

ZURICH, SWITZERLAND, FEBRUARY 8, 2017

ABB delivers growth in fourth quarter

Solid transformation progress in 2016

Fourth quarter highlights

- 3%¹ orders growth driven by large contract awards
- 9% orders growth in the United States and China
- Revenues up 1%
- Power Grids strong growth in orders (up 15%) and revenues (up 4%); Op EBITA margin² increased to 10.4%
- Operational EBITA margin 11.7% impacted by default of a large distributor in Turkey and Egyptian currency losses
- Net Income \$489 mn versus \$204 mn in Q4 2015

Full year 2016 highlights

- Operational EBITA margin up 50 bps to 12.4%
- Operational earnings per share² up 4%
- Orders -5% and revenues -1%
- Successful launch of ABB Ability™ – integrating and expanding digital offering
- Cash return on invested capital up 70 bps to 14.1%; free cash flow up 5%
- Cost savings and working capital programs progressing
- 8th consecutive dividend increase to CHF0.76 per share proposed

“We delivered growth in the fourth quarter, driven by the strong performance of Power Grids, in a continued tough market,” said CEO Ulrich Spiesshofer. “Our customers are excited about ABB Ability, which bundles our leading offering as a digital champion in our industry. With the related orders already received, and significant interest, we are building growth momentum as we implement Next Level Stage 3,” he said. “The underlying performance improvement momentum continued and was stronger than the numbers we are reporting if you consider the one-off events that impacted us during the quarter.”

“In 2016, we made significant progress transforming ABB into a more customer focused, leaner, digital technology leader,” Spiesshofer said. “We delivered margin accretion through our continued focus on productivity and cost. Our working capital program, strong cash generation and disciplined capital allocation reflect the new cash culture of ABB. We are delivering on our commitment to attractive shareholder returns.”

Key Figures

(\$ in millions, unless otherwise indicated)	CHANGE				CHANGE			
	Q4 2016	Q4 2015	US\$	Comparable ¹	FY 2016	FY 2015	US\$	Comparable ¹
Orders	8,277	8,262	0%	+3%	33,379	36,429	-8%	-5%
Revenues	8,993	9,242	-3%	+1%	33,828	35,481	-5%	-1%
Operational EBITA ¹	1,057	1,101	-4%	-2% ³	4,191	4,209	0%	+2% ³
as % of operational revenues	11.7%	11.9%	-0.2pts		12.4%	11.9%	+0.5pts	
Net income	489	204	+140%		1,963	1,933	+2%	
Basic EPS (\$)	0.23	0.09	+147% ⁴		0.91	0.87	+5% ⁴	
Operational EPS ² (\$)	0.33	0.35	-5% ⁴	-3% ⁴	1.29	1.26	+3% ⁴	+4% ⁴
Cash flow from operating activities	1,519	1,994	-24%		3,934	3,818	+3%	
Free cash flow					3,156	3,019	+5%	
Cash return on invested capital (CROI)					14.1%	13.4%	+0.7pts	

¹ Growth rates for orders, revenues and order backlog are on a comparable basis (local currency adjusted for acquisitions and divestitures), previously referred to as 'like-for-like'. US\$ growth rates are presented in Key Figures table

² For a reconciliation of non-GAAP measures, see “Supplemental Reconciliations and Definitions” in the attached Q4 2016 Financial Information

³ Constant currency (not adjusted for portfolio changes)

⁴ EPS growth rates are computed using unrounded amounts. Comparable operational earnings per share is in constant currency (2014 exchange rates and not adjusted for changes in the business portfolio)

Short-term outlook

Macroeconomic and geopolitical developments are signaling a mixed picture with continued uncertainty. Some macroeconomic signs remain positive in the United States and growth in China is expected to continue. The overall global market remains impacted by modest growth and increased uncertainties, e.g., Brexit in Europe and geopolitical tensions in various parts of the world. Oil prices and foreign exchange translation effects are expected to continue to influence the company's results. With this and the ongoing transformation of ABB, we expect 2017 to be a transitional year.

Q4 2016 Group results

Orders

Orders increased 3 percent (steady in US dollars) compared with the fourth quarter a year ago, driven primarily by large contract awards. Large orders (\$15 million and above) were 35 percent higher (24 percent in US dollars) from large orders in Power Grids and Discrete Automation and Motion. Large orders represented 17 percent of total orders compared with 14 percent in the same quarter a year ago. These large orders included a \$640 million ultra-high-voltage direct current systems order for Raigarh-Pugalur in India and a \$100 million order for the upgrade of Sylmar converter station of the Pacific Intertie high-voltage direct current power link in the USA. Base orders (below \$15 million) were 1 percent lower (4 percent in US dollars); improving in Discrete Automation and Motion, steady in Process Automation and lower in the two remaining divisions. Total service and software orders increased 4 percent (2 percent in US dollars) compared with the fourth quarter of 2015 and represented 20 percent of total orders, slightly higher than the same period a year ago.

The order backlog at the end of December 2016, amounted to \$23 billion, 1 percent lower (5 percent in US dollars) compared with the end of 2015. The book-to-bill² ratio in the fourth quarter was 0.92x compared with 0.89x in the fourth quarter of 2015.

Market overview

Demand patterns in ABB's three regions:

- Demand in Europe was subdued due to moderate overall growth and timing of large capital investments. Total orders declined 8 percent (12 percent in US dollars) while base orders were stable (3 percent lower in US dollars). Base order demand was positive in Spain, Norway and the United Kingdom while weak in Turkey, France and the Netherlands.
- The Americas was steady mainly driven by increased momentum for transmission and distribution needs. Total orders were steady in the quarter as large order awards offset a base order decline of 3 percent. The United States grew 9 percent (9 percent in US dollars). Base orders were positive in the United States and Mexico and declined in Canada and Brazil.
- Demand in Asia, the Middle East and Africa (AMEA) was strong as India continued to invest in reliable and efficient power transmission solutions and China fostered further investment in industrial automation. Total orders for the region grew 17 percent (13 percent in US dollars) driven by strong order development in India and China. Base orders were 2 percent lower (5 percent in US dollars) as strong order development in India, up 14 percent (12 percent in US dollars) and China up 11 percent (5 percent in US dollars), could not offset declines in Saudi Arabia and other parts of South East Asia.

Demand patterns in ABB's three major customer sectors:

- Utilities continued their investment activities to upgrade the aging power infrastructure and to integrate renewable energy in the grid.
- In industry, investments in robotics solutions and light industries such as automotive, food and beverage remained positive while demand from the process industries, specifically mining and oil and gas remain subdued.
- Transport and infrastructure demand has been mixed. Demand for building automation solutions as well as solutions involving energy efficiency for rail transport remained strong while the marine sector suffered from a sharp decline due to the subdued oil and gas sector with the exception of cruise ships.

Revenues

Revenues increased 1 percent (3 percent lower in US dollars) in the fourth quarter with revenues higher in Electrification Products and Power Grids. Total services and software revenues increased 2 percent (steady in US dollars) and represented 18.5 percent of total revenues compared with 18.0 percent a year ago.

Operational EBITA

Operational EBITA was \$1,057 million, 2 percent lower in constant currencies (4 percent in US dollars). Operational EBITA margin was 11.7 percent, 20 basis points lower compared with the same quarter a year ago. Positive impacts from net savings and volume were offset by business mix and higher bad debt expenses due to the default of a large distributor in Turkey and operational currency losses due to the devaluation in Egypt. The bad debt expense and operational currency losses were \$30 million and impacted operational EBITA margin by approximately 30 basis points. Excluding these charges, the operational EBITA margin would have increased. The strong margin improvements in Process Automation and Power Grids did not fully offset these negative and unique events in the other divisions.

ABB modified its definition of Operational EBITA to exclude non-operational pension costs and the impacts from changes in pre-acquisition estimates. The results of previous periods have been adjusted to be presented on a comparable basis.

Net income, Basic and Operational earnings per share

Net income increased to \$489 million and basic earnings per share was \$0.23 compared with \$0.09 for the same quarter of 2015. Restructuring and restructuring-related expenses were significantly lower than the same quarter of 2015. During the quarter, net income also included the positive impact from the reassessment of the restructuring and restructuring-related provisions associated with the white collar productivity program which were reduced by \$114 million pre-tax. This adjustment was due to significantly higher than originally expected attrition and internal re-deployment rates.

Net income was also impacted by non-operational pension costs of \$38 million pre-tax, which primarily resulted from the change in Norway from a defined benefit to defined contribution pension plan as well as an increase of \$92 million pre-tax for estimated warranty costs in the solar business for products which were designed and sold by Power-One prior to the acquisition in 2013. During the long warranty periods of the solar inverters designed and sold by Power-One pre-dating the acquisition in 2013, warranty costs have exceeded the amounts originally estimated.

Operational EPS was \$0.33 compared to \$0.35 for the same quarter of 2015, a decrease of 3 percent in constant currency.

Cash flow from operating activities

Cash flow from operating activities was \$1,519 million, 24 percent lower compared with the fourth quarter of 2015, reflecting ABB's focus on more stable quarterly cash generation throughout the year.

Q4 divisional performance

(\$ in millions, unless otherwise indicated)	Orders	CHANGE		Revenues	CHANGE		Operational EBITA %	CHANGE
		US\$	Comparable ¹		US\$	Comparable ¹		
Electrification Products	2,157	-8%	-5%	2,462	0%	+3%	15.5%	-0.9pts
Discrete Automation and Motion	2,013	+1%	+4%	2,211	-3%	-1%	11.7%	-1.0pts
Process Automation	1,520	-15%	-14%	1,737	-10%	-8%	13.4%	+1.3pts
Power Grids	2,879	+10%	+15%	3,042	-2%	+4%	10.4%	+0.9pts
Corporate & other (incl. inter-division elimination)	-292			-459				
ABB Group	8,277	0%	+3%	8,993	-3%	+1%	11.7%	-0.2 pts

Electrification Products

Total orders reflect lower large orders in the systems business compared with the same period a year ago. Positive order development in China and India could not offset declines in the US, Canada and the United Kingdom. Revenues grew 3 percent in the quarter as a result of the execution of the systems backlog and higher demand in building products. Operational EBITA margin was impacted by the default of a Turkish distributor and Egyptian operational currency losses resulting collectively in a 90 basis points decline to 15.5 percent. Excluding these charges operational EBITA margin would have been steady in the quarter despite adverse mix. Effective January 1, 2017, electric vehicle charging, solar and power quality businesses are transferred from Discrete Automation and Motion and is expected to initially have a dampening effect on the division's margin.

Discrete Automation and Motion

Total orders grew 4 percent and revenues were steady as continued strong demand patterns in robotics and the light industry more than offset the impacts from capex declines in process industries such as oil and gas. Operational EBITA margin declined 100 basis points compared with the same quarter a year ago mainly impacted by lower margins in solar, unfavorable mix and low capacity utilization. Effective January 1, 2017, electric vehicle charging, solar and power quality businesses are transferred to the Electrification Products Division due to the synergistic opportunities they have with that portfolio. This transfer of business is expected to have a supportive effect on the division's margin.

Process Automation

Total orders were 14 percent lower as a result of continued capital expenditure reduction in the process industries. Revenues declined 8 percent as higher service revenues could not offset declines in mining and oil and gas. Operational EBITA margin increased 130 basis points to 13.4 percent due to positive mix and successfully implemented cost reduction and productivity measures.

Power Grids

Total orders were 15 percent higher compared with the same quarter a year ago due to significant large contract awards. Such orders included a \$640 million ultra-high-voltage direct current order for Raigarh-Pugalur in India and a \$100 million order for the upgrade of Sylmar converter station of the Pacific Intertie high-voltage direct current power link in the USA. Revenues increased 4 percent due to steady execution of a healthy order backlog. Operational EBITA margin increased by 90 basis points to 10.4 percent, mainly driven by higher revenues, improved productivity, solid project execution and continued cost savings. These results reflect the success of the "step change" transformation to date. Going forward, the division will continue to drive further transformation and value creation through its "Power Up" program.

Full-year 2016 Group Results

Orders were 5 percent lower (8 percent in US dollars) compared with 2015. Base order development was 2 percent lower (5 percent in US dollars) while large orders were down 24 percent (27 percent in US dollars) reflecting the high order intake in 2015. Total service and software orders grew 3 percent (0 percent in US dollars) to 18.4 percent of total group orders. The book-to-bill² ratio was 0.99x for 2016.

Revenues were steady (down 5 percent in US dollars) as revenue growth in Power Grids and Electrification Products offset declines in Discrete Automation and Motion and Process Automation. Total services and software revenues grew 3 percent (0 percent in US dollars) to 17.8 percent of total group revenues.

ABB continued to execute its Next Level strategy in 2016 which resulted in a 50 basis points improvement of the operational EBITA margin to 12.4 percent. The main drivers for the group's enhanced profitability were continued cost savings and productivity measures.

Net income for the year amounted to \$1.96 billion, an increase of 2 percent compared to the previous year. Basic earnings per share in the period improved 5 percent to \$0.91 and operational earnings per share was \$1.29, an increase of 4 percent on a constant currency basis.

Cash flow from operating activities improved 3 percent to \$3.9 billion, free cash flow improved 5 percent to \$3.2 billion and cash return on invested capital (CROI) increased 70 basis points to 14.1%. Net working capital as a percentage of revenues reduced by 150 basis points to 11.5 percent compared to 2015.

During 2016, ABB returned \$2.9 billion in cash to shareholders through the dividend (in the form of a nominal value reduction) and share repurchases.

Dividend

For 2016, the Board has proposed a dividend increase of 0.02 Swiss francs to 0.76 Swiss francs per share. The proposal is in line with the company's dividend policy to pay a steadily rising, sustainable dividend over time. If approved by shareholders at the company's annual general meeting on April 13, 2017, the Board proposes that the dividend be paid as an ordinary dividend. The ex-dividend and payout dates in Switzerland are expected in April 2017. Further information will be made available on ABB's website in due course.

Share buyback program

On September 30, 2016, ABB announced the completion of the share buyback program that was introduced in September 2014. During the buyback program, ABB repurchased approximately 171 million registered shares (equivalent to 7.4 percent of its issued share capital at the launch of the buyback program) for a total amount of approximately \$3.5 billion. In October 2016, ABB announced its plans for a new share buyback program of up to \$3 billion from 2017 through 2019. This reflects the company's confidence in the continued strength of ABB's cash generation and financial position.

Next Level strategy – Stage 3

On October 4, 2016, ABB launched Stage 3 of its Next Level strategy to unlock value for customers and shareholders. The core elements of this included: shaping ABB's divisions into four market-leading, entrepreneurial units; realizing ABB's full digital potential; accelerating momentum in operational excellence; and strengthening ABB's brand.

Driving growth in four market-leading, entrepreneurial units

ABB is driving growth in four market leading entrepreneurial divisions, Electrification Products, Robotics and Motion, Industrial Automation and Power Grids. These divisions were effective January 1, 2017 and are fully operational.

A quantum leap in digital with ABB Ability™

The ABB Ability™ offering combines ABB's portfolio of digital solutions and services across all customer segments, cementing the group's leading position in the Fourth Industrial Revolution and supporting the competitiveness of ABB's four entrepreneurial divisions. With ABB Ability, the company sees an annual addressable market of up to \$20 billion.

Accelerating momentum in operational excellence

The White-Collar Productivity savings program is on track to deliver the increased cost reduction target of \$1.3 billion, run rate end of 2017. ABB will achieve these additional savings within the initially announced timeframe and for \$200 million lower of total combined restructuring program and implementation costs than initially announced. ABB is continuing its regular cost-savings programs to achieve savings equivalent to 3-5 percent of cost of sales each year.

ABB is on track to deliver its Net Working Capital program to free up \$2 billion by the end of 2017. As of December 2016, it has freed up approximately \$900 million. Net working capital as a percentage of revenues reduced 150 bps to 11.5% compared to 2015.

Strengthening ABB's brand

ABB is adopting a single corporate brand, consolidating all its brands around the world under one umbrella. ABB's portfolio of companies is being unified, showcasing the full breadth and depth of the company's global offering under one master brand. The unified brand plays a key part in realizing the value potential of ABB's digital offering, as it increased brand loyalty, price premiums and purchase probability.

The brand features design elements intended to clearly articulate ABB's vision, direction and unique market position to customers, shareholders, employees and all other stakeholders. ABB's heritage as a pioneering technology leader and the three focus areas of its Next Level strategy are reflected in its new brand promise: "Let's write the future."™

Outlook

Macroeconomic and geopolitical developments are signaling a mixed picture with continued uncertainty. Some macroeconomic signs remain positive in the United States and growth in China is expected to continue. The overall global market remains impacted by modest growth and increased uncertainties, e.g., Brexit in Europe and geopolitical tensions in various parts of the world. Oil prices and foreign exchange translation effects are expected to continue to influence the company's results. With this and the ongoing transformation of ABB, we expect 2017 to be a transitional year.

The attractive long-term demand outlook in ABB's three major customer sectors — utilities, industry and transport & infrastructure — is driven by the Energy and Fourth Industrial Revolutions.

ABB is well-positioned to tap into these opportunities for long-term profitable growth with its strong market presence, broad geographic and business scope, technology leadership and financial strength.



More information

The Q4 and full-year 2016 results press release and presentation slides are available on the ABB News Center at www.abb.com/news and on the Investor Relations homepage at www.abb.com/investorrelations.

ABB will host a press conference today starting at 10:00 a.m. Central European Time (CET) (9:00 a.m. BST, 4:00 a.m. EDT). The event will be accessible by webcast on <http://new.abb.com/media/annual-press-conference-2017>.

A conference call for analysts and investors is scheduled to begin today at 2:00 p.m. CET (1:00 p.m. BST, 8:00 a.m. EDT). Callers from the UK should dial +44 203 059 58 62. From Sweden, the number to dial is +46 85 051 00 31, and from the rest of Europe, +41 58 310 50 00. Callers from the US and Canada should dial +1 866 291 41 66 (toll free) or +1 631 570 56 13 (long-distance charges apply). Callers are requested to phone in 10 minutes before the start of the call. The call will also be accessible on the ABB website and a recorded session will be available as a podcast one hour after the end of the conference call and can be downloaded from our website www.abb.com.

ABB (ABBN: SIX Swiss Ex) is a pioneering technology leader in electrification products, robotics and motion, industrial automation and power grids, serving customers in utilities, industry and transport & infrastructure globally. Continuing more than a 125-year history of innovation, ABB today is writing the future of industrial digitalization and driving the Energy and Fourth Industrial Revolutions. ABB operates in more than 100 countries with about 132,000 employees. www.abb.com

INVESTOR CALENDAR 2017

Annual General Meeting (Zurich)	April 13, 2017
First quarter 2017 results	April 20, 2017
Second quarter 2017 results	July 20, 2017
Third quarter 2017 results	October 26, 2017

Important notice about forward-looking information

This press release includes forward-looking information and statements as well as other statements concerning the outlook for our business, including those in the sections of this release titled "Short-term outlook", "Outlook", "Dividend", "Share buy back program", "Q4 divisional performance" and "Next Level strategy – Stage 3". These statements are based on current expectations, estimates and projections about the factors that may affect our future performance, including global economic conditions, the economic conditions of the regions and industries that are major markets for ABB Ltd. These expectations, estimates and projections are generally identifiable by statements containing words such as "expects," "believes," "estimates," "targets," "plans," "is likely," "intends" or similar expressions. However, there are many risks and uncertainties, many of which are beyond our control, that could cause our actual results to differ materially from the forward-looking information and statements made in this press release and which could affect our ability to achieve any or all of our stated targets. The important factors that could cause such differences include, among others, business risks associated with the volatile global economic environment and political conditions, costs associated with compliance activities, market acceptance of new products and services, changes in governmental regulations and currency exchange rates and such other factors as may be discussed from time to time in ABB Ltd's filings with the U.S. Securities and Exchange Commission, including its Annual Reports on Form 20-F. Although ABB Ltd believes that its expectations reflected in any such forward-looking statement are based upon reasonable assumptions, it can give no assurance that those expectations will be achieved.

Zurich, February 8, 2017

Ulrich Spiesshofer, CEO

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FEBRUARY 8, 2017

Q4 2016

Financial information

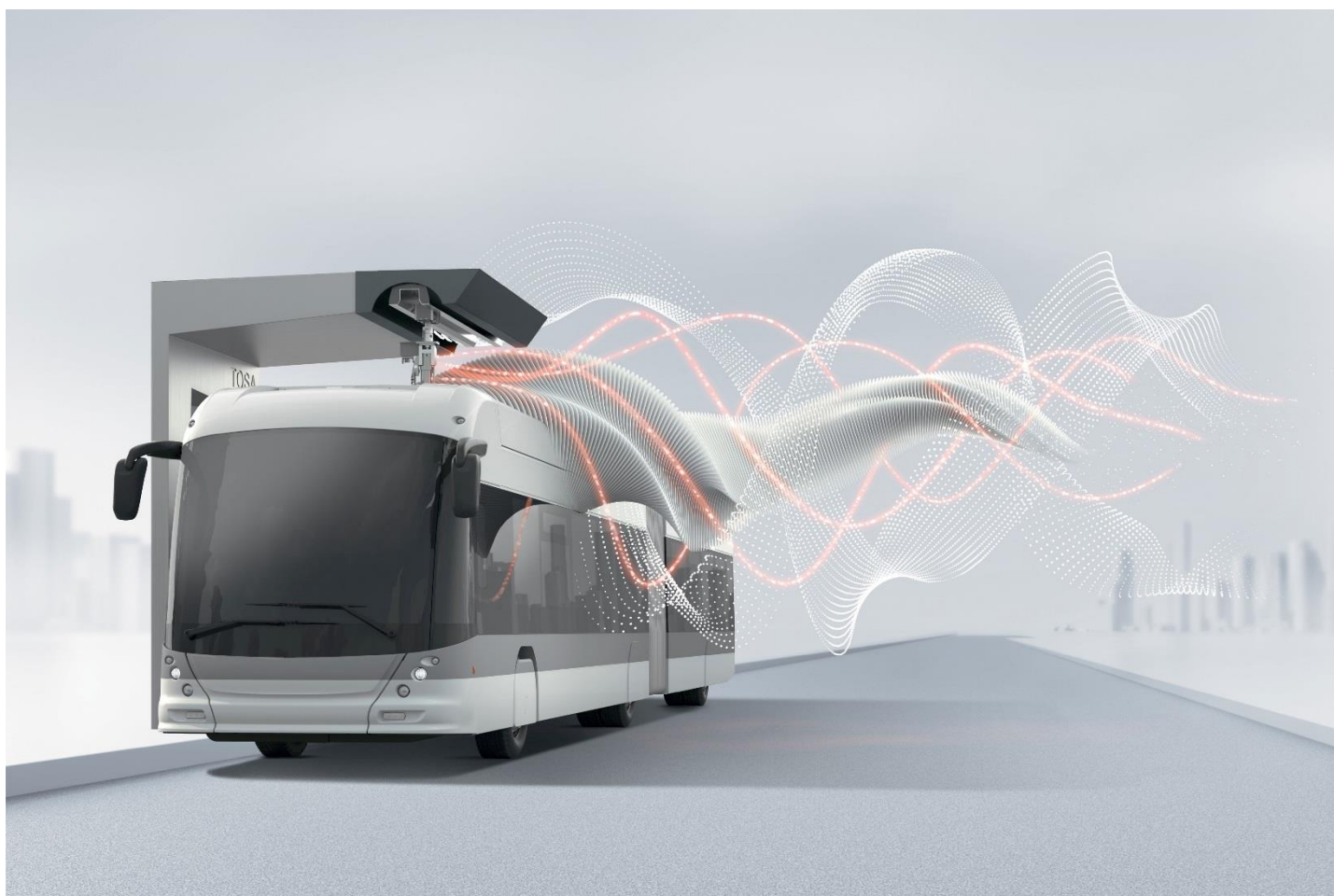
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FINANCIAL INFORMATION

Key Figures

(\$ in millions, unless otherwise indicated)	Q4 2016	Q4 2015	CHANGE	
			US\$	Comparable ⁽¹⁾
Orders	8,277	8,262	0%	3%
Order backlog (end December)	22,981	24,121	-5%	-1%
Revenues	8,993	9,242	-3%	1%
Operational EBITA ⁽¹⁾	1,057	1,101	-4%	-2% ⁽²⁾
as % of operational revenues ⁽¹⁾	11.7%	11.9%	-0.2 pts	
Net income	489	204	140%	
Basic earnings per share (\$)	0.23	0.09	147% ⁽³⁾	
Operational earnings per share ⁽¹⁾ (\$)	0.33	0.35	-5% ⁽³⁾	-3% ⁽³⁾
Cash flow from operating activities	1,519	1,994	-24%	

(\$ in millions, unless otherwise indicated)	FY 2016	FY 2015	CHANGE	
			US\$	Comparable ⁽¹⁾
Orders	33,379	36,429	-8%	-5%
Revenues	33,828	35,481	-5%	-1%
Operational EBITA ⁽¹⁾	4,191	4,209	0%	2% ⁽²⁾
as % of operational revenues ⁽¹⁾	12.4%	11.9%	+0.5 pts	
Net income	1,963	1,933	2%	
Basic earnings per share (\$)	0.91	0.87	5% ⁽³⁾	
Operational earnings per share ⁽¹⁾ (\$)	1.29	1.26	3% ⁽³⁾	4% ⁽³⁾
Cash flow from operating activities	3,934	3,818	3%	

(1) For a reconciliation of non-GAAP measures see "Supplemental Reconciliations and Definitions" on page 33.

(2) Constant currency (not adjusted for portfolio changes).

(3) Earnings per share growth rates are computed using unrounded amounts. Comparable Operational earnings per share growth is in constant currency (2014 foreign exchange rates and not adjusted for changes in the business portfolio).

		Q4 2016	Q4 2015	CHANGE		
(\$ in millions, unless otherwise indicated)				US\$	Local	Comparable
Orders	ABB Group	8,277	8,262	0%	2%	3%
	Electrification Products	2,157	2,340	-8%	-5%	-5%
	Discrete Automation and Motion	2,013	1,984	1%	4%	4%
	Process Automation	1,520	1,796	-15%	-14%	-14%
	Power Grids	2,879	2,628	10%	12%	15%
	Corporate and Other (incl. inter-division eliminations)	(292)	(486)			
Third-party base orders	ABB Group	6,860	7,122	-4%	-1%	-1%
	Electrification Products	2,051	2,158	-5%	-2%	-2%
	Discrete Automation and Motion	1,820	1,779	2%	5%	5%
	Process Automation	1,285	1,309	-2%	0%	0%
	Power Grids	1,692	1,864	-9%	-7%	-7%
	Corporate and Other	12	12			
Order backlog (end December)	ABB Group	22,981	24,121	-5%	-2%	-1%
	Electrification Products	2,612	2,872	-9%	-5%	-5%
	Discrete Automation and Motion	4,078	4,232	-4%	0%	0%
	Process Automation	5,258	6,036	-13%	-10%	-10%
	Power Grids	12,437	12,502	-1%	3%	4%
	Corporate and Other (incl. inter-division eliminations)	(1,404)	(1,521)			
Revenues	ABB Group	8,993	9,242	-3%	0%	1%
	Electrification Products	2,462	2,459	0%	3%	3%
	Discrete Automation and Motion	2,211	2,288	-3%	-1%	-1%
	Process Automation	1,737	1,926	-10%	-8%	-8%
	Power Grids	3,042	3,107	-2%	1%	4%
	Corporate and Other (incl. inter-division eliminations)	(459)	(538)			
Operational EBITA	ABB Group	1,057	1,101	-4%	-2%	
	Electrification Products	382	403	-5%	-4%	
	Discrete Automation and Motion	260	291	-11%	-8%	
	Process Automation	231	235	-2%	0%	
	Power Grids	318	293	9%	12%	
	Corporate and Other (incl. inter-division eliminations)	(134)	(121)			
Operational EBITA %	ABB Group	11.7%	11.9%			
	Electrification Products	15.5%	16.4%			
	Discrete Automation and Motion	11.7%	12.7%			
	Process Automation	13.4%	12.1%			
	Power Grids	10.4%	9.5%			
Income from operations	ABB Group	751	347			
	Electrification Products	319	267			
	Discrete Automation and Motion	89	134			
	Process Automation	244	105			
	Power Grids	334	145			
	Corporate and Other (incl. inter-division eliminations)	(235)	(304)			
Income from operations %	ABB Group	8.4%	3.8%			
	Electrification Products	13.0%	10.9%			
	Discrete Automation and Motion	4.0%	5.9%			
	Process Automation	14.0%	5.5%			
	Power Grids	11.0%	4.7%			
Cash flow from operating activities	ABB Group	1,519	1,994			
	Electrification Products	451	590			
	Discrete Automation and Motion	308	372			
	Process Automation	186	374			
	Power Grids	559	835			
	Corporate and Other	15	(177)			

				CHANGE		
(\$ in millions, unless otherwise indicated)		FY 2016	FY 2015	US\$	Local	Comparable
Orders	ABB Group	33,379	36,429	-8%	-5%	-5%
	Electrification Products	9,158	9,833	-7%	-4%	-4%
	Discrete Automation and Motion	8,654	9,222	-6%	-4%	-4%
	Process Automation	5,866	7,347	-20%	-18%	-18%
	Power Grids	11,232	12,205	-8%	-5%	-4%
	Corporate and Other (incl. inter-division eliminations)	(1,531)	(2,178)			
Third-party base orders	ABB Group	28,887	30,302	-5%	-2%	-2%
	Electrification Products	8,657	9,106	-5%	-2%	-2%
	Discrete Automation and Motion	7,777	8,046	-3%	-1%	-1%
	Process Automation	5,094	5,555	-8%	-6%	-6%
	Power Grids	7,304	7,527	-3%	0%	0%
	Corporate and Other	55	68			
Order backlog (end December)	ABB Group	22,981	24,121	-5%	-2%	-1%
	Electrification Products	2,612	2,872	-9%	-5%	-5%
	Discrete Automation and Motion	4,078	4,232	-4%	0%	0%
	Process Automation	5,258	6,036	-13%	-10%	-10%
	Power Grids	12,437	12,502	-1%	3%	4%
	Corporate and Other (incl. inter-division eliminations)	(1,404)	(1,521)			
Revenues	ABB Group	33,828	35,481	-5%	-2%	-1%
	Electrification Products	9,292	9,547	-3%	1%	1%
	Discrete Automation and Motion	8,714	9,127	-5%	-2%	-2%
	Process Automation	6,598	7,224	-9%	-6%	-6%
	Power Grids	10,975	11,621	-6%	-3%	1%
	Corporate and Other (incl. inter-division eliminations)	(1,751)	(2,038)			
Operational EBITA	ABB Group	4,191	4,209	0%	2%	
	Electrification Products	1,528	1,561	-2%	0%	
	Discrete Automation and Motion	1,195	1,295	-8%	-6%	
	Process Automation	824	863	-5%	-2%	
	Power Grids	1,021	877	16%	19%	
	Corporate and Other (incl. inter-division eliminations)	(377)	(387)			
Operational EBITA %	ABB Group	12.4%	11.9%			
	Electrification Products	16.4%	16.4%			
	Discrete Automation and Motion	13.7%	14.2%			
	Process Automation	12.4%	11.9%			
	Power Grids	9.3%	7.6%			
Income from operations	ABB Group	3,060	3,049			
	Electrification Products	1,335	1,356			
	Discrete Automation and Motion	831	991			
	Process Automation	696	685			
	Power Grids	888	613			
	Corporate and Other (incl. inter-division eliminations)	(690)	(596)			
Income from operations %	ABB Group	9.0%	8.6%			
	Electrification Products	14.4%	14.2%			
	Discrete Automation and Motion	9.5%	10.9%			
	Process Automation	10.5%	9.5%			
	Power Grids	8.1%	5.3%			
Cash flow from operating activities	ABB Group	3,934	3,818			
	Electrification Products	1,221	1,364			
	Discrete Automation and Motion	1,002	1,206			
	Process Automation	728	690			
	Power Grids	1,120	970			
	Corporate and Other	(137)	(412)			

Operational EBITA

(\$ in millions, unless otherwise indicated)	ABB		Electrification Products		Discrete Automation and Motion		Process Automation		Power Grids	
	Q4 16	Q4 15	Q4 16	Q4 15	Q4 16	Q4 15	Q4 16	Q4 15	Q4 16	Q4 15
Revenues	8,993	9,242	2,462	2,459	2,211	2,288	1,737	1,926	3,042	3,107
FX/commodity timing differences in total revenues	20	(4)	4	(4)	7	4	(11)	13	21	(16)
Operational revenues	9,013	9,238	2,466	2,455	2,218	2,292	1,726	1,939	3,063	3,091
Income from operations	751	347	319	267	89	134	244	105	334	145
Acquisition-related amortization	67	73	23	24	29	32	2	3	8	10
Restructuring and restructuring-related expenses ⁽¹⁾	68	531	25	104	31	81	(21)	106	(5)	122
Non-operational pension cost	38	8	–	–	2	–	2	2	1	–
Changes in pre-acquisition estimates	92	12	–	–	92	12	–	–	–	–
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	54	76	7	4	14	26	9	(5)	(8)	1
FX/commodity timing differences in income from operations	(13)	54	8	4	3	6	(5)	24	(12)	15
Operational EBITA	1,057	1,101	382	403	260	291	231	235	318	293
Operational EBITA margin (%)	11.7%	11.9%	15.5%	16.4%	11.7%	12.7%	13.4%	12.1%	10.4%	9.5%

(\$ in millions, unless otherwise indicated)	ABB		Electrification Products		Discrete Automation and Motion		Process Automation		Power Grids	
	FY 16	FY 15	FY 16	FY 15	FY 16	FY 15	FY 16	FY 15	FY 16	FY 15
Revenues	33,828	35,481	9,292	9,547	8,714	9,127	6,598	7,224	10,975	11,621
FX/commodity timing differences in total revenues	81	(28)	4	(11)	5	4	21	13	51	(33)
Operational revenues	33,909	35,453	9,296	9,536	8,719	9,131	6,619	7,237	11,026	11,588
Income from operations	3,060	3,049	1,335	1,356	831	991	696	685	888	613
Acquisition-related amortization	279	310	95	100	120	128	11	12	35	52
Restructuring and restructuring-related expenses ⁽¹⁾	543	674	73	124	88	125	79	130	101	160
Non-operational pension cost	38	19	3	(3)	2	3	2	6	(2)	3
Changes in pre-acquisition estimates	131	21	–	–	131	21	–	–	–	–
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	100	120	8	4	18	26	9	14	(2)	39
FX/commodity timing differences in income from operations	40	16	14	(20)	5	1	27	16	1	10
Operational EBITA	4,191	4,209	1,528	1,561	1,195	1,295	824	863	1,021	877
Operational EBITA margin (%)	12.4%	11.9%	16.4%	16.4%	13.7%	14.2%	12.4%	11.9%	9.3%	7.6%

(1) Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

Depreciation and Amortization

(\$ in millions)	ABB		Electrification Products		Discrete Automation and Motion		Process Automation		Power Grids	
	Q4 16	Q4 15	Q4 16	Q4 15	Q4 16	Q4 15	Q4 16	Q4 15	Q4 16	Q4 15
Depreciation	191	192	49	51	38	39	13	15	50	51
Amortization	91	96	26	27	33	36	4	5	16	17
including total acquisition-related amortization of:	67	73	23	24	29	32	2	3	8	10

(\$ in millions)	ABB		Electrification Products		Discrete Automation and Motion		Process Automation		Power Grids	
	FY 16	FY 15	FY 16	FY 15	FY 16	FY 15	FY 16	FY 15	FY 16	FY 15
Depreciation	767	764	199	206	156	149	57	60	201	204
Amortization	368	396	106	110	136	146	17	19	65	76
including total acquisition-related amortization of:	279	310	95	100	120	128	11	12	35	52

Orders received and revenues by region

(\$ in millions, unless otherwise indicated)	Orders received		CHANGE			Revenues		CHANGE		
	Q4 16	Q4 15	US\$	Local	Com-parable	Q4 16	Q4 15	US\$	Local	Com-parable
Europe	2,529	2,888	-12%	-10%	-8%	3,016	3,028	0%	3%	6%
The Americas	2,487	2,491	0%	0%	0%	2,469	2,627	-6%	-6%	-6%
Asia, Middle East and Africa	3,261	2,883	13%	17%	17%	3,508	3,587	-2%	1%	2%
ABB Group	8,277	8,262	0%	2%	3%	8,993	9,242	-3%	0%	1%

(\$ in millions, unless otherwise indicated)	Orders received		CHANGE			Revenues		CHANGE		
	FY 16	FY 15	US\$	Local	Com-parable	FY 16	FY 15	US\$	Local	Com-parable
Europe	11,213	12,568	-11%	-9%	-8%	11,315	11,602	-2%	0%	4%
The Americas	9,351	10,505	-11%	-9%	-9%	9,741	10,554	-8%	-5%	-5%
Asia, Middle East and Africa	12,815	13,356	-4%	0%	0%	12,772	13,325	-4%	-1%	-1%
ABB Group	33,379	36,429	-8%	-5%	-5%	33,828	35,481	-5%	-2%	-1%

Interim Consolidated Financial Information

ABB Ltd Interim Consolidated Income Statements (unaudited)

	Year ended		Three months ended	
	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2016	Dec. 31, 2015
(\$ in millions, except per share data in \$)				
Sales of products	27,816	29,477	7,339	7,599
Sales of services and software	6,012	6,004	1,654	1,643
Total revenues	33,828	35,481	8,993	9,242
Cost of sales of products	(20,431)	(21,694)	(5,451)	(5,820)
Cost of services and software	(3,650)	(3,653)	(1,027)	(1,027)
Total cost of sales	(24,081)	(25,347)	(6,478)	(6,847)
Gross profit	9,747	10,134	2,515	2,395
Selling, general and administrative expenses	(5,349)	(5,574)	(1,394)	(1,580)
Non-order related research and development expenses	(1,300)	(1,406)	(349)	(408)
Other income (expense), net	(38)	(105)	(21)	(60)
Income from operations	3,060	3,049	751	347
Interest and dividend income	73	77	19	21
Interest and other finance expense	(261)	(286)	(31)	(63)
Income from continuing operations before taxes	2,872	2,840	739	305
Provision for taxes	(790)	(788)	(203)	(66)
Income from continuing operations, net of tax	2,082	2,052	536	239
Income from discontinued operations, net of tax	16	3	2	1
Net income	2,098	2,055	538	240
Net income attributable to noncontrolling interests	(135)	(122)	(49)	(36)
Net income attributable to ABB	1,963	1,933	489	204
Amounts attributable to ABB shareholders:				
Income from continuing operations, net of tax	1,947	1,930	487	203
Net income	1,963	1,933	489	204
Basic earnings per share attributable to ABB shareholders:				
Income from continuing operations, net of tax	0.91	0.87	0.23	0.09
Net income	0.91	0.87	0.23	0.09
Diluted earnings per share attributable to ABB shareholders:				
Income from continuing operations, net of tax	0.90	0.87	0.23	0.09
Net income	0.91	0.87	0.23	0.09
Weighted-average number of shares outstanding (in millions) used to compute:				
Basic earnings per share attributable to ABB shareholders	2,151	2,226	2,137	2,203
Diluted earnings per share attributable to ABB shareholders	2,154	2,230	2,141	2,206

See Notes to the Interim Consolidated Financial Information

ABB Ltd Interim Condensed Consolidated Statements of Comprehensive Income (unaudited)

(\$ in millions)	Year ended		Three months ended	
	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2016	Dec. 31, 2015
Total comprehensive income (loss), net of tax	1,752	1,416	(15)	254
Total comprehensive income attributable to noncontrolling interests, net of tax	(118)	(100)	(31)	(27)
Total comprehensive income (loss) attributable to ABB shareholders, net of tax	1,634	1,316	(46)	227

See Notes to the Interim Consolidated Financial Information

ABB Ltd Interim Consolidated Balance Sheets (unaudited)

(\$ in millions, except share data)	Dec. 31, 2016	Dec. 31, 2015
Cash and equivalents	3,719	4,565
Marketable securities and short-term investments	1,953	1,633
Receivables, net	9,708	10,061
Inventories, net	4,347	4,757
Prepaid expenses	176	225
Deferred taxes	888	881
Other current assets	658	638
Assets held for sale	548	–
Total current assets	21,997	22,760
Property, plant and equipment, net	4,743	5,276
Goodwill	9,501	9,671
Other intangible assets, net	1,996	2,337
Prepaid pension and other employee benefits	90	68
Investments in equity-accounted companies	170	178
Deferred taxes	509	423
Other non-current assets	532	643
Total assets	39,538	41,356
Accounts payable, trade	4,446	4,342
Billings in excess of sales	1,241	1,375
Short-term debt and current maturities of long-term debt	987	1,454
Advances from customers	1,398	1,598
Deferred taxes	259	249
Provisions for warranties	1,142	1,089
Other provisions	1,765	1,920
Other current liabilities	3,936	3,817
Liabilities held for sale	218	–
Total current liabilities	15,392	15,844
Long-term debt	5,800	5,985
Pension and other employee benefits	1,834	1,924
Deferred taxes	958	965
Other non-current liabilities	1,593	1,650
Total liabilities	25,577	26,368
Commitments and contingencies		
Stockholders' equity:		
Capital stock and additional paid-in capital (2,214,743,264 and 2,314,743,264 issued shares at December 31, 2016 and 2015, respectively)	216	1,444
Retained earnings	19,989	20,476
Accumulated other comprehensive loss	(5,187)	(4,858)
Treasury stock, at cost (76,036,429 and 123,118,123 shares at December 31, 2016 and 2015, respectively)	(1,559)	(2,581)
Total ABB stockholders' equity	13,459	14,481
Noncontrolling interests	502	507
Total stockholders' equity	13,961	14,988
Total liabilities and stockholders' equity	39,538	41,356

See Notes to the Interim Consolidated Financial Information

ABB Ltd Interim Consolidated Statements of Cash Flows (unaudited)

(\$ in millions)	Year ended		Three months ended	
	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2016	Dec. 31, 2015
Operating activities:				
Net income	2,098	2,055	538	240
Adjustments to reconcile net income to net cash provided by operating activities:				
Depreciation and amortization	1,135	1,160	282	288
Deferred taxes	(127)	(219)	(19)	(193)
Net loss (gain) from derivatives and foreign exchange	10	15	(48)	53
Net loss (gain) from sale of property, plant and equipment	(38)	(26)	(5)	(5)
Net loss (gain) from sale of businesses	10	20	–	1
Share-based payment arrangements	54	61	17	18
Other	112	94	49	7
Changes in operating assets and liabilities:				
Trade receivables, net	(2)	162	66	363
Inventories, net	115	105	376	509
Trade payables	340	(112)	187	16
Accrued liabilities	80	(24)	66	(2)
Billings in excess of sales	(25)	35	(29)	(55)
Provisions, net	14	330	19	487
Advances from customers	(163)	106	(143)	112
Income taxes payable and receivable	114	(32)	(9)	41
Other assets and liabilities, net	207	88	172	114
Net cash provided by operating activities	3,934	3,818	1,519	1,994
Investing activities:				
Purchases of marketable securities (available-for-sale)	(1,214)	(1,925)	(393)	(827)
Purchases of short-term investments	(3,092)	(614)	(920)	(68)
Purchases of property, plant and equipment and intangible assets	(831)	(876)	(299)	(329)
Acquisition of businesses (net of cash acquired) and increases in cost- and equity-accounted companies	(26)	(56)	(2)	(12)
Proceeds from sales of marketable securities (available-for-sale)	1,057	434	284	55
Proceeds from maturity of marketable securities (available-for-sale)	539	1,022	–	395
Proceeds from short-term investments	2,241	653	791	25
Proceeds from sales of property, plant and equipment	61	68	9	24
Proceeds from sales of businesses (net of transaction costs and cash disposed) and cost- and equity-accounted companies	(1)	69	–	–
Net cash from settlement of foreign currency derivatives	(57)	231	(23)	23
Other investing activities	18	20	5	5
Net cash used in investing activities	(1,305)	(974)	(548)	(709)
Financing activities:				
Net changes in debt with original maturities of 90 days or less	(152)	3	(197)	(72)
Increase in debt	896	68	42	13
Repayment of debt	(1,249)	(101)	(529)	(23)
Delivery of shares	192	107	49	–
Purchase of treasury stock	(1,299)	(1,487)	–	(439)
Dividends paid	–	(1,357)	–	–
Reduction in nominal value of common shares paid to shareholders	(1,610)	(392)	–	–
Dividends paid to noncontrolling shareholders	(122)	(137)	(1)	(6)
Other financing activities	(27)	(84)	(6)	(66)
Net cash used in financing activities	(3,371)	(3,380)	(642)	(593)
Effects of exchange rate changes on cash and equivalents	(104)	(342)	(148)	(97)
Net change in cash and equivalents – continuing operations	(846)	(878)	181	595
Cash and equivalents, beginning of period	4,565	5,443	3,538	3,970
Cash and equivalents, end of period	3,719	4,565	3,719	4,565
Supplementary disclosure of cash flow information:				
Interest paid	213	221	69	70
Taxes paid	814	1,043	223	207

See Notes to the Interim Consolidated Financial Information

ABB Ltd Interim Consolidated Statements of Changes in Stockholders' Equity (unaudited)

			Accumulated other comprehensive loss								
	Capital stock and additional paid-in capital	Retained earnings	Foreign currency translation adjustments	Unrealized gains (losses) on available-for-sale securities	Pension and other post-retirement plan adjustments	Unrealized gains (losses) of cash flow hedge derivatives	Total accumulated other comprehensive loss	Treasury stock	Total ABB stockholders' equity	Noncontrolling interests	Total stockholders' equity
(\$ in millions)											
Balance at January 1, 2015	1,777	19,939	(2,102)	13	(2,131)	(21)	(4,241)	(1,206)	16,269	546	16,815
Comprehensive income:											
Net income		1,933							1,933	122	2,055
Foreign currency translation adjustments, net of tax of \$(47)			(1,033)				(1,033)		(1,033)	(25)	(1,058)
Effect of change in fair value of available-for-sale securities, net of tax of \$(1)				(6)			(6)		(6)		(6)
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax of \$140					412		412		412	3	415
Change in derivatives qualifying as cash flow hedges, net of tax of \$3						10	10		10		10
Total comprehensive income									1,316	100	1,416
Changes in noncontrolling interests	(30)	(25)							(55)	(2)	(57)
Dividends paid to noncontrolling shareholders									-	(137)	(137)
Dividends paid		(1,317)							(1,317)		(1,317)
Reduction in nominal value of common shares paid to shareholders	(349)	(54)							(403)		(403)
Share-based payment arrangements	61								61		61
Purchase of treasury stock								(1,501)	(1,501)		(1,501)
Delivery of shares	(19)							126	107		107
Call options	4								4		4
Balance at December 31, 2015	1,444	20,476	(3,135)	7	(1,719)	(11)	(4,858)	(2,581)	14,481	507	14,988
Balance at January 1, 2016	1,444	20,476	(3,135)	7	(1,719)	(11)	(4,858)	(2,581)	14,481	507	14,988
Comprehensive income:											
Net income		1,963					-		1,963	135	2,098
Foreign currency translation adjustments, net of tax of \$12			(457)				(457)		(457)	(17)	(474)
Effect of change in fair value of available-for-sale securities, net of tax of \$0				-			-		-		-
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax of \$24					118		118		118		118
Change in derivatives qualifying as cash flow hedges, net of tax of \$4						10	10		10		10
Total comprehensive income									1,634	118	1,752
Changes in noncontrolling interests									-	(1)	(1)
Dividends paid to noncontrolling shareholders									-	(122)	(122)
Reduction in nominal value of common shares paid to shareholders	(1,224)	(402)							(1,626)		(1,626)
Cancellation of treasury shares	(40)	(2,007)						2,047	-		-
Share-based payment arrangements	54								54		54
Purchase of treasury stock								(1,280)	(1,280)		(1,280)
Delivery of shares	(22)	(41)						255	192		192
Call options	4								4		4
Balance at December 31, 2016	216	19,989	(3,592)	7	(1,601)	(1)	(5,187)	(1,559)	13,459	502	13,961

See Notes to the Interim Consolidated Financial Information

Notes to the Interim Consolidated Financial Information (unaudited)

Note 1 **The Company and basis of presentation**

ABB Ltd and its subsidiaries (collectively, the Company) together form a pioneering technology leader in electrification products, robotics and motion, industrial automation and power grids serving customers in utilities, industry and transport & infrastructure globally.

The Company's Interim Consolidated Financial Information is prepared in accordance with United States of America generally accepted accounting principles (U.S. GAAP) for interim financial reporting. As such, the Interim Consolidated Financial Information does not include all the information and notes required under U.S. GAAP for annual consolidated financial statements. Therefore, such financial information should be read in conjunction with the audited consolidated financial statements in the Company's Annual Report for the year ended December 31, 2015.

The preparation of financial information in conformity with U.S. GAAP requires management to make assumptions and estimates that directly affect the amounts reported in the Interim Consolidated Financial Information. The most significant, difficult and subjective of such accounting assumptions and estimates include:

- estimates used to record expected costs for employee severance in connection with restructuring programs,
- estimates used to record warranty obligations,
- assumptions and projections, principally related to future material, labor and project related overhead costs, used in determining the percentage of completion on projects,
- estimates of loss contingencies associated with litigation or threatened litigation and other claims and inquiries, environmental damages, product warranties, self-insurance reserves, regulatory and other proceedings,
- assumptions used in the calculation of pension and postretirement benefits and the fair value of pension plan assets,
- estimates to determine valuation allowances for deferred tax assets and amounts recorded for uncertain tax positions,
- growth rates, discount rates and other assumptions used to determine impairment of long lived assets and in testing goodwill for impairment,
- assumptions used in determining inventory obsolescence and net realizable value,
- estimates and assumptions used in determining the fair values of assets and liabilities assumed in business combinations, and
- assessment of the allowance for doubtful accounts.

The actual results and outcomes may differ from the Company's estimates and assumptions.

A portion of the Company's activities (primarily long-term construction activities) has an operating cycle that exceeds one year. For classification of current assets and liabilities related to such activities, the Company elected to use the duration of the individual contracts as its operating cycle. Accordingly, there are accounts receivable, inventories and provisions related to these contracts which will not be realized within one year that have been classified as current.

In September 2016, the Company announced an agreement to divest its high-voltage cable system business (Cables business). The assets and liabilities of this business are shown as assets and liabilities held for sale in the Company's Interim Consolidated Balance Sheet at December 31, 2016.

In the opinion of management, the unaudited Interim Consolidated Financial Information contains all necessary adjustments to present fairly the financial position, results of operations and cash flows for the reported interim periods. Management considers all such adjustments to be of a normal recurring nature.

The Interim Consolidated Financial Information is presented in United States dollars (\$) unless otherwise stated. Certain amounts reported in the Interim Consolidated Financial Information for prior periods have been reclassified to conform to the current year's presentation. These changes primarily relate to the change in the definition of segment profit and the reorganization of the Company's operating segments (see Note 13).

Note 2 **Recent accounting pronouncements** Applicable for current periods

Disclosures for investments in certain entities that calculate net asset value per share (or its equivalent)

As of January 1, 2016, the Company adopted an accounting standard update regarding fair value disclosures for certain investments. Under the update, the Company is no longer required to categorize within the fair value hierarchy any investments for which fair value is measured using the net asset value per share practical expedient. The amendments also removed the requirement to make certain disclosures for investments that are eligible to be measured at fair value using the net asset value per share practical expedient. Rather, those disclosures are limited to investments for which the Company has elected to measure the fair value using that practical expedient. This update was applied retrospectively and did not have a significant impact on the consolidated financial statements.

Simplifying the measurement of inventory

As of January 1, 2016, the Company early-adopted an accounting standard update simplifying the subsequent measurement of inventories by replacing the current lower of cost or market test with a lower of cost and net realizable value test. The guidance applies only to inventories for which cost is determined by methods other than last-in first-out and the retail inventory methods. Net realizable value is the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. The update was applied prospectively and did not have a significant impact on the consolidated financial statements.

Applicable for future periods

Revenue from contracts with customers

In May 2014, an accounting standard update was issued to clarify the principles for recognizing revenues from contracts with customers. The update, which supersedes substantially all existing revenue recognition guidance, provides a single comprehensive model for recognizing revenues on the transfer of promised goods or services to customers in an amount that reflects the consideration that is expected to be received for those goods or services. Under the standard it is possible that more judgments and estimates would be required than under existing standards, including identifying the separate performance obligations in a contract, estimating any variable consideration elements, and allocating the transaction price to each separate performance obligation. The update also requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. Further updates were issued in 2016 to clarify the guidance on identifying performance obligations, licensing and contract costs, to enhance the implementation guidance on principal versus agent considerations and to add other practical expedients.

In August 2015, the effective date for the update was deferred and the update is now effective for the Company for annual and interim periods beginning January 1, 2018, and is to be applied either (i) retrospectively to each prior reporting period presented, with the option to elect certain defined practical expedients, or (ii) retrospectively with the cumulative effect of initially applying the update recognized at the date of adoption in retained earnings (with additional disclosure as to the impact on individual financial statement lines affected). Early adoption of the standard is permitted for annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period.

The Company currently plans to adopt these updates as of January 1, 2018, pursuant to the aforementioned adoption method (ii) and currently does not anticipate these updates will have a significant impact on its consolidated financial statements. The Company's analysis of contracts performed in 2016 resulted in immaterial differences in the identification of performance obligations compared to the current unit of accounting determination. Except for a limited number of contracts where the required criteria are not met, the analysis supports the recognition of revenue over time following the cost-to-cost method under the new revenue recognition standard for those contracts which are following the cost-to-cost method under the current revenue recognition model. The Company continues to evaluate the expected impacts of the adoption of these updates and the expected impacts are subject to change.

Balance sheet classification of deferred taxes

In November 2015, an accounting standard update was issued which removes the requirement to separate deferred tax liabilities and assets into current and noncurrent amounts and instead requires all such amounts, as well as any related valuation allowance, to be classified as noncurrent in the balance sheet. This update is effective for the Company for annual and interim periods beginning January 1, 2017, with early adoption permitted, and is applicable either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. The Company will adopt this update as of January 1, 2017, on a retrospective basis and expects the balance of deferred tax assets and liabilities to decrease by approximately \$300 million due to additional netting impacts.

Recognition and measurement of financial assets and financial liabilities

In January 2016, an accounting standard update was issued to enhance the reporting model for financial instruments, which includes amendments to address aspects of recognition, measurement, presentation and disclosure. For example, the Company would be required to measure equity investments (except those accounted for under the equity method) at fair value with changes in fair value recognized in net income and to present separately financial assets and financial liabilities by measurement category and form of financial asset. This update is effective for the Company for annual and interim periods beginning January 1, 2018, with early adoption permitted for certain provisions. The Company is currently evaluating the impact of this update on its consolidated financial statements.

Leases

In February 2016, an accounting standard update was issued that requires lessees to recognize lease assets and corresponding lease liabilities on the balance sheet for all leases with terms of more than 12 months. The update, which supersedes existing lease guidance, will continue to classify leases as either finance or operating, with the classification determining the pattern of expense recognition in the income statement. This update is effective for the Company for annual and interim periods beginning January 1, 2019, with early adoption permitted, and is applicable on a modified retrospective basis with various optional practical expedients. The Company is currently evaluating the impact of this update on its consolidated financial statements.

Simplifying the transition to the equity method of accounting

In March 2016, an accounting standard update was issued which eliminates the retroactive adjustments to an investment upon it qualifying for the equity method of accounting as a result of an increase in the level of ownership interest or degree of influence by the investor. It requires that the equity method investor add the cost of acquiring the additional interest in the investee to the current basis of the investor's previously held interest and adopt the equity method of accounting as of the date the investment qualifies for equity method accounting. This update is effective for the Company for annual and interim periods beginning January 1, 2017, with early adoption permitted, and is applicable prospectively. The Company does not believe that this update will have a significant impact on its consolidated financial statements.

Improvements to employee share-based payment accounting

In March 2016, an accounting standard update was issued which changes the accounting for certain aspects of share-based payment awards to employees, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as the classification in the statement of cash flows. This update is effective for the Company for annual and interim periods beginning January 1, 2017, with early adoption permitted. The Company does not believe that this update will have a significant impact on its consolidated financial statements.

Measurement of credit losses on financial instruments

In June 2016, an accounting standard update was issued which replaces the existing incurred loss impairment methodology for most financial assets with a new “current expected credit loss” model. The new model will result in the immediate recognition of the estimated credit losses expected to occur over the remaining life of financial assets such as trade and other receivables, held-to-maturity debt securities, loans and other instruments. Credit losses relating to available-for-sale debt securities will be measured in a manner similar to current GAAP, except that the losses will be recorded through an allowance for credit losses rather than as a direct write-down of the security.

This update is effective for the Company for annual and interim periods beginning January 1, 2020, with early adoption permitted for annual and interim periods beginning January 1, 2019. The Company is currently evaluating the impact of this update on its consolidated financial statements.

Classification of certain cash receipts and cash payments in the statement of cash flows

In August 2016, an accounting standard update was issued which clarifies how certain cash receipts and cash payments, including debt prepayment or extinguishment costs, the settlement of zero coupon debt instruments, contingent consideration paid after a business combination, proceeds from insurance settlements, distributions from certain equity method investees and beneficial interests obtained in a financial asset securitization, should be presented and classified in the statement of cash flows. This update is effective for the Company for annual and interim periods beginning January 1, 2018 on a retrospective basis, with early adoption permitted. The Company does not believe that this update will have a significant impact on its consolidated financial statements.

Income taxes – Intra-entity transfers of assets other than inventory

In October 2016, an accounting standard update was issued that requires the Company to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs instead of when the asset has been sold to an outside party. This update is effective for the Company for annual and interim periods beginning January 1, 2018, with early adoption permitted, and is applicable on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. The Company is currently evaluating the impact of this update on its consolidated financial statements.

Statement of cash flows - Restricted cash

In November 2016, an accounting standard update was issued which clarifies the classification and presentation of changes in restricted cash on the statement of cash flows. It requires the inclusion of cash and cash equivalents that have restrictions on withdrawal or use in total cash and cash equivalents on the statement of cash flows. This update is effective for the Company for annual and interim periods beginning January 1, 2018 on a retrospective basis, with early adoption permitted. The Company does not believe that this update will have a significant impact on its consolidated financial statements.

Clarifying the definition of a business

In January 2017, an accounting standard update was issued which narrows the definition of a business. It also provides a framework for determining whether a set of transferred assets and activities involves a business. This update is effective for the Company for annual and interim periods beginning January 1, 2018 on a prospective basis, with early adoption permitted. The Company does not believe that this update will have a significant impact on its consolidated financial statements.

Simplifying the Test for Goodwill Impairment

In January 2017, an accounting standard update was issued which eliminates the requirement to calculate the implied fair value of goodwill when measuring a goodwill impairment loss. Instead, the Company is required to record an impairment loss based on the excess of a reporting unit's carrying amount over its fair value provided that the loss recognized does not exceed the total amount of goodwill allocated to that reporting unit. This update is effective for the Company for annual and interim periods beginning January 1, 2020 on a prospective basis, with early adoption permitted. The Company plans to early adopt this update in the first quarter of 2017 and apply it prospectively. The Company does not believe that this update will have a significant impact on its consolidated financial statements.

Note 3**Cash and equivalents, marketable securities and short-term investments**

Current assets

Cash and equivalents, marketable securities and short-term investments consisted of the following:

(\$ in millions)	December 31, 2016					Marketable securities and short-term investments
	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents	
Cash	1,779			1,779	1,779	–
Time deposits	2,764			2,764	1,940	824
Other short-term investments	271			271	–	271
Debt securities available-for-sale:						
U.S. government obligations	221	1	(2)	220	–	220
Other government obligations	2	–	–	2	–	2
Corporate	95	1	(1)	95	–	95
Equity securities available-for-sale	530	11	–	541	–	541
Total	5,662	13	(3)	5,672	3,719	1,953

(\$ in millions)	December 31, 2015					Marketable securities and short-term investments
	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents	
Cash	1,837			1,837	1,837	–
Time deposits	2,821			2,821	2,717	104
Other short-term investments	231			231	–	231
Debt securities available-for-sale:						
U.S. government obligations	120	2	(1)	121	–	121
Other government obligations	2	–	–	2	–	2
Corporate	519	1	(1)	519	11	508
Equity securities available-for-sale	658	9	–	667	–	667
Total	6,188	12	(2)	6,198	4,565	1,633

Included in Other short-term investments at December 31, 2016 and 2015, are receivables of \$268 million and \$224 million, respectively, representing reverse repurchase agreements. These collateralized lendings, made to a financial institution, have maturity dates of less than one year.

Non-current assets

Included in “Other non-current assets” are certain held-to-maturity marketable securities. At December 31, 2016, the amortized cost, gross unrecognized gain and fair value (based on quoted market prices) of these securities were \$80 million, \$6 million and \$86 million, respectively. At December 31, 2015, the amortized cost, gross unrecognized gain and fair value (based on quoted market prices) of these securities were \$99 million, \$11 million and \$110 million, respectively. These securities are pledged as security for certain outstanding deposit liabilities and the funds received at the respective maturity dates of the securities will only be available to the Company for repayment of these obligations.

Note 4**Derivative financial instruments**

The Company is exposed to certain currency, commodity, interest rate and equity risks arising from its global operating, financing and investing activities. The Company uses derivative instruments to reduce and manage the economic impact of these exposures.

Currency risk

Due to the global nature of the Company’s operations, many of its subsidiaries are exposed to currency risk in their operating activities from entering into transactions in currencies other than their functional currency. To manage such currency risks, the Company’s policies require the subsidiaries to hedge their foreign currency exposures from binding sales and purchase contracts denominated in foreign currencies. For forecasted foreign currency denominated sales of standard products and the related foreign currency denominated purchases, the Company’s policy is to hedge up to a maximum of 100 percent of the forecasted foreign currency denominated exposures, depending on the length of the forecasted exposures. Forecasted exposures greater than 12 months are not hedged. Forward foreign exchange contracts are the main instrument used to protect the Company against the volatility of future cash flows (caused by changes in exchange rates) of contracted and forecasted sales and purchases denominated in foreign currencies. In addition, within its treasury operations, the Company primarily uses foreign exchange swaps and forward foreign exchange contracts to manage the currency and timing mismatches arising in its liquidity management activities.

Commodity risk

Various commodity products are used in the Company’s manufacturing activities. Consequently it is exposed to volatility in future cash flows arising from changes in commodity prices. To manage the price risk of commodities, the Company’s policies require that the subsidiaries hedge the commodity price risk exposures from binding contracts, as well as at least 50 percent (up to a maximum of 100 percent) of the forecasted commodity exposure over the next 12 months or longer (up to a maximum of 18 months). Primarily swap contracts are used to manage the associated price risks of commodities.

Interest rate risk	The Company has issued bonds at fixed rates. Interest rate swaps are used to manage the interest rate risk associated with certain debt and generally such swaps are designated as fair value hedges. In addition, from time to time, the Company uses instruments such as interest rate swaps, interest rate futures, bond futures or forward rate agreements to manage interest rate risk arising from the Company's balance sheet structure but does not designate such instruments as hedges.
Equity risk	The Company is exposed to fluctuations in the fair value of its warrant appreciation rights (WARs) issued under its management incentive plan. A WAR gives its holder the right to receive cash equal to the market price of an equivalent listed warrant on the date of exercise. To eliminate such risk, the Company has purchased cash-settled call options, indexed to the shares of the Company, which entitle the Company to receive amounts equivalent to its obligations under the outstanding WARs.
Volume of derivative activity	In general, while the Company's primary objective in its use of derivatives is to minimize exposures arising from its business, certain derivatives are designated and qualify for hedge accounting treatment while others either are not designated or do not qualify for hedge accounting.

Foreign exchange and interest rate derivatives

The gross notional amounts of outstanding foreign exchange and interest rate derivatives (whether designated as hedges or not) were as follows:

Type of derivative (\$ in millions)	Total notional amounts at	
	December 31, 2016	December 31, 2015
Foreign exchange contracts	15,353	16,467
Embedded foreign exchange derivatives	2,162	2,966
Interest rate contracts	3,021	4,302

Derivative commodity contracts

The following table shows the notional amounts of outstanding commodity derivatives (whether designated as hedges or not), on a net basis, to reflect the Company's requirements in the various commodities:

Type of derivative	Unit	Total notional amounts at	
		December 31, 2016	December 31, 2015
Copper swaps	metric tonnes	47,425	48,903
Aluminum swaps	metric tonnes	4,650	5,455
Nickel swaps	metric tonnes	–	18
Lead swaps	metric tonnes	15,100	14,625
Zinc swaps	metric tonnes	150	225
Silver swaps	ounces	1,586,395	1,727,255
Crude oil swaps	barrels	121,000	133,500

Equity derivatives

At December 31, 2016 and 2015, the Company held 47 million and 55 million cash-settled call options indexed to ABB Ltd shares (conversion ratio 5:1) with a total fair value of \$23 million and \$13 million, respectively.

Cash flow hedges	<p>As noted above, the Company mainly uses forward foreign exchange contracts to manage the foreign exchange risk of its operations, commodity swaps to manage its commodity risks and cash-settled call options to hedge its WAR liabilities. Where such instruments are designated and qualify as cash flow hedges, the effective portion of the changes in their fair value is recorded in "Accumulated other comprehensive loss" and subsequently reclassified into earnings in the same line item and in the same period as the underlying hedged transaction affects earnings. Any ineffectiveness in the hedge relationship, or hedge component excluded from the assessment of effectiveness, is recognized in earnings during the current period.</p> <p>At December 31, 2016 and 2015, "Accumulated other comprehensive loss" included net unrealized losses of \$1 million and \$11 million, respectively, net of tax, on derivatives designated as cash flow hedges. Of the amount at December 31, 2016, net gains of \$2 million are expected to be reclassified to earnings in the following 12 months. At December 31, 2016, the longest maturity of a derivative classified as a cash flow hedge was 39 months.</p> <p>The amount of gains or losses, net of tax, reclassified into earnings due to the discontinuance of cash flow hedge accounting and the amount of ineffectiveness in cash flow hedge relationships directly recognized in earnings were not significant in the year and three months ended December 31, 2016 and 2015.</p>
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The pre-tax effects of derivative instruments, designated and qualifying as cash flow hedges, on “Accumulated other comprehensive loss” (OCI) and the Consolidated Income Statements were as follows:

(\$ in millions)	Gains (losses) recognized in OCI on derivatives (effective portion)		Gains (losses) reclassified from OCI into income (effective portion)	
	2016	2015	2016	2015
Year ended December 31,				
Type of derivative		Location		
Foreign exchange contracts	2	(11) Total revenues	(11)	(36)
		Total cost of sales	10	11
Commodity contracts	4	(9) Total cost of sales	(2)	(10)
Cash-settled call options	15	(6) SG&A expenses ⁽¹⁾	10	(4)
Total	21	(26)	7	(39)

(\$ in millions)	Gains (losses) recognized in OCI on derivatives (effective portion)		Gains (losses) reclassified from OCI into income (effective portion)	
	2016	2015	2016	2015
Three months ended December 31,				
Type of derivative		Location		
Foreign exchange contracts	(6)	(4) Total revenues	(2)	(5)
		Total cost of sales	1	3
Commodity contracts	3	(3) Total cost of sales	–	(3)
Cash-settled call options	(3)	4 SG&A expenses ⁽¹⁾	(2)	2
Total	(6)	(3)	(3)	(3)

(1) SG&A expenses represent “Selling, general and administrative expenses”.

The amounts in respect of gains (losses) recognized in income for hedge ineffectiveness and amounts excluded from effectiveness testing were not significant for the year and three months ended December 31, 2016 and 2015.

Net derivative gains of \$6 million and net derivative losses of \$30 million, both net of tax, were reclassified from “Accumulated other comprehensive loss” to earnings during the year ended December 31, 2016 and 2015, respectively. During the three months ended December 31, 2016 and 2015, net derivative losses of \$3 million and \$2 million, both net of tax, respectively, were reclassified from “Accumulated other comprehensive loss” to earnings.

Fair value hedges

To reduce its interest rate exposure arising primarily from its debt issuance activities, the Company uses interest rate swaps. Where such instruments are designated as fair value hedges, the changes in the fair value of these instruments, as well as the changes in the fair value of the risk component of the underlying debt being hedged, are recorded as offsetting gains and losses in “Interest and other finance expense”. Hedge ineffectiveness of instruments designated as fair value hedges for the year and three months ended December 31, 2016 and 2015, was not significant.

The effect of interest rate contracts, designated and qualifying as fair value hedges, on the Consolidated Income Statements was as follows:

(\$ in millions)	Year ended December 31,		Three months ended December 31,	
	2016	2015	2016	2015
Gains (losses) recognized in Interest and other finance expense:				
- on derivatives designated as fair value hedges	(28)	8	(60)	(22)
- on hedged item	30	(4)	60	23

Derivatives not designated in hedge relationships

Derivative instruments that are not designated as hedges or do not qualify as either cash flow or fair value hedges are economic hedges used for risk management purposes. Gains and losses from changes in the fair values of such derivatives are recognized in the same line in the income statement as the economically hedged transaction.

Furthermore, under certain circumstances, the Company is required to split and account separately for foreign currency derivatives that are embedded within certain binding sales or purchase contracts denominated in a currency other than the functional currency of the subsidiary and the counterparty.

The gains (losses) recognized in the Consolidated Income Statements on derivatives not designated in hedging relationships were as follows:

Type of derivative not designated as a hedge (\$ in millions)	Location	Gains (losses) recognized in income			
		Year ended December 31,		Three months ended December 31,	
		2016	2015	2016	2015
Foreign exchange contracts	Total revenues	(206)	(216)	(187)	10
	Total cost of sales	(56)	16	13	(40)
	SG&A expenses ⁽¹⁾	8	13	13	4
	Non-order related research and development	(2)	(1)	(1)	–
	Other income (expense), net	22	–	22	–
	Interest and other finance expense	(34)	287	11	39
Embedded foreign exchange contracts	Total revenues	(5)	127	36	(11)
	Total cost of sales	(5)	(25)	(12)	(1)
	SG&A expenses ⁽¹⁾	(2)	(5)	(3)	(3)
Commodity contracts	Total cost of sales	42	(61)	27	(14)
Other	Interest and other finance expense	4	(1)	2	1
Total		(234)	134	(79)	(15)

(1) SG&A expenses represent “Selling, general and administrative expenses”.

The fair values of derivatives included in the Consolidated Balance Sheets were as follows:

(\$ in millions)	December 31, 2016			
	Derivative assets		Derivative liabilities	
	Current in “Other current assets”	Non-current in “Other non-current assets”	Current in “Other current liabilities”	Non-current in “Other non-current liabilities”
Derivatives designated as hedging instruments:				
Foreign exchange contracts	5	–	6	5
Commodity contracts	2	–	–	–
Interest rate contracts	2	62	–	–
Cash-settled call options	13	9	–	–
Total	22	71	6	5
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	169	29	257	77
Commodity contracts	29	2	6	1
Cross-currency interest rate swaps	–	2	–	–
Cash-settled call options	–	1	–	–
Embedded foreign exchange derivatives	58	21	35	18
Total	256	55	298	96
Total fair value	278	126	304	101

(\$ in millions)	December 31, 2015			
	Derivative assets		Derivative liabilities	
	Current in “Other current assets”	Non-current in “Other non-current assets”	Current in “Other current liabilities”	Non-current in “Other non-current liabilities”
Derivatives designated as hedging instruments:				
Foreign exchange contracts	15	10	8	16
Commodity contracts	–	–	3	–
Interest rate contracts	6	86	–	–
Cash-settled call options	8	5	–	–
Total	29	101	11	16
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	172	32	237	81
Commodity contracts	2	–	29	9
Cross-currency interest rate swaps	–	–	–	1
Embedded foreign exchange derivatives	94	53	41	27
Total	268	85	307	118
Total fair value	297	186	318	134

Close-out netting agreements provide for the termination, valuation and net settlement of some or all outstanding transactions between two counterparties on the occurrence of one or more pre-defined trigger events.

Although the Company is party to close-out netting agreements with most derivative counterparties, the fair values in the tables above and in the Consolidated Balance Sheets at December 31, 2016 and 2015, have been presented on a gross basis.

The Company's netting agreements and other similar arrangements allow net settlements under certain conditions. At December 31, 2016 and 2015, information related to these offsetting arrangements was as follows:

(\$ in millions)					
December 31, 2016					
Type of agreement or similar arrangement	Gross amount of recognized assets	Derivative liabilities eligible for set-off in case of default	Cash collateral received	Non-cash collateral received	Net asset exposure
Derivatives	325	(190)	–	–	135
Reverse repurchase agreements	268	–	–	(268)	–
Total	593	(190)	–	(268)	135

(\$ in millions)					
December 31, 2016					
Type of agreement or similar arrangement	Gross amount of recognized liabilities	Derivative liabilities eligible for set-off in case of default	Cash collateral pledged	Non-cash collateral pledged	Net liability exposure
Derivatives	352	(190)	–	–	162
Total	352	(190)	–	–	162

(\$ in millions)					
December 31, 2015					
Type of agreement or similar arrangement	Gross amount of recognized assets	Derivative liabilities eligible for set-off in case of default	Cash collateral received	Non-cash collateral received	Net asset exposure
Derivatives	336	(215)	–	–	121
Reverse repurchase agreements	224	–	–	(224)	–
Total	560	(215)	–	(224)	121

(\$ in millions)					
December 31, 2015					
Type of agreement or similar arrangement	Gross amount of recognized liabilities	Derivative liabilities eligible for set-off in case of default	Cash collateral pledged	Non-cash collateral pledged	Net liability exposure
Derivatives	384	(215)	(3)	–	166
Total	384	(215)	(3)	–	166

Note 5 Fair values

The Company uses fair value measurement principles to record certain financial assets and liabilities on a recurring basis and, when necessary, to record certain non-financial assets at fair value on a non-recurring basis, as well as to determine fair value disclosures for certain financial instruments carried at amortized cost in the financial statements. Financial assets and liabilities recorded at fair value on a recurring basis include foreign currency, commodity and interest rate derivatives, as well as cash-settled call options and available-for-sale securities. Non-financial assets recorded at fair value on a non-recurring basis include long-lived assets that are reduced to their estimated fair value due to impairments.

Fair value is the price that would be received when selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the Company uses various valuation techniques including the market approach (using observable market data for identical or similar assets and liabilities), the income approach (discounted cash flow models) and the cost approach (using costs a market participant would incur to develop a comparable asset). Inputs used to determine the fair value of assets and liabilities are defined by a three-level hierarchy, depending on the reliability of those inputs. The Company has categorized its financial assets and liabilities and non-financial assets measured at fair value within this hierarchy based on whether the inputs to the valuation technique are observable or unobservable. An observable input is based on market data obtained from independent sources, while an unobservable input reflects the Company's assumptions about market data.

The levels of the fair value hierarchy are as follows:

- Level 1: Valuation inputs consist of quoted prices in an active market for identical assets or liabilities (observable quoted prices). Assets and liabilities valued using Level 1 inputs include listed derivatives which are actively traded such as commodity futures, interest rate futures and certain actively traded debt securities.
- Level 2: Valuation inputs consist of observable inputs (other than Level 1 inputs) such as actively quoted prices for similar assets, quoted prices in inactive markets and inputs other than quoted prices such as interest rate yield curves, credit spreads, or inputs derived from other observable data by interpolation, correlation, regression or other means. The adjustments applied to quoted prices or the inputs used in valuation models may be both observable and unobservable. In these cases, the fair value measurement is classified as Level 2 unless the unobservable portion of the adjustment

or the unobservable input to the valuation model is significant, in which case the fair value measurement would be classified as Level 3. Assets and liabilities valued or disclosed using Level 2 inputs include investments in certain funds, reverse repurchase agreements, certain debt securities that are not actively traded, interest rate swaps, commodity swaps, cash-settled call options, forward foreign exchange contracts, foreign exchange swaps and forward rate agreements, time deposits, as well as financing receivables and debt.

Level 3: Valuation inputs are based on the Company's assumptions of relevant market data (unobservable input).

Whenever quoted prices involve bid-ask spreads, the Company ordinarily determines fair values based on mid-market quotes. However, for the purpose of determining the fair value of cash-settled call options serving as hedges of the Company's management incentive plan, bid prices are used.

When determining fair values based on quoted prices in an active market, the Company considers if the level of transaction activity for the financial instrument has significantly decreased, or would not be considered orderly. In such cases, the resulting changes in valuation techniques would be disclosed. If the market is considered disorderly or if quoted prices are not available, the Company is required to use another valuation technique, such as an income approach.

Recurring fair value measures

The fair values of financial assets and liabilities measured at fair value on a recurring basis were as follows:

(\$ in millions)	December 31, 2016			
	Level 1	Level 2	Level 3	Total fair value
Assets				
Available-for-sale securities in "Marketable securities and short-term investments":				
Equity securities	–	541	–	541
Debt securities—U.S. government obligations	220	–	–	220
Debt securities—Other government obligations	–	2	–	2
Debt securities—Corporate	–	95	–	95
Derivative assets—current in "Other current assets"	–	278	–	278
Derivative assets—non-current in "Other non-current assets"	–	126	–	126
Total	220	1,042	–	1,262
Liabilities				
Derivative liabilities—current in "Other current liabilities"	–	304	–	304
Derivative liabilities—non-current in "Other non-current liabilities"	–	101	–	101
Total	–	405	–	405

(\$ in millions)	December 31, 2015			
	Level 1	Level 2	Level 3	Total fair value
Assets				
Available-for-sale securities in "Cash and equivalents":				
Debt securities—Corporate	–	11	–	11
Available-for-sale securities in "Marketable securities and short-term investments":				
Equity securities	–	667	–	667
Debt securities—U.S. government obligations	121	–	–	121
Debt securities—Other government obligations	–	2	–	2
Debt securities—Corporate	–	508	–	508
Derivative assets—current in "Other current assets"	1	296	–	297
Derivative assets—non-current in "Other non-current assets"	–	186	–	186
Total	122	1,670	–	1,792
Liabilities				
Derivative liabilities—current in "Other current liabilities"	3	315	–	318
Derivative liabilities—non-current in "Other non-current liabilities"	–	134	–	134
Total	3	449	–	452

The Company uses the following methods and assumptions in estimating fair values of financial assets and liabilities measured at fair value on a recurring basis:

- **Available-for-sale securities in "Cash and equivalents" and "Marketable securities and short-term investments":** If quoted market prices in active markets for identical assets are available, these are considered Level 1 inputs; however, when markets are not active, these inputs are considered Level 2. If such quoted market prices are not available, fair value is determined using market prices for similar assets or present value techniques, applying an appropriate risk-free interest rate adjusted for nonperformance risk. The inputs used in present value techniques are observable and fall into the Level 2 category.
- **Derivatives:** The fair values of derivative instruments are determined using quoted prices of identical instruments from an active market, if available (Level 1). If quoted prices are not available, price quotes for similar instruments, appropriately adjusted, or present value techniques, based on available market data, or option pricing models are used. Cash-settled call options hedging the Company's WAR liability are valued based on bid prices of the equivalent listed warrant. The fair values obtained using price

quotes for similar instruments or valuation techniques represent a Level 2 input unless significant unobservable inputs are used.

Non-recurring fair value measures There were no significant non-recurring fair value measurements during the year and three months ended December 31, 2016 and 2015.

Disclosure about financial instruments carried on a cost basis The fair values of financial instruments carried on a cost basis were as follows:

December 31, 2016					
(\$ in millions)	Carrying value	Level 1	Level 2	Level 3	Total fair value
Assets					
Cash and equivalents (excluding available-for-sale securities with original maturities up to 3 months):					
Cash	1,779	1,779	–	–	1,779
Time deposits	1,940	–	1,940	–	1,940
Marketable securities and short-term investments (excluding available-for-sale securities):					
Time deposits	824	–	824	–	824
Receivables under reverse repurchase agreements	268	–	268	–	268
Other short-term investments	3	3	–	–	3
Other non-current assets:					
Loans granted	30	–	31	–	31
Held-to-maturity securities	80	–	86	–	86
Restricted cash deposits	91	59	42	–	101
Liabilities					
Short-term debt and current maturities of long-term debt (excluding capital lease obligations)	964	856	108	–	964
Long-term debt (excluding capital lease obligations)	5,709	5,208	784	–	5,992
Non-current deposit liabilities in “Other non-current liabilities”	106	–	124	–	124

December 31, 2015					
(\$ in millions)	Carrying value	Level 1	Level 2	Level 3	Total fair value
Assets					
Cash and equivalents (excluding available-for-sale securities with original maturities up to 3 months):					
Cash	1,837	1,837	–	–	1,837
Time deposits	2,717	–	2,717	–	2,717
Marketable securities and short-term investments (excluding available-for-sale securities):					
Time deposits	104	–	104	–	104
Receivables under reverse repurchase agreements	224	–	224	–	224
Other short-term investments	7	7	–	–	7
Other non-current assets:					
Loans granted	29	–	30	–	30
Held-to-maturity securities	99	–	110	–	110
Restricted cash deposits	176	55	138	–	193
Liabilities					
Short-term debt and current maturities of long-term debt (excluding capital lease obligations)	1,427	614	817	–	1,431
Long-term debt (excluding capital lease obligations)	5,889	5,307	751	–	6,058
Non-current deposit liabilities in “Other non-current liabilities”	215	–	244	–	244

The Company uses the following methods and assumptions in estimating fair values of financial instruments carried on a cost basis:

- Cash and equivalents (excluding available-for-sale securities with original maturities up to 3 months), and Marketable securities and short-term investments (excluding available-for-sale securities): The carrying amounts approximate the fair values as the items are short-term in nature.
- Other non-current assets: Includes (i) loans granted whose fair values are based on the carrying amount adjusted using a present value technique to reflect a premium or discount based on current market interest rates (Level 2 inputs), (ii) held-to-maturity securities (see Note 3) whose fair values are based on quoted market prices in inactive markets (Level 2 inputs), (iii) restricted cash whose fair values approximate the carrying amounts (Level 1 inputs) and restricted cash deposits pledged in respect of certain non-current deposit liabilities whose fair values are determined using a discounted cash flow methodology based on current market interest rates (Level 2 inputs).
- Short-term debt and current maturities of long-term debt (excluding capital lease obligations): Short-term debt includes commercial paper, bank borrowings and overdrafts. The carrying amounts of short-

term debt and current maturities of long-term debt, excluding capital lease obligations, approximate their fair values.

- Long-term debt (excluding capital lease obligations): Fair values of bonds are determined using quoted market prices (Level 1 inputs), if available. For bonds without available quoted market prices and other long-term debt, the fair values are determined using a discounted cash flow methodology based upon borrowing rates of similar debt instruments and reflecting appropriate adjustments for non-performance risk (Level 2 inputs).
- Non-current deposit liabilities in "Other non-current liabilities": The fair values of non-current deposit liabilities are determined using a discounted cash flow methodology based on risk-adjusted interest rates (Level 2 inputs).

Note 6

Commitments and contingencies

Contingencies—Regulatory,
Compliance and Legal

Antitrust

In April 2014, the European Commission announced its decision regarding its investigation of anticompetitive practices in the cables industry and granted the Company full immunity from fines under the European Commission's leniency program. In December 2013, the Company agreed with the Brazilian Antitrust Authority (CADE) to settle its ongoing investigation into the Company's involvement in anticompetitive practices in the cables industry and the Company agreed to pay a fine of approximately 1.5 million Brazilian reais (equivalent to approximately \$1 million on date of payment).

In Brazil, the Company's Gas Insulated Switchgear business is under investigation by the CADE for alleged anticompetitive practices. In addition, the CADE has opened an investigation into certain other power businesses of the Company, including flexible alternating current transmission systems (FACTS) and power transformers. With respect to these matters, management is cooperating fully with the authorities. An informed judgment about the outcome of these investigations or the amount of potential loss or range of loss for the Company, if any, relating to these investigations cannot be made at this stage.

Suspect payments

As a result of an internal investigation, the Company self-reported to the Securities and Exchange Commission (SEC) and the Department of Justice (DoJ) in the United States as well as to the Serious Fraud Office (SFO) in the United Kingdom concerning certain of its past dealings with Unaoil and its subsidiaries, including alleged improper payments made by these entities to third parties. The SFO has commenced an investigation into this matter. The Company is cooperating fully with the authorities. At this time, it is not possible for the Company to make an informed judgment about the outcome of these matters.

General

In addition, the Company is aware of proceedings, or the threat of proceedings, against it and others in respect of private claims by customers and other third parties with regard to certain actual or alleged anticompetitive practices. Also, the Company is subject to other various legal proceedings, investigations, and claims that have not yet been resolved. With respect to the above mentioned regulatory matters and commercial litigation contingencies, the Company will bear the costs of the continuing investigations and any related legal proceedings.

Liabilities recognized

At December 31, 2016 and 2015, the Company had aggregate liabilities of \$150 million and \$160 million, included in "Other provisions" and "Other non-current liabilities", for the above regulatory, compliance and legal contingencies, and none of the individual liabilities recognized was significant. As it is not possible to make an informed judgment on the outcome of certain matters and as it is not possible, based on information currently available to management, to estimate the maximum potential liability on other matters, there could be material adverse outcomes beyond the amounts accrued.

Guarantees

General

The following table provides quantitative data regarding the Company's third-party guarantees. The maximum potential payments represent a "worst-case scenario", and do not reflect management's expected outcomes.

Maximum potential payments (\$ in millions)	December 31, 2016	December 31, 2015
Performance guarantees	193	209
Financial guarantees	69	77
Indemnification guarantees	71	50
Total	333	336

The carrying amount of liabilities recorded in the Consolidated Balance Sheets reflects the Company's best estimate of future payments, which it may incur as part of fulfilling its guarantee obligations. In respect of the above guarantees, the carrying amounts of liabilities at December 31, 2016 and 2015, were not significant.

The Company is party to various guarantees providing financial or performance assurances to certain third parties. These guarantees, which have various maturities up to 2020, mainly consist of performance guarantees whereby (i) the Company guarantees the performance of a third party's product or service according to the terms of a contract and (ii) as member of a consortium that includes third parties, the Company guarantees not only its own performance but also the work of third parties. Such guarantees may include guarantees that a project will be completed within a specified time. If the third party does not fulfill the obligation, the Company will compensate the guaranteed party in cash or in kind. The original maturity dates for the majority of these performance guarantees range from one to six years.

Commercial commitments

In addition, in the normal course of bidding for and executing certain projects, the Company has entered into standby letters of credit, bid/performance bonds and surety bonds (collectively “performance bonds”) with various financial institutions. Customers can draw on such performance bonds in the event that the Company does not fulfill its contractual obligations. The Company would then have an obligation to reimburse the financial institution for amounts paid under the performance bonds. At December 31, 2016 and 2015, the total outstanding performance bonds aggregated to \$7.9 billion and \$9.5 billion, respectively. There have been no significant amounts reimbursed to financial institutions under these types of arrangements in the year and three months ended December 31, 2016 and 2015.

Product and order-related contingencies

The Company calculates its provision for product warranties based on historical claims experience and specific review of certain contracts.

The reconciliation of the “Provisions for warranties”, including guarantees of product performance, was as follows:

(\$ in millions)	2016	2015
Balance at January 1,	1,089	1,148
Claims paid in cash or in kind	(329)	(357)
Net increase in provision for changes in estimates, warranties issued and warranties expired	424	377
Exchange rate differences	(42)	(79)
Balance at December 31,	1,142	1,089

During 2016, the Company determined that the provision for product warranties in its solar business, acquired in 2013 as part of the purchase of Power-One, was no longer sufficient to cover expected warranty costs in the remaining warranty period. Due to higher than originally expected product failure rates for certain solar inverters designed and manufactured by Power-One, a substantial portion of which relates to products which were delivered to customers prior to the acquisition date, the previously estimated product warranty provision was increased by a total of \$151 million during the year, of which \$110 million was recorded in the three months ended December 31, 2016. The corresponding increases were included in Cost of sales of products and resulted in a decrease in basic and diluted earnings per share of \$0.06 and \$0.05, respectively, for the year ended December 31, 2016, and a decrease of \$0.04 (basic and diluted) for the three months ended December 31, 2016. As \$131 million and \$92 million of these warranty costs for the year and three months ended December 31, 2016, respectively, relate to products which were sold prior to the acquisition date, these costs have been excluded from the Company’s primary measure of segment performance, Operational EBITA (See Note 13).

The information for 2015 contained in the table above has been adjusted to correct a classification difference between Claims paid in cash and kind and Net effect of changes in estimates, warranties issued and warranties expired.

**Note 7
Debt**

The Company’s total debt at December 31, 2016 and 2015, amounted to \$6,787 million and \$7,439 million, respectively.

Short-term debt and current maturities of long-term debt

The Company’s “Short-term debt and current maturities of long-term debt” consisted of the following:

(\$ in millions)	December 31, 2016	December 31, 2015
Short-term debt	119	278
Current maturities of long-term debt	868	1,176
Total	987	1,454

Short-term debt primarily represented issued commercial paper and short-term loans from various banks. At December 31, 2016 and 2015, \$57 million and \$132 million, respectively, was outstanding under the \$2 billion commercial paper program in the United States.

In May 2016, the Company exercised its option to extend the maturity of its \$2 billion multicurrency revolving credit facility to 2021. No amount was drawn at December 31, 2016 and 2015. The facility contains cross default clauses whereby an event of default would occur if the Company were to default on indebtedness as defined in the facility, at or above a specified threshold.

In June and October 2016, the Company repaid at maturity the USD 600 million 2.5% Notes and the CHF 500 million 1.25% Bonds (equivalent to approximately \$506 million at date of payment), respectively.

Long-term debt

The Company’s long-term debt at December 31, 2016 and 2015, amounted to \$5,800 million and \$5,985 million, respectively.

Outstanding bonds (including maturities within the next 12 months) were as follows:

(in millions)	December 31, 2016			December 31, 2015		
	Nominal outstanding	Carrying value ⁽¹⁾		Nominal outstanding	Carrying value ⁽¹⁾	
Bonds:						
2.5% USD Notes, due 2016			–	USD	600	\$ 599
1.25% CHF Bonds, due 2016			–	CHF	500	\$ 510
1.625% USD Notes, due 2017	USD	500	\$ 500	USD	500	\$ 499
4.25% AUD Notes, due 2017	AUD	400	\$ 291	AUD	400	\$ 297
1.50% CHF Bonds, due 2018	CHF	350	\$ 342	CHF	350	\$ 352
2.625% EUR Instruments, due 2019	EUR	1,250	\$ 1,311	EUR	1,250	\$ 1,363
4.0% USD Notes, due 2021	USD	650	\$ 643	USD	650	\$ 641
2.25% CHF Bonds, due 2021	CHF	350	\$ 368	CHF	350	\$ 383
5.625% USD Notes, due 2021	USD	250	\$ 274	USD	250	\$ 279
2.875% USD Notes, due 2022	USD	1,250	\$ 1,261	USD	1,250	\$ 1,275
0.625% EUR Notes, due 2023	EUR	700	\$ 732			–
4.375% USD Notes, due 2042	USD	750	\$ 722	USD	750	\$ 722
Total			\$ 6,444			\$ 6,920

(1) USD carrying values include unamortized debt issuance costs, bond discounts or premiums, as well as adjustments for fair value hedge accounting, where appropriate.

In May 2016, the Company issued notes with an aggregate principal of EUR 700 million, due 2023. The notes pay interest annually in arrears at a fixed rate of 0.625 percent per annum. The Company recorded net proceeds (after underwriting fees) of EUR 697 million (equivalent to approximately \$807 million on date of issuance).

Note 8 Employee benefits

The Company operates defined benefit pension plans, defined contribution pension plans, and termination indemnity plans, in accordance with local regulations and practices. These plans cover a large portion of the Company's employees and provide benefits to employees in the event of death, disability, retirement, or termination of employment. Certain of these plans are multi-employer plans. The Company also operates other postretirement benefit plans including postretirement health care benefits, and other employee-related benefits for active employees including long-service award plans. The measurement date used for the Company's employee benefit plans is December 31. The funding policies of the Company's plans are consistent with the local government and tax requirements.

Net periodic benefit cost of the Company's defined benefit pension and other postretirement benefit plans consisted of the following:

(\$ in millions)	Defined pension benefits		Other postretirement benefits	
	2016	2015	2016	2015
Year ended December 31,				
Service cost	249	267	1	1
Interest cost	280	305	6	8
Expected return on plan assets	(402)	(456)	–	–
Amortization of prior service cost (credit)	40	38	(12)	(9)
Amortization of net actuarial loss	85	112	–	1
Curtailments, settlements and special termination benefits	41	20	–	–
Net periodic benefit cost	293	286	(5)	1

(\$ in millions)	Defined pension benefits		Other postretirement benefits	
	2016	2015	2016	2015
Three months ended December 31,				
Service cost	58	64	–	–
Interest cost	67	74	2	2
Expected return on plan assets	(96)	(111)	–	–
Amortization of prior service cost (credit)	10	10	(4)	(3)
Amortization of net actuarial loss	20	29	–	–
Curtailments, settlements and special termination benefits	39	7	–	–
Net periodic benefit cost	98	73	(2)	(1)

Employer contributions were as follows:

(\$ in millions)	Defined pension benefits		Other postretirement benefits	
	2016	2015	2016	2015
Year ended December 31,				
Total contributions to defined benefit pension and other postretirement benefit plans	270	243	11	15
Of which, discretionary contributions to defined benefit pension plans	15	31	–	–

(\$ in millions)	Defined pension benefits		Other postretirement benefits	
	2016	2015	2016	2015
Three months ended December 31,				
Total contributions to defined benefit pension and other postretirement benefit plans	86	88	2	4
Of which, discretionary contributions to defined benefit pension plans	15	21	–	–

During the year ended December 31, 2016, total contributions included available-for-sale debt securities, having a fair value at the contribution date of \$52 million, contributed to certain of the Company's pension plans in Germany and the United Kingdom, of which \$12 million was contributed in the three months ended December 31, 2016.

During the year and three months ended December 31, 2015, total contributions included available-for-sale debt securities, having a fair value at the contribution date of \$22 million, contributed to certain of the Company's pension plans in the United Kingdom.

The Company expects to make contributions totaling approximately \$193 million and \$13 million to its defined benefit pension plans and other postretirement benefit plans, respectively, for the full year 2017.

Note 9

Stockholders' equity

Between September 2014 and September 2016, the Company executed a share buyback program for the purchase of up to \$4 billion of its own shares and on September 30, 2016, announced that it had completed this program. Over the period of the share buyback, the Company purchased a total of 146.595 million shares (for approximately \$3 billion) for cancellation and 24.740 million shares (for approximately \$0.5 billion) to support its employee share programs. The shares acquired for cancellation were purchased through a separate trading line on the SIX Swiss Exchange (on which only the Company could purchase shares), while shares acquired for delivery under employee share programs were acquired through the ordinary trading line.

In 2016, under this share buyback program, the Company purchased 60.370 million shares for cancellation and 4.940 million shares to support its employee share programs and these transactions resulted in an increase in Treasury stock of \$1,280 million. In the year ended December 31, 2015, the Company purchased 60.245 million shares for cancellation and 13.050 million shares to support its employee share programs, of which 19.955 million shares were purchased for cancellation and 4.350 million shares were purchased to support its employee share programs in the three months ended December 31, 2015. In the year and three months ended December 31, 2015, these transactions resulted in an increase in Treasury stock of \$1,501 million and \$454 million, respectively.

At the Annual General Meeting of Shareholders on April 21, 2016, shareholders approved the proposal of the Board of Directors to reduce the share capital of the Company by cancelling 100 million shares which were bought back under the share buyback program. This cancellation was completed in July 2016, resulting in a decrease in Treasury stock of \$2,047 million and a corresponding total decrease in Capital stock and additional paid-in capital and in Retained earnings.

Also at the Annual General Meeting of Shareholders on April 21, 2016, shareholders approved the proposal of the Board of Directors to distribute 0.74 Swiss francs per share to shareholders by way of a nominal value reduction (reduction in the par value of each share) from 0.86 Swiss francs to 0.12 Swiss francs. In July 2016, the nominal value reduction was registered in the commercial register of the canton of Zurich, Switzerland, and was paid. The Company recorded a reduction in Capital stock and additional paid-in capital of \$1,224 million and a reduction in Retained earnings of \$402 million in relation to the nominal value reduction.

In 2016, the Company delivered, out of treasury stock, 8.9 million shares for options exercised in connection with its Management Incentive Plan and 2.6 million shares under the Employee Share Acquisition Plan.

In October 2016, the Company announced a new share buyback program for the purchase of up to \$3 billion of its own shares from 2017 to 2019.

Note 10
Earnings per share

Basic earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the period. Diluted earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the period, assuming that all potentially dilutive securities were exercised, if dilutive. Potentially dilutive securities comprise outstanding written call options and outstanding options and shares granted subject to certain conditions under the Company's share-based payment arrangements.

Basic earnings per share

(\$ in millions, except per share data in \$)	Year ended December 31,		Three months ended December 31,	
	2016	2015	2016	2015
Amounts attributable to ABB shareholders:				
Income from continuing operations, net of tax	1,947	1,930	487	203
Income from discontinued operations, net of tax	16	3	2	1
Net income	1,963	1,933	489	204
Weighted-average number of shares outstanding (in millions)	2,151	2,226	2,137	2,203
Basic earnings per share attributable to ABB shareholders:				
Income from continuing operations, net of tax	0.91	0.87	0.23	0.09
Income from discontinued operations, net of tax	–	–	–	–
Net income	0.91	0.87	0.23	0.09

Diluted earnings per share

(\$ in millions, except per share data in \$)	Year ended December 31,		Three months ended December 31,	
	2016	2015	2016	2015
Amounts attributable to ABB shareholders:				
Income from continuing operations, net of tax	1,947	1,930	487	203
Income from discontinued operations, net of tax	16	3	2	1
Net income	1,963	1,933	489	204
Weighted-average number of shares outstanding (in millions)	2,151	2,226	2,137	2,203
Effect of dilutive securities:				
Call options and shares	3	4	4	3
Adjusted weighted-average number of shares outstanding (in millions)	2,154	2,230	2,141	2,206
Diluted earnings per share attributable to ABB shareholders:				
Income from continuing operations, net of tax	0.90	0.87	0.23	0.09
Income from discontinued operations, net of tax	0.01	–	–	–
Net income	0.91	0.87	0.23	0.09

Note 11
Reclassifications out of accumulated other comprehensive loss

The following table shows changes in "Accumulated other comprehensive loss" (OCI) attributable to ABB, by component, net of tax:

(\$ in millions)	Foreign currency translation adjustments	Unrealized gains (losses) on available-for-sale securities	Pension and other postretirement plan adjustments	Unrealized gains (losses) of cash flow hedge derivatives	Total OCI
Balance at January 1, 2015	(2,102)	13	(2,131)	(21)	(4,241)
Other comprehensive (loss) income before reclassifications	(1,058)	(7)	298	(20)	(787)
Amounts reclassified from OCI	–	1	117	30	148
Total other comprehensive (loss) income	(1,058)	(6)	415	10	(639)
Less:					
Amounts attributable to noncontrolling interests	(25)	–	3	–	(22)
Balance at December 31, 2015	(3,135)	7	(1,719)	(11)	(4,858)
Other comprehensive (loss) income before reclassifications	(474)	–	4	16	(454)
Amounts reclassified from OCI	–	–	114	(6)	108
Total other comprehensive (loss) income	(474)	–	118	10	(346)
Less:					
Amounts attributable to noncontrolling interests	(17)	–	–	–	(17)
Balance at December 31, 2016	(3,592)	7	(1,601)	(1)	(5,187)

The following table reflects amounts reclassified out of OCI in respect of pension and other postretirement plan adjustments and unrealized gains (losses) of cash flow hedge derivatives:

		Year ended		Three months ended	
(\$ in millions)	Location of (gains) losses	December 31,		December 31,	
Details about OCI components	reclassified from OCI	2016	2015	2016	2015
Pension and other postretirement plan adjustments:					
Amortization of prior service cost	Net periodic benefit cost ⁽¹⁾	28	29	6	7
Amortization of net actuarial loss	Net periodic benefit cost ⁽¹⁾	85	113	20	29
Net losses from pension settlements	Net periodic benefit cost ⁽¹⁾	37	15	37	3
Total before tax		150	157	63	39
Tax	Provision for taxes	(36)	(40)	(16)	(10)
Amounts reclassified from OCI		114	117	47	29
Unrealized gains (losses) of cash flow hedge derivatives:					
Foreign exchange contracts	Total revenues	11	36	2	5
	Total cost of sales	(10)	(11)	(1)	(3)
Commodity contracts	Total cost of sales	2	10	–	3
Cash-settled call options	SG&A expenses ⁽²⁾	(10)	4	2	(2)
Total before tax		(7)	39	3	3
Tax	Provision for taxes	1	(9)	–	(1)
Amounts reclassified from OCI		(6)	30	3	2

(1) These components are included in the computation of net periodic benefit cost (see Note 8).

(2) SG&A expenses represent “Selling, general and administrative expenses”.

The amounts in respect of Unrealized gains (losses) on available-for-sale securities were not significant for the year and three months ended December 31, 2016 and 2015.

Note 12 Restructuring and related expenses

White Collar Productivity program

In September 2015, the Company announced a two-year program aimed at making the Company leaner, faster and more customer-focused. Productivity improvements include the rapid expansion and use of regional shared service centers as well as the streamlining of global operations and head office functions, with business units moving closer to their respective key markets. In the course of this program, the Company is implementing and executing various restructuring initiatives across all operating segments and regions.

The following table outlines the costs incurred in the year and three months ended December 31, 2016, the cumulative costs incurred to date and the total amount of costs expected to be incurred under the program per operating segment:

(\$ in millions)	Costs incurred				Cumulative costs	
	Year ended December 31,		Three months ended December 31,		incurred up to December 31, 2016	Total expected costs ⁽¹⁾
	2016	2015	2016	2015		
Electrification Products	14	73	(11)	71	87	89
Discrete Automation and Motion	27	45	(6)	42	72	74
Process Automation	36	96	(37)	86	132	134
Power Grids	33	70	(17)	68	103	105
Corporate and Other	30	86	(19)	85	116	118
Total	140	370	(90)	352	510	520

(1) Total expected costs have been recast to reflect the reorganization of the Company's operating segments as outlined in Note 13.

Total expected program costs were originally estimated to be \$852 million. During 2016, the total expected program costs were reduced by \$332 million, of which \$111 million was in the three months ended December 31, 2016. This was primarily due to the realization of significantly higher than originally expected attrition and internal re-deployment rates. The reductions were made across all operating segments as well as for corporate functions.

Of the total expected costs of \$520 million, the majority is related to employee severance costs.

The Company recorded the following expenses, net of changes in estimates, under this program:

(\$ in millions)	Year ended December 31,		Three months ended December 31,		Cumulative costs incurred up to December 31, 2016
	2016	2015	2016	2015	
Employee severance costs	130	364	(99)	346	494
Estimated contract settlement, loss order and other costs	2	5	1	5	7
Inventory and long-lived asset impairments	8	1	8	1	9
Total	140	370	(90)	352	510

Expenses, net of change in estimates, associated with this program are recorded in the following line items in the Consolidated Income Statements:

(\$ in millions)	Year ended December 31,		Three months ended December 31,	
	2016	2015	2016	2015
Total cost of sales	92	122	(47)	113
Selling, general and administrative expenses	38	187	(39)	183
Non-order related research and development expenses	(5)	38	(12)	34
Other income (expense), net	15	23	8	22
Total	140	370	(90)	352

Liabilities associated with the White Collar Productivity program are primarily included in "Other provisions". The following table shows the activity from the beginning of the program to December 31, 2016, by expense type.

(\$ in millions)	Employee severance costs	Contract settlement, loss order and other costs	Total
Liability at January 1, 2015	–	–	–
Expenses	364	5	369
Cash payments	(34)	(1)	(35)
Liability at December 31, 2015	330	4	334
Expenses	232	3	235
Cash payments	(106)	(3)	(109)
Change in estimates	(102)	(1)	(103)
Exchange rate differences	(23)	–	(23)
Liability at December 31, 2016	331	3	334

The change in estimates during 2016 of \$103 million is due to significantly higher than expected rates of attrition and internal re-deployment and a lower than expected severance cost per employee for the employee groups affected by the first phase of restructuring initiated in 2015. The reduction in the liability was recorded in income from operations, primarily as reductions in Cost of sales of \$49 million and in Selling, general and administrative expenses of \$38 million for the year ended December 31, 2016. During the three months ended December 31, 2016, the change in estimate was \$114 million, and related to restructurings initiated in both 2015 and 2016. This reduction was recorded primarily as reductions in Cost of sales of \$52 million and in Selling, general and administrative expenses of \$45 million for the three months ended December 31, 2016.

Other restructuring-related activities

In the year ended December 31, 2016 and 2015, the Company executed various other restructuring-related activities and incurred expenses of \$171 million and \$256 million, respectively. In the three months ended December 31, 2016 and 2015, these expenses amounted to \$80 million and \$144 million, respectively. These expenses were primarily recorded in "Total cost of sales".

(\$ in millions)	Year ended December 31,		Three months ended December 31,	
	2016	2015	2016	2015
Employee severance costs	90	207	31	130
Estimated contract settlement, loss order and other costs	40	27	21	11
Inventory and long-lived asset impairments	41	22	28	3
Total	171	256	80	144

At December 31, 2016 and 2015, the balance of other restructuring-related liabilities is primarily included in "Other provisions".

Change in estimates

In addition to the change in estimate of \$103 million relating to the White Collar Productivity Program, a further \$46 million was recorded as a change in estimate to reduce liabilities associated with the Company's other restructuring-related activities mainly due to changes in the planned scope of these activities. This was recorded in income from operations, primarily as reductions in Cost of sales. The combined total change in estimates for both the year and three months ended December 31, 2016, of \$149 million and \$139 million, respectively, resulted in an increase in earnings per share (basic and diluted) of \$0.05 in the respective periods.

Note 13 Operating segment data

The Chief Operating Decision Maker (CODM) is the Chief Executive Officer. The CODM allocates resources to and assesses the performance of each operating segment using the information outlined below. The Company's operating segments consist of Electrification Products, Discrete Automation and Motion, Process Automation and Power Grids. The remaining operations of the Company are included in Corporate and Other.

Effective January 1, 2016, the Company reorganized its operating segments with the aim of delivering more customer value in a better, more focused way from its combined power and automation offering. The new Electrification Products segment includes the business of the former Low Voltage Products segment and the Medium Voltage Products business from the former Power Products segment. The Process Automation segment has been expanded to include the Distributed Control Systems business from the former Power Systems segment, while the remaining businesses of the former Power Products and Power Systems segments were combined to form the new Power Grids segment. There were no significant changes to the Discrete Automation and Motion segment.

In addition, commencing in 2016, the Company changed its method of allocating income taxes to its operating segments whereby tax assets are primarily accounted for in Corporate and Other. As a result, certain amounts relating to current and deferred tax assets previously reported within the total segment assets of each individual operating segment have been allocated to Corporate and Other.

The segment information for the year and three months ended December 31, 2015 and at December 31, 2015, has been recast to reflect these organizational and allocation changes.

A description of the types of products and services provided by each reportable segment is as follows:

- **Electrification Products:** manufactures and sells products and services including low- and medium-voltage switchgear (air and gas insulated), breakers, switches, control products, DIN rail components, automation and distribution enclosures, wiring accessories and installation material for many kinds of applications.
- **Discrete Automation and Motion:** manufactures and sells motors, generators, variable speed drives, robots and robotics, solar inverters, wind converters, rectifiers, excitation systems, power quality and protection solutions, electric vehicle fast charging infrastructure, components and subsystems for railways, and related services for a wide range of applications in discrete automation, process industries, transportation and utilities.
- **Process Automation:** develops and sells control and plant optimization systems, automation products and solutions, including instrumentation, as well as industry-specific application knowledge and services for the oil, gas and petrochemicals, metals and minerals, marine and turbocharging, pulp and paper, chemical and pharmaceuticals, and power industries.
- **Power Grids:** supplies power and automation products, systems, and service and software solutions for power generation, transmission and distribution to utility, industry, transportation and infrastructure customers. These offerings address evolving grid developments which include the integration of renewables, network control, digital substations, microgrids and asset management. The segment also manufactures a wide range of power, distribution and traction transformers, an array of high-voltage products, including circuit breakers, switchgear, capacitors and power transmission systems.
- **Corporate and Other:** includes headquarters, central research and development, the Company's real estate activities, Group Treasury Operations, historical operating activities of certain divested businesses, and other minor business activities.

The Company evaluates the profitability of its segments based on Operational EBITA. In the fourth quarter of 2016, the Company modified the definition of its primary measure of segment performance to also exclude changes in estimates relating to opening balance sheets of acquired businesses (changes in pre-acquisition estimates) and non-operational pension cost, which comprises: (a) interest cost, (b) expected return on plan assets, (c) amortization of prior service cost (credit), (d) amortization of net actuarial loss, and (e) curtailments, settlements and special termination benefits.

After these revisions, Operational EBITA represents income from operations excluding: (i) amortization expense on intangibles arising upon acquisitions (acquisition-related amortization), (ii) restructuring and restructuring-related expenses, (iii) non-operational pension cost, (iv) changes in pre-acquisition estimates, (v) gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items, as well as (vi) foreign exchange/commodity timing differences in income from operations consisting of: (a) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (b) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (c) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities).

The CODM primarily reviews the results of each segment on a basis that is before the elimination of profits made on inventory sales between segments. Segment results below are presented before these eliminations, with a total deduction for intersegment profits to arrive at the Company's consolidated Operational EBITA. Intersegment sales and transfers are accounted for as if the sales and transfers were to third parties, at current market prices.

The following tables present segment revenues, Operational EBITA, and the reconciliations of consolidated Operational EBITA to Income from continuing operations before taxes for the year and three months ended December 31, 2016 and 2015, as well as total assets at December 31, 2016 and 2015.

	Year ended December 31, 2016			Year ended December 31, 2015		
	Third-party revenues	Intersegment revenues	Total revenues	Third-party revenues	Intersegment revenues	Total revenues
(\$ in millions)						
Electrification Products	8,744	548	9,292	8,932	615	9,547
Discrete Automation and Motion	8,169	545	8,714	8,492	635	9,127
Process Automation	6,448	150	6,598	7,104	120	7,224
Power Grids	10,408	567	10,975	10,876	745	11,621
Corporate and Other	59	1,553	1,612	77	1,459	1,536
Intersegment elimination	–	(3,363)	(3,363)	–	(3,574)	(3,574)
Consolidated	33,828	–	33,828	35,481	–	35,481

(\$ in millions)	Three months ended December 31, 2016			Three months ended December 31, 2015		
	Third-party revenues	Intersegment revenues	Total revenues	Third-party revenues	Intersegment revenues	Total revenues
Electrification Products	2,318	144	2,462	2,294	165	2,459
Discrete Automation and Motion	2,079	132	2,211	2,109	179	2,288
Process Automation	1,700	37	1,737	1,892	34	1,926
Power Grids	2,878	164	3,042	2,927	180	3,107
Corporate and Other	18	393	411	20	346	366
Intersegment elimination	–	(870)	(870)	–	(904)	(904)
Consolidated	8,993	–	8,993	9,242	–	9,242

(\$ in millions)	Year ended December 31,		Three months ended December 31,	
	2016	2015	2016	2015
Operational EBITA:				
Electrification Products	1,528	1,561	382	403
Discrete Automation and Motion	1,195	1,295	260	291
Process Automation	824	863	231	235
Power Grids	1,021	877	318	293
Corporate and Other and Intersegment elimination	(377)	(387)	(134)	(121)
Consolidated Operational EBITA	4,191	4,209	1,057	1,101
Acquisition-related amortization	(279)	(310)	(67)	(73)
Restructuring and restructuring-related expenses ⁽¹⁾	(543)	(674)	(68)	(531)
Non-operational pension cost	(38)	(19)	(38)	(8)
Changes in pre-acquisition estimates	(131)	(21)	(92)	(12)
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	(100)	(120)	(54)	(76)
Foreign exchange/commodity timing differences in income from operations:				
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(65)	67	(22)	(13)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(5)	(68)	(16)	(18)
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	30	(15)	51	(23)
Income from operations	3,060	3,049	751	347
Interest and dividend income	73	77	19	21
Interest and other finance expense	(261)	(286)	(31)	(63)
Income from continuing operations before taxes	2,872	2,840	739	305

(1) Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

(\$ in millions)	Total assets ⁽¹⁾	
	December 31, 2016	December 31, 2015
Electrification Products	9,523	9,474
Discrete Automation and Motion	8,465	9,223
Process Automation	4,153	4,662
Power Grids	8,980	9,422
Corporate and Other	8,417	8,575
Consolidated	39,538	41,356

(1) Total assets are after intersegment eliminations and therefore reflect third-party assets only.

Realignment of segments

On October 4, 2016, the Company announced a planned change in the composition of the business portfolio of its four segments. Effective January 1, 2017, the scope of the Electrification Products segment has been expanded to include the electric vehicle charging, solar, and power quality businesses from the Discrete Automation and Motion segment.

In addition, the Discrete Automation and Motion segment has been renamed the Robotics and Motion segment while the Process Automation segment has been renamed the Industrial Automation segment.



Supplemental Reconciliations and Definitions

The following reconciliations and definitions include measures which ABB uses to supplement its Interim Consolidated Financial Information (unaudited) which is prepared in accordance with United States generally accepted accounting principles (U.S. GAAP). Certain of these financial measures are, or may be, considered non-GAAP financial measures as defined in the rules of the U.S. Securities and Exchange Commission (SEC).

While ABB's management believes that the non-GAAP financial measures herein are useful in evaluating ABB's operating results, this information should be considered as supplemental in nature and not as a substitute for the related financial information prepared in accordance with U.S. GAAP. Therefore these measures should not be viewed in isolation but considered together with the Interim Consolidated Financial Information (unaudited) prepared in accordance with U.S. GAAP as of and for the year and three months ended December 31, 2016.

Comparable growth rates

Growth rates for certain key figures may be presented and discussed on a "comparable" basis. The comparable growth rate measures growth on a constant currency basis. Since we are a global company, the comparability of our operating results reported in U.S. dollars is affected by foreign currency exchange rate fluctuations. We calculate the impacts from foreign currency fluctuations by translating the current-year periods' reported key figures into U.S. dollar amounts using the exchange rates in effect for the comparable periods in the previous year.

Comparable growth rates are also adjusted for changes in our business portfolio. Adjustments to our business portfolio occur due to acquisitions, divestments, or by exiting specific business activities or customer markets. The adjustment for portfolio changes is calculated as follows: where the results of any business acquired or divested have not been consolidated and reported for the entire duration of both the current and comparable periods, the reported key figures of such business are adjusted to exclude the relevant key figures of any corresponding quarters which are not comparable when computing the comparable growth rate. Certain portfolio changes which do not qualify as divestments under U.S. GAAP have been treated in a similar manner to divestments. Changes in our portfolio where we have exited certain business activities or customer markets are adjusted as if the relevant business was divested in the period when the decision to cease business activities was taken. We do not adjust for portfolio changes where the relevant business has annualized revenues of less than \$50 million.

The following tables provide reconciliations of reported growth rates of certain key figures to their respective comparable growth rate.

Divisional comparable growth rate reconciliation

Division	Q4 2016 compared to Q4 2015							
	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Electrification Products	-8%	3%	0%	-5%	0%	3%	0%	3%
Discrete Automation and Motion	1%	3%	0%	4%	-3%	2%	0%	-1%
Process Automation	-15%	1%	0%	-14%	-10%	2%	0%	-8%
Power Grids	10%	2%	3%	15%	-2%	3%	3%	4%
ABB Group	0%	2%	1%	3%	-3%	3%	1%	1%

Division	FY 2016 compared to FY 2015							
	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Electrification Products	-7%	3%	0%	-4%	-3%	4%	0%	1%
Discrete Automation and Motion	-6%	2%	0%	-4%	-5%	3%	0%	-2%
Process Automation	-20%	2%	0%	-18%	-9%	3%	0%	-6%
Power Grids	-8%	3%	1%	-4%	-6%	3%	4%	1%
ABB Group	-8%	3%	0%	-5%	-5%	3%	1%	-1%

Regional comparable growth rate reconciliation

Region	Q4 2016 compared to Q4 2015							
	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Europe	-12%	2%	2%	-8%	0%	3%	3%	6%
The Americas	0%	0%	0%	0%	-6%	0%	0%	-6%
Asia, Middle East and Africa	13%	4%	0%	17%	-2%	3%	1%	2%
ABB Group	0%	2%	1%	3%	-3%	3%	1%	1%

Region	FY 2016 compared to FY 2015							
	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Europe	-11%	2%	1%	-8%	-2%	2%	4%	4%
The Americas	-11%	2%	0%	-9%	-8%	3%	0%	-5%
Asia, Middle East and Africa	-4%	4%	0%	0%	-4%	3%	0%	-1%
ABB Group	-8%	3%	0%	-5%	-5%	3%	1%	-1%

Order backlog growth rate reconciliation

Division	December 31, 2016, compared to December 31, 2015			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Electrification Products	-9%	4%	0%	-5%
Discrete Automation and Motion	-4%	4%	0%	0%
Process Automation	-13%	3%	0%	-10%
Power Grids	-1%	4%	1%	4%
ABB Group	-5%	3%	1%	-1%

Other growth rate reconciliations

	Q4 2016 compared to Q4 2015				FY 2016 compared to FY 2015			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Large orders	24%	3%	8%	35%	-27%	2%	1%	-24%
Base orders	-4%	3%	0%	-1%	-5%	3%	0%	-2%
Service orders	2%	2%	0%	4%	0%	3%	0%	3%
Service revenues	0%	2%	0%	2%	0%	3%	0%	3%

Division realignment:

Effective January 1, 2016, we have realigned our organizational structure to better address customer needs and deliver operational efficiency. Our new streamlined structure is comprised of four operating divisions: Power Grids, Electrification Products, Discrete Automation and Motion and Process Automation. In addition, the operations of certain previously divested businesses have been excluded from the results of the four divisions (but are included in the total ABB Group) for the periods prior to their respective divestment. See Note 13 to the Interim Consolidated Financial Information (unaudited) for further details on the realignment.

The following information presents a reconciliation of growth rates of orders and revenues for 2015 compared with 2014 to reflect these organizational changes:

Divisional comparable growth rate reconciliation:

Q4 2015 compared to Q4 2014								
Division	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Electrification Products	-7%	9%	0%	2%	-10%	9%	0%	-1%
Discrete Automation and Motion	-17%	8%	0%	-9%	-11%	7%	0%	-4%
Process Automation	-14%	11%	0%	-3%	-16%	10%	0%	-6%
Power Grids	-7%	9%	1%	3%	-8%	9%	-1%	0%
ABB Group	-12%	9%	1%	-2%	-11%	9%	0%	-2%

FY 2015 compared to FY 2014								
Division	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Electrification Products	-9%	9%	0%	0%	-10%	10%	0%	0%
Discrete Automation and Motion	-13%	8%	0%	-5%	-10%	8%	0%	-2%
Process Automation	-20%	11%	0%	-9%	-16%	11%	0%	-5%
Power Grids	-4%	12%	0%	8%	-7%	10%	-1%	2%
ABB Group	-12%	10%	1%	-1%	-11%	10%	1%	0%

Adjusted services and software revenues as a percentage of total revenues

Adjusted services and software revenues as a percentage of total revenues is calculated as Sales of services and software divided by Total revenues, after reducing both amounts by the amount of revenues recorded for businesses which have subsequently been divested. Total revenues are also adjusted when we have exited certain business activities or customer markets as if the relevant business was divested in the period when the decision to cease business activities was taken. We do not adjust for portfolio changes where the relevant business has annualized revenues of less than \$50 million.

	Year ended December 31,		Three months ended December 31,	
	2016	2015	2016	2015
(\$ in millions, unless otherwise indicated)				
Adjusted services and software revenues as a percentage of total revenues				
Sales of services and software	6,012	6,004	1,654	1,643
Adjusted services and software revenues	6,012	6,004	1,654	1,643
Total revenues	33,828	35,481	8,993	9,242
Total revenues in divested/exited businesses	(134)	(574)	(44)	(131)
Adjusted total revenues	33,694	34,907	8,949	9,111
Adjusted services and software revenues as a percentage of total revenues	17.8%	17.2%	18.5%	18.0%

Operational EBITA margin

In the fourth quarter of 2016, the Company modified the definition of Operational EBITA to also exclude the amount of non-operational pension cost and impacts from changes in estimates relating to opening balance sheets of acquired businesses (changes in pre-acquisition estimates). The new definition is provided below. The restated reconciliations for prior periods can be below in the section "Reconciliation of Operational EBITA margin by division for prior periods".

Definition

Operational EBITA margin

Operational EBITA margin is Operational EBITA as a percentage of Operational revenues.

Operational EBITA

Operational earnings before interest, taxes and acquisition-related amortization (Operational EBITA) represents Income from operations: excluding (i) acquisition-related amortization (as defined below), (ii) restructuring and restructuring-related expenses, (iii) non-operational pension cost (as defined below), (iv) changes in pre-acquisition estimates, (v) gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items, as well as (vi) foreign exchange/commodity timing differences in income from operations consisting of: (a) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (b) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (c) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities). Operational EBITA is our measure of segment profit but is also used by management to evaluate the profitability of the Company as a whole.

Acquisition-related amortization

Amortization expense on intangibles arising upon acquisitions.

Operational revenues

The Company presents Operational revenues solely for the purpose of allowing the computation of Operational EBITA margin. Operational revenues are total revenues adjusted for foreign exchange/commodity timing differences in total revenues of: (i) unrealized gains and losses on derivatives, (ii) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (iii) unrealized foreign exchange movements on receivables (and related assets). Operational revenues are not intended to be an alternative measure to *Total Revenues*, which represent our revenues measured in accordance with U.S. GAAP.

Non-operational pension cost

Non-operational pension cost comprises the total net periodic benefit cost of defined pension benefits and other postretirement benefits but excludes the current service cost of both components. A breakdown of the components of non-operational pension cost is provided below.

Reconciliation

The following tables provide reconciliations of consolidated Operational EBITA to Net Income and Operational EBITA Margin by division.

Reconciliation of consolidated Operational EBITA to Net Income

(\$ in millions)	Year ended December 31,		Three months ended December 31,	
	2016	2015	2016	2015
Operational EBITA	4,191	4,209	1,057	1,101
Acquisition-related amortization	(279)	(310)	(67)	(73)
Restructuring and restructuring-related expenses ⁽¹⁾	(543)	(674)	(68)	(531)
Non-operational pension cost	(38)	(19)	(38)	(8)
Changes in pre-acquisition estimates	(131)	(21)	(92)	(12)
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	(100)	(120)	(54)	(76)
Foreign exchange/commodity timing differences in income from operations:				
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(65)	67	(22)	(13)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(5)	(68)	(16)	(18)
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	30	(15)	51	(23)
Income from operations	3,060	3,049	751	347
Interest and dividend income	73	77	19	21
Interest and other finance expense	(261)	(286)	(31)	(63)
Income from continuing operations before taxes	2,872	2,840	739	305
Provision for taxes	(790)	(788)	(203)	(66)
Income from continuing operations, net of tax	2,082	2,052	536	239
Income from discontinued operations, net of tax	16	3	2	1
Net income	2,098	2,055	538	240

(1) Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

Reconciliation of Operational
EBITA margin by division

	Year ended December 31, 2016					
	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	9,292	8,714	6,598	10,975	(1,751)	33,828
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	20	3	9	73	–	105
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(5)	2	8	8	–	13
Unrealized foreign exchange movements on receivables (and related assets)	(11)	–	4	(30)	–	(37)
Operational revenues	9,296	8,719	6,619	11,026	(1,751)	33,909
Income (loss) from operations	1,335	831	696	888	(690)	3,060
Acquisition-related amortization	95	120	11	35	18	279
Restructuring and restructuring-related expenses ⁽¹⁾	73	88	79	101	202	543
Non-operational pension cost	3	2	2	(2)	33	38
Changes in pre-acquisition estimates	–	131	–	–	–	131
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	8	18	9	(2)	67	100
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	21	3	12	35	(6)	65
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(4)	2	5	2	–	5
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(3)	–	10	(36)	(1)	(30)
Operational EBITA	1,528	1,195	824	1,021	(377)	4,191
Operational EBITA margin (%)	16.4%	13.7%	12.4%	9.3%	n.a.	12.4%

(1) Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

Year ended December 31, 2015

	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	9,547	9,127	7,224	11,621	(2,038)	35,481
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(21)	23	(2)	(92)	1	(91)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	8	(27)	32	64	(1)	76
Unrealized foreign exchange movements on receivables (and related assets)	2	8	(17)	(5)	(1)	(13)
Operational revenues	9,536	9,131	7,237	11,588	(2,039)	35,453
Income (loss) from operations	1,356	991	685	613	(596)	3,049
Acquisition-related amortization	100	128	12	52	18	310
Restructuring and restructuring-related expenses ⁽¹⁾	124	125	130	160	135	674
Non-operational pension cost	(3)	3	6	3	10	19
Changes in pre-acquisition estimates	–	21	–	–	–	21
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	4	26	14	39	37	120
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(28)	17	(3)	(57)	4	(67)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	6	(27)	26	63	–	68
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	2	11	(7)	4	5	15
Operational EBITA	1,561	1,295	863	877	(387)	4,209
Operational EBITA margin (%)	16.4%	14.2%	11.9%	7.6%	n.a.	11.9%

(1) Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

Three months ended December 31, 2016

	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	2,462	2,211	1,737	3,042	(459)	8,993
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	18	8	(3)	40	–	63
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(1)	2	1	13	–	15
Unrealized foreign exchange movements on receivables (and related assets)	(13)	(3)	(9)	(32)	(1)	(58)
Operational revenues	2,466	2,218	1,726	3,063	(460)	9,013
Income (loss) from operations	319	89	244	334	(235)	751
Acquisition-related amortization	23	29	2	8	5	67
Restructuring and restructuring-related expenses ⁽¹⁾	25	31	(21)	(5)	38	68
Non-operational pension cost	–	2	2	1	33	38
Changes in pre-acquisition estimates	–	92	–	–	–	92
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	7	14	9	(8)	32	54
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	11	3	(4)	19	(7)	22
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(1)	2	5	10	–	16
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(2)	(2)	(6)	(41)	–	(51)
Operational EBITA	382	260	231	318	(134)	1,057
Operational EBITA margin (%)	15.5%	11.7%	13.4%	10.4%	n.a.	11.7%

(1) Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

Three months ended December 31, 2015

	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	2,459	2,288	1,926	3,107	(538)	9,242
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(6)	3	2	(37)	1	(37)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	2	1	4	7	(1)	13
Unrealized foreign exchange movements on receivables (and related assets)	–	–	7	14	(1)	20
Operational revenues	2,455	2,292	1,939	3,091	(539)	9,238
Income (loss) from operations	267	134	105	145	(304)	347
Acquisition-related amortization	24	32	3	10	4	73
Restructuring and restructuring-related expenses ⁽¹⁾	104	81	106	122	118	531
Non-operational pension cost	–	–	2	–	6	8
Changes in pre-acquisition estimates	–	12	–	–	–	12
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	4	26	(5)	1	50	76
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	2	8	9	(8)	2	13
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	1	(1)	9	9	–	18
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	1	(1)	6	14	3	23
Operational EBITA	403	291	235	293	(121)	1,101
Operational EBITA margin (%)	16.4%	12.7%	12.1%	9.5%	n.a.	11.9%

(1) Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

Operational and non-operational pension cost

The operational pension cost reflects the ongoing service cost of providing employee benefits to the company's employees.

The non-operational pension cost comprises: (i) interest cost, (ii) expected return on plan assets, (iii) amortization of prior service cost (credit), (iv) amortization of net actuarial loss, and (v) curtailments, settlements and special termination benefits.

The operational and non-operational pension costs together comprise the net periodic benefit cost as disclosed in Note 8 to the Interim Consolidated Financial Information (unaudited).

Reconciliation

	Year ended	Three months ended,				Year ended	Three months ended,				Year ended
	Dec 31, 2016	Dec 31, 2016	Sep 30, 2016	Jun 30, 2016	Mar 31, 2016	Dec 31, 2015	Dec 31, 2015	Sep 30, 2015	Jun 30, 2015	Mar 31, 2015	Dec 31, 2014
Defined pension benefits (\$ in millions, unless otherwise indicated)											
Service cost	249	58	65	63	63	267	64	66	71	66	243
Operational pension cost	249	58	65	63	63	267	64	66	71	66	243
Interest cost	280	67	71	71	71	305	74	76	80	75	409
Expected return on plan assets	(402)	(96)	(102)	(102)	(102)	(456)	(111)	(112)	(120)	(113)	(481)
Amortization of prior service cost (credit)	40	10	9	11	10	38	10	9	10	9	27
Amortization of net actuarial loss	85	20	22	21	22	112	29	28	27	28	102
Curtailments, settlements and special termination benefits	41	39	1	1	–	20	7	13	–	–	1
Non-operational pension cost	44	40	1	2	1	19	9	14	(3)	(1)	58
Net periodic benefit cost	293	98	66	65	64	286	73	80	68	65	301

	Year ended	Three months ended,				Year ended	Three months ended,				Year ended
	Dec 31, 2016	Dec 31, 2016	Sep 30, 2016	Jun 30, 2016	Mar 31, 2016	Dec 31, 2015	Dec 31, 2015	Sep 30, 2015	Jun 30, 2015	Mar 31, 2015	Dec 31, 2014
Other postretirement benefits (\$ in millions, unless otherwise indicated)											
Service cost	1	–	1	–	–	1	–	–	1	–	1
Operational pension cost	1	–	1	–	–	1	–	–	1	–	1
Interest cost	6	2	1	1	2	8	2	2	2	2	10
Amortization of prior service cost (credit)	(12)	(4)	(2)	(3)	(3)	(9)	(3)	(2)	(2)	(2)	(9)
Amortization of net actuarial loss	–	–	–	–	–	1	–	–	1	–	–
Non-operational pension cost	(6)	(2)	(1)	(2)	(1)	–	(1)	–	1	–	1
Net periodic benefit cost	(5)	(2)	–	(2)	(1)	1	(1)	–	2	–	2

	Year ended	Three months ended,				Year ended	Three months ended,				Year ended
	Dec 31, 2016	Dec 31, 2016	Sep 30, 2016	Jun 30, 2016	Mar 31, 2016	Dec 31, 2015	Dec 31, 2015	Sep 30, 2015	Jun 30, 2015	Mar 31, 2015	Dec 31, 2014
Total (\$ in millions, unless otherwise indicated)											
Total operational pension cost	250	58	66	63	63	268	64	66	72	66	244
Total non-operational pension cost	38	38	–	–	–	19	8	14	(2)	(1)	59

Operational EPS

Definition

Operational EPS

Operational EPS is calculated as Operational net income divided by the weighted-average number of shares outstanding used in determining basic earnings per share.

Operational net income

Operational net income is calculated as Net income attributable to ABB adjusted for the following:

- (i) acquisition-related amortization,
- (ii) restructuring and restructuring-related expenses,
- (iii) non-operational pension cost and,
- (iv) changes in pre-acquisition estimates,
- (v) gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items,
- (vi) foreign exchange/commodity timing differences in income from operations consisting of: (a) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (b) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (c) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities).
- (vii) The amount of income tax on operational adjustments either estimated using the Adjusted Group effective tax rate or in certain specific cases, computed using the actual income tax effects of the relevant item in (i) to (v) above.

Acquisition-related amortization

Amortization expense on intangibles arising upon acquisitions.

Adjusted Group effective tax rate

The Adjusted Group effective tax rate is computed by dividing an adjusted provision for taxes by an adjusted income from continuing operations before taxes. Certain amounts recorded in income from continuing operations before taxes and the related provision for taxes (primarily gains and losses from sale of businesses) are excluded from the computation.

Constant currency Operational EPS adjustment and Operational EPS growth rate (constant currency)

In connection with ABB's 2015-2020 targets, Operational EPS growth is measured assuming 2014 as the base year and uses constant exchange rates. We compute the constant currency operational net income for all periods using the relevant monthly exchange rates which were in effect during 2014 and any difference in computed Operational net income is divided by the relevant weighted-average number of shares outstanding to identify the constant currency Operational EPS adjustment.

Reconciliation

	2016				2015				2014			
(\$ in millions, except per share data in \$)	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Net income (attributable to ABB)	489	568	406	500	204	577	588	564	680	734	636	544
Operational adjustments:												
Acquisition-related amortization	67	70	71	71	73	74	80	83	90	93	96	101
Restructuring and restructuring-related expenses ⁽¹⁾	68	39	367	69	531	59	58	26	93	55	40	47
Non-operational pension cost	38	–	–	–	8	14	(2)	(1)	21	12	12	14
Changes in pre-acquisition estimates	92	17	14	8	12	9	–	–	–	–	–	–
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	54	35	9	2	76	(6)	39	11	(122)	(257)	(114)	11
FX/commodity timing differences in income from operations	(13)	24	12	17	54	72	(80)	(30)	43	76	20	25
Tax on operational adjustments ⁽²⁾	(84)	(58)	(123)	(46)	(189)	(64)	(17)	(25)	(18)	91	15	(56)
Operational net income	711	695	756	621	769	735	666	628	787	804	705	686
Weighted-average number of shares outstanding (in millions)	2,137	2,135	2,149	2,181	2,203	2,219	2,232	2,251	2,266	2,290	2,295	2,301
Operational EPS	0.33	0.33	0.35	0.28	0.35	0.33	0.30	0.28	0.35	0.35	0.31	0.30
Constant currency Operational EPS adjustment	0.02	0.02	0.04	0.05	0.01	0.03	0.03	0.03	–	–	–	–
Operational EPS (constant currency basis - 2014 exchange rates)	0.35	0.35	0.39	0.33	0.36	0.36	0.33	0.31	0.35	0.35	0.31	0.30
Operational EPS growth rate⁽³⁾	-5%	-2%	18%	2%	0%	-6%	-3%	-7%				
Operational EPS growth rate (constant currency basis - 2014 exchange rates)	-3%	-3%	18%	4%	5%	2%	7%	5%				

(1) Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

(2) Tax amount is computed by applying the Adjusted Group effective tax rate to the operational adjustments, except for gains and losses from sale of businesses for which the actual provision for taxes resulting from the gain or loss has been computed.

(3) Growth is computed using unrounded EPS amounts.

(\$ in millions, except per share data in \$)	Year ended December 31,		
	2016	2015	2014
Net income (attributable to ABB)	1,963	1,933	2,594
Operational adjustments:			
Acquisition-related amortization	279	310	380
Restructuring and restructuring-related expenses ⁽¹⁾	543	674	235
Non-operational pension cost	38	19	59
Changes in pre-acquisition estimates	131	21	–
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	100	120	(482)
FX/commodity timing differences in income from operations	40	16	164
Tax on operational adjustments ⁽²⁾	(311)	(295)	32
Operational net income	2,783	2,798	2,982
Weighted-average number of shares outstanding (in millions)	2,151	2,226	2,288
Operational EPS	1.29	1.26	1.30
Constant currency Operational EPS adjustment	0.12	0.10	–
Operational EPS (constant currency basis - 2014 exchange rates)	1.41	1.36	1.30
Operational EPS growth rate⁽³⁾	3%	-4%	
Operational EPS growth rate (constant currency basis - 2014 exchange rates)	4%	5%	

(1) Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

(2) Tax amount is computed by applying the Adjusted Group effective tax rate to the operational adjustments, except for gains and losses from sale of businesses for which the actual provision for taxes resulting from the gain or loss has been computed.

(3) Growth is computed using unrounded EPS amounts.

Net debt

Definition

Net debt

Net debt is defined as Total debt less Cash and marketable securities.

Total debt

Total debt is the sum of Short-term debt and current maturities of long-term debt, and Long-term debt.

Cash and marketable securities

Cash and marketable securities is the sum of Cash and equivalents, and Marketable securities and short-term investments.

Reconciliation

(\$ in millions)	December 31,				
	2016	2015	2014	2013	2012
Short-term debt and current maturities of long-term debt	987	1,454	353	453	2,537
Long-term debt	5,800	5,985	7,312	7,538	7,497
Total debt	6,787	7,439	7,665	7,991	10,034
Cash and equivalents	3,719	4,565	5,443	6,021	6,875
Marketable securities and short-term investments	1,953	1,633	1,325	464	1,606
Cash and marketable securities	5,672	6,198	6,768	6,485	8,481
Net debt	1,115	1,241	897	1,506	1,553

Net working capital as a percentage of revenues

Definition

Net working capital as a percentage of revenues

Net working capital as a percentage of revenues is calculated as Net working capital divided by Adjusted revenues for the trailing twelve months.

Net working capital

Net working capital is the sum of (i) receivables, net, (ii) inventories, net, and (iii) prepaid expenses; less (iv) accounts payable, trade, (v) billings in excess of sales, (vi) advances from customers, and (vii) other current liabilities (excluding primarily: (a) income taxes payable, (b) current derivative liabilities, (c) pension and other employee benefits, and (d) payables under the share buyback program); and including the amounts related to these accounts which have been presented as either assets or liabilities held for sale.

Adjusted revenues for the trailing twelve months

Adjusted revenues for the trailing twelve months includes total revenues recorded by ABB in the twelve months preceding the relevant balance sheet date adjusted to eliminate revenues of divested businesses and the estimated impact of annualizing revenues of certain acquisitions which were completed in the same trailing twelve-month period.

Reconciliation

	Dec 31, 2016	Sep 30, 2016	Jun 30, 2016	Mar 31, 2016	Dec 31, 2015	Sep 30, 2015	Jun 30, 2015	Mar 31, 2015	Dec 31, 2014	Sep 30, 2014	Jun 30, 2014	Mar 31, 2014	Dec 31, 2013
(\$ in millions, unless otherwise indicated)													
Net working capital:													
Receivables, net	9,708	10,155	10,384	10,131	10,061	10,564	11,071	10,599	11,078	11,788	12,106	12,215	12,146
Inventories, net	4,347	5,017	5,045	5,104	4,757	5,410	5,458	5,346	5,376	5,961	6,210	6,201	6,004
Prepaid expenses	176	242	246	268	225	286	304	289	218	307	306	305	252
Accounts payable, trade	(4,446)	(4,458)	(4,536)	(4,323)	(4,342)	(4,405)	(4,564)	(4,473)	(4,765)	(4,820)	(4,950)	(4,872)	(5,112)
Billings in excess of sales	(1,241)	(1,330)	(1,377)	(1,331)	(1,375)	(1,440)	(1,505)	(1,396)	(1,455)	(1,560)	(1,499)	(1,539)	(1,714)
Advances from customers	(1,398)	(1,591)	(1,612)	(1,601)	(1,598)	(1,497)	(1,512)	(1,503)	(1,624)	(1,628)	(1,705)	(1,780)	(1,726)
Other current liabilities	(3,198)	(3,153)	(3,002)	(2,949)	(3,127)	(3,103)	(3,030)	(2,900)	(3,286)	(3,380)	(3,381)	(3,307)	(3,541)
excluding: ⁽¹⁾	738	744	2,505	803	690	802	1,201	1,017	971	1,260	774	710	701
Net working capital in assets and liabilities held for sale	(72)	(46)	-	-	-	-	1	-	-	(8)	27	-	-
Net working capital	3,876	4,836	5,148	5,299	4,601	5,815	6,223	5,962	5,542	6,660	7,114	7,223	6,309
Total revenues for the three months ended:													
Dec. 31, 2016 / 2015 / 2014 / 2013	8,993	9,242	9,242	9,242	9,242	10,346	10,346	10,346	10,346	11,373	11,373	11,373	11,373
Sep. 30, 2016 / 2015 / 2014 / 2013	8,255	8,255	8,519	8,519	8,519	8,519	9,823	9,823	9,823	9,823	10,535	10,535	10,535
Jun. 30, 2016 / 2015 / 2014 / 2013	8,677	8,677	8,677	9,165	9,165	9,165	9,165	10,190	10,190	10,190	10,190	10,225	10,225
Mar. 31, 2016 / 2015 / 2014 / 2013	7,903	7,903	7,903	7,903	8,555	8,555	8,555	8,555	9,471	9,471	9,471	9,471	9,715
Total revenues for the trailing twelve months	33,828	34,077	34,341	34,829	35,481	36,585	37,889	38,914	39,830	40,857	41,569	41,604	41,848
Adjustment to annualize/eliminate revenues of certain acquisitions/divestments	-	-	-	-	-	(64)	(144)	(372)	(613)	(633)	(212)	204	460
Adjusted revenues for the trailing twelve months	33,828	34,077	34,341	34,829	35,481	36,521	37,745	38,542	39,217	40,224	41,357	41,808	42,308
Net working capital as a percentage of revenues (%)	11.5%	14.2%	15.0%	15.2%	13.0%	15.9%	16.5%	15.5%	14.1%	16.6%	17.2%	17.3%	14.9%

(1) The amounts excluded from Other current liabilities related primarily to (a) income taxes payable, (b) current derivative liabilities, (c) pension and other employee benefits, and (d) payables under the share buyback program.

Free cash flow conversion to net income

Definition

Free cash flow conversion to net income

Free cash flow conversion to net income is calculated as Free cash flow divided by Net income attributable to ABB.

Free cash flow (FCF)

Free cash flow is calculated as net cash provided by operating activities adjusted for: (i) purchases of property, plant and equipment and intangible assets, (ii) proceeds from sales of property, plant and equipment, and (iii) changes in financing and other non-current receivables, net (included in other investing activities).

Reconciliation

(\$ in millions, unless otherwise indicated)	Year ended December 31,				
	2016	2015	2014	2013	2012
Net cash provided by operating activities	3,934	3,818	3,845	3,653	3,779
Adjusted for the effects of:					
Purchases of property, plant and equipment and intangible assets	(831)	(876)	(1,026)	(1,106)	(1,293)
Proceeds from sale of property, plant and equipment	61	68	33	80	40
Changes in financing receivables and other non-current receivables	(8)	9	5	5	29
Free cash flow	3,156	3,019	2,857	2,632	2,555
Net income attributable to ABB	1,963	1,933	2,594	2,787	2,704
Free cash flow conversion to net income	161%	156%	110%	94%	94%

Finance net

Definition

Finance net is calculated as Interest and dividend income less Interest and other finance expense.

Reconciliation

(\$ in millions)	Year ended December 31,		Three months ended December 31,	
	2016	2015	2016	2015
Interest and dividend income	73	77	19	21
Interest and other finance expense	(261)	(286)	(31)	(63)
Finance net	(188)	(209)	(12)	(42)

Book-to-bill ratio

Definition

Book-to-bill ratio is calculated as Orders received divided by Total revenues.

Reconciliation

(\$ in millions, unless otherwise indicated)	Three months ended December 31,	
	2016	2015
Orders received	8,277	8,262
Total revenues	8,993	9,242
Book-to-bill ratio	0.92	0.89

(\$ in millions, unless otherwise indicated)	Year ended December 31,				
	2016	2015	2014	2013	2012
Orders received	33,379	36,429	41,515	38,896	40,232
Total revenues	33,828	35,481	39,830	41,848	39,336
Book-to-bill ratio	0.99	1.03	1.04	0.93	1.02

Cash return on invested capital (CROI)

Definition

Cash return on invested capital (CROI)

Cash return on invested capital is calculated as Adjusted cash return divided by Capital invested.

Adjusted cash return

Adjusted cash return is calculated as the sum of (i) net cash provided by operating activities, (ii) interest paid and (iii) estimate to annualize/eliminate the net cash provided by operating activities of certain acquisitions / (divestments).

Adjusted total fixed assets

Adjusted total fixed assets is the sum of (i) property, plant and equipment, net, (ii) goodwill, (iii) other intangible assets, net, and (iv) investments in equity-accounted companies less (v) deferred tax liabilities recognized in certain acquisitions.

Net working capital

Net working capital is the sum of (i) receivables, net, (ii) inventories, net, and (iii) prepaid expenses; less (iv) accounts payable, trade, (v) billings in excess of sales, (vi) advances from customers, and (vii) other current liabilities (excluding primarily: (a) income taxes payable, (b) current derivative liabilities, (c) pension and other employee benefits, and (d) payables under the share buyback program); and including the amounts related to these accounts which have been presented as either assets or liabilities held for sale.

Capital invested

Capital invested is the sum of (i) Adjusted total fixed assets, (ii) Net working capital and (iii) Accumulated depreciation and amortization.

Reconciliation

(\$ in millions, unless otherwise indicated)	Year ended December 31,		
	2016	2015	2014
Adjusted cash return:			
Net cash provided by operating activities	3,934	3,818	3,845
Interest paid	213	221	259
Estimate to annualize/eliminate the net cash provided by operating activities of certain divestments ⁽¹⁾	–	–	(58)
Adjusted cash return	4,147	4,039	4,046
(\$ in millions, unless otherwise indicated)	December 31,		
	2016	2015	2014
Adjusted total fixed assets:			
Property, plant and equipment, net	4,743	5,276	5,652
Goodwill	9,501	9,671	10,053
Other intangible assets, net	1,996	2,337	2,702
Investments in equity-accounted companies	170	178	177
Fixed assets included in assets held for sale ⁽²⁾	448	–	–
Total fixed assets	16,858	17,462	18,584
Less: deferred taxes recognized in certain acquisitions ⁽³⁾	(1,901)	(1,901)	(1,928)
Adjusted total fixed assets	14,957	15,561	16,656
Net working capital (as defined above)	3,876	4,601	5,542
Accumulated depreciation and amortization:			
Accumulated depreciation of property, plant and equipment	6,926	6,840	6,905
Accumulated amortization of intangible assets including goodwill ⁽⁴⁾	3,438	3,175	2,767
Accumulated depreciation and amortization of assets held for sale ⁽²⁾	149	–	–
Accumulated depreciation and amortization	10,513	10,015	9,672
Capital invested	29,346	30,177	31,870
Cash return on invested capital (CROI)	14.1%	13.4%	12.7%

(1) Divestments: In 2014 HVAC, Power Solutions, Steel Structures and Full Service.

(2) Held for sale: In 2016 ABB announced an agreement to divest its global high-voltage cable system business.

(3) Power-One acquired in 2013, Thomas & Betts acquired in 2012 and Baldor acquired in 2011.

(4) Includes accumulated goodwill amortization up to December 31, 2001. Thereafter goodwill is not amortized (under U.S. GAAP) but subject to annual testing for impairment.

	Three months ended September 30, 2016					Consolidated
	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	
(\$ in millions, unless otherwise indicated)						
Total revenues	2,308	2,203	1,523	2,636	(415)	8,255
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	6	2	6	20	–	34
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(2)	–	(1)	6	–	3
Unrealized foreign exchange movements on receivables (and related assets)	1	2	3	(1)	1	6
Operational revenues	2,313	2,207	1,531	2,661	(414)	8,298
Income (loss) from operations	389	276	170	222	(179)	878
Acquisition-related amortization	24	30	3	9	4	70
Restructuring and restructuring-related expenses ⁽¹⁾	(7)	(4)	7	12	31	39
Non-operational pension cost	1	–	–	(1)	–	–
Changes in pre-acquisition estimates	–	17	–	–	–	17
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	1	4	–	2	28	35
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	3	2	(1)	4	–	8
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(2)	1	2	2	–	3
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	3	2	6	3	(1)	13
Operational EBITA	412	328	187	253	(117)	1,063
Operational EBITA margin (%)	17.8%	14.9%	12.2%	9.5%	n.a.	12.8%

Three months ended June 30, 2016

	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	2,397	2,221	1,717	2,779	(437)	8,677
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	14	10	13	62	–	99
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(2)	(1)	3	(6)	–	(6)
Unrealized foreign exchange movements on receivables (and related assets)	(10)	(7)	(10)	(29)	–	(56)
Operational revenues	2,399	2,223	1,723	2,806	(437)	8,714
Income (loss) from operations	339	226	112	151	(181)	647
Acquisition-related amortization	24	30	3	9	5	71
Restructuring and restructuring-related expenses ⁽¹⁾	51	54	89	76	97	367
Non-operational pension cost	1	–	–	(1)	–	–
Changes in pre-acquisition estimates	–	14	–	–	–	14
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	–	–	–	2	7	9
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	7	5	14	46	(10)	62
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(1)	(1)	(2)	(6)	–	(10)
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(6)	(3)	(6)	(25)	–	(40)
Operational EBITA	415	325	210	252	(82)	1,120
Operational EBITA margin (%)	17.3%	14.6%	12.2%	9.0%	n.a.	12.9%

Three months ended March 31, 2016

	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	2,125	2,079	1,621	2,518	(440)	7,903
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(18)	(17)	(7)	(49)	–	(91)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	1	5	(5)	–	1
Unrealized foreign exchange movements on receivables (and related assets)	11	8	20	32	–	71
Operational revenues	2,118	2,071	1,639	2,496	(440)	7,884
Income (loss) from operations	288	240	170	181	(95)	784
Acquisition-related amortization	24	31	3	9	4	71
Restructuring and restructuring-related expenses ⁽¹⁾	4	7	4	18	36	69
Non-operational pension cost	1	–	–	(1)	–	–
Changes in pre-acquisition estimates	–	8	–	–	–	8
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	–	–	–	2	–	2
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	–	(7)	3	(34)	11	(27)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	–	–	(4)	–	(4)
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	2	3	16	27	–	48
Operational EBITA	319	282	196	198	(44)	951
Operational EBITA margin (%)	15.1%	13.6%	12.0%	7.9%	n.a.	12.1%

Three months ended September 30, 2015

	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	2,353	2,220	1,659	2,791	(504)	8,519
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	–	41	27	52	1	121
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	3	1	9	13	–	26
Unrealized foreign exchange movements on receivables (and related assets)	(3)	(5)	(4)	(22)	–	(34)
Operational revenues	2,353	2,257	1,691	2,834	(503)	8,632
Income (loss) from operations	390	264	159	159	(90)	882
Acquisition-related amortization	25	31	3	10	5	74
Restructuring and restructuring-related expenses ⁽¹⁾	10	16	3	13	17	59
Non-operational pension cost	(1)	1	2	1	11	14
Changes in pre-acquisition estimates	–	9	–	–	–	9
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	(1)	–	1	5	(11)	(6)
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(18)	26	8	33	15	64
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	3	3	6	10	–	22
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	1	(5)	1	(9)	(2)	(14)
Operational EBITA	409	345	183	222	(55)	1,104
Operational EBITA margin (%)	17.4%	15.3%	10.8%	7.8%	n.a.	12.8%

Three months ended June 30, 2015

	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	2,506	2,348	1,875	2,951	(515)	9,165
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(23)	(8)	(23)	(102)	(1)	(157)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	2	–	(1)	21	–	22
Unrealized foreign exchange movements on receivables (and related assets)	8	5	(2)	24	–	35
Operational revenues	2,493	2,345	1,849	2,894	(516)	9,065
Income (loss) from operations	389	293	216	181	(118)	961
Acquisition-related amortization	26	33	3	15	3	80
Restructuring and restructuring-related expenses ⁽¹⁾	3	25	20	10	–	58
Non-operational pension cost	(1)	1	1	1	(4)	(2)
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	–	–	15	31	(7)	39
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(23)	(24)	(27)	(89)	3	(160)
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	1	–	(4)	23	–	20
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	15	12	4	25	4	60
Operational EBITA	410	340	228	197	(119)	1,056
Operational EBITA margin (%)	16.4%	14.5%	12.3%	6.8%	n.a.	11.6%

Three months ended March 31, 2015

	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	2,229	2,271	1,764	2,772	(481)	8,555
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	8	(13)	(8)	(5)	–	(18)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	1	(29)	20	23	–	15
Unrealized foreign exchange movements on receivables (and related assets)	(3)	8	(18)	(21)	–	(34)
Operational revenues	2,235	2,237	1,758	2,769	(481)	8,518
Income (loss) from operations	310	300	205	128	(84)	859
Acquisition-related amortization	25	32	3	17	6	83
Restructuring and restructuring-related expenses ⁽¹⁾	7	3	1	15	–	26
Non-operational pension cost	(1)	1	1	1	(3)	(1)
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	1	–	3	2	5	11
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	11	7	7	7	(16)	16
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	1	(29)	15	21	–	8
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(15)	5	(18)	(26)	–	(54)
Operational EBITA	339	319	217	165	(92)	948
Operational EBITA margin (%)	15.2%	14.3%	12.3%	6.0%	n.a.	11.1%

Year ended December 31, 2014

	Electrification Products	Discrete Automation and Motion	Process Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	10,572	10,142	8,618	12,518	(2,020)	39,830
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	25	10	12	192	–	239
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	(2)	17	48	–	63
Unrealized foreign exchange movements on receivables (and related assets)	(5)	(13)	(15)	(56)	–	(89)
Operational revenues	10,592	10,137	8,632	12,702	(2,020)	40,043
Income (loss) from operations	1,562	1,422	931	257	6	4,178
Acquisition-related amortization	113	138	18	89	22	380
Restructuring and restructuring-related expenses ⁽¹⁾	49	25	36	106	19	235
Non-operational pension cost	(2)	6	17	12	26	59
Gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items	(7)	–	32	9	(516)	(482)
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	23	16	20	168	(4)	223
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	1	(2)	13	32	(2)	42
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	–	(10)	(22)	(66)	(3)	(101)
Operational EBITA	1,739	1,595	1,045	607	(452)	4,534
Operational EBITA margin (%)	16.4%	15.7%	12.1%	4.8%	n.a.	11.3%

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