debt outstanding at December 31, 2016 is 3.1 percent per annum (2015: 3.2 percent).

The weighted average interest rate on the combined current and non-current bank and other financial debt outstanding at December 31, 2016 is 3.1 percent per annum (2015: 4.4 percent). The weighted average interest rates include the cost of financing emerging market borrowings.

Interest paid on non-current financial debt was $66 million (2015: $93 million). All non-current debt ranks equally.

18. Financial debt and other non-current liabilities continued

Syngenta AG has fully and unconditionally guaranteed on a senior unsecured basis the due and punctual payment of the principal of and any premium and interest on the debt securities issued by Syngenta Finance N.V., which is an indirect, wholly-owned finance subsidiary. The guarantees will rank equally with all of Syngenta's other unsecured and unsubordinated debt. No other subsidiary of Syngenta guarantees such debt securities.

19. Provisions

Provisions at December 31, 2016 and 2015 are as follows:

($m)	2016	2015
Restructuring provisions	**63**	84
Employee benefits:		
Pensions (Note 22)	**820**	383
Other post-retirement benefits (Note 22)	**18**	20
Other long-term employee benefits	**58**	63
Environmental provisions	**192**	209
Provisions for legal and product liability settlements	**113**	108
Other provisions	**61**	53
Total	**1,325**	920

($m)	2016	2015
Current portion of:		
Restructuring provisions	**58**	72
Employee benefits	**72**	45
Environmental provisions	**18**	28
Provisions for legal and product liability settlements	**22**	27
Other provisions	**12**	21
Total current provisions	**182**	193
Total non-current provisions	**1,143**	727
Total	**1,325**	920

The timing of payment in respect of non-current provisions is, with few exceptions, not contractually fixed and cannot be estimated with certainty. Key assumptions and sources of estimation uncertainty are discussed in Note 2.

At December 31, 2016, Syngenta recognized $16 million (2015: $16 million) in Financial and other non-current assets in respect of virtually certain reimbursements related to the above provisions.

Syngenta has recorded provisions for environmental liabilities at some currently or formerly owned, leased and third party sites throughout the world. These provisions are estimates of amounts payable or expected to become payable and take into consideration the number of other potentially responsible parties at each site and the identity and financial positions of such parties in light of the joint and several nature of certain of the liabilities. The material components of Syngenta's environmental provisions are based on a risk assessment involving investigation of the various sites.

Provisions for legal and product liability settlements, all of which are individually immaterial, relate to various legal proceedings incidental to the normal conduct of Syngenta's business, including proceedings involving product liability claims, commercial claims, employment and wrongful termination claims, patent infringement claims, competition law claims, tax assessment claims, regulatory compliance claims, waste disposal claims and tort claims relating to the release of chemicals into the environment. Other provisions mainly comprise provisions for long-term contractual obligations under license and other agreements.

19. Provisions continued

Movements in provisions for the year ended December 31, 2016 are as follows:

($m)	January 1	Charged to income	Release of provisions credited to income	Payments	Actuarial (gains)/ losses	Transfers offset in defined benefit pension assets	Currency translation effects/ other	December 31
Restructuring provisions:								
Employee termination costs	75	45	(8)	(59)	–	–	(4)	49
Other third party costs	9	17	–	(14)	–	–	2	14
Employee benefits:								
Pensions	383	144	–	(150)	527	(21)	(63)	820
Other post-retirement benefits	20	2	(1)	–	(2)	–	(1)	18
Other long-term employee benefits	63	3	(2)	(5)	–	–	(1)	58
Environmental provisions	209	7	(3)	(16)	–	–	(5)	192
Provisions for legal and product liability settlements	108	27	(8)	(18)	–	–	4	113
Other provisions	53	27	(4)	(16)	–	–	1	61
Total	920	272	(26)	(278)	525	(21)	(67)	1,325

Provisions for employee termination costs include severance, pension and other costs directly related to affected employees.

Provisions for other third party costs principally include payments for early termination of contracts with third parties related to redundant activities.

20. Share capital

Each Syngenta ordinary share carries one vote at the shareholders' meetings of Syngenta. Voting rights may be exercised only after a shareholder has been registered in Syngenta's share register. Registration as a shareholder with voting rights is subject to certain declarations on the ownership of Syngenta shares. The number of ordinary shares of par value CHF 0.10 that were authorized, issued, fully paid and outstanding at, and the movements during the years ended, December 31, 2016 and 2015 are presented in the table below.

The Board of Directors of Syngenta AG was authorized on April 24, 2012 to repurchase registered shares up to a maximum value of 10 percent of the company's share capital, for the purpose of capital reduction. On the basis of this authorization, Syngenta established a second trading line on the SIX Swiss Exchange ("SIX"), which was closed on October 15, 2015. At that date, 303,000 shares, out of an authorized maximum of 9,312,614 registered shares, had been repurchased. None of the repurchases were made during 2015.

On September 3, 2015, Syngenta announced its intention to return more than $2 billion of capital to shareholders through a new share repurchase program and consequently, Syngenta announced on October 16, 2015 the opening of a new second trading line on the SIX, which was closed on March 10, 2016. At that date, 231,500 shares had been repurchased through this new second trading line. None of the repurchases were made in 2016.

	2016		2015	
(Millions of shares)	Shares in issue	Treasury shares held	Shares in issue	Treasury shares held
January 1	92.9	(1.2)	92.9	(1.3)
Cancellation of treasury shares	(0.4)	0.4	–	–
Share repurchases	–	–	–	(0.4)
Issue of ordinary shares under employee share purchase and option plans	–	0.4	–	0.5
December 31	92.5	(0.4)	92.9	(1.2)

At December 31, 2016 and 2015, Syngenta had no open options accounted for as equity instruments.

21. Non-cash and other reconciling items included in income before taxes

The following table analyzes non-cash and other reconciling items included in income before taxes for the years ended December 31, 2016 and 2015:

($m)	2016	2015
Depreciation, amortization and impairment of:		
Property, plant and equipment	**397**	392
Intangible assets	**265**	212
Financial assets	**–**	1
Deferred revenue and gains	**(40)**	(19)
Gains on disposal of non-current assets	**(22)**	(51)
Charges in respect of share based compensation	**141**	74
Charges in respect of provisions (Note 19)	**246**	355
Financial expense, net	**291**	256
Losses/(gains) on hedges reported in operating income	**27**	(10)
Income from associates and joint ventures	**(5)**	(7)
Total	**1,300**	1,203

See Note 3 for a description of the change in accounting treatment of share based payment arrangements.

22. Post-employment benefits

Syngenta has, apart from legally required social security arrangements, numerous independent pension plans, which are either "defined contribution" plans where company contributions and resulting benefit costs are a set percentage of employees' pay or "defined benefit" plans where benefits are generally based on employees' length of service and pensionable pay. Syngenta's contributions to defined contribution plans were $48 million for the year ended December 31, 2016 (2015: $53 million). Approximately 35 percent of Syngenta's employees are members of defined benefit plans and a significant proportion of these are members of both defined benefit and defined contribution plans. All of Syngenta's major defined benefit plans are funded through legally separate trustee administered funds. The cash funding of these plans, which may from time to time involve special payments, is designed to ensure that present and future contributions should be sufficient to meet future liabilities. Syngenta's main defined benefit pension plans are in the UK, Switzerland and the USA.

UK

In accordance with its rules, Syngenta's UK Pension Fund (the "UK Fund") is governed by a company (the Trustee) that is controlled by a publicly listed independent professional trustee corporation. That corporation appoints the Trustee's directors, including its own representative, Syngenta nominated and member nominated directors. The Trustee manages the UK Fund and appoints professional advisors independently to assist it in doing so. The UK Fund is subject to UK pensions legislation, is regulated by the UK Pensions Regulator and is exempt from most UK taxation through its registered status. The defined benefit section of the UK Fund has been closed to new members since 2002. New employees since 2002 instead join a defined contribution pension plan. The defined benefit section of the UK Fund is open to future accrual for employees who were members before that date; however, effective January 1, 2016, pensionable pay for these employees has been frozen, as described in Note 2. At retirement date, defined benefit members have the right to take up to 25 percent of the value of their benefits as a lump sum, with the balance being paid as an annuity. Alternatively, after taking appropriate advice, members may transfer their defined benefits to a different authorized pension arrangement.

The Trustee is required by the UK Fund's rules to increase pensions in payment and accrued deferred pension rights each year by the lower of 5 percent and price inflation, as measured by the UK Retail Price Index (RPI) or Consumer Price Index (CPI), as applicable. An independent actuary is required to value the UK Fund's liabilities in accordance with UK pension regulations and certify the required contributions, both for future service and elimination of any deficit, at least every three years. Following each such valuation, employer contribution amounts must be formally agreed between Syngenta and the Trustee, subject to review by the Pensions Regulator, and remain binding until re-assessed in the following valuation. The solvency of the UK Fund, defined as its ability to pay benefits as they fall due, is guaranteed by the sponsoring subsidiary, Syngenta Ltd. Syngenta AG has irrevocably and unconditionally undertaken to ensure Syngenta Ltd. will honor that guarantee. In addition, certain benefits under the UK Fund are guaranteed by the UK Pension Protection Fund.

The Trustee agrees the investment strategy for the UK Fund's assets and implements it through an investment sub-committee (the UK Investment Committee) it appoints from among the Trustee directors. The investment objectives are to ensure the assets are appropriately diversified and liquid to generate sufficient returns to meet the benefit liability and control the long-term costs of the UK Fund. These objectives are achieved through appointing and monitoring a number of third party investment managers, each with specific investment mandates that collectively cover a wide range of investment classes and geographical markets and utilize both asset liability matching and return seeking strategies. Asset liability matching is achieved both through underlying investment class selection (e.g. fixed interest) and through using derivatives to limit the potential impact of changes in interest rates, price inflation and foreign currency exchange rates on the benefits payable by and assets of the UK Fund.

22. Post-employment benefits continued

Switzerland

The Swiss federal law on occupational old age, survivors' and disability pensions ("BVG") sets minimum standards for occupational pension plans, which Syngenta's Swiss pension fund (the Swiss Fund) exceeds. All employees having had an employment contract for more than three months with any of Syngenta's Swiss subsidiaries or with its CIMO joint venture entity (see Note 14) and whose age and income exceed the minimum stipulated by BVG are automatically insured in the Swiss Fund. The benefits payable on retirement are calculated according to the capital sums that each member accumulates through transfer of benefits from previous employments, employer and employee contributions during service with Syngenta, interest and member voluntary contributions. Disability and survivors' death in service benefits are defined on the basis of the member's insured remuneration. Leavers before retirement are required to transfer their accumulated retirement and capital savings to the occupational pension plan of their new employment. The Swiss Fund is governed by a 12 member Board of Trustees. Six members, including the President, are nominated by Syngenta (five members) and CIMO (one member), and six are elected by insured plan members from among the employees. Its decisions regarding certain items, including rates of retirement credits for service and interest credits, conversion rates on retirement and plan asset investment strategy require a two-thirds majority vote. Legal conformity of the Swiss Fund's regulations is verified by the Swiss Pension Inspectorate. Syngenta's legal obligations, including required employer contributions, are defined in the pension fund rules which are agreed by the Board of Trustees.

Employer and employee contributions are payable according to an age related scale of percentages of pay. Under BVG, the Swiss Fund guarantees the vested benefit amount as confirmed annually to members. Interest may be added to member balances at the discretion of the Board of Trustees. Members have the right to take their retirement benefit as a lump sum, an annuity or part as a lump sum with the balance converted to a fixed annuity at the rates defined in the Fund's rules. The Board of Trustees may increase the annuity at their discretion subject to the Swiss Fund's funded status including sufficient free funds as determined according to Swiss statutory valuation rules. Syngenta accounts for the Swiss Fund as a defined benefit pension plan.

An actuarial balance sheet is usually drawn up annually by the Swiss Fund's actuary. If the balance sheet reveals a deficit, the Board of Trustees defines appropriate measures to eliminate the deficit. If necessary, and after consultation with the actuary, the contributions payable by employees and by Syngenta may be increased or the benefits, including current pensions, may be adjusted to the funds available. The Board of Trustees manages the Swiss Fund's assets in conformity with the investment policy rules laid down by Swiss law, with the objectives of achieving investment that is secure, produces an appropriate yield and meets the liquidity needs of the Swiss Fund. This is implemented through an investment sub-committee similar to the UK Investment Committee mentioned above.

USA

Syngenta's main US defined benefit pension plan (the US Plan) is a non-contributory defined benefit pension plan subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended (ERISA) and the US Internal Revenue Code of 1986, as amended (Code). In addition, certain benefits under the US Plan are guaranteed by the US Pension Benefit Guaranty Corporation. The US Plan was closed to new members effective January 1, 2009. Employees joining Syngenta after that date participate in a defined contribution pension plan. The defined benefits of existing members of the US Plan were not affected by this change. The US Plan offers members the choice of taking their retirement benefits, which are generally based on their age, pay and years of service, as a full lump sum at retirement date or as a fixed annuity. In these financial statements, the benefit obligation has been valued assuming that current eligible members will take the lump sum option at normal retirement or other permissible commencement dates. This assumption is consistent with historical and expected future member choices.

US plan assets are held in a separate trust with State Street Bank and Trust Company as trustee and custodian. The assets must generally remain in the trust until all pension benefits are paid. An Investment Committee of Syngenta employees (the US Investment Committee), appointed by the Board of Directors of Syngenta Corporation, a wholly owned subsidiary of Syngenta AG, oversees the investment of the plan assets, either directly or through the appointment of investment managers. The US Investment Committee develops and implements an investment strategy that takes into account the liability profile of the US Plan. Asset classes are selected that include equities, fixed income and alternative assets. Interest rate derivatives may be used to hedge the interest rate risk of the US Plan. The Plan's key risks include interest rate risk that impacts the value of the liability and the fixed income assets of the US Plan, investment performance volatility, and to a lesser degree inflation and longevity risk. An actuarial valuation is required each year and is used to determine the valuation and characteristics of the liability of the US Plan.

Syngenta Corporation's funding policy is to contribute to the US Plan amounts necessary on an actuarial basis to at least satisfy the minimum funding requirements of the Code. Additional discretionary contributions above the minimum funding requirements can be made and are generally based on the annual service cost along with an adjustment for any over/under funding.

In 2015, the US Plan made a one-time lump sum payment offer to terminated vested participants who otherwise had no lump sum option, and made $52 million in lump sum benefit payments to terminated vested participants as a result. Syngenta accounted for this as a settlement of these participants' DBO, which was $57 million at the 4.25 percent discount rate at the settlement date.

22. Post-employment benefits continued

Other plans

The status of Syngenta's defined benefit plans at December 31, 2016 and 2015 using actuarial assumptions determined in accordance with IAS 19 is summarized below. The following tables provide reconciliations of benefit obligations, plan assets and funded status of the defined benefit pension plans to the amounts recognized in the consolidated balance sheet at December 31, 2016 and 2015:

($m)	2016	2015
Benefit obligations		
January 1	**5,932**	6,198
Current service cost	**139**	147
Curtailments and settlements	**–**	(42)
Employee contributions	**37**	39
Interest cost	**137**	164
Actuarial losses/(gains):		
From changes in demographic assumptions	**63**	(20)
From changes in financial assumptions	**695**	54
From actual experience compared to assumptions	**59**	(130)
Benefit payments	**(251)**	(282)
Currency translation effects and other	**(589)**	(196)
December 31	**6,222**	5,932
Of which arising from:		
Funded plans	**6,052**	5,777
Wholly unfunded plans	**170**	155

($m)	2016	2015
Plan assets at fair value		
At January 1	**5,608**	5,841
Actual return on plan assets	**378**	59
Employer contributions	**161**	168
Employee contributions	**37**	39
Curtailments and settlements	**–**	(52)
Benefit payments	**(251)**	(282)
Currency translation effects and other	**(534)**	(165)
December 31	**5,399**	5,608

Actual return on plan assets can be analyzed as follows:

($m)	2016	2015
Interest on plan assets	**133**	156
Actuarial gains/(losses)	**245**	(97)
Total	**378**	59

Funded status	**(823)**	(324)
Effect of asset ceiling	**(10)**	(63)
Net accrued benefit liability	**(833)**	(387)
Amounts recognized in the balance sheet:		
Prepaid benefit costs (Note 14)	**–**	21
Accrued benefit liability	**(833)**	(408)
Net amount recognized	**(833)**	(387)

All material changes in the amount shown for the asset ceiling arose from the effect of applying the ceiling at each period end. The amount not recognized as an asset at December 31, 2015 related mainly to the UK pension plan. The maximum economic benefit available to Syngenta for that plan at that date consisted partly of future contribution savings and partly of the refund, net of applicable taxes, which will be unconditionally available to Syngenta when all liabilities have been settled. Changes in the asset ceiling amount due to interest and foreign currency translation during 2016 and 2015 were immaterial.

Of the accrued benefit liability for pensions of $833 million at December 31, 2016, $820 million is included in Note 19 as pension provisions and $13 million as restructuring provisions (2015: $383 million as pension; $25 million as restructuring).

The following table shows the estimated undiscounted future defined benefit payments that are projected to occur within 10 years from the balance sheet date. Actual payments may differ from those shown because of uncertain future events, including members' choice of benefit options as described above.

($m)	
2017	263
2018	264
2019	279
2020	281
2021	286
Years 2022–2026	1,491
Total 2017–2026	**2,864**

Syngenta's estimate of employer contributions to be paid to defined benefit plans in 2017 is $150 million, excluding restructuring costs. Actual payments could differ materially from this estimate if any new funding regulations or laws are enacted or due to business and market conditions, which may result in Syngenta prepaying contributions. Additional contributions, the amount and timing of which are uncertain, may also be required as Syngenta's restructuring programs are implemented.

In accordance with UK pension regulations, during the 2015 valuation Syngenta agreed with the UK pension plan Trustee to pay fixed contributions of $34 million per year from 2017 to 2019 and $32 million in 2020 to meet the valuation deficit at March 31, 2015, administration costs and part of the costs of employee service in those years. The balance of the costs of employee service is payable as a percentage of pensionable pay in those years. In 2016 and 2015, $36 million and $40 million of fixed contributions were paid respectively. Additional variable contributions of up to $57 million in 2018 and $38 million in 2020 are also required to be paid if the actual percentage returns on plan assets for the respective actuarial periods ending March 31, 2018 and March 31, 2020 are less than the agreed assumption. In respect of the actuarial period up to March 31, 2015, no additional variable contributions were payable.

22. Post-employment benefits continued

The fair values of assets and liabilities of the major defined benefit pension plans, together with aggregated data for other defined benefit plans are as follows. Unquoted investments represent investments in pooled funds in which the underlying investments are unquoted or those where the pooled fund does not have liquidity on at least a weekly basis:

	Fair value ($m, except assumptions)					
At December 31, 2016	Switzerland	UK	USA	Other plans	Total	%
Investments quoted in active markets:						
Equities	605	355	158	23	1,141	21
Real estate funds	238	–	–	–	238	4
Bonds	768	535	286	22	1,611	30
Other assets	37	136	–	14	187	4
Unquoted investments:						
Equities	40	363	40	–	443	8
Real estate	29	203	–	–	232	4
Bonds	–	390	–	–	390	7
Other assets	296	468	172	–	936	18
Cash and cash equivalents	118	67	33	3	221	4
Fair value of assets	2,131	2,517	689	62	5,399	100
Benefit obligation	(2,414)	(2,847)	(759)	(202)	(6,222)	
of which:						
Active members	(1,371)	(655)	(429)			
Deferred members	n/a	(649)	(81)			
Pensioners and dependants	(1,043)	(1,543)	(249)			
Funded status	(283)	(330)	(70)	(140)	(823)	
Effect of asset ceiling	–	–	–	(10)	(10)	
Net pension liability	(283)	(330)	(70)	(150)	(833)	
Net periodic benefit cost	89	19	22	15	145	
Significant actuarial assumptions:						
Discount rate (%)	0.7	2.5	4.0	–	2.6	
Inflation (RPI) (%)	n/a	3.3	n/a			
Pensionable pay increase (%)	1.4	–	4.0			
Pension increase (%)	–	3.3	n/a			
Interest credit rate (%)	1.0	n/a	n/a			
Remaining life expectancy (years):						
male aged 63 in 2016	24.2	26.0	22.8			
female aged 63 in 2016	26.3	27.5	24.9			
male aged 63 in 2036	26.1	27.7	24.5			
female aged 63 in 2036	28.2	29.3	26.6			
Weighted average duration of benefit obligation (years)	17	18	11			

Other assets include investments in private equity funds, diversified hedge funds, infrastructure funds, insurance funds and inflation, interest rate and foreign currency derivatives.

22. Post-employment benefits continued

At December 31, 2015	Fair value ($m, except assumptions) Switzerland	UK	USA	Other plans	Total	%
Investments quoted in active markets:						
Equities	559	331	154	22	1,066	19
Real estate funds	229	–	–	–	229	4
Bonds	774	628	267	25	1,694	30
Other assets	32	104	1	15	152	3
Unquoted investments:						
Equities	36	532	42	–	610	11
Real estate	28	138	–	–	166	3
Bonds	3	390	–	–	393	7
Other assets	372	478	201	–	1,051	19
Cash and cash equivalents	77	159	10	1	247	4
Fair value of assets	2,110	2,760	675	63	5,608	100
Benefit obligation	(2,343)	(2,717)	(655)	(217)	(5,932)	
of which:						
Active members	(1,402)	(554)	(371)			
Deferred members	n/a	(575)	(87)			
Pensioners and dependants	(941)	(1,588)	(197)			
Funded status	(233)	43	20	(154)	(324)	
Effect of asset ceiling	–	(52)	–	(11)	(63)	
Net pension asset/(liability)	(233)	(9)	20	(165)	(387)	
Net periodic benefit cost	103	25	16	21	165	
Significant actuarial assumptions:						
Discount rate (%)	0.8	3.7	4.4	–	2.5	
Inflation (RPI) (%)	n/a	3.0	n/a			
Pensionable pay increase (%)	1.5	–	4.0			
Pension increase (%)	–	3.0	n/a			
Interest credit rate (%)	1.0	n/a	n/a			
Remaining life expectancy (years):						
male aged 63 in 2015	23.0	25.9	22.7			
female aged 63 in 2015	25.5	27.4	24.8			
male aged 63 in 2035	23.4	27.6	24.4			
female aged 63 in 2035	25.7	29.2	26.5			
Weighted average duration of benefit obligation (years)	23	17	9			

The following table provides an analysis of the benefit costs recorded in the consolidated income statement for the defined benefit pension plans for the years ended December 31, 2016 and 2015:

($m)	**2016**	2015
Current service cost	**139**	147
Curtailments and settlements	**–**	10
Interest on the net defined benefit liability/(asset)	**6**	8
Net periodic benefit cost	**145**	165

Amounts recognized in OCI were as follows for the years ended December 31, 2016 and 2015:

($m)	**2016**	2015
Actuarial (gains)/losses	**574**	1
Effect of asset ceiling	**(47)**	53

The sensitivity of the benefit obligation to the significant actuarial assumptions is discussed in the “Critical accounting estimates” section of Note 2.

Other post-retirement benefits

Syngenta’s most significant other post-retirement benefit plan is the retiree medical plan in the USA. The plan is self-insured and the principal benefit for the majority of eligible participants is a subsidy of their medical insurance premiums after retirement. The subsidy amount varies based on age and service at retirement. Retirees enroll in individual Medicare plans available in the open market or public exchange, and are responsible for paying the full cost of coverage in excess of the subsidy. The assumed healthcare cost trend rate for this plan at December 31, 2016 was 6.8 percent, decreasing in each successive year from 2016 onwards, to reach an ultimate rate of 5.0 percent in 2023 (December 31, 2015: 7.0 percent decreasing to 5.0 percent in 2022).

22. Post-employment benefits continued

Syngenta had a net benefit asset for other post-retirement benefits at December 31, 2016 of $18 million (2015: $14 million) reported within Defined benefit post-employment benefit asset in Note 14 and a net benefit liability of $18 million (2015: $20 million) reported within Other post-retirement benefits provision in Note 19. Actuarial gains recognized in OCI for the period were $7 million (2015: actuarial gains of $5 million). Expense recognized in the consolidated income statement, contributions to the other post-retirement benefit plans and benefit payments by the plans were not material for 2016 or 2015.

23. Employee share participation plans

Syngenta has offered the following employee share participation plans during 2016 and 2015. All significant plans were equity-settled until amended on February 2, 2016 to require Syngenta to cash settle all awards that are outstanding on completion of the ChemChina Tender Offer, as disclosed further in Note 3.

Syngenta Long-Term Incentive Plans (LTI)

The Syngenta Long-Term Incentive Plans provide selected executives and key employees of Syngenta with the opportunity to obtain the right to purchase shares of Syngenta AG, or the equivalent American Depositary Shares (ADS) that are offered to selected executives and key employees in the USA. The grant of share options for Syngenta shares is at the discretion of the Compensation Committee of Syngenta's Board of Directors ("Compensation Committee"), whose members are appointed by the Board of Directors of Syngenta ("Board").

In 2015, Syngenta created a new LTI plan for members of the Syngenta Executive Committee ("Executive Committee"). Except as described below, the terms of the Syngenta LTI plan and the Syngenta LTI plan for members of the Executive Committee have the same terms. With effect from the 2015 award, awards of share options granted to members of the Executive Committee are subject to additional performance conditions, as well as a required three year service period. The Compensation Committee sets the performance conditions before the grant date of the awards. The performance achieved during the three year performance period, which starts on January 1 in the year of grant and ends on the third December 31 following, determines the number of share options that vest, subject to the approval of the Compensation Committee. In the event that the financial results used to calculate the vesting of the share options need to be restated subsequently, Syngenta retains the right to claw back a portion of the awards.

Until the 2012 award, the exercise prices were equal to either the weighted average share price on the SIX for the five business days preceding the grant date, or the share price on the SIX at the grant date, with the Compensation Committee having determined which of the two exercise prices were used for each grant year. For subsequent awards, the closing share price on the SIX at the grant date was used to set the equity grant value and exercise price. Options over ADSs are converted to US dollars at the exchange rate at the grant date, which may vary from the exchange rate at the exercise date. Standard options vest in full and are exercisable after completion of three years service and terminate after 10 years from the grant date. Vesting can occur after less than three years in particular circumstances including redundancy and retirement. None of the options vest on a pro rata basis during the vesting period.

For share option awards to Executive Committee members, the number of options vesting varies from 0 percent to 125 percent of the award, depending on the quartile in which Syngenta's Total Shareholder Return (TSR), defined as share price movement plus dividends, has ranked relative to the TSR of a comparator group of 16 public international quoted companies, including Syngenta and its major competitors. Performance is calculated in US dollars and share prices and dividends quoted in currencies other than US dollars are translated into US dollars using the average exchange rate in each year ending December 31. For the purposes of cash settlement on completion of the ChemChina Tender Offer, performance will be deemed to be at target.

The following table sets out share option activity under these plans during 2015, including the equivalent ADSs:

Share options	Exercise price	Exercise price	Outstanding at January 1	Granted	Exercised	Forfeited/ other	Outstanding at December 31	Exercisable	Remaining contractual life
	(CHF)	($ equivalent[1])			(thousands of options)				(years)
Year ended December 31, 2015									
Awarded in 2004	89.3	90.0	7.3	–	(7.3)	–	–	–	–
Awarded in 2005	127.4	128.4	12.7	–	(12.6)	(0.1)	–	–	–
Awarded in 2006	185.0	186.4	34.4	–	(20.0)	–	14.4	14.4	0.25
Awarded in 2007	226.7	228.4	45.9	–	(14.1)	–	31.8	31.8	1.25
Awarded in 2008	301.5	303.8	64.8	–	(23.4)	–	41.4	41.4	2.25
Awarded in 2009	233.4	235.2	110.4	–	(28.2)	(0.1)	82.1	82.1	3.25
Awarded in 2010	283.7	285.9	70.1	–	(21.2)	–	48.9	48.9	4.25
Awarded in 2011	308.7	311.1	144.6	–	(51.2)	–	93.4	93.4	5.25
Awarded in 2012	300.4	302.7	248.2	–	(87.5)	(1.5)	159.2	159.2	6.25
Awarded in 2013	391.4	394.4	244.8	–	(5.7)	(12.3)	226.8	34.5	7.25
Awarded in 2014	325.9	328.4	340.2	–	(5.2)	(13.1)	321.9	43.7	8.25
Awarded in 2015	332.2	334.7	–	486.9	–	(6.4)	480.5	4.3	9.25
Total for year ended December 31, 2015			1,323.4	486.9	(276.4)	(33.5)	1,500.4	553.7	

1 At the December 31, 2015 exchange rate

23. Employee share participation plans continued

In 2016, no further grants of share options were made, 244,012 share options were exercised and 34,273 share options were forfeited or expired. The normal vesting date of share options awarded in 2014, of which 260,051 were outstanding at December 31, 2016, is in February 2017 which is before the ChemChina Tender Offer is expected to complete. These awards will therefore vest in the normal way to participants who have met the vesting condition. For these and all vested share options, holders may choose to exercise the share options and tender the resulting shares into the ChemChina Tender Offer, or retain the share options for cash settlement by Syngenta if the ChemChina Tender Offer completes. At December 31, 2016, 1,222,636 share options were outstanding and have been accounted for on a cash-settled basis, assuming that no further share options will be exercised before completion of the ChemChina Tender Offer. The liability recognized for the fair value of the cash settlement obligation was $79 million (2015: $2 million). Share options outstanding at December 31, 2016, of which 480,197 were fully vested and exercisable, have a weighted average exercise price of $352 per share.

The Long-Term Incentive Plan also grants selected executives and key employees of Syngenta restricted share units (RSUs) (or equivalent restricted ADSs for relevant Syngenta employees in the USA). RSUs (or equivalent restricted ADSs) are rights to receive the equivalent number of Syngenta AG shares for no payment at the end of a three year vesting period. RSUs do not carry rights to dividends and the grant date fair value is reduced to reflect this. None of the RSUs or equivalent ADSs vest on a pro rata basis during the vesting period.

The Long-Term Incentive Plan 2015 for Executive Committee members granted Syngenta performance share units (PSUs). PSUs are rights to receive the equivalent number of Syngenta AG shares for no payment at the end of a three-year vesting period, subject to performance. PSUs do not carry rights to dividends and the grant date fair value is reduced to reflect this. The number of PSUs vesting varies from 0 percent to 100 percent of the award, depending on achievement of defined targets for four specified long term metrics relating to financial and non-financial performance, each of which carries equal weighting for on target performance. Each year the Compensation Committee assesses performance against the targets for each metric, and the weighted sum of the assessment outcome represents one third of the eventual payout, subject to completion of the required service period. In 2016, a variant of this plan was introduced, under which 50 percent of PSU awards granted in 2016 were subject to the ranking of Syngenta TSR compared to a comparator group of companies and the remaining 50 percent were subject to achievement of Syngenta performance targets for the four financial and non-financial metrics. Vesting for PSUs subject to the TSR condition varies from 0 percent to 200 percent of the award, depending on Syngenta ranking. The grant date fair value of these PSUs was measured using the Monte Carlo method. Vesting for PSUs subject to the Syngenta performance metrics varies from 0 percent to 100 percent of the award. For the purposes of cash settlement on completion of the ChemChina Tender Offer, performance will be deemed to be at target.

The following table sets out RSU and PSU activity under these plans during 2015 (including the equivalent restricted ADS for relevant Syngenta employees in the USA), and summarizes information about RSUs and PSUs outstanding at December 31, 2015.

RSUs and PSUs	Grant date fair value	Grant date fair value	Outstanding at January 1	Granted	Distributed	Forfeited/ other	Outstanding at December 31	Remaining life
	(CHF)	($ equivalent[1])		(thousands of shares)				(years)
Year ended December 31, 2015								
Awarded in 2012	277.0	305.6	76.0	–	(75.4)	(0.6)	–	–
Awarded in 2013	359.7	389.0	69.5	–	(8.5)	(3.1)	57.9	0.25
Awarded in 2014	298.5	332.6	95.6	–	(7.6)	(4.3)	83.7	1.25
Awarded in 2015	303.6	323.3	–	108.1	(0.9)	(2.1)	105.1	2.25
Total for year ended December 31, 2015			**241.1**	**108.1**	**(92.4)**	**(10.1)**	**246.7**	

1 At the grant date exchange rate

In 2016, 65,889 RSUs were distributed and a total of 127,637 RSUs and PSUs were granted. The normal vesting date of RSUs awarded in 2014, of which 74,076 were outstanding at December 31, 2016, is in February 2017 which is before the ChemChina Tender Offer is expected to complete. These awards will vest in the normal way to participants who have met the vesting condition, and will therefore not be cash settled by Syngenta. Holders will decide whether to retain these shares or to tender them into the ChemChina Tender Offer to be settled. 223,109 RSUs and PSUs awarded in 2015 and 2016 were outstanding at December 31, 2016, would be cash settled by Syngenta on completion of the ChemChina Tender Offer on the date of the second settlement, and have been accounted for on a cash-settled basis. The liability recognized for the fair value of the cash settlement obligation was $69 million (2015: $nil). For the purposes of cash settlements on completion of the ChemChina Tender Offer, performance will be deemed to be at target.

Syngenta Deferred Share Plan

The Syngenta Deferred Share Plan provides selected senior executives with an opportunity to obtain shares of Syngenta AG. The plan entitles participants to defer part of their annual short-term incentive awards in favor of Syngenta shares and, subject to service throughout the three year deferral period, additionally to receive one matching share for each deferred share held at the end of that period. Deferred and matching shares do not carry rights to dividends during the deferral period and their grant date fair value is reduced to reflect this. A mandatory part of the short-term incentive is allocated as deferred shares. Additional voluntary deferrals within the limits of the plan can be made at the discretion of the participants. None of the shares vested on a pro rata basis during the vesting period.

23. Employee share participation plans continued

The following table sets out activity under this plan during 2015 including the equivalent ADSs that are offered to Syngenta employees in the USA:

ADSs	Outstanding at January 1	Granted	Distributed	Outstanding at December 31	Matching shares Outstanding at December 31	Remaining life
	(thousands of shares)					(years)
Year ended December 31, 2015						
Awarded in 2012	45.9	–	(45.9)	–	–	–
Awarded in 2013	24.7	–	(6.2)	18.5	18.5	0.25
Awarded in 2014	1.2	–	(0.1)	1.1	1.1	1.25
Awarded in 2015	–	27.7	(3.1)	24.6	24.6	2.25
Total for year ended December 31, 2015	71.8	27.7	(55.3)	44.2	44.2	

In 2016, 36,434 deferred and matching shares were distributed on vesting of the 2013 awards, 44,457 deferred and matching shares were granted and 2,715 matching shares were forfeited. The normal release date of deferred shares and vesting date of matching shares awarded in 2014, of which 2,054 were outstanding at December 31, 2016, is in February 2017 which is before the ChemChina Tender Offer is expected to complete. The deferred shares awarded will therefore be released, and the matching shares awarded will vest, in the normal way to participants who have met the vesting condition, and will therefore not be cash settled by Syngenta. Holders will decide whether to retain these shares or to tender them into the ChemChina Tender Offer to be settled. 83,838 deferred and matching shares awarded in 2015 and 2016 were outstanding at December 31, 2016, would be cash settled on completion of the ChemChina Tender Offer on the date of the second settlement, and have been accounted for on a cash-settled basis. The liability recognized for the fair value of the cash settlement obligation was $14 million (2015: $nil).

Employee share purchase plans

Syngenta has employee share purchase plans in various countries, which entitle employees to subscribe for shares in Syngenta AG with the benefit of either discounts from market value varying between 33 percent and 50 percent or a matching share. Shares issued under the plans vest immediately and are subject to blocking periods of between two and three years, with the exception of the UK plan, for which completion of three years' service is required before vesting. Maximum annual subscription amounts per employee vary between $500 and $3,000. In 2016, a total of 75,023 (2015: 73,031) shares were subscribed under these plans and settled through a release of treasury shares.

Share option valuation assumptions

The grant date fair value of share options granted was measured using the Black-Scholes-Merton formula, except for the fair value of performance options awarded under the Executive Committee LTI plan 2015, which was measured using the Monte Carlo method, adjusting the fair value for the relative TSR market condition. Except for the TSR adjustment, the measurement of fair value was not adjusted for any other feature of the share option grant and, except for the Executive LTI plan 2015, no share option grant was subject to a market condition. The effect of early exercise was incorporated into the model by using an estimate of the share option's expected life rather than its contractual life.

The weighted average assumptions used in determining the grant date fair value of share options granted were as follows:

	2015
Dividend yield	2.9%
Volatility	19.2%
Risk-free interest rate – shares (CHF)	0.0%
Risk-free interest rate – ADSs ($)	2.1%
Risk-free interest rate – TSR adjustment	(0.8)%
Expected life	7 years
Exercise price (CHF per share)	332.2
Exercise price ($ equivalent per share[1])	353.7

1 At the grant date exchange rate

The above dividend yield and volatility were management estimates at grant date for the life of the respective option, as no warrants or options over Syngenta AG shares for this period were widely traded. Both actual dividend yield and volatility may vary from the assumptions used above. The estimate of volatility takes into account the historical volatility of the Syngenta AG share price and the implied volatilities of such longer dated warrants that have been traded in the market. The volatility assumption for 2015, as measured at the grant date, was based on the 36-month historical volatility of Syngenta AG shares on the SIX. For the TSR adjustment, the correlation of the share prices of comparator companies was measured using their historical daily returns over three years.

The assumptions used in determining the fair value of the cash settlement liability for the options outstanding at December 31, 2016 are set out in Note 3.

23. Employee share participation plans continued

Other information regarding the plans is as follows:

	2016	2015
Weighted average grant date fair value of options granted during year (CHF per option)	–	36.8
Weighted average grant date fair value of options granted during year ($ equivalent per option[1])	–	40.0
Weighted average share price at exercise date for options exercised during year (CHF per option)	393.0	370.9
Weighted average share price at exercise date for options exercised during year ($ equivalent per option[2])	399.4	392.7

Grant date fair value of shares granted during year:		
RSUs, and PSUs subject to performance conditions (CHF per unit)	361.5	303.6
RSUs, and PSUs subject to performance conditions ($ equivalent per share[1])	355.3	323.3
PSUs subject to a TSR condition (CHF per unit)	449.5	–
PSUs subject to a TSR condition ($ equivalent per share)	452.6	–
Deferred Share Plan (CHF per unit) – combined value of basic and matching share award	723.1	607.2
Deferred Share Plan ($ equivalent per unit[1]) – combined value of basic and matching share award	728.1	646.5
Employee Share Purchase Plans (CHF per share)	194.5	165.3
Employee Share Purchase Plans ($ equivalent per share[1])	182.6	169.5
Employee Share Purchase Plan ($ per ADS)	25.2	25.7
Cash to be paid on settlement of the ChemChina Tender Offer, including special dividend (CHF per share[3])	478.6	–
Cash to be paid on settlement of the ChemChina Tender Offer, including special dividend ($ equivalent per share[3])	469.9	–

Cash received from exercise of options and subscription for shares ($m)	92	85

1 At the grant date exchange rate
2 At the exercise date average exchange rate for the month
3 At the December 31, 2016 exchange rate

Compensation expense

The compensation expense associated with employee share participation plans, which was measured indirectly by reference to the fair value of the equity instruments granted, is as follows for the years ended December 31, 2016 and 2015:

($m)	2016	2015
Long-Term Incentive Plan	109	45
Deferred Share Plan	11	6
Employee Share Purchase Plans	21	16
Total	**141**	67

of which:

($m)	2016	2015
Accounted for as equity-settled	21	67
Accounted for as cash-settled	120	–
Total	**141**	67

24. Transactions and agreements with related parties

Key management personnel are considered to be the members of the Syngenta Executive Committee and the Board of Directors. Their compensation is as follows for the years ended December 31, 2016 and 2015:

($m)	2016	2015
Fees, salaries and other short-term benefits	14	13
Post-employment benefits	1	2
Payments to end of contractual notice period	2	3
Share based compensation	24	15
Total	**41**	33

$1 million in aggregate is payable in 2017 to two former Executive Committee members subject to compliance with non-compete agreements, which Syngenta concluded with them in 2016.

Fees, salaries and other short-term benefits includes $3 million in aggregate of payments to two new Executive Committee members to compensate them for loss of bonuses and incentive awards from their previous employers, which will be spread over the vesting periods according to their contractual terms (2015: $nil).

Members of the Syngenta Executive Committee and Board of Directors receive their cash compensation in Swiss francs, except one member of the Executive Committee who is based in the US and is paid in US dollars. The compensation amounts presented above have been converted into US dollars using the average currency exchange rate in effect during each year reported. The average Swiss franc per US dollar exchange rate for the year ended December 31, 2016 is 0.99 (2015: 0.96).

Post-employment benefits includes healthcare, disability, death in service and pension costs.

The amount disclosed for share based compensation is the expense for the period calculated in accordance with IFRS 2, "Share Based Payment" and as described in Notes 3, 23 and 29, relating to key management personnel. The cost of a share based compensation award is spread over the vesting period of the award. Therefore the charge for each year comprises parts of that year's awards and those of preceding years that had not already vested at the start of the year.

Members of the Board, excluding the Chairman and the Chief Executive Officer, are eligible for the share plan for non-executive Directors. Eligible Directors define a percentage of their annual fee for compensation in shares and, in addition, choose between blocked shares or freely tradable shares. The Chairman receives a fixed part of his compensation in the form of blocked shares. Under these plans, members of the Board were allocated a total of 3,984 shares (2015: 2,543 shares) in lieu of cash compensation. These shares vest immediately and had a combined fair value at grant of $2 million (2015: $1 million).

Detailed disclosures regarding executive remuneration required by Swiss Company Law are included in the Syngenta Corporate Governance Report on www.syngenta.com in the section "About Syngenta/Governance".

Transactions and balances between Syngenta and its employee post-retirement benefit plans are disclosed in Note 22.

25. Commitments and contingencies

Commitments

Minimum future lease payments at December 31, 2016 for finance leases are $62 million (2015: $60 million), of which $17 million is due within one year (2015: $18 million), $37 million after more than one but less than five years (2015: $34 million) and $8 million thereafter (2015: $8 million).

Fixed-term, non-cancelable operating lease commitments total $227 million at December 31, 2016 (2015: $120 million) of which $67 million is due within one year (2015: $61 million), $141 million after more than one and less than five years (2015: $52 million) and $19 million thereafter (2015: $7 million). Operating lease payments relate to leases of buildings, office equipment and vehicles. Operating lease expense in 2016 is $97 million (2015: $44 million).

Commitments for the purchase of property, plant and equipment at December 31, 2016 are $176 million (2015: $134 million).

At December 31, 2016 and 2015, Syngenta had entered into long-term commitments to purchase minimum quantities of certain raw materials, long-term research agreements with various institutions to fund various research projects, and other commitments. The estimated timing of minimum future committed payments is as follows:

	2016		2015	
($m)	Materials purchases	Other	Materials purchases	Other
Within one year	784	62	483	55
From one to two years	190	21	214	21
From two to three years	106	17	165	20
From three to four years	71	12	36	12
From four to five years	55	4	9	10
After more than five years	–	7	40	17
Total	**1,206**	**123**	947	135

Syngenta has no material contingent liabilities related to associates and joint ventures.

Syngenta's sales are made subject to normal warranties, which cover product technical specifications and, in some cases, products' performance effect on grower crop yields. Certain license agreements indemnify the other party against liabilities arising from claims related to the intellectual property licensed to or by Syngenta. Leases may require indemnification for liabilities Syngenta's actions may create for the lessor or lessee. Syngenta has also issued warranties to purchasers of businesses or product lines relating to events that arose before the sales. It is not possible to predict the maximum future payments possible under these or similar provisions because it is not possible to predict whether any of these contingencies will occur.

Syngenta has obtained licenses from others for the rights to sell certain products, or products containing certain technology, under agreements which require Syngenta to pay royalties based on its future sales of those products or that technology.

Contingencies

Litigation matters

Litigation is subject to many uncertainties, and the outcome of individual matters cannot be predicted with certainty. Consequently, it is reasonably possible that the final resolution of some of these matters could require Syngenta to make expenditures in excess of the established provisions that are reported in Note 19. Further, the range of amounts involved, as well as the period of time over which many of these expenditures may be made, cannot be reasonably estimated.

Syngenta maintains general liability insurance, including product liability insurance, covering claims on a worldwide basis with coverage limits and retention amounts which management believes to be adequate and appropriate in relation to Syngenta's businesses and the risks to which it is subject.

Significant recent or ongoing legal proceedings are described below.

VIPTERA™

Since September 12, 2014, a total of approximately 4,363 lawsuits (as of January 9, 2017) have been filed against Syngenta in state and federal courts in the United States by plaintiffs seeking damages from Syngenta for commercializing its AGRISURE VIPTERA® (MIR162) and DURACADE™ corn seed in the United States without having obtained import approval from China for those products. Virtually all of the lawsuits were filed by individual plaintiffs (including growers, grain elevators and exporters such as Cargill, Archer Daniels Midland and Louis Dreyfus), and approximately 107 by putative classes of growers and others allegedly affected, including ethanol plants, on the theory that China's 2013 rejection of US corn based on the alleged presence of MIR162 caused increased costs and US commodity prices to drop. The cases are pending in multiple jurisdictions, including (1) cases that were initially filed in federal court that have been consolidated for pre-trial proceedings in a federal multi-district litigation ("MDL") action in the District of Kansas; (2) a consolidated state court proceeding in Hennepin County, Minnesota; (3) federal court in the Southern District of Illinois; and (4) various state courts in Illinois, Indiana, Louisiana and Ohio. Certain of these cases also name additional defendants including ADM, Bunge, Cargill, Louis Dreyfus and Gavilon. In September 2016, the federal MDL court certified a nationwide class of corn growers alleging violations of the Lanham Act and eight statewide classes of corn growers, and in November 2016, the court presiding over the Minnesota state court consolidated proceedings certified a class of Minnesota corn growers. The allegations include claims that Syngenta issued misleading statements concerning the status of or timetable for approval of import of VIPTERA™ corn into China and that the public had a right to expect that corn sold to the general public was free from "contamination" with VIPTERA™ corn. Plaintiffs in the federal MDL court have filed expert reports claiming nationwide economic damages in excess of $5 billion in addition to punitive damages. Plaintiffs in the Minnesota consolidated proceeding have filed expert reports claiming statewide economic damages in excess of $440 million and are also seeking punitive damages. The Cargill lawsuit refers to damages of in excess of $90 million and one of the exporter lawsuits specifies damages of $41 million. The first Minnesota trial will begin on April 24, 2017 on behalf of an individual producer who grew VIPTERA™ corn, followed by a June 5, 2017 federal MDL trial on behalf of the nationwide class and a class of Kansas corn growers who did not grow VIPTERA™ corn,

25. Commitments and contingencies continued

followed by an August 14, 2017 Minnesota trial on behalf of a class of Minnesota corn producers who did not grow VIPTERA™ corn. The federal court in the Southern District of Illinois has set a presumptive trial date of December 2017, and the court presiding over the Iowa state court case has set a presumptive trial date of October 2018. No trial dates have been set for any other cases. Syngenta strongly believes that the claims in these cases are without merit and will vigorously defend the lawsuits.

On December 1, 2015, a claim was filed in Ontario, Canada by a proposed representative plaintiff on behalf of a putative class comprising all farmers in Canada against Syngenta Canada Inc. and Syngenta AG seeking damages from Syngenta for commercializing its AGRISURE VIPTERA® (MIR162) and DURACADE™ corn seed in the North American corn market without having obtained import approval from China for those products. Syngenta Canada Inc. was served with the claim on December 8, 2015. Syngenta AG was served with the claim under the Hague Convention on May 18, 2016. The causes of action referred to in the lawsuit include negligence and negligent misrepresentations. The allegations include claims that Syngenta actively misled farmers about the importance of the Chinese market, the timing and substance of the application for approval in China, its ability to channel VIPTERA™ corn into non-Chinese markets and its ability to contain the infiltration of VIPTERA™ corn to the North American corn supply. The proposed representative plaintiff is seeking on behalf of the putative class general and special damages of 300 million Canadian dollars ($222 million at the December 31, 2016 exchange rate), punitive and aggravated damages of 100 million Canadian dollars ($74 million at the December 31, 2016 exchange rate), the costs of distributing all monies awarded to class members, pre-judgment interest, and costs on a substantial indemnity basis. No steps have been taken in the action except for the service of the claim on Syngenta Canada Inc. and Syngenta AG. Subject to any preliminary motions that Syngenta determines should be brought, the next step in these proceedings will be a certification motion brought by the proposed representative plaintiff. Syngenta strongly believes that the claims in this action are without merit and will vigorously defend the action.

Canada Beekeeper Lawsuits

In September 2014, a claim was filed in Ontario, Canada by two proposed representative members on behalf of a putative class comprising all beekeepers who have owned or continue to own and operate honey producing, pollinating, and/or queen bee rearing businesses in Canada since January 1, 2006, against a number of Syngenta legal entities together with certain entities of a second manufacturer of neonicotinoid insecticides. Plaintiffs allege negligence through the sale by that manufacturer and by Syngenta of products containing such insecticides in the knowledge that they would be injurious to bees and by virtue of misrepresentations and concealment relating thereto. Plaintiffs claim 400 million Canadian dollars ($296 million at the December 31, 2016 exchange rate) general and 50 million Canadian dollars ($37 million at the December 31, 2016 exchange rate) punitive damages. The pleadings in the Ontario proceedings have subsequently been amended by plaintiffs' counsel to add waiver of tort and unlawful conspiracy to the single cause of action, negligence, which was previously pleaded. Both of the additional causes of action are ancillary to and largely dependent on the negligence claim. The Syngenta defendant legal entities (Syngenta Canada Inc. and Syngenta International AG) have filed appearances in the proceedings. Subject to any preliminary motions, the next step in these proceedings will be a certification motion brought by the proposed representative plaintiffs. No dates have been scheduled for any motions at this time. In October 2014, a Motion for Authorization was filed by the same firm of plaintiffs' counsel in Montréal, Quebec seeking permission to bring a similar class proceeding in that province. The proposed representative plaintiff operates a family business specialized in the breeding of queen bees. The Quebec litigation closely resembles the original Ontario lawsuit claiming negligence except that, rather than a nationwide class, it alleges a class limited to Quebec. At this preliminary motion stage damages are unspecified. Notices of appearance have been entered on behalf of the Syngenta defendant legal entities in Quebec. A case management judge has been appointed in the Quebec proceedings. A preliminary motion by Syngenta and the second manufacturer in August 2016 to address evidentiary issues related to the representative plaintiff's proposed Motion for Authorization resulted in an order allowing that manufacturer and Syngenta to examine the proposed representative plaintiff under oath. That examination took place in November 2016. No date has been scheduled for the Motion for Authorization. Syngenta believes the claims in these cases are without merit and will vigorously defend the lawsuits.

Atrazine related litigation

In August 2013, a personal injury Complaint relating to atrazine was filed under seal in the Circuit Court for the Twentieth Judicial Circuit, St. Clair County, Illinois, on behalf of an unnamed minor (the case being brought under the alias James Doe) and his parents, against Syngenta Crop Protection LLC, Syngenta AG, a distributor, Growmark Inc., and three local dealers, M&M Service Company, Hamel Seed & Farm Supply, Inc. and St. Clair Service Company. The Complaint alleges public nuisance, strict liability and negligence, and seeks unspecified damages together with the costs of suit. Answers and Affirmative Defenses were filed on January 21, 2014 for Syngenta Crop Protection LLC as well as the non-Syngenta defendants, and on February 25, 2014 the Answer and Affirmative Defenses of Syngenta AG were also filed. Fact discovery in the litigation opened in March 2014 and is continuing. The claims in the lawsuit have no grounding in fact or science and Syngenta will vigorously defend the lawsuit.

Tax matters

Significant management judgment is required to estimate the tax provisions related to the eventual outcome of reviews and audits by tax authorities of tax returns filed by Syngenta's subsidiaries. Tax returns filed by many of Syngenta's subsidiaries during the past several years are either currently under examination by tax authorities or are open for future examination until expiry under statutes of limitation. Syngenta is also subject to certain tax claims pending before the judiciary. See Note 2 "Uncertain tax positions" for detail regarding two ongoing transfer pricing disputes in Brazil. In Syngenta's opinion, the likelihood is remote that a material amount in excess of current provisions will result from the resolution of any such examination or case. However, it is reasonably possible that actual outcomes and settlements may differ significantly from the estimated liabilities shown in the consolidated balance sheet for income taxes and in Note 17 for other taxes.

25. Commitments and contingencies continued

Environmental matters

It is reasonably possible that Syngenta may be required to make expenditures in excess of the established provisions that are reported in Note 19 to remediate environmental liabilities at some currently or formerly owned, leased and third party sites throughout the world. Further, in cases where it is not possible to estimate reliably the remediation costs that may be incurred in the future for environmental damage that has occurred at sites currently in operation and having no present obligation for environmental damage remediation, no provisions have been made. This is because it is neither possible to determine a time limit beyond which the sites will no longer be operated, nor what remediation costs may be required upon their eventual closure.

In the USA, Syngenta and/or its indemnitors or indemnitees, have been named under federal legislation (the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended) as a potentially responsible party ("PRP") in respect of several sites. Syngenta expects to be indemnified against a proportion of the liabilities associated with a number of these sites by the sellers of the businesses associated with such sites and, where appropriate, actively participates in or monitors the clean-up activities at the sites in respect of which it is a PRP.

Contingencies summary

Given the inherent difficulties in estimating liabilities relating to litigation, tax, environmental and certain other matters due to uncertainty concerning both the amount and timing of future expenditures, it is reasonably possible that additional costs may be incurred materially in excess of provisions recorded for such liabilities. Such expenditures, in excess of established provisions, could have a material effect on Syngenta's consolidated operating results and cash flows for a particular reporting period, but management does not believe they will have a materially adverse effect on Syngenta's consolidated financial position or liquidity, although there can be no assurances in this regard.

26. Principal currency translation rates

Year end rates used for the consolidated balance sheets at December 31, to translate the following currencies into $, are:

	2016 per $	2015 per $
Swiss franc	**1.02**	0.99
British pound sterling	**0.81**	0.68
Euro	**0.95**	0.92
Brazilian real	**3.26**	3.90
Russian ruble	**61.55**	73.89
Ukrainian hryvnia	**27.19**	23.79

Average rates during the years ended December 31, used for the consolidated income and cash flow statements, to translate the following currencies into $, are:

	2016 per $	2015 per $
Swiss franc	**0.99**	0.96
British pound sterling	**0.73**	0.65
Euro	**0.90**	0.90
Brazilian real	**3.49**	3.33
Russian ruble	**67.57**	61.05
Ukrainian hryvnia	**25.43**	21.45

27. Risk management of financial risks

Risk management framework

The nature of Syngenta's business and its global presence exposes it to a range of financial risks. These risks include (i) market risks, which include potential unfavorable changes in foreign exchange rates, interest rates, commodity prices and other market prices (equities, credit spreads etc.), (ii) counterparty risk and (iii) liquidity and refinancing risk.

A financial risk management framework is in place in the form of a Treasury policy approved by the Board of Directors. This policy provides guidance over all Treasury and finance related matters, is underpinned by delegated authority guidelines and is additionally supported by detailed procedures in place across Syngenta. In accordance with its Treasury policy, Syngenta actively monitors and manages financial risk with the objectives of reducing fluctuations in reported earnings and cash flows from these risks and providing economic protection against cost increases. These objectives are achieved through (a) a monthly assessment of the impact of market risks against defined risk limits (see following section), which take into account the risk appetite of Syngenta and (b) the use of a variety of derivative and non-derivative financial instruments.

Financial instruments available for use to mitigate these risks are selected by Syngenta according to the nature of the underlying risk. These instruments are designed to economically hedge underlying risks arising from operational activities and from funding and investment positions. Syngenta does not enter into any speculative financial transactions.

The fair values and the volumes of the derivatives (including the time periods being hedged and the average strike/price achieved) used to manage financial market risks are below, classified by accounting treatment: CF and FV indicate derivatives where cash flow hedge and fair value hedge accounting is applied, respectively; and M2M indicates derivatives that are marked to market through profit or loss and hedge accounting is not specifically required. The transactions are managed to minimize the potential adverse movement for the entire portfolio of the net transactional flows, rather than on an individual currency basis. As such, there is no single average strike or price of the derivatives.

27. Risk management of financial risks continued

2016		Fair value of outstanding derivatives[1]			Maturity profile in $m			
Risk	Accounting treatment	$m quantity	Assets	Liabilities	0–90 days	90 days–1 year	1–5 years	>5 years
Foreign exchange risk ($m)								
Trading transaction – committed	M2M	5,713	48	(117)	(49)	(20)	–	–
Trading transaction – uncommitted	CF	1,542	16	(40)	(6)	(18)	–	–
Trading transaction – uncommitted	M2M	97	–	–	–	–	–	–
Issued financial debt and interest	CF	2,234	–	(272)	–	(82)	(144)	(46)
Interest rate risk	FV	500	21	–	–	–	–	21
Commodity price risk								
Gas[2]	CF	7	2	–	1	1	–	–
Soft commodities[3]	M2M	113	29	–	28	1	–	–
Soft commodities[4]	CF	83	6	–	5	1	–	–
Total		**10,289**	**122**	**(429)**	**(21)**	**(117)**	**(144)**	**(25)**

2015		Fair value of outstanding derivatives[1]			Maturity profile in $m			
Risk	Accounting treatment	$m quantity	Assets	Liabilities	0–90 days	90 days–1 year	1–5 years	>5 years
Foreign exchange risk ($m)								
Trading transaction – committed	M2M	7,133	81	(81)	(21)	18	3	–
Trading transaction – uncommitted	CF	1,456	33	(21)	8	4	–	–
Trading transaction – uncommitted	M2M	127	16	–	–	16	–	–
Issued financial debt and interest	CF	2,234	–	(267)	–	–	(107)	(160)
Interest rate risk	FV	500	25	–	–	–	–	25
Commodity price risk								
Gas[2]	CF	6	–	(2)	(1)	(1)	–	–
Soft commodities[3]	M2M	87	2	(10)	(6)	(2)	–	–
Soft commodities[4]	CF	82	6	–	–	6	–	–
Total		11,625	163	(381)	(20)	41	(104)	(135)

1 The fair values of derivatives are reported in the consolidated balance sheet as shown in Note 28
2 2,277,000 million (2015: 1,888,464 million) British thermal units
3 Mainly 830,985 lbs (2015: 1,637,089 lbs) of coffee
4 4,020,000 bushels (2015: 5,500,000 bushels) of soybean and 11,720,000 bushels (2015: 7,580,000 bushels) of corn

Of the derivatives listed in the table above, hedge accounting is applied wherever possible. Exceptions to this are derivatives where the fair value movements of the hedges and the retranslation of the underlying exposures are largely offset in profit or loss (hedging foreign exchange risk of committed monetary items); or derivatives placed, which do not fulfil the specific requirements of the accounting standard to achieve hedge accounting (hedging foreign exchange risk of uncommitted forecast transactions; commodity price risk: soft commodities, principally Brazil coffee purchases as part of barter programs).

For those transactions which are not designated for hedge accounting purposes where the transactions do not fulfill the specific requirements of the accounting standard to achieve hedge accounting, the gains and losses on those hedging instruments for the year 2016 were as follows:

- Foreign currency forward contracts that are effective economic hedges of forecast cash flows arising from anticipated sales and purchases between Syngenta affiliates and third parties. The amount recorded in profit or loss in 2016 is a loss of $10 million (2015: $nil)
- Commodity derivative contracts that are effective economic hedges of the anticipated purchases of raw materials or purchases, principally purchases related to corn and soybean in North America and Latin America, and the resale of various crops in barter arrangements. The amount recorded in profit or loss in respect of these derivatives in 2016 is a gain of $45 million (2015: loss of $1 million). The profit or loss impact from the corresponding forecasted transactions occurs when the related finished product inventories are sold, which is generally in the year following recognition of the gain or loss on the hedge.

27. Risk management of financial risks continued

Assessment of the impact of market risks

The impact of market risks is assessed using a variety of Value-at-Risk (VaR) and Earnings-at-Risk (EaR) methods. These methods are adjusted to reflect the nature of the exposures and the impact of the exposures on profit or loss of the financial year. The specific methods used to assess the impact of financial risks are described below:

Risk	Method	Exposure (financial statement item)	Time horizon (months)
Foreign exchange risk			
Trading transaction – committed	VaR	Monetary asset and liability carrying amounts	1
Trading transaction – uncommitted	EaR	Operating income	12
Issued financial debt and interest	VaR	Monetary liability carrying amounts	1
Translation	VaR	Cumulative translation adjustment in OCI	1
Interest rate risk	EaR	Interest expense	12
Commodity price risk	EaR	Operating income	12

VaR and EaR calculations are risk management tools designed to statistically estimate with a pre-set probability the maximum amount of potential losses in value (VaR) or earnings (EaR) over a specific (holding) time period given current and forecast positions and possible movements in market prices. The VaR and EaR methods used by Syngenta estimate the gross impact on the consolidated financial statements if the underlying items were not hedged and the net impact of the combined underlying hedged items and the related hedging instruments. VaR and EaR calculations attempt to recognize that holding different assets and liabilities or incurring different future cash flow exposures may reduce portfolio risk through diversification. Such diversification effects are captured within the calculations, which aim to present the risk based on Syngenta's currency exposure as a whole, rather than the sum of the exposures to the individual currency pairs within the portfolio of exposures. Using historical data, the VaR and EaR calculations are designed to predict possible changes in the markets in the future at a 99 percent confidence level, with a 1 percent probability that actual results will be worse than calculated. The time horizon used to calculate the VaR figures for each risk is determined by the time period over which management forecasts and monitors changes in the risk and in Syngenta's exposure to it and takes mitigating actions in response to those changes.

The assessment of the impact of market risks is performed monthly and the results are compared against annually defined risk limits. In cases where the net impact is higher than a risk limit, Syngenta enters into derivative financial instrument transactions in order to stay within the risk limits approved in the risk management policy. Breaches of risk limits, should they occur, are immediately reported to senior management.

Syngenta cannot predict future movements in risk variables precisely, therefore calculations of the impact of market risks neither represent actual losses nor consider the effects of potential favorable movements in underlying risk variables. Accordingly, these calculations may only be an indication of future movements to the extent the historic market patterns repeat in the future.

Foreign exchange risk

Operating worldwide exposes Syngenta to foreign exchange transaction and translation risk at both the Group and subsidiary level. Syngenta's policy is to hedge the effect of foreign exchange translation risk on shareholders' equity only in specific circumstances, for example to protect the value of temporary excess foreign currency denominated cash positions.

Foreign exchange transaction risk – committed

Syngenta's individual subsidiaries predominantly transact their operational activities in their respective functional currencies. However, the globally integrated nature of Syngenta's business results in its subsidiaries bearing some amount of transactional balance sheet risk, because some monetary items (including financial liabilities) are denominated in foreign currencies.

Such committed foreign currency exposures are largely generated by the routing of products from Syngenta's central manufacturing sites to its foreign locations. The risk management strategy is to ensure that these committed exposures are fully hedged, unless otherwise approved by Group Treasury, for example where not deemed cost-effective or where there is no forward market for a specific currency.

The derivative instruments that Syngenta's risk management policy allows to be used to manage the risk are foreign exchange forward contracts and cross currency swaps with the same risk (foreign exchange currency index), where the fair value movements of the hedges and the retranslation of the underlying committed exposures are largely offset in profit or loss.

The derivative instruments are placed with the same maturity as the expected cash flows of the hedged transactions so that the timing of the cash flows of the items within the hedged exposure effectively matches the timing of the cash flows of the derivative instrument.

Net committed transactional currency exposures are identified and reported on a monthly basis by business units. The impact of the hedging program can be illustrated in the VaR calculations for committed exposures, which relate to the revaluation of exposures relative to spot rates over a monthly period. The impact of interest differentials and other factors is not included in these calculations.

27. Risk management of financial risks continued

($m, except risk reduction %)	December 31, 2016 Value-at-Risk			December 31, 2015 Value-at-Risk		
Underlying currency (1-month holding period)	**Gross impact**	**Net impact**	**Risk reduction**	Gross impact	Net impact	Risk reduction
Swiss franc	**88**	**8**	**90%**	40	20	50%
Brazilian real	**119**	**2**	**99%**	96	–	100%
British pound sterling	**23**	**–**	**99%**	24	8	68%
Russian ruble	**39**	**–**	**99%**	23	–	99%
Rest of world	**92**	**22**	**77%**	83	24	71%
Total undiversified	**361**	**32**	**91%**	266	52	80%
Diversification	**(207)**	**(24)**	**89%**	(155)	(32)	79%
Net VaR	**154**	**8**	**95%**	111	20	82%

At December 31, 2016, the Value-at-Risk for a one month holding period, after hedges, at a 99 percent confidence level was $8 million (December 31, 2015: $20 million).

The largest exposures arise in Brazilian real, Swiss franc, British pound sterling and Russian ruble. Switzerland and Great Britain house large research and manufacturing sites. In recent years, due to the growth of Syngenta sales, exposures in emerging markets (particularly Brazil) have become significant.

Foreign exchange transaction risk – uncommitted
Uncommitted transactions are expected, highly probable future transactions for which Syngenta does not yet have a contractual right or obligation (mainly sales and costs).

The US dollar represents the biggest single currency for both sales and costs. However, currency mismatches arise from Syngenta having a centralized cost base, denominated mainly in Swiss francs, British pounds and US dollars, against a local selling base, denominated mainly in US dollars, Euros and various other currencies, including those in emerging markets. In addition, due to the seasonality of Syngenta's business, the majority of sales occur during the first half of the year whereas costs tend to occur more linearly throughout the year.

The risk management objective is to minimize the impact of changes in foreign exchange rates on the operating income forecasted to result from these transactions. Syngenta considers hedging this exposure unless it can reliably expect that operating income could, without significant adverse economic impact, be protected by adjusting the pricing of forecast transactions for changes in foreign exchange rates before those transactions occur. Hedging transactions are managed to minimize the potential adverse movement for the entire portfolio of the net transactional flows, rather than on an individual currency basis. Transactions in a specific calendar year are managed cumulatively in separate portfolios.

The cumulative diversified risk of the whole portfolio can be reduced by entering into derivative transactions for a portion or the full amount of the individual transactions so that the remaining risk of the whole portfolio is at acceptable levels within clearly defined risk limits. The risk management objective is applicable for transactions in the following 24 months. Currently transactions for the next 12 month period are being hedged.

The derivative instruments that Syngenta's risk management policy allows to be used to manage the risk are:

- foreign exchange forward contracts and net purchased currency options with the same risk (foreign exchange currency index) which are eliminating or reducing the uncertainty in the cash flows
- placed mainly with the same or (to a lesser extent) with shorter maturity than the timing of the cash flows being hedged so that the timing of the cash flows of the hedged transactions effectively matches the timing of the cash flows of the derivative instrument.

The impact of the hedging program on operating income can be illustrated in the Earnings-at-Risk calculation performed for anticipated net transactional currency flows for the following year taking into account related currency hedges.

($m, except risk reduction %)	December 31, 2016 Earnings-at-Risk			December 31, 2015 Earnings-at-Risk		
Underlying currency (12-month holding period)	**Gross impact**	**Net impact**	**Risk reduction**	Gross impact	Net impact	Risk reduction
Swiss franc	**161**	**67**	**58%**	199	90	55%
Argentine peso	**27**	**27**	**–**	500	500	–
Brazilian real	**112**	**112**	**–**	94	94	–
Russian ruble	**29**	**13**	**56%**	10	8	–
Euro	**44**	**44**	**–**	40	39	3%
British pound sterling	**51**	**32**	**37%**	40	25	38%
Rest of world	**206**	**188**	**9%**	191	159	17%
Total undiversified	**630**	**483**	**23%**	1,074	915	15%
Diversification	**(445)**	**(355)**	**20%**	(498)	(387)	22%
Net EaR	**185**	**128**	**31%**	576	528	8%

At December 31, 2016, the total potential adverse movement for 2017 net transactional flows after hedges relative to year-end, at a 99 percent confidence level, was $128 million (December 31, 2015: $528 million).

27. Risk management of financial risks continued

The net resulting Earnings-at-Risk figures at December 31, 2016 decreased by $400 million compared with December 31, 2015 mainly due to the large reduction in the risk of the Argentine peso (December 31, 2015: $500 million vs. December 31, 2016: $27 million). This reduction is a product of the Argentine peso stabilizing through the year after the sharp devaluation in December 2015 which occurred due to the election of the new government in Argentina.

The risk is similar to the levels seen at the end of 2014 with the greatest exposures being the Swiss franc, where Syngenta has a significant cost base in Switzerland with no material offsetting sales, and the Brazilian real, where a significant cost base is only partially offset by sales because sales in Brazil are largely dollarized.

Foreign exchange transaction risk – issued financial debt and interest

Syngenta has a funding strategy which involves securing a diversification of funding sources in different markets and maintaining an optimal currency mix of debt.

This additional foreign currency exposure arises from the debt issuances in Euro and in Swiss franc under the Euro Medium Term Note (EMTN) program. The risk management objective is to minimize the impact of changes in foreign exchange rates on these foreign currency denominated debt interest and principal repayments.

The foreign exchange risk on the foreign currency denominated debt is managed mostly by derivative instruments, and to a lesser extent within a portfolio of other committed transactions, so that no material foreign currency risk remains as a result of the foreign currency denominated debt.

The derivative instruments which Syngenta's risk management policy allows to be used to manage the risk are:

- cross currency swaps designated as hedges of foreign exchange risk of future interest and principal payments on foreign currency financial debt which are eliminating or reducing the uncertainty in the cash flows
- placed mainly with the same terms as the items being hedged so that the timing of the interest and principal repayments of the hedged transactions effectively matches the timing of the cash flows of the derivative instrument.

Foreign exchange translation risk

Translation exposure arises from the consolidation of foreign currency denominated financial statements of Syngenta's subsidiaries. This is reported as currency translation effects in OCI.

Translation risk can be significant; however, Syngenta regards its equity base to be of sufficient magnitude generally to absorb the short- to medium-term impact of exchange rate movements.

Syngenta can use both foreign currency denominated debt and net investment hedging to manage this exposure. The latter incorporates specific actions to protect the value of temporary excess foreign currency denominated cash positions. No hedging was undertaken for exposures of this type during the years ended December 31, 2016 or 2015. The exposure is deemed to be mitigated by the large net asset base of Syngenta and consequently no additional management of the exposure was undertaken in 2016 or 2015.

The table below presents the 1-month translation Value-at-Risk:

($m)	December 31, 2016 Value-at-Risk	December 31, 2015 Value-at-Risk
Currency of net investment in subsidiary (1-month holding period)	**Gross impact**	Gross impact
Brazilian real	**156**	164
Swiss franc	**145**	287
Euro	**44**	56
British pound sterling	**59**	61
Rest of world	**135**	128
Total undiversified	**539**	696
Diversification	**(204)**	(277)
Net VaR	**335**	419

At December 31, 2016, the Value-at-Risk for a one month holding period at a 99 percent confidence level was $335 million (December 31, 2015: $419 million). The Value-at-Risk at December 31, 2016 is lower than as of December 31, 2015 mainly driven by an increased Swiss franc volatility in 2015 due to the removal by the Swiss Central Bank of the cap of the Swiss franc against the Euro.

The two largest single currency exposures arise in the Brazilian real and Swiss franc, driven by the large operations and investments in facilities in Switzerland and Brazil.

Interest rate risk

Syngenta is exposed to fluctuations in interest rates on its borrowings (including forecasted borrowings) and excess cash. While the majority of Syngenta's borrowings have fixed interest rates, portions of Syngenta's net borrowings, including its short-term commercial paper program and local borrowings, are subject to changes in short-term interest rates.

Syngenta monitors its interest rate exposures and analyzes the potential impact of interest rate movements on net interest expense. The risk management strategy involves ensuring an efficient fixed/floating mix of total debt within approved interest rate limits.

The derivative instruments allowed to manage the risk are interest rate swaps relating to future interest payments of financial debt liabilities. The derivative instruments are placed with the same maturity as the expected cash flows of the hedged transactions so that the timing of the cash flows of the hedged transactions effectively matches the timing of the cash flows of the derivative instrument.

At December 31, 2016, the net amount of Earnings-at-Risk on floating rate debt due to potential changes in interest rates (a parallel shift of 100 bps was applied) was $10 million (2015: $10 million). The net amount of Earnings-at-Risk on net debt, as defined under "Capital structure" below, due to potential changes in interest rates was immaterial at December 31, 2016 and 2015.

27. Risk management of financial risks continued

Commodity price risks

Operating in the agribusiness sector, changes in certain commodity prices affect Syngenta's reported operating results and cash flows. On a limited basis, Syngenta enters into derivative transactions to hedge the exposure of its cost base to commodity prices. This activity comprises oil and natural gas hedging in the UK and USA, as well as soft commodity hedging for corn and soybean purchases by the Seeds business in the USA, Canada, Brazil and Argentina, where Syngenta contracts to purchase various seed crops from growers and hedges the cost of the purchases. In barter arrangements where Syngenta sells products in exchange for receiving a certain amount of a commodity crop, Syngenta hedges the value of the crop. At December 31, 2016 and 2015, there were no open hedging transactions for Brazil and Argentina corn and soybean price risk.

Syngenta has indirect exposure to oil price fluctuations mainly through the impact of oil prices on the cost of both raw materials, especially chemical intermediates in the Crop Protection business, and distribution activities. At December 31, 2016, there was no hedge protection in place for oil for 2017 (December 31, 2015: no hedge protection in place for oil for 2016). As the exposure to oil is indirect, Syngenta does not calculate the Earnings-at-Risk due to potential changes in oil prices.

Natural gas exposure occurs in Syngenta's primary manufacturing sites and Syngenta is managing the exposure by hedging the main risk component, which is the natural gas market price, contractually linked to the NYMEX natural gas benchmark price. The other risk components within the exposure are immaterial.

The main objective of managing commodity price risk is to reduce the impact of commodity price changes on operating income and to provide economic protection against future cost increases. Syngenta uses fixed price contracts and derivatives (both Over-the-Counter (OTC) and exchange traded instruments, including commodity option and futures contracts) to achieve this objective. The derivative instruments are placed with the same maturity as the expected cash flows of the hedged transactions so that the timing of the cash flows of the hedged transactions effectively matches the timing of the cash flows of the derivative instrument.

At December 31, 2016, the net amount of Earnings-at-Risk due to potential changes in natural gas prices was not material. Earnings-at-Risk due to potential changes in prices of soft commodities, principally corn and soybean, assuming a 12-month holding period are presented below.

($m, except risk reduction %)	December 31, 2016 Earnings-at-Risk			December 31, 2015 Earnings-at-Risk		
Soft commodities	Gross impact	Net impact	Risk reduction	Gross impact	Net impact	Risk reduction
Total undiversified[1]	**36**	**28**	**23%**	40	16	60%

1 As the main soft commodities are largely correlated to each other, the impact of diversification is immaterial

The Earnings-at-Risk of soft commodities is driven by their high price volatility compared to other asset classes. The hedging program reduces overall 12-month Earnings-at-Risk at December 31, 2016 to $28 million (December 31, 2015: $16 million). The increase in net risk in 2016 is mainly due to lower hedge ratios.

Derivatives and hedge accounting

Syngenta seeks to apply, wherever possible, hedge accounting to present its financial statements in accordance with the economic purpose of the hedging activity. Hedges for which hedge accounting is not adopted either (a) do not meet the requirements for hedge accounting treatment under IFRS or (b) when combined with the accounting for the underlying hedged items, impact the financial statements in a manner aligned with the economic purpose of the hedging transaction without the need to adopt hedge accounting treatment, for example hedges of monetary items denominated in foreign currency.

Syngenta determines the economic relationship between the hedged items and the hedging instruments by reviewing the critical terms of the hedged items and the hedging instruments. As a result Syngenta concludes that the risk being hedged for the hedged items and risk inherent in the hedging instruments are sufficiently aligned, there is no inherent mismatch in the hedging relationship and a 100 percent hedge ratio applies both for the actual quantities hedged and for the hedge accounting, except as described below.

For the hedging of foreign currency risk of uncommitted forecasted trading transactions, because the exposures are largely generated by the routing of products from Syngenta's central manufacturing sites to its foreign locations, the profit or loss impact from the corresponding transactions occurs when the related finished product inventories are sold to third parties. When entering into derivative hedging contracts, Syngenta selects maturity dates based on the forecast period that Syngenta holds inventories of its products for each commercial market by hedged currency exposure. Limited variability in the holding period occurs mainly due to timing of the third party sales transactions ("inventory holding period mismatch").

For the hedging of commodity price risk of soy and corn, there is variability between the index being hedged (CBOT) and the drivers of the actual exposures (local soy elevator prices based on CBOT and Syngenta seeds production and selling prices based on CBOT). The variability is, however, limited to individual transactions within the group of transactions in this hedging program – and a hedge ratio of 100 percent is observed for the whole group of transactions.

27. Risk management of financial risks continued

The following table summarizes the accounting treatment, sources of ineffectiveness and the effectiveness assessment method for the identified financial market risks:

Risk	Accounting treatment	Potential sources of ineffectiveness	Effectiveness assessment Method	Effectiveness assessment Frequency
Foreign exchange risk:				
Trading transaction – uncommitted	CF	Lower volume of hedged items; inventory holding period mismatch	Critical terms match	Quarterly
Issued financial debt and interest	CF	Lower volume of hedged items	Critical terms match	Quarterly
Interest rate risk	FV	Lower volume of hedged items	Critical terms match	Quarterly
Commodity price risk:				
Gas	CF	Lower volume of hedged items	Critical terms match	Semi-annually
Soft commodities	CF	Lower volume of hedged items; index mismatch	Regression analysis	Quarterly

Ineffectiveness is recognized in the consolidated income statement in Other general and administrative for hedges of uncommitted foreign currency forecast transactions, in Financial expense, net for hedges of committed foreign currency monetary items, in Financial expense, net for hedges of interest rate risk and in Cost of goods sold for hedges of commodity price risk. For the years ended December 31, 2016 and 2015, none of the above potential sources of ineffectiveness, individually or collectively, resulted in material amounts of actual ineffectiveness being reported for any hedge accounting relationships.

Fair Value Hedge Accounting

The amounts being reported in the statement of financial position for the fair value hedging relationships at December 31, 2016 and 2015 are as follows:

	Carrying amount of hedged item		Accumulated amount of fair value adjustment	
	Liabilities		Liabilities	
Risk ($m)	**2016**	2015	**2016**	2015
Interest rate risk – for continuing hedging relationships	**515**	519	**(17)**	(21)
Interest rate risk – for hedged items that have ceased to be adjusted	**83**	85	**(8)**	(10)
Total	**598**	604	**(25)**	(31)

The carrying amounts of the hedged items, including the fair value adjustments to the hedged items, are reported under Current financial debt and other financial liabilities and Financial debt and other non-current liabilities.

The change in the value of the hedged items during the period for hedge effectiveness purposes was $7 million (2015: $4 million).

Cash flow hedges

The gains/(losses) on derivative instruments recognized in and classified out of the cash flow hedge reserve during the years ended December 31, 2016 and 2015 were as follows. The amounts shown exclude related income tax effects, which are disclosed in Note 7. This is a change in presentation from the corresponding tables in prior years' financial statements, which included the related income tax effects.

	Continuing hedging relationships					Hedge accounting no longer applied			
	Foreign exchange risk		Commodity price risk						
2016 ($m)	Trading transaction – uncommitted	Issued financial debt and interest	Gas	Soft commodities	Subtotal	Foreign exchange risk – translation	Issued financial debt and interest	Subtotal	Total
Opening balance	4	12	–	–	16	(69)	(2)	(71)	(55)
(Losses)/gains recognized in OCI:									
on hedges as designated	36	(43)	–	3	(4)	1	–	1	(3)
Transferred directly to assets or liabilities	–	–	–	(7)	(7)	–	–	–	(7)
Reclassifications to profit or loss:									
(Losses)/gains on hedges as designated:									
Cost of goods sold	–	–	–	7	7	–	–	–	7
General and administrative	(63)	–	–	–	(63)	–	–	–	(63)
Financial expense, net	–	100	–	–	100	–	2	2	102
Closing balance	(23)	69	–	3	49	(68)	–	(68)	(19)

27. Risk management of financial risks continued

2015 ($m)	Continuing hedging relationships: Foreign exchange risk: Trading transaction – uncommitted	Continuing hedging relationships: Foreign exchange risk: Issued financial debt and interest	Continuing hedging relationships: Commodity price risk: Gas	Continuing hedging relationships: Commodity price risk: Soft commodities	Subtotal	Hedge accounting no longer applied: Foreign exchange risk – translation	Hedge accounting no longer applied: Issued financial debt and interest	Subtotal	Total
Opening balance	46	(86)	(3)	21	(22)	(69)	(2)	(71)	(93)
(Losses)/gains recognized in OCI:									
on hedges as designated	(12)	1	(2)	(21)	(34)	–	(5)	(5)	(39)
undesignated hedging costs recognized in OCI	(9)	–	–	–	(9)	–	–	–	(9)
Transferred directly to assets or liabilities	–	–	–	(4)	(4)	–	–	–	(4)
Reclassifications to profit or loss:									
(Losses)/gains on hedges as designated:									
Cost of goods sold	–	–	5	4	9	–	–	–	9
General and administrative	(21)	–	–	–	(21)	–	–	–	(21)
Financial expense, net	–	97	–	–	97	–	5	5	102
Closing balance	4	12	–	–	16	(69)	(2)	(71)	(55)

Amounts reclassified from the cash flow hedge reserve into profit or loss are recognized in the consolidated income statement in Other general and administrative for hedges of uncommitted foreign currency forecast transactions, in Financial expense, net for hedges of committed foreign currency monetary items and for hedges of interest rate risk and in Cost of goods sold for hedges of commodity price risk.

Credit risk

Credit risk arises from the possibility that counterparties involved in transactions with Syngenta may default on their obligation, resulting in financial losses to Syngenta. Credit risk relates both to financial assets (including derivatives, marketable securities and money market contracts) as well as to operational assets managed by Syngenta's businesses (such as trade receivables).

Syngenta's maximum exposure to credit risk is the carrying values of its financial assets and receivables, including derivatives with positive market values. These amounts are disclosed in Note 28.

Syngenta has policies and operating guidelines in place to ensure that financial instrument transactions are only entered into with high credit quality banks and financial institutions. These include limits in respect of counterparties to ensure that there are no significant concentrations of credit risk. Syngenta continuously monitors the creditworthiness of its counterparties based on credit ratings and credit default swap data.

At December 31, 2016, Syngenta had no treasury or derivative transactions representing a significant concentration of credit risk. No credit losses have been incurred from investments in derivative financial instruments during the years ended December 31, 2016 and 2015.

To minimize its exposure to derivative positions, Syngenta enters into netting agreements under an International Swaps and Derivatives Association (ISDA) master agreement with its respective counterparties. In addition, for almost all derivative positions, Syngenta has entered into Credit Support Annex contracts (CSAs) under which cash is exchanged as collateral. The CSA contracts cumulatively limit either Syngenta's or the counterparty's aggregate credit risk exposure to no more than $1 million per counterparty on a weekly settlement basis for the positions for which CSA contracts have been agreed. There are no constraints on the cash exchanged and held between counterparties and the collateral can be used as part of operations. At December 31, 2016, an asset amounting to $349 million (2015: $267 million), and a liability amounting to $9 million (2015: $43 million) were recorded representing cash paid and received by Syngenta as collateral under these CSAs.

The impact of credit risk on the fair value of derivatives is considered through market observable credit default swap spreads for Syngenta and its counterparties. The impact on the fair value of Syngenta's derivative positions at December 31, 2016 and 2015 of the risk of default by financial counterparties was not material.

The credit risk to operational assets is managed through the use of credit limits and is partially mitigated through commercial activities, which include barter operations, cash sales incentives and obtaining other security from customers where appropriate.

27. Risk management of financial risks continued

The following tables show the effect of set-off rights that apply to financial assets and liabilities under the above ISDA and CSA agreements at December 31, 2016 and 2015. Syngenta's rights under these arrangements would become enforceable in the event of a future default of the respective counterparty.

	2016		2015	
($m)	Assets	Liabilities	Assets	Liabilities
Gross recognized derivative financial instrument fair values (Note 28)	**122**	**(429)**	163	(381)
Amounts offset in consolidated balance sheet	**–**	**–**	–	–
Net amounts per consolidated balance sheet	**122**	**(429)**	163	(381)
Amounts subject to conditional set-off rights but not offset in consolidated balance sheet:				
ISDA Master netting agreements for derivative financial instruments	**(60)**	**60**	(65)	65
Collateral (received)/ paid by Syngenta under CSA agreements	**(9)**	**349**	(43)	267
Net amounts in the event that all conditional set-off rights are applied	**53**	**(20)**	55	(49)

Liquidity risk and refinancing risk

Within Syngenta's risk management framework, liquidity risk is defined as the risk of being unable to raise funds to meet payment obligations when they fall due.

Refinancing or funding risk is defined as the risk of being unable, on an ongoing basis, to borrow in the market to fund actual or proposed commitments. Syngenta mitigates its liquidity and refinancing risk by maintaining: a committed unsecured funding facility; ongoing discussions with its core banks to best monitor its funding capacity; simulations; and diversification of its debt portfolio.

Syngenta's liquidity risk policy is to maintain at all times sufficient liquidity reserves both at Group and subsidiary level in order to meet payment obligations as they become due and also to maintain an adequate liquidity margin. The planning and supervision of liquidity is the responsibility of the subsidiaries and Group Treasury. Liquidity requirements are forecasted on a weekly basis. Syngenta operates regional or country cash pools to allow efficient use of its liquidity reserves.

Short-term liquidity

Two of Syngenta's largest markets are Europe, Africa and the Middle East and North America. Both sales and operating profit in these two regions are seasonal and are weighted towards the first half of the calendar year, reflecting the northern hemisphere planting and growing cycle. Latin America is another large market for Syngenta and sales and operating profit there are weighted towards the second half of the calendar year, reflecting the southern hemisphere planting and growing cycle. This seasonal operating activity results in seasonal working capital requirements.

Syngenta's principal source of liquidity consists of cash generated from operations. Working capital fluctuations due to the seasonality of the business are supported by short-term funding available from a $2.5 billion Global Commercial Paper program supported by a committed, revolving, multi-currency syndicated credit facility. In January 2016, the amount of this credit facility was increased from $1.5 billion to $2.5 billion. Its contractual expiry date is in 2019 but it has a change of control clause which allows each lender to cancel its commitment unless renegotiated terms are agreed within 30 days of a change of control occurring. In order to address the risk of early termination, ChemChina has provided cover for the backstop facility and also for other financing needs arising from the change of control via a committed Target Facilities Agreement that Syngenta expects to be able to access on successful completion of the ChemChina Tender Offer. The amount drawn under the Global Commercial Paper program at December 31, 2016 was $100 million (2015: $nil). The average outstanding balance under the Global Commercial Paper program for the year 2016 was $1,217 million (2015: $500 million).

The maturity analyses for Syngenta's current financial liabilities other than short-term derivative liabilities are presented in Notes 15 to 17.

The maturities of short-term derivative liabilities are as follows:

($m)	Total	0–90 days	90–180 days	180 days–1 year
2016	**239**	**98**	**36**	**105**
2015	115	90	16	9

Long-term financing

Long-term capital employed is currently financed through eight unsecured bonds, one unsecured floating rate note, and unsecured notes issued under the Note Purchase Agreement in the US Private Placement market. During 2015, the 4.125 percent Eurobond 2015 with the principal of EUR 500 million matured.

During 2015, Syngenta issued an unsecured non-current 12 year EUR 500 million security with a fixed interest rate of 1.25 percent.

The following table shows Syngenta's contractually agreed (undiscounted) interest and principal repayments on long-term financing-related non-derivative financial liabilities and the related derivatives held at December 31, 2016 and 2015. Non-derivative financial liabilities are recorded at amortized cost (less related issuance costs) unless subject to fair value hedge accounting, in which case the liability is adjusted for the change in fair value of the hedged risk to the extent the hedge relationship is effective. Derivative financial liabilities are recorded at fair value. The table therefore shows the total carrying amount of Syngenta's financial debt adjusted for the effect, if any, of applying fair value hedge accounting.

27. Risk management of financial risks continued

	Non-derivative financial liabilities (Unsecured bonds and notes)				Derivative financial liabilities (Interest rate and cross-currency swaps)			
2016 ($m)	Fixed rate interest	Variable rate interest	Principal repayment	Total	Fixed rate interest	Variable rate interest	Repayment[1]	Total
Less than 1 year	66	–	–	66	23	11	0	34
1–3 years	132	–	344	476	46	18	52	116
3–5 years	122	–	602	724	30	31	113	174
5–10 years	162	–	820	982	92	4	37	133
More than 10 years	230	–	1,025	1,255	25	–	54	79
Total payments	**712**	**–**	**2,791**	**3,503**	**216**	**64**	**256**	**536**
Net carrying amount				2,805				190

	Non-derivative financial liabilities (Unsecured bonds and notes)				Derivative financial liabilities (Interest rate and cross-currency swaps)			
2015 ($m)	Fixed rate interest	Variable rate interest	Principal repayment	Total	Fixed rate interest	Variable rate interest	Repayment[1]	Total
Less than 1 year	67	1	–	68	38	4	–	42
1–3 years	134	1	273	408	76	6	72	154
3–5 years	131	–	427	558	68	–	43	111
5–10 years	196	–	1,372	1,568	113	–	131	244
More than 10 years	257	–	1,047	1,304	40	–	32	72
Total payments	785	2	3,119	3,906	335	10	278	623
Net carrying amount				3,137				267

1 The repayments above (and the net carrying amount of the derivative financial liabilities) do not include the amounts paid as collateral

Forecast data for liabilities that may be incurred in the future is not included in the table above. Amounts in foreign currency were translated to US dollars at the closing rate at the reporting date. Variable payments at each year end arising from financial instruments were calculated based on the forward interest rate yield curve and the spread that Syngenta pays on its outstanding debt and open derivatives at December 31, 2016 and 2015, respectively. Non-derivative financial liabilities, repayment of which can be demanded by the counterparty at any time, have been assigned to the earliest repayment period.

Capital structure

Absent major acquisitions, Syngenta targets maintaining a solid investment grade credit rating, as recognized by major third party rating agencies, which it currently believes provides an optimal balance between financial flexibility and the cost of capital. Syngenta manages capital by monitoring levels of net debt, as calculated below, and equity against targets. Syngenta defines net debt as excluding financing-related derivatives and related collateral paid and received under CSA agreements as these balances offset each other. Capital is returned to shareholders primarily through dividend payments, with the aim of continuous dividend growth, complemented by tactical share repurchases.

The net debt to equity ratio was 29 percent at December 31, 2016 (31 percent at December 31, 2015).

The components of net debt at December 31, 2016 and 2015 are as follows:

($m)	2016	2015
Current financial debt	767	547
Non-current financial debt	2,854	3,183
Cash and cash equivalents	(1,284)	(1,141)
Marketable securities[1]	(56)	(3)
Net debt at December 31	**2,281**	2,586

1 Included within ‘Derivative and other financial assets’ and ‘Financial and other non-current assets’

28. Financial assets and liabilities

The following tables show the carrying amounts and fair values of financial assets and liabilities by category of financial instrument and reconciliation to where they are presented in the balance sheet at December 31, 2016 and 2015. The fair value hierarchy level is shown for those financial assets and liabilities that are carried at fair value in the balance sheet.

	Carrying amount (based on measurement basis)				
2016 ($m)	Amortized cost	Fair value level 1	Fair value level 2[1]	Total[1]	Comparison fair value
Cash and cash equivalents	1,284	–	–	1,284	1,284[2]
Trade receivables, net:					
At amortized cost	4,440	–	–	4,440	4,440[2]
Mandatorily measured at fair value through profit or loss	–	–	103	103	103
Total				4,543	4,543
Other accounts receivable:					
Financial assets	255	–	–	255	255[2]
Non-financial assets	–	–	–	315	–[3]
Total				570	
Derivative and other financial assets:					
Derivative financial assets[4]	–	6	92	98	98
Other current financial assets	349	53	–	402	402[2]
Total				500	500
Financial and other non-current assets:					
Loans, receivables and pooled investments	47	47	7	101	101[5]
Equity investments at fair value through OCI	–	1	75	76	76
Other, not carried at fair value	–	–	–	239	–[3]
Derivative financial assets[4]	–	–	24	24	24
Total				440	
Trade accounts payable	3,338	–	–	3,338	3,338[2]
Current financial debt and other financial liabilities:					
Non-derivative financial liabilities	808	–	–	808	808[2]
Derivative financial liabilities[4]	–	–	239	239	239
Total				1,047	1,047
Other current liabilities:					
Financial liabilities	230	–	–	230	230[2]
Non-financial liabilities	–	–	–	944	–[3]
Total				1,174	
Financial debt and other non-current liabilities:					
Non-derivative financial liabilities	2,854	–	–	2,854	2,908[6]
Derivative financial liabilities[4]	–	–	190	190	190
Non-financial liabilities	–	–	–	33	–[3]
Total				3,077	

1 The totals for equity investments at fair value through OCI include $75 million of level 3 investments, mainly within Syngenta's venture business unit, presented in the level 2 column in the table above. The main valuation input for these investments is the price from their most recent shareholder financing transactions
2 Carrying amount approximates the estimated fair value due to the short-term nature of the financial instruments
3 Fair value is not required to be disclosed for non-financial assets and non-financial liabilities, including defined benefit pension assets
4 Derivative financial assets and liabilities are measured at fair value through profit or loss except that gains and losses on cash flow hedges of forecast transactions are not recognized in profit or loss until the hedged transaction is recognized in profit or loss
5 Fair values of these receivables are measured by discounting their cash flows at interest rates derived using observable yields on government bonds with maturities and currencies that match those of the respective receivable and the estimated credit risk of each receivable. The total fair value disclosed is due from counterparties that have not issued traded bonds and represents a level 3 fair value measurement
6 Financial liabilities represent both exchange traded bonds and non-exchange traded private placement notes issued by Syngenta. The fair value disclosed consists of level 2 fair value measurements derived from observable price quotations for these bonds, except for one private placement note with a fair value of $144 million, which is a level 3 measurement because market interest rates and credit rates are not observable for the full period through to its maturity date in 2035

28. Financial assets and liabilities continued

2015 ($m)	Carrying amount (based on measurement basis) Amortized cost	Fair value level 1	Fair value level 2[1]	Total[1]	Comparison fair value
Cash and cash equivalents	1,141	–	–	1,141	1,141[2]
Trade receivables, net:					
At amortized cost	4,023	–	–	4,023	4,023[2]
Mandatorily measured at fair value through profit or loss	–	–	105	105	105
Total				4,128	4,128
Other accounts receivable:					
Financial assets	384	–	–	384	384[2]
Non-financial assets	–	–	–	337	–[3]
Total				721	
Derivative and other financial assets:					
Derivative financial assets[4]	–	6	128	134	134
Other current financial assets	267	–	–	267	267[2]
Total				401	401
Financial and other non-current assets:					
Loans, receivables and pooled investments	45	51	7	103	103[5]
Equity investments at fair value through OCI	–	2	71	73	73
Other, not carried at fair value	–	–	–	191	–[3]
Derivative financial assets[4]	–	–	29	29	29
Total				396	
Trade accounts payable	3,311	–	–	3,311	3,311[2]
Current financial debt and other financial liabilities:					
Non-derivative financial liabilities	615	–	–	615	615[2]
Derivative financial liabilities[4]	–	–	115	115	115
Total				730	730
Other current liabilities:					
Financial liabilities	209	–	–	209	209[2]
Non-financial liabilities	–	–	–	774	–[3]
Total				983	
Financial debt and other non-current liabilities:					
Non-derivative financial liabilities	3,197	–	–	3,197	3,218[6]
Derivative financial liabilities[4]	–	–	267	267	267
Non-financial liabilities	–	–	–	37	–[3]
Total				3,501	

1 The totals for equity investments at fair value through OCI include $71 million of level 3 investments, mainly within Syngenta's venture business unit, presented in the level 2 column in the table above. The main valuation input for these investments is the price from their most recent shareholder financing transactions
2 Carrying amount approximates the estimated fair value due to the short-term nature of the financial instruments
3 Fair value is not required to be disclosed for non-financial assets and non-financial liabilities, including defined benefit pension assets
4 Derivative financial assets and liabilities are measured at fair value through profit or loss except that gains and losses on cash flow hedges of forecast transactions are not recognized in profit or loss until the hedged transaction is recognized in profit or loss
5 Fair values of these receivables are measured by discounting their cash flows at interest rates derived using observable yields on government bonds with maturities and currencies that match those of the respective receivable and the estimated credit risk of each receivable. The total fair value disclosed is due from counterparties that have not issued traded bonds and represents a level 3 fair value measurement
6 Financial liabilities represent both exchange traded bonds and non-exchange traded private placement notes issued by Syngenta. The fair value disclosed consists of level 2 fair value measurements derived from observable price quotations for these bonds, except for one private placement note with a fair value of $147 million, which is a level 3 measurement because market interest rates and credit rates are not observable for the full period through to its maturity date in 2035

28. Financial assets and liabilities continued

The levels of fair value hierarchy used above are defined as follows:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data.

The fair values of equity shareholdings subject to a lock-up period where the underlying shares are actively traded on a stock exchange is derived by applying a discount to the market price and are classified as level 2. They are reclassified as level 1 on expiry of the lock-up period. In 2016 and 2015, there were no transfers between level 1 and level 2 of the fair value hierarchy or between the fair value and amortized cost categories. In 2015, one equity shareholding was sold for $13 million in response to an offer from a third party to acquire all the equity of the company concerned. There were no transfers during the years ended December 31, 2016 and 2015 into or out of level 3 of the fair value hierarchy.

Movements in level 3 financial assets for the years ended December 31, 2016 and 2015 were as follows:

($m)	2016	2015
January 1	71	66
Gains/(losses) recognized on equity instruments at fair value through OCI	–	(2)
Additions due to issues	4	21
Disposals due to sales	(1)	(14)
Currency translation effects and other	1	–
December 31	**75**	**71**

Income, expense, gains and losses relating to financial instruments recognized in profit or loss during the years ended December 31, 2016 and 2015 are as follows:

2016 ($m)	Amortized cost loans and receivables[1]	Derivative assets and liabilities	Liabilities carried at amortized cost	Total
Recognized within Financial expense, net[2]:				
Interest income	181	–	–	181
Interest expense	(7)	(35)	(158)	(200)
Currency gains/(losses), net	–	(253)	–	(253)
Recognized within Operating income:				
Impairment charges	(67)	–	–	(67)
Total	**107**	**(288)**	**(158)**	**(339)**

2015 ($m)	Amortized cost loans and receivables[1]	Derivative assets and liabilities	Liabilities carried at amortized cost	Total
Recognized within Financial expense, net[2]:				
Interest income	150	–	–	150
Interest expense	(6)	(31)	(132)	(169)
Currency gains/(losses), net	–	(215)	–	(215)
Recognized within Operating income:				
Impairment charges	(76)	–	–	(76)
Total	68	(246)	(132)	(310)

1 Includes immaterial amounts relating to financial assets classified as at fair value through profit or loss
2 Financial expense, net also includes $19 million of bank charges (2015: $22 million)

Reported gains and (losses) recognized in OCI on revaluation of equity investments that were designated at fair value through OCI were $nil and $(3) million for the years ended December 31, 2016 and 2015, respectively.

29. New IFRSs and accounting policies

New IFRSs

Syngenta has adopted the following revised IFRSs from January 1, 2016. These IFRSs have not been early adopted and their adoption had no material impact on these consolidated financial statements:

- "Accounting for Acquisitions of Interests in Joint Operations", Amendments to IFRS 11. The amendments clarify that the acquisition accounting and disclosure requirements of IFRS 3 "Business Combinations" must be applied to the acquisitions of an interest in a joint operation. Syngenta was required to apply the amendments prospectively from January 1, 2016. There were no such acquisitions during 2016.
- "Clarification of Acceptable Methods of Depreciation and Amortization", Amendments to IAS 16 and IAS 38. The amendments state that a unit of revenue depreciation method for property, plant and equipment is inappropriate, and that a unit of revenue amortization method for intangible assets is presumed to be inappropriate unless the economic benefits derived from the asset are highly correlated with revenues or the asset's use is conditional on a measure of revenue such as a threshold amount. Syngenta was required to apply the amendments retrospectively.
- "Agriculture: Bearer Plants" Amendments to IAS 16 and IAS 41, requires bearer plants to be accounted for and reported as property, plant and equipment instead of as biological assets.
- The "Annual Improvements to IFRSs" amendments for the 2012–14 annual improvement cycles.
- "Disclosure Initiative", amendments to IAS 1, amended guidance for presenting gains and losses recognized in OCI by associates and joint ventures, presenting the notes to the financial statements and including additional line items and subtotals in financial statements.

The relevant new or revised IFRSs that Syngenta has not yet adopted are the following:

- IFRS 9 "Financial Instruments" was published in July 2014. IFRS 9 was published in stages and Syngenta early adopted an earlier version, IFRS 9 (December 2013) in 2014. The July 2014 version of IFRS 9 is the complete and final version and contains certain revisions to the financial asset classification and measurement requirements in the December 2013 version, the most important being the addition of a third business model for asset classification with objectives of both collecting contractual cash flows from the assets and selling the assets. On the basis of the financial assets it holds at December 31, 2016, Syngenta does not believe these revisions will have a material impact on its consolidated financial statements. The July 2014 version of IFRS 9 also contains requirements for financial asset impairment that will replace the currently applicable equivalent IAS 39 guidance. Under the new impairment requirements, Syngenta will record allowances for expected credit losses on its financial assets. Syngenta's largest category of financial assets is its trade receivables, which with few exceptions have credit terms of less than 12 months. Under the new requirements, an allowance will be recognized equal to the credit losses Syngenta expects to incur over the lifetime of the trade receivables. This may result in earlier recognition of loss allowances, because under the current guidance credit losses are not recognized until they are incurred. IFRS 9 (July 2014) is effective January 1, 2018 and the new impairment requirements must be applied retrospectively, but restatement of prior periods upon adoption is not required. Early adoption is permitted. Syngenta intends to adopt IFRS 9 (July 2014) on January 1, 2018 and does not currently believe that adoption will have a material impact on its financial statements, but will finalize its assessment of the impact during 2017. The impact on retained earnings upon adoption will depend on the receivable balances outstanding and information available at December 31, 2017 and it is not possible at this time to estimate the impact of aligning impairment allowances with the requirements of the expected credit loss model at that date.
- IFRS 15 "Revenue from Contracts with Customers" was published in May 2014, and contains a single comprehensive set of requirements for the recognition of revenue. Under IFRS 15, reported revenue will represent the transfer of promised goods or services to customers in an amount that reflects the consideration to which Syngenta expects to be entitled in exchange for those goods or services. The recognition requirements relating to contracts where revenue is variable, which for Syngenta include both product sales and licensing agreements, have been expanded significantly in IFRS 15. Each licensing contract Syngenta enters into has unique terms and certain licensing contracts may involve significant upfront or milestone payments in addition to sales-based royalties.
- IFRS 15 allows transition either by retrospective application to and restatement of prior periods, or by a one-time catch-up adjustment to retained earnings ('modified retrospective method'). The mandatory adoption date for IFRS 15 is January 1, 2018 but early adoption is permitted and Syngenta currently intends to adopt IFRS 15 early with effect from January 1, 2017, using the modified retrospective transition method. Under that method, comparative income statements for prior periods are not restated and Syngenta expects any adjustment to retained earnings at January 1, 2017 to be immaterial. IFRS 15 will require the value of third party products and services Syngenta offers as customer incentives in certain of its loyalty programs to be included in Sales and Cost of goods sold. Because Syngenta defines in contracts with the third party suppliers how customers receive these incentives, it will be deemed to be supplying the third party products and services as a principal. Currently Syngenta accounts for these incentives on a net basis and reported Sales and Cost of goods sold include only the value of Syngenta products supplied. Under IFRS 15, the additional amount that will be reported in Sales and Cost of goods sold in 2017 and future years as a result of this change in presentation will depend on customer achievement of targets in the related programs, but is estimated to be $60 million annually. This will have no impact on net income.
- IFRS 16 "Leases", was published in January 2016, and requires a lessee to account for all leases by recognizing an asset for the right to use the leased asset and a corresponding liability for lease payments during the lease term, which is defined as the non-cancellable period of the lease and any additional periods for which the lessee has an option to use the asset that it is reasonably certain to exercise. Leases with a term of less than one year and leases of certain small value assets are exempt from these requirements and will continue to be accounted for in the same way as operating leases under the current IAS 17. The liability for lease payments will be the present value of payments required over the lease term, excluding contingent payments and payments for services associated with the lease. Lease expense will be attributed to accounting periods in the same way as for finance leases under the current IAS 17.

29. New IFRSs and accounting policies continued

Syngenta must adopt IFRS 16 by January 1, 2019 at the latest. Early adoption is permitted on condition that IFRS 15 is also adopted on or before the date IFRS 16 is adopted. IFRS 16 allows transition either by retrospective application to and restatement of prior periods, or by a modified retrospective application method under which IFRS 16 is applied to all leases with a remaining term of more than one year upon adoption by making a one-time catch-up adjustment to retained earnings, and prior periods are not restated. Syngenta is currently assessing the impact on its financial statements of IFRS 16, including the requirement to recognize an asset and a liability for leases that it currently classifies as operating leases and for which it therefore does not recognize a lease asset or liability at present. Syngenta's minimum commitments under its existing operating leases are disclosed in Note 25.

- "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture", Amendments to IFRS 10 and IAS 28, was issued in September 2014 and requires Syngenta to recognize gains and losses on such sales or contributions only to the extent they relate to the interest in the Associate or Joint Venture that is held by investors other than Syngenta. In December 2015, the IASB postponed mandatory application of the amendments indefinitely. Based on the associates and joint ventures in which it has investments at December 31, 2016, Syngenta does not believe that the amendments will have a material impact on its consolidated financial statements.
- "Recognition of Deferred Tax Assets for Unrealised Losses", Amendments to IAS 12, was published in January 2016, and clarifies that for deferred income tax accounting purposes an entity may assume that an asset will be realized for more than its carrying amount if that outcome is supported by sufficient evidence. Syngenta must adopt the amendments on January 1, 2017. Syngenta does not believe that adoption of the amendments will have a material impact on its financial statements.
- "Disclosure Initiative", amendments to IAS 7, was issued in January 2016, and introduces a new requirement for Syngenta to disclose changes in liabilities arising from financing activities, including separate disclosure of changes arising from cash flows and non-cash changes. Syngenta is required to apply the amendments from January 1, 2017.
- "Classification and Measurement of Share Based Payment Transactions", Amendments to IFRS 2, was issued in June 2016. The amendments clarify IFRS guidance on the accounting treatment of transactions with net settlement features for withholding tax obligations, and on the treatment of vesting and non-vesting conditions in and modifications to cash-settled transactions. Syngenta's accounting for its share based payments in these financial statements was consistent with the amendments. The amendments must be applied with effect from January 1, 2018. If the ChemChina Tender Offer completes successfully, Syngenta would no longer have any outstanding share based payment transactions.
- "Annual Improvements to IFRS Standards" 2014–2016 Cycle was issued in December 2016. It clarifies two points: financial statement disclosure requirements for investments in subsidiaries, joint ventures and associates that are classified as held for sale; and for investments in subsidiaries held by a joint venture or associate which is an investment company as defined by IFRS 10. Syngenta must adopt these amendments from January 1, 2017 and January 1, 2018 respectively. At December 31, 2016, neither point would have any impact on Syngenta's consolidated financial statements.
- IFRIC 22 "Foreign Currency Transactions and Advance Consideration" was issued in December 2016, and requires most foreign currency transactions the consideration for which is received or paid in advance, to be translated into the transacting entity's functional currency using the exchange rate at the date(s) on which this consideration is paid or received. The interpretation contains options for application either retrospectively or prospectively to transactions after adoption, which for Syngenta must be by January 1, 2018 at the latest. Syngenta believes that its existing accounting policy for foreign currency translation is consistent with IFRIC 22 guidance in all material respects and so adoption will not have a material impact on its financial statements.
- "Transfers of Investment Property", Amendments to IAS 40, was issued in December 2016 and clarifies that property is transferred into or out of Investment property only when there is actual evidence of change in use and not based on management's intentions. Syngenta must apply these amendments to changes in use that occur after January 1, 2018. Early adoption is permitted, but the amendments may be applied retrospectively to changes in use before their adoption only where this is possible without using hindsight. Syngenta does not believe that adoption of the amendments will have a material impact on its financial statements.

Principles of consolidation

Subsidiaries
Subsidiaries are those entities which Syngenta controls. Syngenta controls all its subsidiaries through ownership of a majority of their voting rights. Syngenta fully consolidates the income, expenses, assets, liabilities and cash flows of subsidiaries from the date it acquires control up to the date control ceases. Intercompany transactions and balances are eliminated upon consolidation.

Associates and joint ventures
Syngenta has no interests in entities that it does not consolidate that would meet the definition of joint operations. Syngenta accounts for both associates and joint ventures using the equity method.

Business combinations
Syngenta accounts for business combinations in accordance with IFRS 3, (revised January 2008), using the acquisition method. At the date it acquires control of another business, Syngenta records the fair value of the agreed consideration payable, including the estimated fair value of any contingent consideration and of any pre-existing ownership interest it holds in the acquired entity. Directly attributable acquisition transaction costs are expensed as incurred. The assets and liabilities of acquired businesses are identified and recorded in the consolidated financial statements at their acquisition date fair values, with certain exceptions as set out in IFRS 3. Acquired intangible assets are generally valued based on the income approach: the relief from royalty method is generally used for brand names and product technology rights, and the residual income method for customer relationships. Acquired land and buildings are valued based on the market approach and specialized plant and equipment based on the cost approach. Non-controlling interests which either consist of actively traded financial instruments or which do not represent a proportionate ownership interest

29. New IFRSs and accounting policies continued

in the acquired entity to which they relate are recorded at their fair value. All other non-controlling interests are recorded at their proportionate share of the fair value of the acquired business's net assets.

Other accounting policies

Foreign currencies

Monetary assets and liabilities denominated in foreign currencies are translated into the functional currency at the rate prevailing at the balance sheet date. Non-monetary assets and liabilities denominated in foreign currencies, stated at historical cost or fair value, are translated into the functional currency at the foreign exchange rate prevailing at the date of the transaction or the date the fair value was determined, respectively. Foreign currency transactions are translated into the relevant functional currency at the exchange rate prevailing at the date of the transaction. With exceptions for certain regional supply centers, holding and finance subsidiaries, each Syngenta subsidiary uses the local currency of its country of operations as its functional currency. Unrealized gains or losses related to equity loans, designated cash flow and net investment hedging arrangements and gains and losses on remeasuring equity investments designated at fair value through OCI are recognized in OCI. All other resulting foreign exchange transaction gains and losses are recognized in profit or loss. Equity loans are intercompany loans to subsidiaries that are not expected to be repaid in the foreseeable future and therefore considered part of Syngenta's net investment in the subsidiary.

Income, expense and cash flows of foreign operations are translated into US dollars using average exchange rates prevailing during the period. Assets and liabilities of foreign operations are translated to US dollars using exchange rates prevailing at the balance sheet date. Foreign exchange differences arising on these translations are recognized directly in OCI. The consolidated historical cost of inventories that have been transferred between Syngenta group entities since their initial purchase or manufacture is measured by translating the currencies in which the costs of purchase or manufacture were incurred into US dollars at the exchange rates prevailing at the date when those costs were incurred, and foreign exchange differences arising on retranslating these amounts to US dollars at the rates at the balance sheet date or the date the inventories were sold, as applicable, are recognized in OCI. Upon disposal or loss of control of a foreign subsidiary, the cumulative currency translation difference relating to the subsidiary is reclassified from equity to profit or loss as part of the gain or loss on disposal.

Revenue

Revenue is measured as the fair value of the consideration received or receivable. If the consideration is receivable more than 12 months after the transaction date and the effect of discounting is material, the revenue amount recognized is discounted to its present value at the transaction date and the unwinding of this discount is recognized as financial income over the period until the date the consideration is due. Revenue from sales of goods is recognized in the income statement when the significant risks and rewards of ownership have been transferred to the buyer, which is usually upon delivery, at a fixed or determinable price, and when collectability is reasonably assured. Delivery is defined based on the terms of the sale contract.

Revenue is reported net of sales taxes, returns, discounts and rebates. Rebates to customers are provided for in the same period that the related sales are recorded based on the contract terms.

In certain markets, sales terms allow customers to exchange purchased products at a later date for other Syngenta products of their choice, to the same value. Revenue is recognized upon delivery of the original products, and is reduced by a provision for products expected to be exchanged. This provision is released, and the corresponding revenue is recorded, when the substitute products are delivered or the period available to exchange the products expires, whichever is earlier.

In certain markets, sales terms allow customers the option of a onetime, non-repeatable extension of credit, for a defined additional period, in respect of a defined proportion of purchases made during a defined period, if the customers still have the inventories on hand upon expiration of the initial agreed credit period. Customers have no right to return these inventories, and must pay unconditionally when the additional credit period expires. In accordance with IAS 18, revenue for these sales is recognized upon product delivery.

Where a right of return exists, revenue is recognized when a reasonable estimate of returns can be made, or when the right of return expires, whichever is earlier. Where Syngenta's distributors hold inventories and have the right of return, or Syngenta's commercial practice is to accept returns from distributors, and it is not possible to make a reasonable estimate of returns, Syngenta recognizes revenue when its distributors sell the inventories to their customers.

Where third parties hold Syngenta inventories on a consignment basis, revenue is recognized in the period that inventories are withdrawn from consignment and delivered to customers.

Syngenta periodically enters into prepayment contracts with customers whereby it receives advance payments for products to be delivered in a future period. These advance payments are recorded as liabilities and presented as part of Trade accounts payable. Advance payment liabilities are released and revenues associated with such advance payment transactions are recognized upon delivery of and transfer of title, ownership, and risk of loss of the related products to the customer.

Royalty and license income is recognized when earned. If the license agreement contains performance obligations for Syngenta, the related income is considered earned when Syngenta has performed the obligations. Contractual minimum royalty income and non-refundable lump sum payments are considered earned when there are no substantive performance obligations or contingencies associated with their receipt other than the passage of time. Amounts received in advance of performance or which may be refundable dependent on future performance are deferred in the consolidated balance sheet. If the license agreement provides for royalties based on sales made by the licensee, the related income is considered earned in the period that the related sales occur.

29. New IFRSs and accounting policies continued

Cash rebates and discounts granted to customers are classified as a reduction of revenue. Awards of free or discounted products or services supplied by Syngenta in connection with customer loyalty programs are recognized as revenue when the customer redeems the credits. Awards supplied by a third party are recognized as revenue when the third party becomes obliged to supply the awards if Syngenta is an agent for the third party, and when Syngenta has performed its obligations to the customer if Syngenta is a principal. Net profit from programs where Syngenta is an agent is shown as part of Sales. Revenue related to programs where Syngenta is a principal is presented as part of Sales, and associated costs are presented within Cost of goods sold or Marketing and distribution expense as appropriate. Syngenta determines whether it is a principal or an agent according to whether it is exposed to the risks and rewards of supplying the third party products or services, in particular inventory holding risk. Liabilities associated with customer loyalty programs are classified within Trade accounts payable.

Barter transactions

For certain customers in certain markets, trade receivables are settled either with proceeds from sales by such customers of agricultural commodities or by delivery of commodities to Syngenta by such customers. For these arrangements, Syngenta recognizes revenue when it has a legally enforceable receivable, the amount of which is reliably measurable based on an agreed price for the Syngenta products. Where Syngenta has a contract with the customer for physical delivery of a commodity at a fixed price, an embedded derivative is recognized for the fair value of the contract until physical delivery. When it subsequently sells the commodity, Syngenta classifies additional revenue as sales only to the extent that the original contract for the sale of Syngenta products included revenue that was contingent upon the commodity sales proceeds. Any remaining gains or losses on the commodity sale are recorded in Marketing and distribution expense in the consolidated income statement.

Research and development

Research expenses are charged to the consolidated income statement when incurred. Internal development costs are capitalized as intangible assets only when there is an identifiable asset that can be completed and is expected to generate future economic benefits and when the cost of such an asset can be measured reliably. Costs incurred internally to develop new chemical or biological crop protection products based on active ingredients that have not yet obtained regulatory approval, or to develop new seed varieties which contain new traits that have not yet obtained regulatory approval, are expensed as incurred because of the uncertainty inherent in the outcome of the regulatory approval process. Costs incurred in the design, construction and testing of new or improved production processes that do not themselves require regulatory approval and that can be applied to products which have already obtained approval are capitalized if the processes are technically feasible, Syngenta intends and has sufficient resources to complete the development, the process will generate future economic benefits, and expenditure attributable to developing the process can be measured reliably. Development expenses Syngenta incurs to develop technology on behalf of a third party under a collaboration agreement are capitalized and amortized over the agreement term if Syngenta expects to recover the costs under the terms in that agreement.

Costs of purchasing distribution rights, patent rights and licenses to use or sell products, or technology or registration data are capitalized as intangible assets. Costs of applying for patents for internally developed products, costs of defending existing patents and costs of challenging patents held by third parties where these are considered invalid, are considered part of development expense and expensed as incurred.

Expenses by function

Cost of goods sold includes costs of purchasing and producing inventories that have been sold to third parties, inbound and inter-site distribution expenses, impairment of inventories, environmental remediation costs associated with ongoing Syngenta manufacturing sites, and general overhead expenses of Syngenta's Production and Supply function which are expensed as incurred. Marketing and distribution includes costs of selling products, providing technical support for products sold, marketing and promotional expenses, distribution of finished products to third party customers, and impairment of trade and other receivables. Research and development includes the expenses of Syngenta's research sites and third party research collaboration agreements, expenses incurred during the regulatory process for Syngenta products and the costs of Syngenta's global field trials organization. General and administrative includes expenses of general management, finance, human resources, information systems, legal affairs and taxes, corporate affairs and communications, business planning and corporate development functions. Services provided by these departments to the Production and Supply, Marketing and Distribution and Research and Development functions are allocated to and included within those other functions. Gains and losses arising on routine asset disposals and gains and losses reclassified from OCI when hedged forecast foreign currency trading transactions affect profit or loss are also reported within General and administrative. Restructuring is a separate general and administrative function as it is managed through a project management office which is accountable to the Executive Committee. Impairment of property, plant and equipment that results from restructuring plans, rather than ongoing activities of the functions responsible for the assets, is included in Restructuring. Impairment of goodwill and intangible assets is also included in Restructuring unless a specific function is accountable for the impairment loss. Non-current asset depreciation and amortization are charged to the functions responsible for the related assets.

Restructuring

Restructuring represents the effect on reported performance of initiating and enabling business changes that are considered major and that, in the opinion of management, will have a material effect on the nature and focus of Syngenta's operations, and therefore require separate disclosure to provide a more thorough understanding of business performance. Restructuring includes the incremental costs of closing, restructuring or relocating existing operations, and gains or losses from related asset disposals. Restructuring also includes the effects of analyzing and preparing for potential industry consolidation transactions as well as completing and integrating significant business combinations and divestments, including related transaction costs, gains and losses. Recurring costs of normal business operations and routine asset disposal gains and losses are excluded.

29. New IFRSs and accounting policies continued

Income taxes
Income taxes for the year comprise current and deferred taxes, calculated using rates enacted or substantively enacted at the balance sheet date. Current tax is the expected tax payable on taxable income for the year and any adjustments to tax payable in respect of previous years. Deferred tax is recognized using the liability method and thus is calculated on temporary differences between the tax bases of assets and liabilities and their respective carrying amounts in the consolidated balance sheet.

Deferred tax is provided on temporary differences arising on investments in subsidiaries, associates and joint ventures, except where the timing of the reversal of the temporary difference can be controlled and it is probable that the difference will not reverse in the foreseeable future. Deferred tax liabilities are not recognized on the initial recognition of goodwill if the carrying amount of goodwill exceeds its tax base. Deferred tax assets, including those related to unused tax losses, are recognized to the extent that it is probable that future taxable profit will be available against which the assets can be utilized. Income tax expense, current and deferred, is recognized in profit or loss unless it relates to items recognized in OCI or in equity in which case the tax expense is also recognized in OCI or equity, respectively.

Syngenta's policy is to comply fully with applicable tax regulations in all jurisdictions in which Syngenta's operations are subject to income taxes. Syngenta's estimates of current income tax expense and liabilities are calculated assuming that all tax computations filed by Syngenta's subsidiaries will be subject to review or audit by the relevant tax authorities. Syngenta and the relevant tax authorities may have different interpretations of how regulations should be applied to actual transactions. Syngenta records provisions for taxes it estimates will ultimately be payable when the reviews or audits have been completed, including allowances for any interest and penalties which may become payable. Syngenta releases these provisions when the tax audit of the applicable year is completed or an Advance Pricing Agreement (APA) settlement is reached that impacts previous years' tax payments, or otherwise when the statute of limitations for the applicable year expires, unless there is evident reason for earlier release.

Financial Instruments
Syngenta early adopted IFRS 9 (2013) with effect from January 1, 2014.

Trade and other accounts receivable
Trade and other accounts receivable include invoiced amounts less adjustments for doubtful receivables which are estimated by taking into account whether receivables are past due based on contractual terms, payment history and other available evidence of collectability. Receivable balances are written off only when there is no realistic prospect of their being collected.

Factoring arrangements transferring substantially all economic risks and rewards associated with accounts receivable to a third party are accounted for by derecognizing the accounts receivable upon receiving the cash proceeds of the factoring arrangement. Factoring arrangements that transfer to a third party some, but not substantially all economic risks and rewards are accounted for by continuing to recognize Syngenta's continuing rights over the receivable and by recognizing any related obligation to the third party factor.

Trade receivables are classified as and measured at amortized cost, less adjustments for doubtful receivables as described above, in accordance with IFRS 9. Syngenta holds trade receivables to collect their contractual cash flows, which consist solely of payments of principal and, where applicable, interest, except for certain foreign currency sales transactions in which Syngenta offers to its customers a written exchange rate option embedded into the sales contract. Trade receivable/option contracts that result from these foreign currency sales transactions are classified as at fair value through profit or loss. The fair value of these trade receivables is measured by:

(a) remeasuring the embedded exchange rate option at fair value;

(b) retranslating the underlying trade receivable into the selling entity's functional currency using closing spot exchange rates at the balance sheet date; and

(c) adjusting the resulting carrying amount of the combined receivable contract to reflect changes in customer credit risk. Syngenta includes this adjustment in the provision for doubtful receivables.

Derivative and other financial instruments
Regular way purchases and sales of marketable securities are recognized at settlement date.

Financial assets and liabilities which have remaining contractual maturities of 12 months or less at the balance sheet date are presented within Total current assets and Total current liabilities, respectively. Financial assets and liabilities which have remaining contractual maturities of more than 12 months are presented within Financial and other non-current assets and Financial debt and other non-current liabilities, respectively.

Equity investments in other entities which are not subsidiaries, associates or joint ventures of Syngenta are included in Financial and other non-current assets. They are classified and measured at fair value through OCI and are revalued to fair value at each reporting date, with all changes in fair value recognized within OCI. In Syngenta's opinion, presenting gains and losses on these investments in OCI is more consistent with Syngenta's strategic investment objectives than presenting those gains and losses within profit and loss. The fair value of equity investments traded in active markets is measured at the quoted price at the balance sheet date, multiplied by the number of shares held by Syngenta. The fair value of other equity investments is based on recent observable market transactions for equity shares in the investee company or, where there are no recent transactions, on valuation multiples for equity shares in similar companies, which are traded.

Other non-current receivables represent royalty and license receivables, loans to employees and other third parties, and amounts recoverable from third parties in reimbursement of environmental remediation and other costs. These receivables are stated at amortized cost, less provision for impairment where appropriate.

Financial debt is recognized initially at its fair value less transaction costs, which represents the net proceeds from issuing the debt. Subsequently, financial debt is stated at amortized cost using the effective interest method, except where subject to a fair value hedge relationship, in which case the carrying amount of the debt is adjusted by the change in the fair value of the hedged exposure during the hedge relationship.

29. New IFRSs and accounting policies continued

Derivative financial instruments are recorded initially at their fair value when Syngenta becomes a party to the instrument. They are revalued to fair value at each reporting date and presented as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

Fair values of publicly traded derivatives are based on quoted market prices of the specific instruments held at the balance sheet date.

Fair values of non-publicly traded derivatives are valued using accepted economic methodologies for pricing these financial instruments, such as discounted cash flow analysis or option pricing models. The valuation models seek to make maximum use of market inputs existing at the balance sheet date. The methods used to determine the fair value of specific types of non-publicly traded derivatives are as follows:

- Interest rate and cross-currency swaps are calculated as the present value of the estimated future cash flows. The future cash flows are determined using relevant market forward interest rates at the balance sheet date and are discounted using the zero-coupon rates with equivalent maturities for AA rated entities at the balance sheet date, as adjusted for the counterparty's credit risk. These discount rates incorporate the impact of net credit risk present in those derivative instruments. For cross-currency swaps, the discount rates reflect the impact of the currency basis on the future cash flows denominated in different currencies;
- Forward contracts are determined using relevant market exchange rates at the balance sheet date;
- Currency options are valued using the Black-Scholes-Merton option pricing model, which incorporates spot exchange rates, zero coupon rates with equivalent maturities for entities with credit ratings which approximate Syngenta's counterparty credit risk, and implied volatility in the market forward exchange rates at the balance sheet date; and
- Commodity options are valued using the Black-Scholes-Merton option pricing model, which incorporates future commodity price curves with equivalent maturities and implied volatilities in the commodities markets at the balance sheet date, adjusted for counterparty credit risk.

Realized gains and losses on disposal of amortized cost financial assets, revaluation gains and losses on derivatives not designated as accounting hedges, and gains and losses corresponding to the ineffective portion of derivatives designated as accounting hedges are recorded in profit or loss as they arise.

Syngenta applies hedge accounting as follows:

Fair value hedges

The designated hedging instruments are remeasured to fair value and the underlying hedged items are remeasured by the amount of change in the fair value of the hedged risk. The resulting remeasurement gains or losses are recognized in profit or loss as they occur.

Cash flow hedges

For the effective portion of the hedge, gains and losses on remeasuring designated hedging instruments to fair value are recognized in OCI as part of the cash flow hedge reserve, and are reclassified into profit or loss in the period (or periods) during which the underlying hedged cash flows affect profit or loss.

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for cash flow hedge accounting, any cumulative unrealized gain or loss on the hedging instrument remains in equity until the underlying hedged item affects profit or loss. However, if a hedged forecasted transaction is no longer expected to occur, the cumulative unrealized gain or loss on the hedging instrument is immediately reclassified into profit or loss.

Time value of options

When Syngenta designates a derivative financial instrument that is, or contains, an option as a hedging instrument in a hedge accounting relationship, the time value of the options as measured using the Black-Scholes-Merton option pricing model is excluded from the hedge designation and accounted for as a cost of hedging, as follows. The change in the fair value of the option during its term is recognized in OCI to the extent that the option terms are aligned with the attributes of the hedged exposure. If the hedged item is a transaction, the cumulative change in time value is included in the initial carrying amount of any non-financial asset or liability recognized when the hedged transaction occurs, or otherwise is recognized in profit and loss when the cash flows from the hedged transaction affect profit and loss. If the hedged item is a risk that may affect profit or loss during the option term, the cumulative amount recognized in OCI is amortized into profit and loss on a straight-line basis over the option term.

Net working capital

For the purposes of presenting consolidated cash flows, the balance sheet items included in Net working capital are Inventories, Trade receivables, Other accounts receivable, Trade accounts payable, Other current assets, Other current liabilities, and similar items due after more than one year, such as minimum royalties from multi-year license agreements.

Inventories

Purchased products are recorded at acquisition cost while own-manufactured products are recorded at manufacturing cost including a share of production overheads based on normal capacity. Cost of inventories is determined on a first-in-first-out basis. Allowances are made for inventories with a net realizable value less than cost, or which are slow moving. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and costs to sell. Costs to sell include direct marketing, selling and distribution costs. Unsaleable inventories are fully written off.

Biological assets

Biological assets represent growing plants and cuttings in Syngenta's Flowers business and sugar cane seedlings within its Sugar cane business. In Flowers, young plants and cuttings are measured at fair value less costs to sell, with key inputs being current average third party net selling prices, actual average selling costs and, for immature assets, estimated stage of growth relative to mature assets. Sugar cane seedlings are measured at cost less impairment because fair value is not reliably measurable due to the nature of the asset not corresponding to traded assets or products in the market. The carrying amount of current consumable biological assets measured using the cost model is tested for impairment by comparing it with the assets' net realizable value determined in accordance with IAS 2, "Inventories". Syngenta classifies gains and losses from remeasuring biological assets to fair value, and impairment losses for biological assets measured at cost less impairment, within Cost of goods sold.

29. New IFRSs and accounting policies continued

Property, plant and equipment

Property, plant and equipment are recorded at acquisition or production cost, less accumulated depreciation and any impairment losses. Eligible borrowing costs are capitalized as part of the asset cost if construction is expected to take more than one year to complete. Capitalization ceases when the asset is ready for its intended use. Depreciation is charged on a straight-line basis to the income statement, starting from the date the asset is ready for use, over the following estimated useful lives:

Buildings	20 to 40 years
Machinery and equipment	10 to 25 years
Furniture and vehicles	5 to 20 years
Computer hardware	3 to 7 years

Land is recorded at acquisition cost and is not subject to depreciation. Bearer biological assets are accounted for as Property, plant and equipment using the cost model and depreciated over their productive lives.

Expenditures made for existing property, plant and equipment that will provide future economic benefit are capitalized and depreciated over the revised remaining useful life of the asset.

Leases

Property, plant and equipment financed by leases giving rights to use the leased assets as if they were owned by Syngenta are classified as finance leases and therefore are capitalized at the lower of fair value and the present value of minimum lease payments at the inception of the lease. Such leases are also embedded in contracts for goods or services provided by suppliers to Syngenta when the supplier can fulfill their obligations only by using a specific asset to supply Syngenta and the contract price is neither fixed per unit of output nor represents a market price. Finance lease assets and liabilities are recognized at the commencement of the lease, which is when the leased asset is ready for use and Syngenta has the right to use it. Finance lease assets are depreciated over the shorter of the remaining lease term and the estimated useful life of the leased asset. Leases that are not classified as finance leases are accounted for as operating leases. Operating lease payments are recognized as lease expense on a straight-line basis over the lease term irrespective of the timing of the payments. The lease term is the non-cancelable period according to the lease contract unless Syngenta has a right to extend the lease beyond the end of that period and believes it is reasonably certain to exercise that right.

Intangible assets other than goodwill

Intangible assets, other than goodwill, are recorded at cost less accumulated amortization and any impairment losses. Currently, all such intangible assets are assigned a finite estimated useful life. The cost of acquired intangible assets other than goodwill consists of the purchase price including transaction costs. The cost of internally generated intangible assets consists of direct internal and external design, development, and testing costs incurred to make the asset ready for use in the manner intended by management. Borrowing costs associated with internal software development projects are capitalized if the project is expected to take more than one year to complete. Capitalization ceases when the software is ready for its intended use.

Intangible assets are amortized starting from the date the asset is ready for use. In respect of product rights, this is when regulatory approval has been obtained. Asset lives are reviewed annually. The straight-line method of amortization is used except where another systematic basis better reflects the pattern of consumption of the economic benefits represented by the asset. Amortization is charged within the consolidated income statement to the function responsible for the asset, or to General and administrative.

Useful lives assigned to acquired product rights are based on the period over which Syngenta expects economic benefit from the product rights. Estimated lives assigned to most product rights upon acquisition are between 10 and 20 years and do not exceed 20 years for any asset.

Patents and trademarks are amortized over their estimated economic or legal life, whichever is shorter. Lives assigned are between 3 and 20 years for patents and between 5 and 30 years for trademarks.

Business combinations give Syngenta access to the distribution channels and customer relationships of the acquired business. These relationships normally continue to generate economic benefit to Syngenta following the acquisition. The useful lives of customer relationships are determined from management estimates of customer attrition rates. Estimated lives assigned are between 5 and 30 years.

Acquired in-process research and development (IPR&D), is valued at fair value at acquisition. It is assessed for impairment annually until it has been successfully developed and is available for use at which time it begins being amortized over its estimated useful life. Lives assigned are between 10 and 20 years.

Assets attributable to long-term supply agreements are amortized as part of cost of goods sold over the period of the supply agreements, which are between 5 and 12 years.

Purchased software licenses are amortized over their remaining license terms. Internally developed software is amortized from the date it is ready for use until the sooner of its expected replacement date or the date significant costs are expected to be incurred to upgrade it. Lives assigned are between 3 and 7 years.

Goodwill

Goodwill is the excess of the fair value of an acquired business over the fair value of its identifiable net assets at the acquisition date. Goodwill is recognized as an asset and presented within intangible assets. Goodwill is not amortized, but is tested annually for impairment and reduced by any impairment losses.

Impairment

Property, plant and equipment, intangible assets and investments in associates and joint ventures are tested for impairment ("tested") in accordance with IAS 36 unless classified as held-for-sale. Goodwill and intangible assets not yet ready for use are tested annually and are also reviewed at each interim and annual reporting date to determine whether conditions changed since the most recent review or annual test. Individual other non-current assets are reviewed at each reporting date to determine whether events or changes in conditions indicate that the carrying amount of each asset may not be recoverable. If any such indication exists, the asset is tested for impairment. Syngenta estimates an asset's recoverable amount as the higher of the asset's fair value less selling costs and value in use, which is the present value of the cash flows expected from the asset's use and eventual disposal. An impairment loss is

29. New IFRSs and accounting policies continued

recorded in the consolidated income statement to the extent that the carrying amount of the tested asset exceeds its recoverable amount. Impairment losses are not reversed for goodwill, but are reversed for other assets if their recoverable amounts subsequently increase.

Non-current assets held-for-sale

Non-current assets and groups of assets are reclassified as held-for-sale when the assets are available for immediate sale in their present condition and a sale within one year is highly probable. Property, plant and equipment and intangible assets held-for-sale are remeasured at the lower of fair value less costs to sell or carrying amount at the date they meet the held-for-sale criteria at which time depreciation and amortization also ceases. Any resulting impairment loss is recognized in profit or loss. Fair value is measured based on bids received from potential buyers of the assets.

Provisions

A provision is recognized in the balance sheet when Syngenta has a legal or constructive obligation to a third party or parties as a result of a past event, the amount of which can be reliably estimated and it is probable that an outflow of economic benefits will be required to settle the obligation. The amount recognized as a provision is the best estimate of the expenditure required to settle the obligation at the balance sheet date. Syngenta self-insures or uses a combination of insurance and self-insurance for certain risks. Provisions for these risks are estimated in part by considering historical claims experience and other actuarial assumptions and, where necessary, counterparty risk.

Environmental provisions

Provisions for remediation costs are made when there is a present obligation, it is probable that expenditures for remediation work will be required within ten years (or a longer period if specified by a legal obligation) and the cost can be estimated within a reasonable range of possible outcomes. The costs are based on currently available facts: technology expected to be available at the time of the clean up; laws and regulations presently or virtually certain to be enacted; and prior experience in remediation of contaminated sites.

Environmental liabilities are recorded at the estimated amount at which the liability could be settled at the balance sheet date, and are discounted if the impact is material and if cost estimates and timing are considered reasonably certain.

Syngenta's restructuring programs have involved closure of several sites to date. Remediation liabilities recognized when site closures are announced are accounted for as restructuring provisions.

Legal and product liability settlements

For claims for which, according to Syngenta's assessment, it is not probable that a liability exists or that there will be a future cash outflow or other sacrifice of economic benefits, Syngenta provides for the costs of defense only. For claims where an outcome unfavorable to Syngenta is assessed as more likely than not, provision is made for the estimated amount of damages and settlement, including directly attributable legal costs. No provision is made where the legal procedures are at too early a stage to estimate the outcome with any reliability.

Restructuring provisions and costs

Restructuring costs are accrued (charged to provisions) when Syngenta has approved a detailed and formal restructuring plan and the restructuring has either commenced or been announced publicly and they qualify for recognition in accordance with IAS 37. Provisions for severance payments and related employment termination costs that do not depend on future service, are made in full when employees are given details of the restructuring plan and the termination benefits that will apply to individual employees should their contracts be terminated. Retention and other payments that depend on future service are recognized over the required service period. Restructuring costs relating to ongoing activities, such as relocation, training and information systems, do not qualify for provisioning under IAS 37 and are expensed when incurred.

Post-employment benefits

For defined benefit plans, plan assets are measured at fair value. The plans' holdings in publicly quoted investments are valued at closing prices at the balance sheet date. The plans' holdings in pooled investment vehicles (PIVs) that are not publicly quoted are valued at the respective investment managers' current estimate of fair value, on a basis consistent with each PIV's most recent audited financial statements. Derivative contracts entered into directly by the pension plans are included within plan assets. Exchange traded derivatives are valued at quoted balance sheet date bid prices for contracts which are assets, or offer prices for contracts which are liabilities, at the balance sheet date. Fair values of over the counter derivatives are measured using independent third party pricing services. The defined benefit obligations are measured at the present value of future benefit payments attributable to employee service rendered up to the balance sheet date, according to the benefit formula set out in the relevant pension plan rules and employment terms at the balance sheet date. Where a surplus of plan assets over the benefit obligation exists at the balance sheet date or would arise upon payment of the minimum funding commitment applicable to the pension plan, Syngenta evaluates the extent to which the surplus is realizable over time through refund rights and reductions in the present value of its future contributions to the plan. To the extent that the surplus is not realizable, the net defined benefit asset is reduced and, where applicable, an additional liability for minimum funding contributions is recognized. Benefit expense charged to profit or loss comprises current service cost, which is the cost to Syngenta of the increase in benefits earned from employee service in the period, gains and losses arising from amendments to and settlements of benefits that occurred during the period, and interest on the net defined benefit asset or liability, which is the change in the present value of that asset or liability arising from the passage of time during the period, measured using the rate used to discount the defined benefit obligation at the previous period end. The net interest cost is presented within Other general and administrative in the consolidated income statement. The benefit obligation and cost are attributed to periods using the projected unit credit actuarial method and are measured using long-term assumptions about expected future length of employee service, increases in pay and pensions, longevity, and for healthcare plans, medical costs. Assumptions are reviewed annually. Gains and losses arising from variances between assumptions and actual outcomes, and from changes to assumptions, are recognized in OCI in the period in which they arise.

Contributions to defined contribution pension plans are recognized as an expense in profit or loss when they are due.

29. New IFRSs and accounting policies continued

Share based payments
The fair value of share and share option awards to employees is recognized as compensation expense over the period in which the shares or options vest, or immediately for awards with no remaining vesting period. To reflect vesting conditions unrelated to Syngenta's share price, compensation expense is measured using Syngenta's best estimate at each reporting date of the shares and options expected to vest and adjusted subsequently in line with actual vesting. Fair value is measured for equity-settled awards at grant date only, but is additionally remeasured at each reporting date for cash-settled awards. An award is granted when it has been approved by the Compensation Committee of Syngenta AG's Board of Directors and its terms have been communicated to share plan members. Fair value of grants of Syngenta AG ordinary shares is measured at market value, less any cash amount payable by the employee and any expected dividends to which the employee is not entitled. Fair value of options over Syngenta AG ordinary shares is measured using the Black-Scholes-Merton formula. As described in Note 23, vesting of certain share and share option awards is conditional on Syngenta's total share return over a three year period relative to a defined peer group of other companies. The Monte Carlo method was used to fair value these awards at grant date. Grants with a cash or equity alternative for plan members are accounted for as liabilities until the members' choice is known. The incremental fair value of members' equity option for these grants is zero. A member's choice to receive equity instruments is accounted for by transferring the fair value of the liability to shareholders' equity when the choice is made. For certain plans, Syngenta has withholding obligations in respect of plan members' personal income tax liabilities on vesting or exercise of awards. These plans were accounted for as fully equity-settled until February 2, 2016 when the accounting was amended to account for all unexercised awards of options and for awards of shares that will vest after the expected completion date of the ChemChina Tender Offer as fully cash-settled, as described in detail in Note 3.

The fair value of share based payment awards to customers in cash rebate sacrifice arrangements is recognized as a reduction in sales in the same way as the cash rebate.

Dividends and capital distributions
Dividends payable to shareholders of Syngenta AG are recorded as liabilities and as a reduction in shareholders' equity when they are approved by the shareholders of Syngenta AG and any conditions for payment are satisfied.

Treasury shares
Share capital includes the par value of treasury shares held by Syngenta that have not been canceled. Treasury shares are shown as a separate component of shareholders' equity and stated at the amount paid to acquire them. Differences between this amount and the amount received upon their disposal are recorded as a movement in consolidated shareholders' equity.

30. Subsequent events

No events occurred between the balance sheet date and the date on which these consolidated financial statements were approved by the Board of Directors that would require adjustments to or disclosure in the consolidated financial statements.

Approval of the Consolidated Financial Statements
These consolidated financial statements were approved by the Board of Directors on February 7, 2017.

Report of Syngenta Management on Internal Control over Financial Reporting

Syngenta's Board of Directors and management are responsible for establishing and maintaining adequate internal control over financial reporting. Syngenta's internal control system was designed to provide reasonable assurance to Syngenta's management and Board of Directors regarding the reliability of financial reporting and the preparation and fair presentation of its published consolidated financial statements.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Syngenta's management assessed the effectiveness of the Group's internal control over financial reporting as of December 31, 2016. In making this assessment, it used the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, management has concluded that, as of December 31, 2016, Syngenta's internal control over financial reporting was effective based on those criteria.

KPMG AG, Switzerland, an independent registered public accounting firm, has issued an opinion on the effectiveness of the Group's internal control over financial reporting which is included in this annual report.

Erik Fyrwald
Chief Executive Officer

Mark Patrick
Chief Financial Officer

Basel, February 7, 2017

Report of the Independent Auditor on Internal Control over Financial Reporting

The Board of Directors and Shareholders
Syngenta AG, Basel:

We have audited Syngenta AG's internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Syngenta AG's Board of Directors and management are responsible for maintaining effective internal control over financial reporting and management is responsible for its assessment of the effectiveness of internal control over financial reporting, included in *the Report of Syngenta Management on Internal Control over Financial Reporting (page 91)*. Our responsibility is to express an opinion on Syngenta AG's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

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In our opinion, Syngenta AG maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with Swiss law, International Standards on Auditing and Swiss Auditing Standards, the consolidated financial statements of Syngenta AG and subsidiaries, which comprise the consolidated balance sheet and the related consolidated income statement, consolidated statement of comprehensive income, consolidated cash flow statement and consolidated statement of changes in equity, and notes (pages 28 to 90) for the year ended December 31, 2016, and our report dated February 7, 2017 expressed an unqualified opinion on those consolidated financial statements.

KPMG AG

Richard Broadbelt
Licensed Audit Expert
Auditor in Charge

Michael Blume
Licensed Audit Expert

Basel, Switzerland
February 7, 2017

Statutory Auditor's Report

To the General Meeting of Syngenta AG, Basel

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of Syngenta AG and its subsidiaries (the Group) set out on pages 28 to 90, which comprise the consolidated balance sheet as of December 31, 2016, and the consolidated income statement, consolidated statement of comprehensive income, consolidated cash flow statement and consolidated statement of changes in equity for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements referred to above give a true and fair view of the financial position of the Group as of December 31, 2016, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) and comply with Swiss law.

Basis for Opinion

We conducted our audit in accordance with Swiss law, International Standards on Auditing (ISAs) and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, as well as the IESBA Code of Ethics for Professional Accountants, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Revenue recognition for crop protection products in Brazil

Accounting for uncertain tax positions

Carrying value of seeds inventory

Acquisition of Syngenta by ChemChina

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

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Revenue recognition for crop protection products in Brazil

Key Audit Matter

There is an inherent risk around the accuracy of revenue recorded given the Group's financial reporting year-end falls in the middle of the peak demand season in Brazil for the Group's crop protection products.

The majority of crop protection sales are to distributors under commercial terms, which provide rebates and discounts dependent upon achievement of sales targets, as well as cash discounts for punctual payment of accounts receivable. The terms also provide a right of return, subject to certain conditions being met. There is an interdependency with the provision for doubtful receivables, as the amounts of rebates, discounts and returns recorded impacts the probability of collecting the accounts receivable.

Changes in contractual sales terms with distributors in Brazil in 2015 reduced uncertainty over the amount of sales returns, however the application of revenue recognition accounting standards is complex. Accruals for estimated product returns from distributors are recorded when the related sales are made, and require significant judgement and estimation by management.

This judgement is particularly complex in a Brazilian environment in which competitive pricing pressure and product discounting are growing trends, together with a broad range of economic and political risks. These risks include crop yield and prices, the availability of credit and the cost of agricultural inputs such as crop protection products, and the related impacts on distributors and end customers (growers).

Management has determined an accrual for returns of $87 million (2015: $106 million) to be appropriate with respect to crop protection sales in Brazil at December 31, 2016.

Our response

We considered the appropriateness of the Group's revenue recognition accounting policies; in particular, those related to the recognition of crop protection product sales in Brazil.

Our procedures included understanding and evaluating the controls and systems related to cut-off and the deductions made to revenue for rebates and returns and key manual and systems-based controls in the order-to-cash transaction cycle.

We assessed the accuracy of the calculation of sales return accruals, corroborated inputs and key assumptions to both internal and independent sources including business plans, program terms, forecast weather data, sales contracts with customers and distributor inventory data.

We evaluated the historical accuracy of the sales returns accrual balance by comparing to past experience of actual returns.

We tested sales transactions around the financial reporting year-end and credit notes issued after the balance sheet date to determine whether revenue had been recognised in the appropriate period.

We also assessed the adequacy of the Group's disclosure of its revenue recognition accounting policy and related judgments and estimates.

For further information on revenue recognition for crop protection products in Brazil refer to the following:

- *Page 35 (significant accounting policy judgments and estimates, note 2)*
- *Page 84 (new IFRSs and accounting policies, note 29)*
- *Page 45 (financial disclosures, note 5).*

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Accounting for uncertain tax positions

Key Audit Matter

The Group operates across a number of different tax jurisdictions and is subject to periodic challenge by local tax authorities on a range of tax matters during the normal course of business. These challenges include transaction-related matters, financing arrangements between Syngenta entities and transfer pricing arrangements where centralised functions support a number of different countries. Areas of particular focus include transfer pricing arrangements relating to the Group's manufacturing and supply chain and the ownership of intellectual property rights that are used across the Group.

Where the amount of tax payable is uncertain, the Group establishes a liability based on management's best estimate of the probable amount to settle the liability. As at December 31, 2016, the Group has recognised a liability of $400 million (2015: $382 million) in respect to uncertain tax positions within current income taxes.

Our response

We updated our understanding of the Group's tax strategy and transfer pricing policies, particularly in relation to any changes implemented during 2016, and assessed key technical tax issues and risks related to business and legislative developments using, where applicable, our local and international tax specialists.

We focused on the judgements made by management in assessing the quantification and likelihood of significant exposures and the level of liability required for specific cases. In particular, we focused on the impact of changes in transfer pricing methodologies affecting tax returns in certain territories, changes in local tax regulations including Base Erosion and Profit Shifting (BEPS), the impact of recent tax rulings and the status of on-going inspections by local tax authorities.

We obtained explanations from management and corroborative evidence including communication with local tax authorities, details of progress with tax arrangements with tax authorities and copies of external tax advice reports relating to tax treatments applied and the corresponding liabilities recorded. We used our tax specialists to gain an understanding of the current status of tax assessments and investigations and to monitor developments in on-going disputes.

We evaluated the design and implementation of controls with respect to identifying uncertain tax positions. We also evaluated the related accounting policy for tax exposures.

We analysed and challenged management's key assumptions, in particular on cases where there had been significant developments with local tax authorities, based on our knowledge and experience of the application of the international and local legislation by the relevant authorities and courts.

We also evaluated whether the liabilities and exposures for uncertain tax positions were appropriately disclosed in the financial statements.

For further information on accounting for uncertain tax positions refer to the following:

- *Page 36 (significant accounting policy judgments and estimates, note 2)*
- *Page 86 (new IFRSs and accounting policies, note 29)*
- *Pages 46 – 49 (financial disclosures, income taxes, note 7).*

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Carrying value of seeds inventory

Key Audit Matter

The Group has significant seeds inventory and the level of judgement involved in determining whether an allowance should be recognised and how it should be measured results in the carrying value of seeds inventory being one of the key judgemental areas in the preparation of the consolidated financial statements.

Seeds inventory is subject to the risk of loss through physical deterioration at all stages of the operating cycle. Syngenta management apply judgement and estimates to determine allowances against the cost of seeds inventories for both quality and obsolescence purposes. Allowances for quality principally comprise finished seed that is of defective quality or is expected to physically deteriorate before sale, based on past experience.

Allowances for obsolescence for excess seeds are recorded when there is insufficient forecast customer demand over the expected remaining commercial life of each seed variety. Excess seed quantities are affected by harvest yields, which are influenced by hard to predict weather and growing conditions.

Seeds inventories totalled $1,146 million (2015: $1,252 million) at December 31, 2016. The seeds inventory allowance expense for 2016 was $170 million (2015: $181 million), and the seeds allowance balance at December 31, 2016 was $263 million (2015: $279 million).

Our response

In respect of the carrying value of seeds inventory our procedures included the following:

- We obtained an understanding of and evaluated the controls and systems related to identifying defective quality and obsolescence and the allowances made to seeds inventory.
- We analysed underlying data to the allowance calculations such as crop variety, batch level seed quantity and quality and sales forecasts.
- We analysed the commercial practices and available markets for seed inventory utilisation and considered expected product portfolio changes and the related impacts of expected harvest yields in determining excess quantities on hand.
- We recalculated on a sample basis the allowances recorded by the Group and compared the accuracy of the usage data to underlying documentation to assess the accuracy of the data used in the calculation.
- We analysed the historical accuracy of allowances recorded by the Group by examining the reversal of previously recorded allowances.
- We also assessed the adequacy of the Group's disclosure of its seeds inventory allowance policy, the judgment involved and other related disclosures.

For further information on the carrying value of seeds inventory refer to the following:

- *Page 36 (significant accounting policy judgments and estimates, note 2)*
- *Page 87 (new IFRSs and accounting policies, note 29)*
- *Page 51 (financial disclosures, inventories, note 11).*

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Acquisition of Syngenta by ChemChina

Key Audit Matter

On February 3, 2016, Syngenta AG (the Company) announced that China National Chemical Corporation ("ChemChina") had made an offer to acquire the Company at US$ 465 per ordinary share plus a special dividend of CHF 5 per share to be paid conditional upon and prior to closing. The Board of Directors of the Company recommended the offer to the shareholders and on March 23, 2016 both a Swiss and US tender offer commenced. The tender offers have been extended by ChemChina and next expire on March 2, 2017.

The proposed acquisition of the Company by ChemChina is still subject to anti-trust review by numerous regulators around the world. Following receipt of clearance from the Committee on Foreign Investment in the United States ("CFIUS"), we concluded the remaining significant uncertainties relate to the EU anti-trust review of the acquisition and the need to have a valid tender of at least 67% of shares.

Management concluded at December 31, 2016 that it is probable under applicable accounting standards that the acquisition will complete. This was an area of focus because of the nature of the transaction and the following accounting implications:

- Change in accounting treatment for share-based payments which are expected to be settled in cash on completion of the acquisition;
- Impact on certain of the Company's debt arrangements from change of control clauses; and
- Impact on assets and liabilities from other change of control clauses.

Our response

We have performed the following procedures:

- We assessed the impact of the remaining regulatory approvals on the likelihood of the tender offer to complete in 2017. We did this through meeting with the Group's legal team to understand developments across all ChemChina matters and their status. We considered whether the remaining actions for the Company required by regulators are capable of being completed.
- We inspected the tender offer documents and CFIUS clearance, validating that specific matters were accurately reflected in the Group's disclosures.
- We considered the delay from the initial planned closing in 2016 to 2017 and discussed with management the implications of the industry consolidation on the remaining regulatory clearances.
- We obtained evidence indicating the number of shares tendered in December 2016 and challenged the underlying assumption that completion is probable by reference to the difference between the offer price and market price per share at December 31, 2016.
- We considered the accounting treatment of the share-based payment arrangements and debt agreements and the disclosures in the financial statements to conclude whether these were appropriate under the circumstances.
- We also considered whether ChemChina was a related party at December 31, 2016 based on applicable accounting standards.

For further information on the acquisition of Syngenta by ChemChina refer to the following:

- *Pages 40 - 42 (acquisitions, divestments and other significant transactions, note 3)*
- *Page 45 (financial disclosures, restructuring, note 6)*
- *Pages 63 - 66 (employee share participation plans, note 23)*
- *Page 77 (risk management of financial risks, note 27).*

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Other Information in the Annual Report

The Board of Directors is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the consolidated financial statements, the stand-alone financial statements of the Company, the remuneration report.and our auditor's reports thereon.

Our opinion on the consolidated financial statements does not cover the other information in the annual report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information in the annual report and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibility of the Board of Directors for the Consolidated Financial Statements

The Board of Directors is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRS and the provisions of Swiss law, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law, ISAs and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Swiss law, ISAs and Swiss Auditing Standards, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

— Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

— Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.

— Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.

— Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

— Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
— Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

In accordance with article 728a para. 1 item 3 CO and the Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

KPMG AG

Richard Broadbelt
Licensed Audit Expert
Auditor in Charge

Michael Blume
Licensed Audit Expert

Basel, Switzerland
February 7, 2017

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

Financial Statements of Syngenta AG

Income Statement

(for the years ended December 31, 2016 and 2015)

(CHF million)	Notes	2016	2015
Income:			
Dividend income	2	**3,597**	1,217
Other financial income	2	**76**	54
Total income		**3,673**	1,271
Expenses:			
Financial expenses		**(23)**	(21)
Operating expenses	2	**(45)**	(13)
Direct taxes		**(7)**	(5)
Total expenses		**(75)**	(39)
Net income		**3,598**	1,232

Balance Sheet (prior to earnings appropriation)

(at December 31, 2016 and 2015)

(CHF million)	Notes	2016	2015
Assets			
Current assets:			
Cash		**6**	–
Short-term receivables from subsidiaries		**1**	2
Short-term loans to subsidiaries	2	**5,006**	2,001
Total current assets		**5,013**	2,003
Non-current assets:			
Long-term loans to subsidiaries		**–**	39
Investments in subsidiaries	3	**4,098**	4,098
Total non-current assets		**4,098**	4,137
Total assets		**9,111**	6,140
Liabilities and shareholders' equity:			
Short-term liabilities:			
Short-term interest bearing loans from subsidiaries	2	**(520)**	(300)
Short-term liabilities to subsidiaries		**(26)**	(10)
Accrued expenses and deferred income		**(10)**	(12)
Total short-term liabilities		**(556)**	(322)
Equity			
Share capital	4, 5	**(9)**	(9)
Legal reserves			
Legal reserves from capital contribution	4	**(27)**	(27)
Legal reserves from retained earnings	4	**(2)**	(2)
Voluntary retained earnings			
Other reserves	4	**(1,628)**	(1,749)
Retained earnings	4	**(3,407)**	(3,186)
Net income		**(3,598)**	(1,232)
Treasury shares	4, 6	**116**	387
Total shareholders' equity		**(8,555)**	(5,818)
Total liabilities and shareholders' equity		**(9,111)**	(6,140)

Notes to the Financial Statements of Syngenta AG

1. Accounting policies

General aspects
These financial statements were prepared according to the provisions of the Swiss Law on Accounting and Financial Reporting (32nd title of the Swiss Code of Obligations) (the "Law"). The significant accounting and valuation principles applied that are not prescribed by the Law are described below.

Exchange rate differences
Except for investments in subsidiaries, associates and joint ventures, which are translated at historical rates, all assets and liabilities denominated in foreign currencies are translated into Swiss francs (CHF) using year end rates of exchange. Realized exchange gains and losses arising from these as well as those from business transactions denominated in foreign currencies are recorded in the income statement. Net unrealized exchange losses are recorded in the income statement; net unrealized gains, however, are deferred within accrued liabilities.

Investments in subsidiaries
Investments are recorded at acquisition cost less any impairment loss.

Treasury shares
Treasury shares are recognized at acquisition cost and deducted from shareholders' equity at the time of acquisition. The gain or loss on resale of treasury shares, if any, is recognized in the income statement as financial income or expense.

Foregoing a cash flow statement and additional disclosures in the notes
In accordance with the Law, Syngenta AG has decided to forgo presenting additional information on interest-bearing liabilities and audit fees in the notes, as well as a cash flow statement, because it has prepared its consolidated financial statements in accordance with a recognized accounting standard (International Financial Reporting Standards as issued by the International Accounting Standards Board).

2. Information on income statement and balance sheet items

Dividend income
Dividend income in 2016 consists entirely of dividends received for the 2015 business year.

Other financial income
Other financial income consists mainly of income from treasury shares sold and guarantee fees received from subsidiaries.

Loans
Syngenta AG receives loans from group companies and gives loans to group companies.

Operating expenses
Operating expenses include costs incurred in relation to the takeover offer by CNAC Saturn (NL) B.V., a subsidiary of China National Chemical Corporation (ChemChina). Please refer to Note 3 "Acquisitions, divestments and other significant transactions" to the consolidated financial statements for details of potential impact of the takeover offer.

3. Investments in subsidiaries, associates and joint ventures

The following are the significant legal entities in the Syngenta group of companies (the "Group"). In the context of the SIX Swiss Exchange Directive on Information relating to Corporate Governance, the disclosure criteria are as follows:

- companies directly owned by Syngenta AG
- companies indirectly owned by Syngenta AG with sales in excess of $100 million or equivalent or total assets in excess of one percent of total Group assets
- companies with a financing function.

None of the significant legal entities are listed. Please refer to Note 29 "New IFRSs and accounting policies" to the consolidated financial statements for the appropriate consolidation method applied to each type of entity.

3. Investments in subsidiaries, associates and joint ventures continued

Country	Municipality	Capital and voting rights owned by Syngenta[1]	Local currency	Share capital in local currency	Function of company
Argentina					
Syngenta Agro S.A.	Buenos Aires	100%	ARS	2,801,002,218	Sales/Production
Australia					
Syngenta Australia Pty Limited	North Ryde	100%	AUD	83,942,909	Sales/Production/Development
Brazil					
Syngenta Proteção de Cultivos Ltda.	São Paulo	100%	BRL	2,522,624,609	Sales/Production/Research
Canada					
Syngenta Canada Inc.	Guelph	100%	CAD	–	Sales/Research
China					
Syngenta (China) Investment Company Limited	Shanghai	100%	USD	46,660,810	Holding/Sales
France					
Syngenta France S.A.S.	Saint-Sauveur	100%	EUR	50,745,240	Sales/Production/Development
Syngenta Holding France SA[2]	Guyancourt	100%	EUR	99,965,085	Holding/Finance
Germany					
Syngenta Agro GmbH	Maintal	100%	EUR	2,100,000	Sales
Hungary					
Syngenta Hungary Kft.	Budapest	100%	HUF	280,490,000	Sales/Production/Development
India					
Syngenta India Limited	Pune	96%	INR	164,718,540	Sales/Production
Indonesia					
PT Syngenta Indonesia	Jakarta	100%	IDR	58,122,874,000	Sales/Production/Development
Italy					
Syngenta Italia S.p.A.	Milano	100%	EUR	5,200,000	Sales/Production/Development
Japan					
Syngenta Japan K.K.	Tokyo	100%	JPY	–	Sales/Production/Research
Mexico					
Syngenta Agro, S.A. de C.V.	México City, D.F.	100%	MXN	157,580,000	Sales/Production/Development
Netherlands					
Syngenta Seeds B.V.	Enkhuizen	100%	EUR	488,721	Holding/Sales/Production/ Research
Syngenta Finance N.V.	Enkhuizen	100%	EUR	45,000	Finance
Syngenta Treasury N.V.	Enkhuizen	100%	EUR	90,001	Holding/Finance
Panama					
Syngenta Crop Protection S.A.	Panama City	100%	USD	101,000	Sales/Distribution
Poland					
Syngenta Polska Sp.z.o.o.	Warsaw	100%	PLN	22,264,000	Sales
Russian Federation					
OOO Syngenta	Moscow	100%	RUB	895,619,000	Sales/Distribution

3. Investments in subsidiaries, associates and joint ventures continued

Country	Municipality	Capital and voting rights owned by Syngenta[1]	Local currency	Share capital in local currency	Function of company
Spain					
Syngenta España S.A.	Madrid	100%	EUR	7,544,828	Distribution/Development/ Production
Switzerland					
Syngenta Supply AG	Basel	100%	CHF	250,000	Sales
Syngenta Crop Protection AG[2]	Basel	100%	CHF	257,000	Holding/Sales/Production/Research
Syngenta Crop Protection Monthey SA[2]	Monthey	100%	CHF	70,000,000	Production
Syngenta Agro AG	Dielsdorf	100%	CHF	2,100,000	Sales/Production/Research
Syngenta Agroservices Asia AG[2]	Basel	100%	CHF	650,000	Distribution/Consulting
Syngenta Finance AG[2]	Basel	100%	CHF	10,000,000	Finance
Syngenta International AG[2]	Basel	100%	CHF	100,000	Management Services
Syngenta Participations AG[2]	Basel	100%	CHF	25,000,020	Holding
Syngenta South Asia AG[2]	Basel	100%	CHF	9,000,000	Holding/Finance
Ukraine					
TOV Syngenta	Kiev	100%	UAH	3,540,391,580	Sales/Research
United Kingdom					
Syngenta Limited	Bracknell	100%	GBP	85,000,000	Holding/Production/Research
Syngenta UK Limited	Fulbourn	100%	GBP	500	Sales/Research
USA					
Syngenta Crop Protection, LLC	Greensboro	100%	USD	100	Sales/Production/Research
Syngenta Seeds, LLC	Minnetonka	100%	USD	–	Sales/Production/Research
Syngenta Corporation	Wilmington	100%	USD	100	Holding/Finance
GreenLeaf Genetics, LLC	Minnetonka	100%	USD	–	For Liquidation
Vietnam					
Syngenta Vietnam Ltd.	Bien Hoa City	100%	USD	45,000,000	Sales/Production

1 The capital and voting rights in 2016 have not changed compared to 2015
2 Direct holding of Syngenta AG

4. Equity

(CHF million)	Legal reserves: Share capital	Legal reserves: From capital contribution	Legal reserves: From retained earnings	Legal reserves: Reserve for treasury shares	Voluntary retained earnings: Other reserves	Voluntary retained earnings: Retained earnings	Voluntary retained earnings: Net income	Treasury shares	Total
Balance at December 31, 2014	9	27	2	413	1,336	3,022	1,174	–	5,983
Transfer[1]	–	–	–	(413)	413	–	–	–	–
Reclassification of treasury shares[1]	–	–	–	–	–	–	–	(412)	(412)
Opening balance as of January 1, 2015, Article 957 of new Swiss Code of Obligations	9	27	2	–	1,749	3,022	1,174	(412)	5,571
Appropriation of available earnings	–	–	–	–	–	1,174	(1,174)	–	–
Sale of treasury shares	–	–	–	–	–	–	–	154	154
Cancelation of own shares	–	–	–	–	–	–	–	–	–
Purchase of own shares	–	–	–	–	–	–	–	(129)	(129)
Dividend payment	–	–	–	–	–	(1,010)	–	–	(1,010)
Net income of the period	–	–	–	–	–	–	1,232	–	1,232
Balance at December 31, 2015	9	27	2	–	1,749	3,186	1,232	(387)	5,818

1 According to new Swiss Code of Obligations treasury shares are reclassified from Assets to Equity and consequently reserves for treasury shares are transferred to other reserves

(CHF million)	**Legal reserves: Share capital**	**Legal reserves: From capital contribution**	**Legal reserves: From retained earnings**	**Voluntary retained earnings: Other reserves**	**Voluntary retained earnings: Retained earnings**	**Voluntary retained earnings: Net income**	**Treasury shares**	**Total**
Balance at December 31, 2015	**9**	**27**	**2**	**1,749**	**3,186**	**1,232**	**(387)**	**5,818**
Appropriation of available earnings	**–**	**–**	**–**	**–**	**1,232**	**(1,232)**	**–**	**–**
Sale of treasury shares	**–**	**–**	**–**	**–**	**–**	**–**	**150**	**150**
Cancelation of own shares	**–**	**–**	**–**	**(121)**	**–**	**–**	**121**	**–**
Dividend payment	**–**	**–**	**–**	**–**	**(1,011)**	**–**	**–**	**(1,011)**
Net income of the period	**–**	**–**	**–**	**–**	**–**	**3,598**	**–**	**3,598**
Balance at December 31, 2016	**9**	**27**	**2**	**1,628**	**3,407**	**3,598**	**(116)**	**8,555**

5. Share capital

	December 31, 2016	Movement in period	December 31, 2015
Total Syngenta AG registered shares	**92,578,149**	(367,500)	92,945,649
Nominal value per share (CHF)	**0.10**	0.10	0.10
Total share capital (CHF million)	**9.26**	(0.03)	9.29

On April 26, 2016, the Annual General Meeting (AGM) agreed to the cancellation of 367,500 shares at a nominal value of CHF 0.10 each. The cancellation of shares took place on July 7, 2016.

6. Treasury shares

The number of treasury shares held by the Company and their movements are as follows:

	2016	2015
Total treasury registered shares held by Syngenta AG at January 1	**1,161,397**	1,286,312
Sold in the year under various Employee/Management Share Plans	**(436,234)**	(514,415)
Average sale price per share, CHF	**403.07**	342.89
Purchased during the year	**–**	389,500
Canceled during the year	**(367,500)**	–
Average book value per canceled share, CHF	**328.63**	–
Total treasury registered shares held by Syngenta AG at December 31	**357,658**	1,161,397
Average purchase price per share, CHF	**324.44**	333.53

7. Contingent liabilities

	Maximum amount December 31,		Amount in effect at December 31,	
(CHF million)	**2016**	2015	**2016**	2015
External borrowing activities:				
Euro medium-term notes	**2,093**	2,103	**2,093**	2,103
SEC registered US bonds	**764**	744	**764**	744
Private placement notes	**255**	248	**255**	248
Commercial paper	**2,546**	2,481	**102**	–
Credit facilities	**2,546**	1,489	**–**	–
Group treasury lending, borrowing and hedging activities	**23,857**	18,309	**12,941**	10,699
Total	**32,061**	25,374	**16,155**	13,794

External borrowing activities

Syngenta has fully and unconditionally guaranteed on a senior unsecured basis the due and punctual payment of the principal of and any premium and interest on the debt securities issued by Syngenta Finance N.V., which is an indirect, and Syngenta Finance AG, which is a direct, wholly-owned finance subsidiary. The guarantees rank equally with all other unsecured and unsubordinated debt of the Group. No other subsidiary of Syngenta AG guarantees such debt securities.

Treasury – intercompany lending, borrowing and hedging activities

At the request of the Dutch authorities, Syngenta AG guarantees credit risk arising on lending, borrowing and hedging activities between Syngenta Treasury N.V. (a limited liability company organized under the laws of the Netherlands and an indirectly wholly-owned subsidiary) and other Group companies, subject to a threshold of EUR 10 million.

In addition, in 2015 Syngenta AG guaranteed a credit facility made available to Syngenta France S.A.S. by Syngenta Participations AG.

External hedging activities – Financial Instruments

External hedging activities refer to financial instruments where Syngenta Treasury N.V. is the contractual party hedging exposures arising in the Syngenta Group with external counterparties. Details of the nature of these transactions are disclosed in Notes 27 and 28 to the consolidated financial statements.

These financial instruments are transacted under International Swap and Derivative Association (ISDA) contracts. In addition, for certain financial instruments positions, Credit Support Annex (CSA) contracts are in place under which cash is exchanged as collateral.

Syngenta AG guarantees the financial instruments transactions entered under these ISDA contracts. The contingent liabilities related to these financial instruments are significantly limited with the credit risk mitigation measures applicable under the ISDA and the CSA contracts and amount to CHF 11.1 million at December 31, 2016 (2015: CHF 10.9 million).

7. Contingent liabilities continued

Public tender offer for Syngenta AG shares by CNAC Saturn (NL) B.V. ("the Offeror")

On March 23, 2016, CNAC Saturn (NL) B.V. ("the Offeror"), a subsidiary of China National Chemical Corporation (ChemChina), a state-owned enterprise of the People's Republic of China, launched public tender offers to acquire all the publicly held Ordinary Shares and American Depositary Shares (ADSs) of Syngenta AG ("the Offer") for US$465 per Ordinary Share in cash. Syngenta and its Board of Directors have agreed to support the Offer.

If the Offer becomes unconditional, Syngenta AG will pay a special dividend of CHF 5.00 per share immediately before the First Settlement of the Offer. The Offer price will not be adjusted for this dividend. This special Dividend, which was approved by the shareholder's general meeting of April 26, 2016 amounts to CHF 463 million.

In certain circumstances, if the Syngenta AG Board of Directors were to withdraw its support for the Offer and as a result the Offer is not successful or does not become unconditional, Syngenta AG would be required to pay ChemChina US$848 million.

Please refer to Note 3 "Acquisitions, divestments and other significant transactions" to the consolidated financial statements for further details of potential impact of the takeover offer.

Litigation matters

In August 2013, a personal injury Complaint relating to atrazine was filed under seal in the Circuit Court for the Twentieth Judicial Circuit, St. Clair County, Illinois, on behalf of an unnamed minor (the case being brought under the alias James Doe) and his parents, against Syngenta Crop Protection LLC, Syngenta AG and certain dealers and distributors. The Complaint alleges public nuisance, strict liability, and negligence and seeks unspecified damages together with the costs of suit. Fact discovery in the litigation opened in March 2014 and is continuing. The claims in the lawsuit have no grounding in fact or science and Syngenta will vigorously defend the lawsuit.

Since September 12, 2014, a number of lawsuits have been filed against various Syngenta legal entities, among them Syngenta AG, in state and federal courts in the United States by plaintiffs seeking damages from Syngenta for commercializing its AGRISURE VIPTERA® (MIR162) and DURACADE™ corn seed in the United States without having obtained import approval from China for those products. Syngenta strongly believes that the claims in these cases are without merit and will vigorously defend the lawsuits.

On December 1, 2015, a claim was filed in Ontario, Canada, by a proposed representative plaintiff on behalf of a putative class comprising all farmers in Canada against Syngenta Canada, Inc. and Syngenta AG seeking damages from Syngenta for commercializing its AGRISURE VIPTERA® (MIR162) and DURACADE™ corn seed in the North American corn market without having obtained import approval from China for those products. Syngenta Canada Inc. was served with the claim on December 8, 2015. Syngenta AG was served with the claim under the Hague Convention on May 18, 2016. Syngenta strongly believes that the claims in this action are without merit and will vigorously defend the action.

More details on these litigation cases are disclosed in Note 25 "Commitments and contingencies" to the consolidated financial statements.

Other

In a letter addressed to Syngenta Pensions Trustee Limited, dated July 2, 2013, and subsequently updated on January 24, 2014, Syngenta AG confirmed that it will ensure that Syngenta Limited will honor its obligation to guarantee the solvency and due payment of benefits of the Syngenta UK Pension Fund.

At the request of PRI Pensionsgaranti Sweden, a provider of credit insurance for occupational pension provisions, which insures the credit risk of the pension obligation of Syngenta Seeds AB Sweden, Syngenta AG has guaranteed the obligations of Syngenta Seeds AB in relation to the insured pension scheme.

Syngenta AG is part of a group of Swiss entities of Syngenta which are jointly and severally liable for the whole Swiss VAT amount due to the Swiss Tax authorities by this group.

8. Significant shareholders

At December 31, 2016, to the knowledge of Syngenta AG, there are three (2015: four) significant shareholders exceeding the threshold of 5.00 percent voting rights in Syngenta's share capital, including voting rights to shares held as a nominee.

Significant Shareholders	**December 31, 2016 in % of total share capital**	December 31, 2015 in % of total share capital
JPM Chase Nominees Ltd., London[1]	**7.75**	13.03
Mellon Bank N.A. as agent for its client (Nominee), Everett	**5.86**	5.25
BlackRock Inc., New York[2]	**5.08**	5.08

1 Disclosure limited to registered shares ISIN CH0011037469
2 Latest disclosure at April 14, 2014

At December 31, 2016, Syngenta itself holds 357,658 (2015: 1,161,397) shares in treasury corresponding to 0.39 percent (2015: 1.25 percent) of the share capital, as outlined in Note 6.

9. Holding of shares and options

The following tables detail the holding of shares and options by non-executive Directors and the Executive Committee at December 31, 2016 and 2015, including related parties. Related parties are spouses, parents, children living in the same household, legal entities they own or otherwise control, and any legal or natural person that acts as their fiduciary. At December 31, 2016 and 2015, no non-executive Directors held any options.

Holding of shares of non-executive Directors at December 31, 2016 and 2015

	Number of unrestricted shares		Number of restricted shares		% voting rights	
Non-executive Directors	**2016**	2015	**2016**	2015	**2016**	2015
Michel Demaré	**2,281**	1,075	**6,014**	5,694	**< 0.1%**	< 0.1%
Vinita Bali	**304**	–	**–**	–	**< 0.1%**	< 0.1%
Stefan Borgas	**1,438**	826	**1,459**	1,546	**< 0.1%**	< 0.1%
Gunnar Brock	**700**	700	**–**	–	**< 0.1%**	< 0.1%
Eleni Gabre-Madhin	**304**	–	**–**	–	**< 0.1%**	< 0.1%
David Lawrence	**13,309**	12,966	**–**	–	**< 0.1%**	< 0.1%
Eveline Saupper	**650**	650	**1,602**	1,602	**< 0.1%**	< 0.1%
Jürg Witmer	**9,982**	9,000	**–**	–	**< 0.1%**	< 0.1%
Total unrestricted/restricted shares	**28,968**	25,217	**9,075**	8,842	**< 0.1%**	< 0.1%
Jacques Vincent[1] (January 1 – April 26, 2016)	**–**	2,682	**–**	–	**< 0.1%**	< 0.1%
Total shares	**38,043**	36,741				

1 Jacques Vincent retired from the Board of Directors at the AGM 2016

Holding of shares by members of the Executive Committee at December 31, 2016[1]

	Vested shares			Unvested shares				Total
Members of the Executive Committee	Unrestricted	Restricted	% Voting rights	Unconverted DSP share awards	Unvested DSP matching rights	Unvested LTI RSU	Unvested LTI PSU	Vested/ unvested
Erik Fyrwald[2]	**6,263**	**–**	**< 0.1%**	**–**	**–**	**–**	**–**	**6,263**
Patricia Malarkey	**480**	**672**	**< 0.1%**	**453**	**1,125**	**778**	**3,552**	**7,060**
Christoph Mäder	**13,949**	**1,151**	**< 0.1%**	**–**	**1,137**	**857**	**3,342**	**20,436**
Jonathan Parr	**80**	**14**	**< 0.1%**	**1,282**	**1,282**	**461**	**4,492**	**7,611**
Mark Patrick	**663**	**40**	**< 0.1%**	**396**	**396**	**1,266**	**–**	**2,761**
Mark Peacock	**1,946**	**14**	**< 0.1%**	**1,674**	**1,674**	**933**	**3,790**	**10,031**
Total Executive Committee shares	**23,381**	**1,891**	**< 0.1%**	**3,805**	**5,614**	**4,295**	**15,176**	**54,162**

1 Jeff Rowe does not hold any shares and is therefore not included in the table
2 Erik Frywald holds 31,315 American Depositary Shares, which have been disclosed as 6,263 unrestricted shares

Holding of shares by members of the Executive Committee at December 31, 2015

	Vested shares			Unvested shares				Total
Members of the Executive Committee	Unrestricted	Restricted	% Voting rights	Unconverted DSP share awards	Unvested DSP matching rights	Unvested LTI RSU	Unvested LTI PSU	Vested/ unvested
Caroline Luscombe	2,065	27	< 0.1%	1,110	1,110	1,381	1,220	6,913
Patricia Malarkey	356	–	< 0.1%	476	476	931	1,370	3,609
Christoph Mäder	12,174	1,211	< 0.1%	–	1,184	1,523	1,260	17,352
Jonathan Parr	1,779	27	< 0.1%	745	745	791	1,694	5,781
Mark Peacock	13	27	< 0.1%	1,612	1,612	1,581	1,524	6,369
Davor Pisk	10,573	859	< 0.1%	1,192	2,024	2,080	1,834	18,562
John Ramsay	7,747	797	< 0.1%	1,064	1,834	1,870	1,637	14,949
Jonathan Seabrook	1,133	27	< 0.1%	1,067	1,067	1,342	1,201	5,837
Total Executive Committee shares	35,840	2,975	< 0.1%	7,266	10,052	11,499	11,740	79,372

9. Holding of shares and options continued

Holding of options by members of the Executive Committee at December 31, 2016

Year of allocation	2015	2014	2013	2012	2011	2010	2009	2008
Underlying equity	Share	Share	Share	Share	Share	Share	Share	Share
Term (years)	10	10	10	10	10	10	10	10
Exercise period (years)	7	7	7	7	7	7	7	7
Option: share/ADS ratio	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1
Exercise price CHF	332.20	325.90	391.40	300.40	308.71	283.70	233.43	301.50
Vesting status	unvested		vested					
Options held at December 31, 2016:								
Members of the Executive Committee[1]								
Patricia Malarkey	13,697	5,664	772	782	617	–	–	–
Christoph Mäder	12,598	6,234	4,387	5,057	3,518	3,304	–	–
Jonathan Parr	16,933	3,352	2,176	2,230	1,668	1,632	1,225	–
Mark Patrick	3,236	2,239	1,763	1,903	1,093	–	–	–
Mark Peacock	15,240	6,787	4,271	4,418	3,639	–	–	–
Totals by grant year	61,704	24,276	13,369	14,390	10,535	4,936	1,225	–
Total unvested options	85,980							
Total vested options	44,455							
Total options on shares	130,435							

1 Erik Frywald and Jeff Rowe do not hold any options and are therefore not included in the table

Holding of options by members of the Executive Committee at December 31, 2015

Year of allocation	2015	2014	2013	2012	2011	2010	2009	2008	2007
Underlying equity	Share	Share	Share	Share	Share	Share	Share	Share	Share
Term (years)	10	10	10	10	10	10	10	10	10
Exercise period (years)	7	7	7	7	7	7	7	7	7
Option: share/ADS ratio	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1
Exercise price CHF	332.20	325.90	391.40	300.40	308.71	283.70	233.43	301.50	226.70
Vesting status	unvested			vested					
Options held at December 31, 2015:									
Members of the Executive Committee									
Caroline Luscombe	12,192	6,033	3,639	2,637	–	–	–	–	–
Patricia Malarkey	13,697	5,664	772	782	617	–	–	–	–
Christoph Mäder	12,598	6,234	4,387	5,057	3,518	3,304	–	–	–
Jonathan Parr	16,933	3,352	2,176	2,230	1,668	1,632	1,225	–	–
Mark Peacock	15,240	6,787	4,271	4,418	3,639	–	–	–	–
Davor Pisk	18,333	8,446	6,065	6,525	4,586	–	–	–	–
John Ramsay	16,369	7,541	5,497	6,117	4,491	–	4,506	–	2,453
Jonathan Seabrook	13,458	6,452	1,972	2,287	1,791	–	–	–	–
Totals by grant year	118,820	50,509	28,779	30,053	20,310	4,936	5,731	–	2,453
Total unvested options	198,108								
Total vested options	63,483								
Total options on shares	261,591								

10. Allocation of shares for members of the Board

Compensation of the Chairman

Two-thirds of the Chairman's annual fee is paid monthly in cash and one-third is paid quarterly in the form of restricted shares, which are blocked from trading for a period of three years. The number of restricted shares paid each quarter is determined by dividing the share portion of the fee by the market price of a Syngenta share at each quarterly grant date.

Compensation of non-executive Directors

Non-executive Directors have the option to receive part of their annual fee in the form of shares that are either freely tradable or blocked from trading for a period of five years. Shares are granted once a year with the grant value per share being the market price at the grant date.

	2016		2015	
	Quantity	Value at grant (CHF)	Quantity	Value at grant (CHF)
Shares allocated to members of the Board	3,984	1,536,596	2,543	961,522

No options were granted.

11. Full-time equivalents

Syngenta AG does not have any employees.

Appropriation of Available Earnings of Syngenta AG

(CHF million)	2016	2015
Available earnings:		
Balance brought forward from previous year	**3,407**	3,186
Net profit of the year	**3,598**	1,232
Total available earnings	**7,005**	4,418
Appropriation of available earnings:		
Payment of a dividend proposed to the AGM	**–**	(1,018)
Conditional payment of dividend approved by the AGM on April 26th, 2016	**(463)**	(463)
Transfer to free reserves	**–**	–
Total available earnings after appropriation	**6,542**	2,937
Conditional dividend not paid	**–**	463
Dividend waived for treasury shares held by the Company	**–**	7
To be carried forward on this account	**6,542**	3,407

For fiscal year 2015, the AGM approved a dividend distribution out of the available earnings of CHF 11.00 per share and a conditional dividend distribution out of the available earnings of CHF 5.00 per share, which will be paid if the Offer becomes unconditional, which was not yet the case at December 31, 2016 (see Note 7). Therefore the conditional dividend is still included in the available earnings. For 2016, no other dividend is proposed by the Board of Directors.

KPMG

Statutory Auditor's Report

To the General Meeting of Syngenta AG, Basel

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Syngenta AG, which comprise the balance sheet as of December 31, 2016, and the income statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion the financial statements (pages 101 to 111) for the year ended December 31, 2016 comply with Swiss law and the company's articles of incorporation.

Basis for Opinion

We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the entity in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Report on Key Audit Matters based on the circular 1/2015 of the Federal Audit Oversight Authority

We have determined that there are no key audit matters to communicate in our report.

Responsibility of the Board of Directors for the Financial Statements

The Board of Directors is responsible for the preparation of the financial statements in accordance with the provisions of Swiss law and the company's articles of incorporation, and for such internal control as the Board of Directors determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Swiss law and Swiss Auditing Standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

— Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
— Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of internal control.
— Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
— Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the entity to cease to continue as a going concern.

We communicate with the Board of Directors or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

In accordance with article 728a para. 1 item 3 CO and the Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposed appropriation of available earnings complies with Swiss law and the company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

KPMG AG

Richard Broadbelt
Licensed Audit Expert
Auditor in Charge

Michael Blume
Licensed Audit Expert

Basel, February 7, 2017

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

Cautionary Statement Regarding Forward-Looking Statements

This Financial Report contains forward-looking statements, which can be identified by terminology such as “expect”, “would”, “will”, “potential”, “plans”, “prospects”, “estimated”, “aiming”, “on track” and similar expressions. Such statements may be subject to risks and uncertainties that could cause the actual results to differ materially from these statements.

We refer you to Syngenta’s publicly available filings with the US Securities and Exchange Commission for information about these and other risks and uncertainties. Syngenta assumes no obligation to update forward-looking statements to reflect actual results, changed assumptions or other factors.

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Switzerland
Investor Relations
T +41 61 323 5883
F +41 61 323 5880
E global.investor_relations@syngenta.com

Media Relations
T +41 61 323 2323
F +41 61 323 2424
E media.relations@syngenta.com

Share Register
T +41 41 798 4833
F +41 41 798 4849
E syngenta@devigus.com

Shareholder Services
T +41 61 323 2121
F +41 61 323 5461
E shareholder.services@syngenta.com

Corporate Responsibility
E csr@syngenta.com

Syngenta switchboard
T +41 61 323 1111
F +41 61 323 1212

USA
Investor Relations
T +1 202 737 6521
E global.investor_relations@syngenta.com

Media Relations
T +1 202 737 8913

Contacts for ADS holders
T +1 866 253 7068 – from within the USA
T +1 201 680 6825 – from outside the USA
E shrrelations@cpushareownerservices.com

Syngenta AG
Corporate Affairs
P.O. Box
CH-4002 Basel
Switzerland

www.syngenta.com

For the business year 2016, Syngenta has published three books: the Annual Review 2016 (including information about our non-financial performance), the Financial Report 2016, and the Corporate Governance Report and Compensation Report 2016.

All documents were originally published in English. The Annual Review 2016 and the Corporate Governance Report and Compensation Report 2016 are also available in German.

These publications are available on the Internet: www.syngenta.com

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Bringing plant potential to life