

ABB LTD
Form 6-K
April 20, 2017

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Form 6-K

**REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16
UNDER THE SECURITIES EXCHANGE ACT OF 1934**

For the month of April 2017

Commission File Number 001-16429

ABB Ltd

(Translation of registrant's name into English)

P.O. Box 1831, Affolternstrasse 44, CH-8050, Zurich, Switzerland

(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F

Form 40-F

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Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Note: Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.

Indication by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Note: Regulation S-T Rule 101(b)(7) only permits the submission in paper of a Form 6-K if submitted to furnish a report or other document that the registrant foreign private issuer must furnish and make public under the laws of the jurisdiction in which the registrant is incorporated, domiciled or legally organized (the registrant's "home country"), or under the rules of the home country exchange on which the registrant's securities are traded, as long as the report or other document is not a press release, is not required to be and has not been distributed to the registrant's security holders, and, if discussing a material event, has already been the subject of a Form 6-K submission or other Commission filing on EDGAR.

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes

No

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82-

This Form 6-K consists of the following:

1. Press release issued by ABB Ltd dated April 20, 2017 titled “ABB continues its transformation”.
2. Q1 2017 Financial Information.
3. Announcements regarding transactions in ABB Ltd’s Securities made by the directors or the members of the Executive Committee.

The information provided by Item 2 above is incorporated by reference into ABB Ltd's registration statement on Form F-3 (File No. 333-180922) and registration statements on Form S-8 (File Nos. 333-190180, 333-181583, 333-179472, 333-171971 and 333-129271) each of which was previously filed with the Securities and Exchange Commission.

Zurich, Switzerland, April 20, 2017: first-quarter highlights

ABB continues its transformation

Delivers higher revenues¹, base orders and net income

- Revenues up 3 percent¹
- Base order growth of 2 percent
- Total orders reflects lower large contract awards; book to bill ratio² 1.07x
- Operational EBITA margin² 12.1%; solid operating leverage considering 60 bps positive insurance reserve adjustment in 2016
- Net income \$724 million versus \$500 million; operational EPS +1%³
- Cash flow from operating activities \$509 million reflects delay of incentive payments caused by the South Korea case
- Active portfolio management: high-voltage cables divestment closed, B&R acquisition announced April 4
- Commercial launch of ABB Ability™

“ABB delivered its second consecutive quarter of revenue growth. Underlying operational performance improved considering last year’s communicated correction of insurance reserves,” said ABB CEO Ulrich Spiesshofer. “We are seeing the first signals of market stabilization in some process industries, as well as some growth signals in early-cycle businesses. Power Grids’ order pattern for the quarter reflects a Chinese HVDC project, which was awarded in Q1 2016. Overall, underlying demand in China remains positive.”

“We commercially launched ABB Ability, our industry-leading digital offering and are really pleased with the very positive customer response,” he said. “With the completed sale of the cables business and the recently announced acquisition of B&R, an innovation leader in machine and factory automation, we continue our active portfolio management, as we further de-risk the portfolio and continue to shift ABB’s center of gravity to higher growth segments and strengthened competitiveness.”

Key figures

\$ in millions, unless otherwise

Q1 2017

Q1 2016

Change
US \$

Comparable¹

indicated				
Orders	8,403	9,253	-9%	-3%
Revenues	7,854	7,903	-1%	+3%
Operational EBITA ²	943	951	-1%	+2% ⁴
as % of operational revenues	12.1%	12.1%	0%	
Net Income	724	500	+45%	
Basic EPS (\$)	0.34	0.23	+48% ³	
Operational EPS ² (\$)	0.28	0.28	0% ³	+1% ³
Cash flow from operating activities	509	252	+102%	

Short-term outlook

Macroeconomic and geopolitical developments are signaling a mixed picture with continued uncertainty. Some macroeconomic signs in the US remain positive 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, 2017 is expected to be a transitional year.

¹ Growth rates for orders, base orders, revenues and order backlog are on a comparable basis (local currency adjusted for acquisitions and divestitures). 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 Q1 2017 Financial Information

³ 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)

⁴ Constant currency (not adjusted for portfolio changes)

Q1 2017 Group results

Orders

Orders decreased 3 percent (9 percent in US dollars) compared with the first quarter a year ago, driven primarily by lower large order awards. Large orders (\$15 million and above) were 34 percent lower (50 percent in US dollars) due to fewer large order awards in Industrial Automation and Power Grids. Large orders represented 10 percent of total orders compared with 17 percent in the same quarter a year ago. Large orders in the quarter included a \$280 million high-voltage direct current systems order to link the power networks of France and the UK. Base orders (below \$15 million) were 2 percent higher (1 percent lower in US dollars), improving in Electrification Products, Robotics and Motion and Industrial Automation. Total service and software orders increased 7 percent (5 percent in US dollars) compared with the first quarter of 2016 and represented 24 percent of total orders compared to 21 percent for the same period a year ago.

The order backlog at the end of March 2017 amounted to \$23 billion, 2 percent lower (11 percent in US dollars) compared with the end of the first quarter of 2016. The book-to-bill² ratio in the first quarter was 1.07x compared with 1.17x in the first quarter of 2016.

Market overview

Demand patterns in ABB's three regions:

- Demand in Europe was positive on moderate overall growth and timing of large capital investments. Total orders improved 2 percent (12 percent lower in US dollars) while base orders improved 7 percent (3 percent in US dollars). Base order demand was positive in Germany, Sweden, Spain and Finland while weak in Norway and Switzerland.
- Demand in the Americas was positive, driven by increased demand for automation and energy efficiency. Total orders increased 4 percent in the quarter (5 percent in US dollars) on large order awards. The United States grew 5 percent in total orders (5 percent in US dollars) and 3 percent in base orders (3 percent in US dollars). Base orders improved 1 percent (2 percent US dollars) as increases in the United States and Mexico were almost offset by declines in Canada and Brazil.
- Demand in Asia, Middle East and Africa (AMEA) was mixed. Total orders for the region decreased 12 percent (16 percent in US dollars). Orders in China reflect a strong first quarter 2016 comparable, as large and smaller HVDC orders were not repeated. Underlying demand in China for industrial automation, energy efficiency and reliable and efficient power solutions remains positive. India orders reflect continued investment in industrial automation and reliable power solutions. Base orders for the region decreased 2 percent (6 percent in US dollars) as positive order

development in India, South Korea and the UAE, could not offset declines in China and Saudi Arabia.

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 oil and gas remain subdued.
- Transport & 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, except for cruise ships, suffered from a sharp decline due to the subdued oil and gas sector.

Revenues

Revenues increased 3 percent (1 percent lower in US dollars) in the first quarter with revenues higher in Electrification Products, Robotics and Motion and Power Grids. Total services and software revenues was 1 percent higher (1 percent lower in US dollars) and represented 18 percent of total revenues unchanged compared with a year ago.

Operational EBITA

Operational EBITA was \$943 million, 2 percent higher in constant currencies (1 percent lower in US dollars). Operational EBITA margin was 12.1 percent, unchanged compared with the same quarter a year ago. Operational EBITA included margin improvements in Electrification Products, Industrial Automation and Power Grids and a margin decrease in

Robotics and Motion. In addition, the comparable operational EBITA in 2016 was 60 bps higher due to the cumulative elimination of certain intercompany insurance reserves of \$50 million in 2016.

Net income, Basic and Operational earnings per share

Net income increased to \$724 million from \$500 million and basic earnings per share was \$0.34 compared with \$0.23 for the same quarter of 2016. This increase includes the impacts of the capital gain from divestment of the high voltage cable business and other charges recorded to adjust liabilities for retained obligations of this business. In addition, acquisition-related expenses and certain non-operational items negatively impacted net income while foreign exchange and commodity timing differences had a positive impact. The lower effective tax rate reflects the impacts from the cable divestment.

Operational EPS was \$0.28 compared to \$0.28 for the same quarter of 2016, an increase of 1 percent in constant currency².

Cash flow from operating activities

Cash flow from operating activities was \$509 million compared to \$252 million in 2016 due to the change in timing of incentive payments in 2017 to the second quarter in 2017 due to impacts of the South Korea case.

South Korea

ABB announced on February 22, 2017 that it had uncovered a sophisticated criminal scheme involving significant embezzlement and misappropriation of funds in its South Korean subsidiary. The company immediately launched a thorough investigation, involving internal and external parties, which is progressing well. ABB is working with the local police on the investigation as well as with Interpol. The company has checked and reconfirmed the balances of its global bank accounts and can confirm that this situation is limited to South Korea. ABB has a zero-tolerance approach to unethical behavior and maintains the highest standards regarding integrity and ethical business practices. ABB has started implementing disciplinary consequences and will continue to do so as appropriate.

Q1 divisional performance

(\$ in millions, unless otherwise indicated)	Orders		Change US\$ Comparable ¹	Revenues		Change US\$ Comparable ¹	Operational EBITA %	CHANGE
Electrification Products	2,528	+1%	+4%	2,293	0%	+3%	14.1%	+0.6pts
Robotics and Motion	2,177	+4%	+7%	1,926	+3%	+5%	14.3%	-1.0pts
Industrial Automation	1,682	-8%	-6%	1,549	-7%	-5%	13.3%	+1.3pts
Power Grids	2,379	-20%	-17%	2,405	-2%	+4%	10.3%	+2.8pts
Corporate & other (incl. inter-division elimination)	-363			-319				
ABB Group	8,403	-9%	-3%	7,854	-1%	+3%	12.1%	0 pts

Electrification Products

Total orders increased reflecting improved market demand in the United States, China and Germany. Revenues grew 3 percent in the quarter (steady in US dollars), and operational EBITA margin improved due to volume, mix, productivity and cost savings.

Robotics and Motion

Total orders grew 7 percent (4 percent in US dollars), with third-party base orders increasing 13 percent (10 percent in US dollars) on continued strong demand patterns in robotics and light industry. Revenues improved 5 percent (3 percent in US dollars). Operational EBITA margin was impacted by unfavorable mix and low capacity utilization in the quarter. Demand pattern and increasing backlog will ease this situation over time.

Industrial Automation

Total orders reflect lower large orders related to specialty vessels. The improvement in the underlying demand for products, services and software was seen in the positive base order development in the quarter. Revenues declined 5 percent (7 percent in US dollars) on lower revenue coming from the order backlog. Operational EBITA margin increased 130 basis points to 13.3 percent due to positive mix and successfully implemented cost reduction and productivity measures.

Power Grids

Total orders were lower than the same quarter a year ago, primarily due to the timing of large contract awards. The positive base order development in many markets could not offset soft demand in the Middle East and a tough comparable in China last year. Revenues were 4 percent higher (2 percent lower in US dollars) due to steady execution of a healthy order backlog. Operational EBITA margin was 10.3 percent, driven by higher revenues, improved productivity, solid project execution and continued cost savings.

Next Level strategy – Stage 3

ABB continued implementation of its Next Level strategy during the quarter by further shifting its center of gravity to higher growth segments, strengthening its competitiveness and de-risking the portfolio.

ABB announced the acquisition of B&R, an innovation leader in machine and factory automation on April 4, 2017. This acquisition will close ABB's historic gap in machine and factory automation and will create a uniquely comprehensive automation portfolio for customers globally. B&R is a proven innovation leader in Programmable Logic Controllers (PLC), Industrial PCs (IPC) and servo motion-based machine and factory automation and will strengthen ABB's number 2 position in industrial automation. The transaction is expected to close in summer 2017.

ABB commercially launched ABB Ability offering more than 180 solutions across all customer segments which combines ABB's portfolio of digital solutions and services, cementing the group's leading position in the Fourth Industrial Revolution and supporting the competitiveness of ABB's four entrepreneurial divisions.

In addition, ABB successfully completed the divestment of its high-voltage cables and cable accessories businesses to NKT Cables.

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, 2017 is expected 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.

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More information

The Q1 2017 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 conference call. 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). Lines will be open 10-15 minutes before the start of the call.

A conference call and webcast 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/investorrelations.

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
Second quarter 2017 results		July 20, 2017
Third quarter 2017 results		October 26, 2017
Fourth quarter 2017 results		February 8, 2018

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”, 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, April 20, 2017

Ulrich Spiesshofer, CEO

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Key Figures

(\$ in millions, unless otherwise indicated)	Q1 2017	Q1 2016	CHANGE	
			US\$	Comparable ⁽¹⁾
Orders	8,403	9,253	-9%	-3%
Order backlog (end March)	23,084	25,978	-11%	-2%
Revenues	7,854	7,903	-1%	3%
Operational EBITA ⁽¹⁾	943	951	-1%	2% ⁽²⁾
as % of operational revenues ⁽¹⁾	12.1%	12.1%	+0 pts	
Net income	724	500	45%	
Basic earnings per share (\$)	0.34	0.23	48% ⁽³⁾	
Operational earnings per share ⁽¹⁾ (\$)	0.28	0.28	0% ⁽³⁾	1% ⁽³⁾
Cash flow from operating activities	509	252	102%	

- (1) For a reconciliation of non-GAAP measures see “Supplemental Reconciliations and Definitions” on page 30.
- (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).

(\$ in millions, unless otherwise indicated)		Q1 2017	Q1 2016	CHANGE		
				US\$	Local Comparable	
Orders	ABB Group	8,403	9,253	-9%	-7%	-3%
	Electrification Products	2,528	2,506	1%	4%	4%
	Robotics and Motion	2,177	2,088	4%	7%	7%
	Industrial Automation	1,682	1,838	-8%	-6%	-6%
	Power Grids	2,379	2,965	-20%	-17%	-17%
	<i>Corporate and Other</i>					
	<i>(incl. inter-division eliminations)</i>	(363)	(144)			
Third-party base orders	ABB Group	7,598	7,643	-1%	2%	2%
	Electrification Products	2,365	2,351	1%	4%	4%
	Robotics and Motion	1,991	1,803	10%	13%	13%
	Industrial Automation	1,445	1,452	0%	2%	2%
	Power Grids	1,782	2,016	-12%	-10%	-10%
	<i>Corporate and Other</i>	15	21			
Order backlog (end March)	ABB Group	23,084	25,978	-11%	-7%	-2%
	Electrification Products	3,157	3,421	-8%	-3%	-3%
	Robotics and Motion	3,956	4,145	-5%	0%	0%
	Industrial Automation	5,609	6,576	-15%	-11%	-11%
	Power Grids	11,812	12,671	-7%	-3%	-2%
	<i>Corporate and Other</i>					
	<i>(incl. inter-division eliminations)</i>	(1,450)	(835)			
Revenues	ABB Group	7,854	7,903	-1%	2%	3%
	Electrification Products	2,293	2,289	0%	3%	3%
	Robotics and Motion	1,926	1,873	3%	5%	5%
	Industrial Automation	1,549	1,664	-7%	-5%	-5%
	Power Grids	2,405	2,453	-2%	0%	4%
	<i>Corporate and Other</i>					
	<i>(incl. inter-division eliminations)</i>	(319)	(376)			
Operational EBITA	ABB Group	943	951	-1%	2%	
	Electrification Products	322	307	5%	8%	
	Robotics and Motion	274	286	-4%	-1%	
	Industrial Automation	204	202	1%	2%	
	Power Grids	245	183	34%	38%	
	<i>Corporate and Other</i>					
	<i>(incl. inter-division eliminations)</i>	(102)	(27)			
Operational EBITA %	ABB Group	12.1%	12.1%			
	Electrification Products	14.1%	13.5%			
	Robotics and Motion	14.3%	15.3%			
	Industrial Automation	13.3%	12.0%			
	Power Grids	10.3%	7.5%			
Income from operations	ABB Group	1,030	784			
	Electrification Products	307	262			
	Robotics and Motion	252	256			
	Industrial Automation	206	177			
	Power Grids	222	173			
	<i>Corporate and Other</i>					
	<i>(incl. inter-division eliminations)</i>	43	(84)			
Income from operations %	ABB Group	13.1%	9.9%			

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	Electrification Products	13.4%	11.4%
	Robotics and Motion	13.1%	13.7%
	Industrial Automation	13.3%	10.6%
	Power Grids	9.2%	7.1%
Cash flow from operating activities	ABB Group	509	252
	Electrification Products	205	24
	Robotics and Motion	254	118
	Industrial Automation	110	52
	Power Grids	154	26
	<i>Corporate and Other</i>	(214)	32

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Operational EBITA

(\$ in millions, unless otherwise indicated)	ABB		Electrification Products		Robotics and Motion		Industrial Automation		Power Grids	
	Q1 17	Q1 16	Q1 17	Q1 16	Q1 17	Q1 16	Q1 17	Q1 16	Q1 17	Q1 16
Revenues	7,854	7,903	2,293	2,289	1,926	1,873	1,549	1,664	2,405	2,453
FX/commodity timing differences in total revenues	(79)	(19)	(11)	(9)	(11)	(3)	(13)	15	(25)	(20)
Operational revenues	7,775	7,884	2,282	2,280	1,915	1,870	1,536	1,679	2,380	2,433
Income from operations	1,030	784	307	262	252	256	206	177	222	173
Acquisition-related amortization	59	71	26	31	18	23	2	3	8	9
Restructuring and restructuring-related expenses ⁽¹⁾	48	69	–	5	10	7	4	4	3	18
Non-operational pension cost	(7)	–	–	1	–	–	1	–	(1)	(1)
Changes in retained obligations of divested businesses	94	–	–	–	–	–	–	–	–	–
Changes in pre-acquisition estimates	–	8	–	8	–	–	–	–	–	–
Gains and losses from sale of businesses	(338)	–	–	–	–	–	–	–	–	–
Acquisition-related expenses and certain non-operational items	108	2	4	–	–	–	2	–	27	2
FX/commodity timing differences in income from operations	(51)	17	(15)	–	(6)	–	(11)	18	(14)	(18)
Operational EBITA	943	951	322	307	274	286	204	202	245	183
Operational EBITA margin (%)	12.1%	12.1%	14.1%	13.5%	14.3%	15.3%	13.3%	12.0%	10.3%	7.5%

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

Depreciation and Amortization

(\$ in millions)	ABB		Electrification Products		Robotics and Motion		Industrial Automation		Power Grids	
	Q1 17	Q1 16	Q1 17	Q1 16	Q1 17	Q1 16	Q1 17	Q1 16	Q1 17	Q1 16
Depreciation	184	187	50	53	34	35	13	14	43	44
Amortization	79	93	29	34	21	27	3	4	15	16
including total acquisition-related amortization of:	59	71	26	31	18	23	2	3	8	9

Orders received and revenues by region

(\$ in millions, unless otherwise indicated)	Orders received	CHANGE	Revenues	CHANGE		
					Com-	Com-
—						

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	Q1 17	Q1 16	US\$	Local	parable	Q1 17	Q1 16	US\$	Local	parable
Europe	3,127	3,546	-12%	-8%	2%	2,694	2,617	3%	7%	11%
The Americas	2,362	2,255	5%	4%	4%	2,332	2,297	2%	0%	1%
Asia, Middle East and Africa	2,914	3,452	-16%	-12%	-12%	2,828	2,989	-5%	-3%	-3%
ABB Group	8,403	9,253	-9%	-7%	-3%	7,854	7,903	-1%	2%	3%

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Interim Consolidated Financial Information

ABB Ltd Interim Consolidated Income Statements (unaudited)

	Three months ended	
	Mar. 31, 2017	Mar. 31, 2016
(\$ in millions, except per share data in \$)		
Sales of products	6,469	6,503
Sales of services and software	1,385	1,400
Total revenues	7,854	7,903
Cost of sales of products	(4,662)	(4,711)
Cost of services and software	(819)	(834)
Total cost of sales	(5,481)	(5,545)
Gross profit	2,373	2,358
Selling, general and administrative expenses	(1,311)	(1,270)
Non-order related research and development expenses	(291)	(305)
Other income (expense), net	259	1
Income from operations	1,030	784
Interest and dividend income	17	18
Interest and other finance expense	(79)	(72)
Income from continuing operations before taxes	968	730
Provision for taxes	(208)	(201)
Income from continuing operations, net of tax	760	529
Loss from discontinued operations, net of tax	(2)	(1)
Net income	758	528
Net income attributable to noncontrolling interests	(34)	(28)
Net income attributable to ABB	724	500
Amounts attributable to ABB shareholders:		
Income from continuing operations, net of tax	726	501
Net income	724	500
Basic earnings per share attributable to ABB shareholders:		
Income from continuing operations, net of tax	0.34	0.23
Net income	0.34	0.23
Diluted earnings per share attributable to ABB shareholders:		
Income from continuing operations, net of tax	0.34	0.23
Net income	0.34	0.23
Weighted-average number of shares outstanding (in millions) used to compute:		
Basic earnings per share attributable to ABB shareholders	2,140	2,181
Diluted earnings per share attributable to ABB shareholders	2,148	2,184

See Notes to the Interim Consolidated Financial Information
6 Q1 2017 Financial Information

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

(\$ in millions)	Three months ended	
	Mar. 31, 2017	Mar. 31, 2016
Total comprehensive income, net of tax	956	873
Total comprehensive income attributable to noncontrolling interests, net of tax	(43)	(33)
Total comprehensive income attributable to ABB shareholders, net of tax	913	840

See Notes to the Interim Consolidated Financial Information

7 Q1 2017 Financial Information

 ABB Ltd Interim Consolidated Balance Sheets (unaudited)

(\$ in millions, except share data)	Mar. 31, 2017	Dec. 31, 2016
Cash and equivalents	5,562	3,644
Marketable securities and short-term investments	1,224	1,953
Receivables, net	9,918	9,696
Inventories, net	4,728	4,347
Prepaid expenses	230	176
Other current assets	545	688
Assets held for sale	—	548
Total current assets	22,207	21,052
Property, plant and equipment, net	4,805	4,743
Goodwill	9,567	9,501
Other intangible assets, net	1,949	1,996
Prepaid pension and other employee benefits	91	90
Investments in equity-accounted companies	169	170
Deferred taxes	1,034	1,118
Other non-current assets	484	532
Total assets	40,306	39,202
Accounts payable, trade	4,471	4,446
Billings in excess of sales	1,186	1,241
Short-term debt and current maturities of long-term debt	1,049	1,003
Advances from customers	1,509	1,398
Provisions for warranties	1,172	1,142
Other provisions	1,747	1,765
Other current liabilities	4,019	3,936
Liabilities held for sale	—	218
Total current liabilities	15,153	15,149
Long-term debt	5,885	5,800
Pension and other employee benefits	1,831	1,834
Deferred taxes	823	918
Other non-current liabilities	1,679	1,604
Total liabilities	25,371	25,305
Commitments and contingencies		
Stockholders' equity:		
Capital stock		
(2,214,743,264 issued shares at March 31, 2017, and December 31, 2016)	192	192
Additional paid-in capital	16	24
Retained earnings	20,649	19,925
Accumulated other comprehensive loss	(4,998)	(5,187)
Treasury stock, at cost		
(71,007,550 and 76,036,429 shares at March 31, 2017, and December 31, 2016, respectively)	(1,456)	(1,559)

Total ABB stockholders' equity	14,403	13,395
Noncontrolling interests	532	502
Total stockholders' equity	14,935	13,897
Total liabilities and stockholders' equity	40,306	39,202

See Notes to the Interim Consolidated Financial Information

8 Q1 2017 Financial Information

 ABB Ltd Interim Consolidated Statements of Cash Flows (unaudited)

	Three months ended	
	Mar. 31, 2017	Mar. 31, 2016
(\$ in millions)		
Operating activities:		
Net income	758	528
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	263	280
Deferred taxes	(8)	15
Net loss (gain) from derivatives and foreign exchange	(15)	22
Net loss (gain) from sale of businesses	(338)	—
Share-based payment arrangements	12	13
Other	2	4
Changes in operating assets and liabilities:		
Trade receivables, net	(67)	73
Inventories, net	(260)	(165)
Trade payables	(11)	(106)
Accrued liabilities	202	(245)
Billings in excess of sales	(60)	(66)
Provisions, net	54	(114)
Advances from customers	88	(44)
Income taxes payable and receivable	26	32
Other assets and liabilities, net	(137)	25
Net cash provided by operating activities	509	252
Investing activities:		
Purchases of marketable securities (available-for-sale)	(121)	(399)
Purchases of short-term investments	(53)	(425)
Purchases of property, plant and equipment and intangible assets	(192)	(170)
Acquisition of businesses (net of cash acquired) and increases in cost- and equity-accounted companies	(15)	(3)
Proceeds from sales of marketable securities (available-for-sale)	13	28
Proceeds from maturity of marketable securities (available-for-sale)	100	289
Proceeds from short-term investments	821	108
Proceeds from sales of property, plant and equipment	20	12
Proceeds from sales of businesses (net of transaction costs and cash disposed) and cost- and equity-accounted companies	658	—
Net cash from settlement of foreign currency derivatives	17	(35)
Other investing activities	14	(3)
Net cash provided by (used in) investing activities	1,262	(598)
Financing activities:		
Net changes in debt with original maturities of 90 days or less	10	83
Increase in debt	47	21
Repayment of debt	(19)	(13)
Delivery of shares	83	—
Purchase of treasury stock	—	(448)

Dividends paid to noncontrolling shareholders	(9)	(10)
Other financing activities	(6)	9
Net cash provided by (used in) financing activities	106	(358)
Effects of exchange rate changes on cash and equivalents	41	105
Net change in cash and equivalents – continuing operations	1,918	(599)
Cash and equivalents, beginning of period	3,644	4,565
Cash and equivalents, end of period	5,562	3,966
Supplementary disclosure of cash flow information:		
Interest paid	52	52
Taxes paid	201	150

See Notes to the Interim Consolidated Financial Information

9 Q1 2017 Financial Information

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

(\$ in millions)	Total accumu-					Total ABB stockholders' equity	Non- controlling interests	Total stockholders' equity
	Capital stock	Additional paid-in capital	Retained earnings	lated other comprehensive loss	Treasurystock			
Balance at January 1, 2016	1,440	4	20,476	(4,858)	(2,581)	14,481	507	14,988
Comprehensive income:								
Net income			500			500	28	528
Foreign currency translation adjustments, net of tax of \$13				346		346	5	351
Effect of change in fair value of available-for-sale securities, net of tax of \$0				6		6		6
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax of \$(9)				(17)		(17)		(17)
Change in derivatives qualifying as cash flow hedges, net of tax of \$2				5		5		5
Total comprehensive income						840	33	873
Dividends paid to noncontrolling shareholders						—	(11)	(11)
Share-based payment arrangements		13				13		13
Purchase of treasury stock					(496)	(496)		(496)
Delivery of shares		(3)			3	—		(3)
Balance at March 31, 2016	1,440	14	20,976	(4,518)	(3,074)	14,838	529	15,367
Balance at January 1, 2017	192	24	19,925	(5,187)	(1,559)	13,395	502	13,895
Comprehensive income:								
Net income			724			724	34	758
Foreign currency translation adjustments, net of tax of \$(1)				189		189	9	198
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax of \$1				1		1		1
Change in derivatives qualifying as cash flow hedges, net of tax of \$0				(1)		(1)		(1)
Total comprehensive income						913	43	956
Changes in noncontrolling interests						—	5	5
Dividends paid to noncontrolling shareholders						—	(18)	(18)
Share-based payment arrangements		12				12		12
Delivery of shares		(20)			103	83		83
Balance at March 31, 2017	192	16	20,649	(4,998)	(1,456)	14,403	532	14,935

See Notes to the Interim Consolidated Financial Information
10 Q1 2017 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, 2016.

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 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 reorganization of the Company's operating segments (see Note 13) and to the reclassification and netting of deferred tax assets and liabilities, as a result of the adoption of an accounting standard update on the classification of deferred taxes (see Note 2).

Adjustment related to prior periods

In the three months ended March 31, 2016, the Company recorded a cumulative correction to eliminate certain intercompany self-insurance reserves. The correction resulted in a \$50 million reduction in "Total cost of sales" in the Interim Consolidated Income Statements for the three months ended March 31, 2016, and is included in Corporate and Other Operational EBITA. The Company evaluated the impact of the correction on both a quantitative and qualitative basis under the guidance of ASC 250, Accounting Changes and Error Corrections, and determined that there were no material impacts on the trend of net income, cash flows or liquidity for previously issued annual financial statements.

Note 2

Recent accounting pronouncements

Applicable for current periods

Balance sheet classification of deferred taxes

As of January 1, 2017, the Company adopted an accounting standard update removing the requirement to separate deferred tax liabilities and assets into current and noncurrent amounts and instead requiring all such amounts, as well as any related valuation allowance, to be classified as noncurrent in the consolidated balance sheets. This update was applied retrospectively and resulted in a decrease of \$297 million in both the total deferred tax assets and total deferred tax liabilities at December 31, 2016, due to additional netting impacts.

Simplifying the transition to the equity method of accounting

As of January 1, 2017, the Company adopted an accounting standard update eliminating 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 was applied prospectively and did not have a significant impact on the consolidated financial statements.

Improvements to employee share-based payment accounting

As of January 1, 2017, the Company adopted an accounting standard update which changed 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 did not have a significant impact on the consolidated financial statements.

Simplifying the test for goodwill impairment

As of January 1, 2017, the Company early-adopted an accounting standard update eliminating the requirement to calculate the implied fair value of goodwill when measuring a goodwill impairment loss. Instead the Company is now 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 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 will adopt these updates as of January 1, 2018, pursuant to the aforementioned adoption method (ii) and, apart from additional disclosures, 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.

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.

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.

Clarifying the scope of asset derecognition guidance and accounting for partial sales of nonfinancial assets

In February 2017, an accounting standard update was issued which clarifies the scope of asset derecognition guidance, adds guidance for partial sales of nonfinancial assets and clarifies recognizing gains and losses from the transfer of nonfinancial assets in contracts with noncustomers. The Company plans to adopt this update retrospectively as of

January 1, 2018, with the cumulative effect of initially applying the update recognized at the date of adoption in retained earnings. The Company does not believe that this update will have a significant impact on its consolidated financial statements.

Improving the presentation of net periodic pension cost and net periodic postretirement benefit cost

In March 2017, an accounting standard update was issued which changes how employers that sponsor defined benefit pension plans and other postretirement plans present the net periodic benefit cost in the income statement. Under this standard, the Company will be required to report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. Other components of net benefit will be required to be presented in the income statement separately from the service cost component and outside the subtotal of income from operations. Under the amendment only the service cost component is allowed to be capitalized. This update is effective for the Company for annual and interim periods beginning January 1, 2018 on a retrospective basis for the presentation requirements and on a prospective basis for the capitalization of the service cost component requirements. The Company will adopt this update as of January 1, 2018, and does not believe that this update will have a significant impact on its consolidated financial statements.

Note 3

Acquisitions and Divestments

Divestment of the high-voltage cable system business

In March 2017, the Company divested its high-voltage cable system business (the Cables business) and recorded a net gain of \$334 million (including transaction costs) in “Other income (expense), net” and tax expense of \$28 million in “Provision for taxes”, relating to this divestment.

The Company has retained certain obligations of the Cables business and thus the Company remains directly or indirectly liable for these liabilities which existed at the date of the divestment. Subsequent to the divestment, the Company recorded a loss of \$94 million for changes in the amounts recorded for these obligations. In addition, the Company has provided certain performance guarantees to third parties which guarantee the performance of the buyer under existing contracts with customers as well as for certain capital expenditures of the divested business.

There were no significant gains or losses recognized relating to divestments in the three months ended March 31, 2016.

ABB to acquire B&R

On April 4, 2017, ABB announced that it had reached an agreement to acquire Bernecker + Rainer Industrie-Elektronik GmbH (B&R). B&R is a worldwide provider of product- and software-based, open-architecture solutions for machine and factory automation. ABB expects to complete the acquisition of B&R in the middle of 2017, following the receipt of customary regulatory approvals.

Note 4**Cash and equivalents, marketable securities and short-term investments**

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

March 31, 2017

(\$ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents	Marketable securities and short-term investments
Cash	1,668			1,668	1,668	—
Time deposits	3,968			3,968	3,894	74
Other short-term investments	275			275	—	275
Debt securities available-for-sale:						
U.S. government obligations	123	1	(2)	122	—	122
Other government obligations	2	—	—	2	—	2
Corporate	202	2	(1)	203	—	203
Equity securities available-for-sale	538	10	—	548	—	548
Total	6,776	13	(3)	6,786	5,562	1,224

December 31, 2016

(\$ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents	Marketable securities and short-term investments
Cash	1,704			1,704	1,704	—
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	5,587	13	(3)	5,597	3,644	1,953

Included in Other short-term investments at March 31, 2017, and December 31, 2016, are receivables of \$272 million and \$268 million, respectively, representing reverse repurchase agreements. These collateralized lendings, made to a financial institution, have maturity dates of less than one year.

Note 5

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		
	March 31, 2017	December 31, 2016	March 31, 2016
Foreign exchange contracts	16,326	15,353	17,724
Embedded foreign exchange derivatives	2,151	2,162	3,205
Interest rate contracts	4,337	3,021	4,013

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		
		March 31, 2017	December 31, 2016	March 31, 2016
Copper swaps	metric tonnes	37,643	47,425	49,500
Aluminum swaps	metric tonnes	5,850	4,650	6,042
Nickel swaps	metric tonnes	12	—	12
Lead swaps	metric tonnes	175	15,100	11,750
Zinc swaps	metric tonnes	125	150	250
Silver swaps	ounces	1,822,356	1,586,395	1,889,230
Crude oil swaps	barrels	146,000	121,000	127,000

Equity derivatives

At March 31, 2017, December 31, 2016, and March 31, 2016, the Company held 42 million, 47 million and 53 million cash-settled call options indexed to ABB Ltd shares (conversion ratio 5:1) with a total fair value of \$28 million, \$23 million and \$13 million, respectively.

Cash flow hedges

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.

At March 31, 2017, and December 31, 2016, “Accumulated other comprehensive loss” included net unrealized losses of \$2 million and \$1 million, respectively, net of tax, on derivatives designated as cash flow hedges. Of the amount at March 31, 2017, net losses of \$1 million are expected to be reclassified to earnings in the following 12 months. At March 31, 2017, the longest maturity of a derivative classified as a cash flow hedge was 36 months.

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 three months ended March 31, 2017 and 2016.

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:

**Gains (losses) recognized
in OCI**

**Gains (losses) reclassified
from OCI**

(\$ in millions)	on derivatives (effective portion)		into income (effective portion)	
	2017	2016	2017	2016
Three months ended March 31,				
Type of derivative				
Foreign exchange contracts	2	4		
			Total revenues	(2) (3)
			Total cost of sales	3 4
Commodity contracts	2	1	Total cost of sales	2 (2)
Cash-settled call options	8		– SG&A expenses ⁽²⁾	6 (1)
Total	12	5		9 (2)

(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 three months ended March 31, 2017 and 2016, respectively.

Net derivative gains of \$7 million and net derivative losses of \$1 million, both net of tax, respectively, were reclassified from “Accumulated other comprehensive loss” to earnings during the three months ended March 31, 2017 and 2016, respectively.

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 three months ended March 31, 2017 and 2016, 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)	Three months ended March 31,	
	2017	2016
Gains (losses) recognized in Interest and other finance expense:		
- on derivatives designated as fair value hedges	1	37
- on hedged item	—	(37)

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	Location	Gains (losses) recognized in income	
		Three months ended March 31,	
(\$ in millions)		2017	2016
Foreign exchange contracts	Total revenues	107	133
	Total cost of sales	(60)	(61)
	SG&A expenses ⁽¹⁾	(3)	(12)
	Non-order related research and development	(2)	—

	Other income (expense), net	(1)	–
	Interest and other finance expense	(6)	(47)
Embedded foreign exchange contracts	Total revenues	(21)	(52)
	Total cost of sales	1	6
	SG&A expenses ⁽¹⁾	2	3
Commodity contracts	Total cost of sales	26	2
Other	Interest and other finance expense	(5)	–
Total		38	(28)

(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)	March 31, 2017			
	Derivative assets		Derivative liabilities	
	Current in “Other current assets”	Non-current in “Other non-current assets”	Current in “Other current liabilities”	Non-current “Other non-curr liabiliti
Derivatives designated as hedging instruments:				
Foreign exchange contracts	3	–	8	
Commodity contracts	2	–	–	
Interest rate contracts	2	62	–	
Cash-settled call options	14	13	–	
Total	21	75	8	
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	126	23	192	
Commodity contracts	37	1	3	
Cross-currency interest rate swaps	–	–	–	
Cash-settled call options	–	1	–	
Embedded foreign exchange derivatives	40	19	38	
Total	203	44	233	
Total fair value	224	119	241	

(\$ 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 “Other non-curr liabiliti
Derivatives designated as hedging instruments:				
Foreign exchange contracts	5	–	6	
Commodity contracts	2	–	–	
Interest rate contracts	2	62	–	
Cash-settled call options	13	9	–	
Total	22	71	6	
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	169	29	257	
Commodity contracts	29	2	6	
Cross-currency interest rate swaps	–	2	–	
Cash-settled call options	–	1	–	
Embedded foreign exchange derivatives	58	21	35	
Total	256	55	298	
Total fair value	278	126	304	

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 March 31, 2017, and December 31, 2016, have been presented on a gross basis.

The Company’s netting agreements and other similar arrangements allow net settlements under certain conditions. At March 31, 2017, and December 31, 2016, information related to these offsetting arrangements was as follows:

(\$ in millions)	March 31, 2017				
	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
Type of agreement or similar arrangement					
Derivatives	284	(141)	–	–	143
Reverse repurchase agreements	272	–	–	(272)	–
Total	556	(141)	–	(272)	143

(\$ in millions)

March 31, 2017

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	255	(141)	–	–	114
Total	255	(141)	–	–	114

(\$ in millions)

Type of agreement or similar arrangement	December 31, 2016				
	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)

Type of agreement or similar arrangement	December 31, 2016				
	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

Note 6**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 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)	March 31, 2017			Total fair value
	Level 1	Level 2	Level 3	
Assets				
Available-for-sale securities in "Marketable securities and short-term investments":				
Equity securities	–	548	–	548
Debt securities—U.S. government obligations	122	–	–	122
Debt securities—Other government obligations	–	2	–	2
Debt securities—Corporate	–	203	–	203
Derivative assets—current in "Other current assets"	–	224	–	224
Derivative assets—non-current in "Other non-current assets"	–	119	–	119
Total	122	1,096	–	1,218
Liabilities				
Derivative liabilities—current in "Other current liabilities"	–	241	–	241
Derivative liabilities—non-current in "Other non-current liabilities"	–	66	–	66
Total	–	307	–	307

(\$ in millions)	December 31, 2016			Total fair value
	Level 1	Level 2	Level 3	
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

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 “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 three months ended March 31, 2017 and 2016.

Disclosure about financial instruments carried on a cost basis

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

(\$ in millions)	March 31, 2017				Total fair value
	Carrying value	Level 1	Level 2	Level 3	
Assets					
Cash and equivalents (excluding available-for-sale securities with original maturities up to 3 months):					
Cash	1,668	1,668	–	–	1,668
Time deposits	3,894	–	3,894	–	3,894
Marketable securities and short-term investments (excluding available-for-sale securities):					
Time deposits	74	–	74	–	74
Receivables under reverse repurchase agreements	272	–	272	–	272
Other short-term investments	3	3	–	–	3
Other non-current assets:					
Loans granted	31	–	32	–	32
Restricted cash deposits	43	43	–	–	43
Liabilities					
Short-term debt and current maturities of long-term debt (excluding capital lease obligations)					
	1,025	884	141	–	1,025
Long-term debt (excluding capital lease obligations)	5,764	5,251	756	–	6,007

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	1,704	1,704	–	–	1,704
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
Restricted cash deposits	59	59	–	–	59
Liabilities					
Short-term debt and current maturities of long-term debt (excluding capital lease obligations)					
	980	856	124	–	980
Long-term debt (excluding capital lease obligations)					
	5,709	5,208	784	–	5,992

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), and (ii) restricted cash whose fair values approximate the carrying amounts (Level 1 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).

Note 7

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 March 31, 2017, and December 31, 2016, the Company had aggregate liabilities of \$210 million and \$150 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)	March 31, 2017	December 31, 2016
Performance guarantees	1,367	193
Financial guarantees	198	69
Indemnification guarantees	74	71
Total	1,639	333

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 March 31, 2017, and December 31, 2016, 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 2025, 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.

In conjunction with the divestment of the high-voltage cable system business, the Company has entered into various performance and financial guarantees with other parties with respect to certain liabilities of the divested business. The maximum potential payable under these guarantees amounts to \$882 million and these guarantees have various maturities ranging from one to eight 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 March 31, 2017, and December 31, 2016, the total outstanding performance bonds aggregated to \$7.7 billion and \$7.9 billion, respectively. There have been no significant amounts reimbursed to financial institutions under these types of arrangements in the three months ended March 31, 2017 and 2016.

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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)	2017	2016
Balance at January 1,	1,142	1,089
Claims paid in cash or in kind	(79)	(67)
Net increase in provision for changes in estimates, warranties issued and warranties expired	90	67
Exchange rate differences	19	32
Balance at March 31,	1,172	1,121

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 \$8 million during the three months ended March 31, 2016. As the \$8 million increase relates in full 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 2016 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 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	
	2017	2016	2017	2016
Three months ended March 31,				
Service cost	59	63	—	—
Interest cost	61	71	1	2
Expected return on plan assets	(99)	(102)	—	—
Amortization of prior service cost (credit)	9	10	(1)	(3)
Amortization of net actuarial loss	22	22	—	—
Net periodic benefit cost	52	64	—	(1)

Employer contributions were as follows:

(\$ in millions)	Defined pension benefits		Other postretirement benefits	
	2017	2016	2017	2016
Three months ended March 31,				
Total contributions to defined benefit pension and other postretirement benefit plans	47	52	2	3

The Company expects to make contributions totaling approximately \$195 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. In the three months ended March 31, 2016, under this share buyback program, the Company purchased 24.630 million shares for cancellation and 3.040 million shares to support its employee share programs. These transactions resulted in an increase in Treasury stock of \$496 million.

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. As of March 31, 2017, no shares had been bought under this new program.

In the first quarter of 2017, the Company delivered, out of treasury stock, 4.9 million shares for options exercised in connection with its Management Incentive Plan.

At the Annual General Meeting of Shareholders on April 13, 2017, shareholders approved the proposal of the Board of Directors to distribute 0.76 Swiss francs per share to shareholders. Also at the meeting, shareholders approved the proposal of the Board of Directors to reduce the share capital of the Company by cancelling 46,595,000 shares which were bought back under the share buyback program announced in September 2014.

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**Three months ended March 31,**

	2017	2016
(\$ in millions, except per share data in \$)		
Amounts attributable to ABB shareholders:		
Income from continuing operations, net of tax	726	501
Loss from discontinued operations, net of tax	(2)	(1)
Net income	724	500
Weighted-average number of shares outstanding (in millions)	2,140	2,181
Basic earnings per share attributable to ABB shareholders:		
Income from continuing operations, net of tax	0.34	0.23
Loss from discontinued operations, net of tax	—	—
Net income	0.34	0.23

Diluted earnings per share**Three months ended March 31,**

	2017	2016
(\$ in millions, except per share data in \$)		
Amounts attributable to ABB shareholders:		
Income from continuing operations, net of tax	726	501
Loss from discontinued operations, net of tax	(2)	(1)
Net income	724	500
Weighted-average number of shares outstanding (in millions)	2,140	2,181
Effect of dilutive securities:		
Call options and shares	8	3
Adjusted weighted-average number of shares outstanding (in millions)	2,148	2,184
Diluted earnings per share attributable to ABB shareholders:		
Income from continuing operations, net of tax	0.34	0.23
Loss from discontinued operations, net of tax	—	—
Net income	0.34	0.23

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
Balance at January 1, 2016	(3,135)	7	(1,719)	(11)	(4,858)
Other comprehensive (loss) income before reclassifications	351	6	(40)	4	311
Amounts reclassified from OCI	—	—	23	1	24
Total other comprehensive (loss) income	351	6	(17)	5	339
Less:					
Amounts attributable to noncontrolling interests	5	—	—	—	5
Balance at March 31, 2016	(2,789)	13	(1,736)	(6)	(4,418)

(\$ 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
Balance at January 1, 2017	(3,592)	7	(1,601)	(1)	(5,187)
Other comprehensive (loss) income before reclassifications	203	—	(28)	9	174
Amounts reclassified from OCI	—	—	23	(7)	16
Changes attributable to divestments ⁽¹⁾	(5)	—	6	(3)	—
Total other comprehensive (loss) income	198	—	1	(1)	198
Less:					
Amounts attributable to noncontrolling interests	9	—	—	—	9
Balance at March 31, 2017	(3,403)	7	(1,600)	(2)	(4,998)

(1) Amounts relate to the divestment of the high-voltage cable system business and are included in the net gain from sale of the business (see Note 3).

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:

(\$ in millions)		Three months ended March 31, 2017/2016	
Details about OCI components	Location of (gains) losses reclassified from OCI		
Pension and other postretirement plan adjustments:			
Amortization of prior service cost	Net periodic benefit cost ⁽¹⁾	8	7
Amortization of net actuarial loss	Net periodic benefit cost ⁽¹⁾	22	22
Total before tax		30	29
Tax	Provision for taxes	(7)	(6)
Amounts reclassified from OCI		23	23
Unrealized gains (losses) of cash flow hedge derivatives:			
Foreign exchange contracts	Total revenues	2	3
	Total cost of sales	(3)	(4)
Commodity contracts	Total cost of sales	(2)	2
Cash-settled call options	SG&A expenses ⁽²⁾	(6)	1
Total before tax		(9)	2
Tax	Provision for taxes	2	(1)
Amounts reclassified from OCI		(7)	1

(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 three months ended March 31, 2017 and 2016.

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 three months ended March 31, 2017 and 2016, the cumulative costs incurred to date and the total amount of costs expected to be incurred under the program per operating segment:

	Costs incurred Three months ended March 31, 2017	Cumulative costs incurred up to 2016 March 31, 2017⁽¹⁾	Total expected costs⁽¹⁾
(\$ in millions)			
Electrification Products	(4)	1 85	86
Robotics and Motion	–	– 70	72
Industrial Automation	(4)	– 128	131
Power Grids	(7)	(1) 96	98
Corporate and Other	(7)	(1) 109	111
Total	(22)	(1) 488	498

(1) Cumulative costs incurred up to March 31, 2017 and 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, and were further reduced by \$22 million in the three months ended March 31, 2017. 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 \$498 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)	Three months ended		Cumulative costs
	March 31, 2017	2016	March 31, 2017
Employee severance costs	(22)	(2)	472
Estimated contract settlement, loss order and other costs	–	1	7
Inventory and long-lived asset impairments	–	–	9
Total	(22)	(1)	488

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

(\$ in millions)	Three months ended March	
	31, 2017	2016
Total cost of sales	(14)	(1)
Selling, general and administrative expenses	(4)	–
Non-order related research and development expenses	(2)	–
Other income (expense), net	(2)	–
Total	(22)	(1)

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 March 31, 2017, by expense type.

(\$ in millions)	Employee severance costs	Contract settlement, loss order and other costs	Total
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
Expenses	9	–	9
Cash payments	(35)	(2)	(37)
Change in estimates	(31)	–	(31)
Exchange rate differences	6	1	7
Liability at March 31, 2017	280	2	282

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. During the three months ended March 31, 2016, the change in estimate related to restructurings initiated in 2015 was not significant.

The change in estimate during the three months ended March 31, 2017, is due to higher than expected rates of attrition and internal re-deployment and a lower than expected severance cost per employee. The decrease in the liability was recorded in income from operations, primarily as reductions in Cost of sales of \$17 million and in Selling, general and administrative expenses of \$10 million for the three months ended March 31, 2017.

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, Robotics and Motion, Industrial Automation and Power Grids. The

remaining operations of the Company are included in Corporate and Other.

Effective January 1, 2017, the Company re-allocated the management responsibilities for certain businesses among the four reported operating segments. The primary change was the transfer to the Electrification Products segment of the electric vehicle charging, solar, and power quality businesses from the Discrete Automation and Motion segment. In addition, the Discrete Automation and Motion segment was renamed the Robotics and Motion segment while the Process Automation segment was renamed the Industrial Automation segment.

The segment information for the three months ended March 31, 2016 and at December 31, 2016, has been recast to reflect these organizational changes. In addition, total assets at December 31, 2016, has been adjusted to reflect the additional netting of deferred tax assets and liabilities which resulted from the adoption of an accounting standard update on the classification of deferred taxes.

Furthermore, the results for the Company's high-voltage cable system business which, prior to its divestment in March, were included with the Power Grids operating segment, have been reclassified within Corporate and Other for all periods presented.

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 electric vehicle charging, solar inverters, modular substation packages, switchgear, UPS solutions, circuit breakers, control products, wiring accessories, enclosures and cabling systems, and intelligent home and building solutions designed to integrate and automate the lighting, heating and ventilation, and security and data communication networks.
- **Robotics and Motion:** manufactures and sells robotics, motors, generators, drives, wind converters, components and systems for railways and related services and digital solutions for a wide range of applications in industry, transportation and infrastructure, and utilities.
- **Industrial Automation:** develops and sells integrated automation and electrification systems and solutions, a comprehensive range of services ranging from repair to advanced services such as remote monitoring and preventive maintenance and cybersecurity services, process and discrete control solutions, advanced process control software and manufacturing execution systems, sensing, measurement and analytics, electric ship propulsion systems and large turbochargers.

- **Power Grids:** offers a range of products, systems, service and software solutions across the power value chain of generation, transmission and distribution, to utility, industry, transportation and infrastructure customers. These offerings address existing and evolving grid needs such as the integration of renewables, network control, digital substations, microgrids and asset management. The division portfolio includes turnkey grid integration, transmission systems and substation solutions as well as a wide range of power, distribution and traction transformers, and an array of high-voltage products, such as circuit breakers, switchgear, capacitors.
- **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, which represents income from operations excluding:

- amortization expense on intangibles arising upon acquisitions (acquisition-related amortization),
- restructuring and restructuring-related expenses,
- non-operational pension cost comprising: (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,

- changes in the amount recorded for retained obligations of divested businesses occurring after the divestment date (changes in retained obligations of divested businesses),
- changes in estimates relating to opening balance sheets of acquired businesses (changes in pre-acquisition estimates),
- gains and losses from sale of businesses,
- acquisition-related expenses and certain non-operational items, as well as
- 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 three months ended March 31, 2017 and 2016, as well as total assets at March 31, 2017, and December 31, 2016.

	Three months ended March 31, 2017			Three months ended March 31, 2016		
	Third-party revenues	Intersegment revenues	Total revenues	Third-party revenues	Intersegment revenues	Total revenues
(\$ in millions)						
Electrification Products	2,182	111	2,293	2,144	145	2,289
Robotics and Motion	1,809	117	1,926	1,744	129	1,873
Industrial Automation	1,516	33	1,549	1,618	46	1,664
Power Grids	2,282	123	2,405	2,320	133	2,453
Corporate and Other	65	326	391	77	439	516
Intersegment elimination	–	(710)	(710)	–	(892)	(892)
Consolidated	7,854	–	7,854	7,903	–	7,903

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(\$ in millions)	Three months ended March	
	31,	2016
	2017	2016
<i>Operational EBITA:</i>		
Electrification Products	322	307
Robotics and Motion	274	286
Industrial Automation	204	202
Power Grids	245	183
Corporate and Other and Intersegment elimination	(102)	(27)
Consolidated Operational EBITA	943	951
Acquisition-related amortization	(59)	(71)
Restructuring and restructuring-related expenses ⁽¹⁾	(48)	(69)
Non-operational pension cost	7	—
Changes in retained obligations of divested businesses	(94)	—
Changes in pre-acquisition estimates	—	(8)
Gains and losses from sale of businesses	338	—
Acquisition-related expenses and certain non-operational items	(108)	(2)
<i>Foreign exchange/commodity timing differences in income from operations:</i>		
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	76	27
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	10	4
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(35)	(48)
Income from operations	1,030	784
Interest and dividend income	17	18
Interest and other finance expense	(79)	(72)
Income from continuing operations before taxes	968	730

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

(\$ in millions)	Total assets⁽¹⁾	
	March 31, 2017	December 31, 2016
Electrification Products	10,063	9,881
Robotics and Motion	7,915	7,943
Industrial Automation	4,346	4,310
Power Grids	8,762	8,728
Corporate and Other	9,220	8,340
Consolidated	40,306	39,202

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

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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 three months ended March 31, 2017.

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

Q1 2017 compared to Q1 2016

Division	Order growth rate				Revenue growth rate			
	US\$		Foreign		US\$		Foreign	
	(as reported)	(as exchange impact)	(as exchange Portfolio changes)	(as exchange Portfolio Comparable)	(as reported)	(as exchange impact)	(as exchange Portfolio changes)	(as exchange Portfolio Comparable)
Electrification Products	1%	3%	0%	4%	0%	3%	0%	3%
Robotics and Motion	4%	3%	0%	7%	3%	2%	0%	5%
Industrial Automation	-8%	2%	0%	-6%	-7%	2%	0%	-5%
Power Grids	-20%	3%	0%	-17%	-2%	2%	4%	4%
ABB Group	-9%	2%	4%	-3%	-1%	3%	1%	3%

Regional comparable growth rate reconciliation

Q1 2017 compared to Q1 2016

Region	Order growth rate				Revenue growth rate			
	US\$		Foreign		US\$		Foreign	
	(as reported)	(as exchange impact)	(as exchange Portfolio changes)	(as exchange Portfolio Comparable)	(as reported)	(as exchange impact)	(as exchange Portfolio changes)	(as exchange Portfolio Comparable)
Europe	-12%	4%	10%	2%	3%	4%	4%	11%
The Americas	5%	-1%	0%	4%	2%	-2%	1%	1%
Asia, Middle East and Africa	-16%	4%	0%	-12%	-5%	2%	0%	-3%
ABB Group	-9%	2%	4%	-3%	-1%	3%	1%	3%

Order backlog growth rate reconciliation**March 31, 2017 compared to March 31, 2016**

Division	US\$	Foreign	Portfolio changes	Comparable
	(as reported)	exchange impact		
Electrification Products	-8%	5%	0%	-3%
Robotics and Motion	-5%	5%	0%	0%
Industrial Automation	-15%	4%	0%	-11%
Power Grids	-7%	4%	1%	-2%
ABB Group	-11%	4%	5%	-2%

Other growth rate reconciliations**Q1 2017 compared to Q1 2016**

	US\$	Foreign	Portfolio changes	Comparable
	(as reported)	exchange impact		
Large orders	-50%	3%	13%	-34%
Base orders	-1%	3%	0%	2%
Services and software orders	5%	2%	0%	7%
Services and software revenues	-1%	2%	0%	1%

Division realignment

Effective January 1, 2017, we changed the composition of the business portfolio of our four divisions. The scope of the Electrification Products division was expanded to include the electric vehicle charging, solar, and power quality businesses from the Discrete Automation and Motion division. In addition, the Discrete Automation and Motion division was renamed the Robotics and Motion division while the Process Automation division was renamed the Industrial Automation division. Furthermore the operations of certain divested businesses have been excluded from the results of the Power Grids division (but are included in the total ABB Group as part of Corporate and other) 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 Q1 2016 compared with Q1 2015 to reflect these organizational changes:

Divisional comparable growth rate reconciliation**Q1 2016 compared to Q1 2015**

Order growth rate			Revenue growth rate		
US\$	Foreign	Portfolio	US\$	Foreign	Portfolio
(as exchange)			(as exchange)		

Division	reported)	impact	changes	Comparable	reported)	impact	changes	Comparable
Electrification Products	-9%	5%	0%	-4%	-5%	4%	0%	-1%
Robotics and Motion	-11%	3%	0%	-8%	-8%	3%	0%	-5%
Industrial Automation	-21%	5%	0%	-16%	-8%	5%	0%	-3%
Power Grids	-5%	4%	1%	0%	-9%	4%	3%	-2%
ABB Group	-11%	3%	3%	-5%	-8%	4%	1%	-3%

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.

	Three months ended March 31,	
(\$ in millions, unless otherwise indicated)	2017	2016
Adjusted services and software revenues as a percentage of total revenues		
Sales of services and software	1,385	1,400
Sales of services and software in divested/exited businesses	(7)	(7)
Adjusted services and software revenues	1,378	1,393
Total revenues	7,854	7,903
Total revenues in divested/exited businesses	(23)	(113)
Adjusted total revenues	7,831	7,790
Adjusted services and software revenues as a percentage of total revenues	17.6%	17.9%

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Operational EBITA margin

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:

- acquisition-related amortization (as defined below),
- restructuring and restructuring-related expenses,
- non-operational pension cost (as defined below),
- changes in the amount recorded for retained obligations of divested businesses occurring after the divestment date (changes in retained obligations of divested businesses),
- changes in pre-acquisition estimates,
- gains and losses from sale of businesses,
- acquisition-related expenses and certain non-operational items, as well as
- 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).

Amounts relating to changes in retained obligations of divested businesses (as defined above), were previously included within acquisition-related expenses and certain non-operational items. In periods prior to 2017, there were no significant amounts to warrant separate presentation.

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

	Three months ended March	
	31,	
(\$ in millions)	2017	2016
Operational EBITA	943	951
Acquisition-related amortization	(59)	(71)
Restructuring and restructuring-related expenses ⁽¹⁾	(48)	(69)
Non-operational pension cost	7	—
Changes in retained obligations of divested businesses	(94)	—
Changes in pre-acquisition estimates	—	(8)
Gains and losses from sale of businesses	338	—
Acquisition-related expenses and certain non-operational items	(108)	(2)
Foreign exchange/commodity timing differences in income from operations:		
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	76	27
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	10	4
Unrealized foreign exchange movements on receivables/payables (and		

related assets/liabilities)	(35)	(48)
Income from operations	1,030	784
Interest and dividend income	17	18
Interest and other finance expense	(79)	(72)
Income from continuing operations before taxes	968	730
Provision for taxes	(208)	(201)
Income from continuing operations, net of tax	760	529
Loss from discontinued operations, net of tax	(2)	(1)
Net income	758	528

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

Reconciliation of Operational EBITA margin by division

Three months ended March 31, 2017

	Electrification	Robotics	Industrial Power	Corporate and Other and Intersegment	Consolidated	
(\$ in millions, unless otherwise indicated)	Products	Motion	Automation	Grids	elimination	
Total revenues	2,293	1,926	1,549	2,405	(319)	7,854
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(23)	(17)	(18)	(47)	(22)	(127)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	—	—	—	(5)	2	(3)
Unrealized foreign exchange movements on receivables (and related assets)	12	6	5	27	1	51
Operational revenues	2,282	1,915	1,536	2,380	(338)	7,775
Income (loss) from operations	307	252	206	222	43	1,030
Acquisition-related amortization	26	18	2	8	5	59
Restructuring and restructuring-related expenses ⁽¹⁾	—	10	4	3	31	48
Non-operational pension cost	—	—	1	(1)	(7)	(7)
Changes in retained obligations of divested businesses	—	—	—	—	94	94
Gains and losses from sale of businesses	—	—	—	—	(338)	(338)
Acquisition-related expenses and certain non-operational items	4	—	2	27	75	108
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(16)	(9)	(16)	(35)	—	(76)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	—	—	—	(5)	(5)	(10)
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	1	3	5	26	—	35
Operational EBITA	322	274	204	245	(102)	943
Operational EBITA margin (%)	14.1%	14.3%	13.3%	10.3%	n.a.	12.1%

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

Three months ended March 31, 2016

	Electrification Products	Robotics and Motion	Industrial Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	2,289	1,873	1,664	2,453	(376)	7,903
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(21)	(11)	(10)	(47)	(2)	(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)	12	7	20	32	–	71
Operational revenues	2,280	1,870	1,679	2,433	(378)	7,884
Income (loss) from operations	262	256	177	173	(84)	784
Acquisition-related amortization	31	23	3	9	5	71
Restructuring and restructuring-related expenses ⁽¹⁾	5	7	4	18	35	69
Non-operational pension cost	1	–	–	(1)	–	–
Changes in pre-acquisition estimates	8	–	–	–	–	8
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)	(1)	(4)	1	(41)	18	(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)	1	4	17	27	(1)	48
Operational EBITA	307	286	202	183	(27)	951
Operational EBITA margin (%)	13.5%	15.3%	12.0%	7.5%	n.a.	12.1%

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

Three months ended March 31, 2015

	Electrification Products	Robotics and Motion	Industrial Automation	Power Grids	Corporate and Other and Intersegment elimination	Consolidated
(\$ in millions, unless otherwise indicated)						
Total revenues	2,406	2,040	1,816	2,701	(408)	8,555
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	9	(13)	(9)	(12)	7	(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)	7	(18)	(20)	–	(34)
Operational revenues	2,413	2,005	1,809	2,692	(401)	8,518
Income (loss) from operations	289	308	218	109	(65)	859
Acquisition-related amortization	34	24	3	17	5	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)	14	6	5	10	(19)	16
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	1	(29)	15	22	(1)	8
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(15)	1	(16)	(26)	2	(54)
Operational EBITA	330	314	230	150	(76)	948
Operational EBITA margin (%)	13.7%	15.7%	12.7%	5.6%	n.a.	11.1%

(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

Defined pension benefits (\$ in millions, unless otherwise indicated)	Three months ended March 31,	
	2017	2016
Service cost	59	63
Operational pension cost	59	63
Interest cost	61	71
Expected return on plan assets	(99)	(102)
Amortization of prior service cost (credit)	9	10
Amortization of net actuarial loss	22	22
Non-operational pension cost	(7)	1
Net periodic benefit cost	52	64
Other postretirement benefits (\$ in millions, unless otherwise indicated)	Three months ended March 31,	
	2017	2016
Interest cost	1	2
Amortization of prior service cost (credit)	(1)	(3)
Non-operational pension cost	–	(1)
Net periodic benefit cost	–	(1)
Total operational pension cost	59	63
Total non-operational pension cost	(7)	–

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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,
- (iv) changes in retained obligations of divested businesses,
- (v) changes in pre-acquisition estimates,
- (vi) gains and losses from sale of businesses,
- (vii) acquisition-related expenses and certain non-operational items,
- (viii) 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), and
- (ix) 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 (vii) 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

(\$ in millions, except per share data in \$)	Three months ended March		
	31, 2017	2016	Growth ⁽³⁾
Net income (attributable to ABB)	724	500	
Operational adjustments:			
Acquisition-related amortization	59	71	
Restructuring and restructuring-related expenses ⁽¹⁾	48	69	
Non-operational pension cost	(7)	—	
Changes in retained obligations of divested businesses	94	—	
Changes in pre-acquisition estimates	—	8	
Gains and losses from sale of businesses	(338)	—	
Acquisition-related expenses and certain non-operational items	108	2	
FX/commodity timing differences in income from operations	(51)	17	
Tax on operational adjustments ⁽²⁾	(30)	(46)	
Operational net income	607	621	-2%
Weighted-average number of shares outstanding (in millions)	2,140	2,181	
Operational EPS	0.28	0.28	0%
Constant currency Operational EPS adjustment	0.05	0.05	
Operational EPS (constant currency basis - 2014 exchange rates)	0.33	0.33	1%

(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)	March 31, 2017	December 31, 2016
Short-term debt and current maturities of long-term debt	1,049	1,003
Long-term debt	5,885	5,800
Total debt	6,934	6,803
Cash and equivalents	5,562	3,644
Marketable securities and short-term investments	1,224	1,953
Cash and marketable securities	6,786	5,597
Net debt	148	1,206

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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

(\$ in millions, unless otherwise indicated)

	March 31, 2017	March 31, 2016
Net working capital:		
Receivables, net	9,918	10,131
Inventories, net	4,728	5,104
Prepaid expenses	230	268
Accounts payable, trade	(4,471)	(4,323)
Billings in excess of sales	(1,186)	(1,331)
Advances from customers	(1,509)	(1,601)
Other current liabilities ⁽¹⁾	(3,435)	(2,949)
Net working capital	4,275	5,299
Total revenues for the three months ended:		
March 31, 2017 / 2016	7,854	7,903
December 31, 2016 / 2015	8,993	9,242
September 30, 2016 / 2015	8,255	8,519
June 30, 2016 / 2015	8,677	9,165

Adjustment to annualize/eliminate revenues of certain acquisitions/divestments	(284)	—
Adjusted revenues for the trailing twelve months	33,495	34,829
Net working capital as a percentage of revenues (%)	12.8%	15.2%

(1) Amounts exclude \$584 million and \$803 million at March 31, 2017 and 2016, respectively, 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).

Free cash flow for the trailing twelve months

Free cash flow for the trailing twelve months includes free cash flow recorded by ABB in the twelve months preceding the relevant balance sheet date.

Net income for the trailing twelve months

Net income for the trailing twelve months includes net income recorded by ABB in the twelve months preceding the relevant balance sheet date.

Free cash flow conversion to net income

(\$ in millions, unless otherwise indicated)

	Twelve months to	
	March 31, 2017	December 31, 2016
Net cash provided by operating activities	4,100	3,843
Adjusted for the effects of:		
Purchases of property, plant and equipment and intangible assets	(853)	(831)
Proceeds from sale of property, plant and equipment	69	61
Changes in financing receivables and other non-current receivables	3	(8)
Free cash flow	3,319	3,065
Net income attributable to ABB	2,123	1,899
Free cash flow conversion to net income	156%	161%

Reconciliation of the trailing twelve months to March 31, 2017

	Net cash provided by operating activities	Purchases of property, plant and equipment and intangible assets	Proceeds from sale of property, plant and equipment	Changes in financing receivables and other non-current receivables	Net income attributable to ABB
(\$ in millions)					
Q2 2016	1,082	(178)	16	2	406
Q3 2016	1,081	(184)	24	(3)	568
Q4 2016	1,428	(299)	9	(4)	425
Q1 2017	509	(192)	20	8	724
Total for the trailing twelve months					
to March 31, 2017	4,100	(853)	69	3	2,123
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Finance net**Definition**

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

Reconciliation

(\$ in millions)	Three months ended March 31,	
	2017	2016
Interest and dividend income	17	18
Interest and other finance expense	(79)	(72)
Finance net	(62)	(54)

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 March 31,	
	2017	2016
Orders received	8,403	9,253
Total revenues	7,854	7,903
Book-to-bill ratio	1.07	1.17

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January — March 2017 — Q1

ABB Ltd announces that the following members of the **Executive Committee** or **Board of Directors** of ABB have purchased, sold or been granted ABB's registered shares, call options and warrant appreciation rights ("WARs"), in the following amounts:

Name	Date	Description	Received *	Purchased	Sold	Price
Louis R. Hughes	March 15, 2017	Shares			2,019	CHF 22.78
Louis R. Hughes	March 15, 2017	Shares			1,058	CHF 22.79
Louis R. Hughes	March 15, 2017	Shares			1,007	CHF 22.80
Louis R. Hughes	March 15, 2017	Shares			2,128	CHF 22.83
Louis R. Hughes	March 15, 2017	Shares			1,000	CHF 22.87
Louis R. Hughes	March 15, 2017	Shares			2,109	CHF 22.89
Louis R. Hughes	March 15, 2017	Shares			679	CHF 22.90

Key:

* Received instruments were delivered as part of the ABB Ltd Director's or Executive Committee Member's compensation

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ABB LTD

Date: April 20, 2017.

By: /s/ Alanna Abrahamson - Haka
Name: Alanna Abrahamson - Haka
Title: Group Senior Vice President and
Head of Investor Relations

Date: April 20, 2017.

By: /s/ Richard A. Brown
Name: Richard A. Brown
Title: Group Senior Vice President and
Chief Counsel Corporate & Finance
