

ZURICH, SWITZERLAND, JULY 22, 2020

Q2 2020 results

Strong COVID-19 headwinds; Power Grids divestment completed

- Orders \$6.1 billion, -18%; comparable -14%¹
- Revenues \$6.2 billion, -14%; comparable -10%
- Income from operations \$571 million; margin 9.3%
- Operational EBITA¹ \$651 million; margin¹ 10.6%
- Net income \$319 million, +398%²
- Basic EPS \$0.15, +398%³; operational EPS¹ \$0.22, -35%
- Cash flow from operating activities \$680 million; resilient cash delivery expected for the full year
- Power Grids divestment completed July 1
- Net cash proceeds to be returned to shareholders, as planned

“As expected, the second quarter has been heavily impacted by COVID-19. At the same time, we were very focused on cost mitigation efforts which provided some resilience. Operational margins for the Group turned out better than we had anticipated, with Motion doing particularly well,” said Björn Rosengren, CEO of ABB. “A lot of uncertainty remains and we still see some challenging quarters ahead. At the same time, our way forward is clear. We will continue to roll out our new operating model, review our business portfolio and start our share buyback program.”

KEY FIGURES (\$ millions, unless otherwise indicated)	CHANGE				CHANGE			
	Q2 2020	Q2 2019	US\$	Comparable	H1 2020	H1 2019	US\$	Comparable
Orders	6,054	7,401	-18%	-14%	13,400	15,014	-11%	-7%
Revenues	6,154	7,171	-14%	-10%	12,370	14,018	-12%	-8%
Income from operations	571	123	+364%		944	713	+32%	
Operational EBITA ¹	651	825	-21%	-20% ⁴	1,287	1,591	-19%	-18% ⁴
as % of operational revenues	10.6	11.5	-0.9 pts		10.4	11.4	-1.0 pts	
Income from continuing operations, net of tax	395	(54)	n.a.		721	361	+100%	
Net income attributable to ABB	319	64	+398%		695	599	+16%	
Basic EPS (\$)	0.15	0.03	+398% ³		0.33	0.28	+16% ³	
Operational EPS (\$) ¹	0.22	0.34	-35% ³	-33% ³	0.52	0.64	-19% ³	-18% ³
Cash flow from operating activities ⁵	680	0	n.a.		103	(256)	n.a.	

On December 17, 2018, ABB announced an agreed sale of its Power Grids business. Consequently, the results of the Power Grids business are presented as discontinued operations.

¹ For a reconciliation of non-GAAP measures, see “supplemental reconciliations and definitions” in the attached Q2 2020 Financial Information.

² The result benefited mainly from the absence of the charge booked in 2019 in relation to the sale of the solar inverters business.

³ EPS growth rates are computed using unrounded amounts. Comparable operational earnings per share is in constant currency (2019 exchange rates not adjusted for changes in the business portfolio).

⁴ Constant currency (not adjusted for portfolio changes).

⁵ Amount represents total for both continuing and discontinued operations.

Q2 2020 Group results

Summary

Trading conditions during the second quarter were challenging, influenced by the escalating COVID-19 pandemic. Alongside the sharp drop in short-cycle demand that lowered product volumes, system installation and service activities faced extensive mobility restrictions. Reflecting this, orders and revenues for the second quarter period were severely dampened across the Group when compared to the prior year period. Motion's result fared better, aided by a strong rebound in China and strong backlog execution. Despite intensified cost mitigation, operational margins contracted in Electrification, Industrial Automation and Robotics & Discrete Automation compared to the prior year period, while Motion improved its margin year-on-year.

Orders

Orders were 18 percent lower (14 percent comparable) in the quarter compared to the prior year period. Foreign exchange translation effects had a net negative impact of 2 percent and portfolio changes a net negative impact of 2 percent. The order backlog was 1 percent lower (up 5 percent comparable) at the end of the quarter.

Regional overview

- Orders from Europe were 18 percent lower (14 percent comparable). Most countries had materially lower orders, driven mainly by lockdowns. Orders were 4 percent lower in Germany (2 percent comparable), 4 percent lower in the UK (up 1 percent comparable) and 3 percent lower in Switzerland (4 percent comparable). Orders fell materially in Italy, which was 13 percent lower (9 percent comparable), and in Finland, Norway, Spain and the Netherlands declined even more steeply. Orders from Sweden advanced 9 percent (11 percent comparable).
- Orders from the Americas were 26 percent lower (23 percent comparable), with nearly all countries reporting lower order levels. In the US, orders declined by 25 percent (23 percent comparable).
- In Asia, Middle East and Africa (AMEA), orders were 11 percent lower (5 percent comparable), with a notable drop in India of 40 percent (33 percent comparable). In China, demand improved sequentially; orders were 3 percent lower (up 3 percent comparable) on a year-on-year basis in the second quarter.

End-market overview

- In discrete industries, orders were disrupted in most end-markets, with orders from automotive and automotive sector-related industries as well as machine builders severely impacted. 3C activities were challenged, although they trended more favorably toward quarter end.
- Process industry activities fell sharply in the quarter. Service activities were severely constrained by lockdowns, as well as customers reducing operational expenditure. In addition, multiple capital expenditure projects have been deferred as customers adapt to a softer demand outlook.
- In transport & infrastructure, investments in rail, e-mobility, water & wastewater and data centers continued. As well, orders were resilient in electrical distribution utilities. However, marine and renewables activities declined steeply.
- Buildings were challenged, with construction activity constrained by lockdowns.

Revenues

Revenues were 14 percent lower (10 percent comparable) year-on-year. Foreign exchange translation effects had a net negative impact of 2 percent and portfolio changes a net negative impact of 2 percent. The book-to-bill ratio for the quarter was 0.98x¹, compared to 1.03x in the prior year period.

Income from operations and operational EBITA

Income from operations of \$571 million increased 364 percent. Compared to the prior year, the result benefited mainly from the absence of the charge booked in 2019 in relation to the sale of the solar inverters business. The year-on-year increase was also aided by a net \$86 million gain related to timing differences on commodities and foreign exchange, and lower expenses related to restructuring and integration efforts.

Operational EBITA¹ of \$651 million was 21 percent lower (20 percent in local currencies). The operational EBITA margin¹ of 10.6 percent was 90 basis points lower year-on-year. Margins were higher in Motion while all other businesses reported lower margins compared to the prior year period, mainly reflecting lower volumes, despite intensified cost mitigation efforts. Corporate & Other costs, including \$19 million stranded costs, improved when compared to the prior year period.

Net income and basic earnings per share

Net income from continuing operations was \$395 million, significantly higher mainly due to the aforementioned absence of the solar inverters charge. The Group's effective tax rate was 24.8 percent. Discontinued operations reported \$49 million in losses, reflecting a material non-operational pension charge as well as subdued operational performance mainly due to COVID-19 disruption.

Group net income attributable to ABB was \$319 million and basic EPS \$0.15, 398 percent higher for both on a year-on-year basis. Operational EPS of \$0.22¹ was 35 percent³ lower compared to the prior year period.

Cash flow from operating activities

Cash flow from operating activities was \$680 million, versus \$0 million in the second quarter of 2019. Despite the reduction in business activities, cash flow from operating activities from continuing operations improved materially, while the amount from discontinued operations was \$32 million.

Cash flow from operating activities from continuing operations was supported mainly by timing differences on employee incentive payments, which were distributed in the first quarter this year as opposed to the second quarter last year. As well, cash flow benefited from timing of tax payments and favorable net working capital movement. Net working capital as a percent of revenues ended the quarter at 12.6 percent.

Q2 2020 business area results

All commentary by business area relates to second quarter results on a year-on-year basis.

Electrification (EL)

KEY FIGURES (\$ millions, unless otherwise indicated)	CHANGE				CHANGE			
	Q2 2020	Q2 2019	US\$	Comparable	H1 2020	H1 2019	US\$	Comparable
Orders	2,737	3,339	-18%	-12%	5,858	6,702	-13%	-7%
Order backlog	4,465	4,553	-2%	+6%	4,465	4,553	-2%	+6%
Revenues	2,764	3,272	-16%	-10%	5,537	6,329	-13%	-9%
Operational EBITA ¹	348	440	-21%		666	817	-18%	
as % of operational revenues	12.6%	13.5%	-0.9 pts		12.0%	12.9%	-0.9 pts	

- Orders were impacted by a fall in short-cycle demand including in the buildings market, and a material decline in the oil and gas and renewables markets. Select markets including electric distribution utilities, rail, e-mobility and data centers offered relative resilience. All regions declined, with demand from the Americas materially impacted by COVID-19.
- Revenues declined due to weak short-cycle business as well as constrained project activities, mainly in Distribution Solutions.
- Margin contraction was essentially driven by lower volumes. This was partly mitigated by supportive cost savings initiatives and resilient pricing, as well as the ongoing turnaround of GEIS and Installation Products, both of which remain firmly on track.

Industrial Automation (IA)

KEY FIGURES (\$ millions, unless otherwise indicated)	CHANGE				CHANGE			
	Q2 2020	Q2 2019	US\$	Comparable	H1 2020	H1 2019	US\$	Comparable
Orders	1,305	1,622	-20%	-17%	3,062	3,288	-7%	-4%
Order backlog	5,210	5,240	-1%	+3%	5,210	5,240	-1%	+3%
Revenues	1,382	1,580	-13%	-9%	2,844	3,098	-8%	-5%
Operational EBITA ¹	115	190	-39%		259	395	-34%	
as % of operational revenues	8.4%	12.1%	-3.7 pts		9.1%	12.8%	-3.7 pts	

- Orders reflect a sharp downturn across energy and process industries as well as a fall-off in marine, even while the business area benefited from select large order wins. Orders were lower in all regions, with a severe drop in the Americas.
- Revenues were impacted by a substantial drop in book-and-bill activities, particularly mobility constrained services.
- Aside from lower volumes, margins were held back by under-absorption and negative mix, mainly from lower service activities.

Motion (MO)

KEY FIGURES (\$ millions, unless otherwise indicated)	CHANGE				CHANGE			
	Q2 2020	Q2 2019	US\$	Comparable	H1 2020	H1 2019	US\$	Comparable
Orders	1,586	1,762	-10%	-7%	3,487	3,562	-2%	0%
Order backlog	3,384	3,050	+11%	+13%	3,384	3,050	+11%	+13%
Revenues	1,583	1,641	-4%	-1%	3,093	3,246	-5%	-3%
Operational EBITA ¹	279	275	+1%		509	538	-5%	
as % of operational revenues	17.7%	16.7%	+1.0 pts		16.5%	16.6%	-0.1 pts	

- A broad-based short-cycle downturn weighed on orders, even while orders remained healthy in the rail and chemicals sectors. Orders across the Americas fell steeply, substantially mitigated by a strong rebound in China.
- Resilient revenue development mainly reflects strong backlog execution.
- Margin expansion was driven by strong cost actions and favorable mix.

Robotics & Discrete Automation (RA)

KEY FIGURES (\$ millions, unless otherwise indicated)	CHANGE				CHANGE			
	Q2 2020	Q2 2019	US\$	Comparable	H1 2020	H1 2019	US\$	Comparable
Orders	638	883	-28%	-25%	1,449	1,850	-22%	-19%
Order backlog	1,478	1,586	-7%	-4%	1,478	1,586	-7%	-4%
Revenues	629	845	-26%	-23%	1,300	1,696	-23%	-21%
Operational EBITA ¹	43	105	-59%		102	200	-49%	
as % of operational revenues	6.8%	12.3%	-5.5 pts		7.8%	11.8%	-4.0 pts	

- Against a tough comparison base for large orders, RA's order result moved sharply lower, as expected. Activity levels declined materially across key end-markets, including automotive, general industry and machine builders. Orders fell sharply in Europe and the Americas, while demand from the AMEA region remained weak.
- Revenues were severely impacted by lower systems business and service activities, as well as lower product volumes.
- Margin contraction reflects steep volume decline, which outweighed supportive cost actions.

Corporate and Other

KEY FIGURES	CHANGE			CHANGE		
(\$ millions, unless otherwise indicated)	Q2 2020	Q2 2019	US\$	H1 2020	H1 2019	US\$
Orders	(212)	(205)	(7)	(456)	(388)	(68)
Revenues	(204)	(167)	(37)	(404)	(351)	(53)
Income from operations	(153)	(285)	+132	(326)	(515)	+189
Operational EBITA ¹	(134)	(185)	+51	(249)	(359)	+110

- Corporate and Other operational EBITA improved to -\$134 million. Compared to a year ago this reflects lower stranded and lower ongoing corporate costs.
- In the second quarter of 2020, stranded costs of \$19 million were recognized, impacting operational EBITA margin by 30 basis points.

Corporate and Other orders and revenues primarily represent intersegment eliminations.

Capital structure optimization

ABB divested 80.1 percent of its Power Grids business to Hitachi on July 1, 2020, as planned, delivering on an important milestone in the company's transformation agenda as announced in December 2018.

ABB is committed to returning to shareholders net cash proceeds from the Power Grids divestment of \$7.6-7.8 billion. ABB will initially launch a share buyback program of 10 percent⁶ of the company's share capital to begin imminently. This represents about 180 million shares in addition to those already held in treasury.

Also, as part of the overall capital structure optimization program, ABB has now repaid fully the €2 billion short-term revolving credit facility put in place to strengthen liquidity in the face of COVID-19. The Group plans to implement further deleveraging actions, including a review of certain defined benefit pension structures, as well as repayment of a €1 billion bond that matures in October 2020. ABB aims to maintain its single A credit rating.

"ABB's capital structure optimization during the coming years will focus on shareholder returns, by executing on its share buyback program, as planned, as well as by improving the company's risk profile and finance costs through an efficient deleveraging strategy. In these challenging times, ABB has a resilient financial framework and strong balance sheet," said Timo Ihamuotila, CFO of ABB.

Transformation progress

ABB's CEO presented his First Perspectives to investors on June 10, 2020, outlining ABB's way forward on creating value for shareholders, customers and employees. Following a new ABB Way of working, the Group intends to accelerate its transition to a fully decentralized operating model. This comprises four business areas – Electrification, Industrial Automation, Motion and Robotics & Discrete Automation – with 18 divisions, governed by a lean corporate. Going forward, the 18 divisions will have full accountability for their P&L and operational balance sheet. ABB's management team will prioritize improvement of the Group's financial performance, with a clear profitability focus for underperforming

⁶ Maximum 10 percent of the company's issued share capital, including treasury shares.

divisions, as well as active portfolio management. A new, division level, scorecard system using standardized KPIs to measure performance and drive continuous improvement will be introduced in the third quarter of 2020. ABB is on track for faster delivery of ~\$500 million per annum net savings initiated through the ABB-OS simplification program.

ABB plans to host a Capital Markets Day in November 2020 that will provide more detail on the portfolio's evolution and business area and divisional strategies, while also setting out ABB's 2030 sustainability targets.

Short-term outlook

The global economy is expected to contract in 2020 after a rapid deterioration in outlook driven by the COVID-19 pandemic. Despite unprecedented stimuli by governments and central banks around the world and a recovery in economic activity in China in the second quarter, macro-indicators continue to point to a deep global recession with uncertainty around the pace of recovery. Many countries continue to face ongoing or new restrictions, with anticipated long-term economic consequences.

The impact of COVID-19 continues to weigh on the short-term outlook across many end-markets, and particularly in oil and gas, conventional power generation, automotive, marine and buildings. Some end markets such as electrical distribution, transport, data centers and food and beverage continue to show relative resilience.

Potential easing of COVID-19 impacts remain subject to considerable uncertainties. Against this background, ABB expects some improvement in year-on-year order decline already in the third quarter. Revenues are expected to remain strongly impacted on a year-on-year basis, at best recovering somewhat in the fourth quarter.

As ABB continues to adapt its operations and cost base to safeguard profitability, it expects its operational margin to steady on a sequential basis. The company anticipates resilient cash delivery for the full year.

More information

The Q2 2020 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. A conference call and webcast for analysts and investors is scheduled to begin today at 10:00 a.m. CEST (9:00 a.m. BST). To pre-register for the conference call or to join the webcast, please refer to the ABB website: www.abb.com/investorrelations. The recorded session will be available after the event on ABB's website.

ABB (ABBN: SIX Swiss Ex) is a leading global technology company that energizes the transformation of society and industry to achieve a more productive, sustainable future. By connecting software to its electrification, robotics, automation and motion portfolio, ABB pushes the boundaries of technology to drive performance to new levels. With a history of excellence stretching back more than 130 years, ABB's success is driven by about 110,000 talented employees in over 100 countries.

INVESTOR CALENDAR	
Q3 2020 results	October 23, 2020
Capital Markets Day	November 2020

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 "Capital structure optimization", "Transformation progress" and "Short-term outlook". 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. These expectations, estimates and projections are generally identifiable by statements containing words such as "anticipates", "expects," "believes," "estimates," "plans", "targets" 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, July 22, 2020

Björn Rosengren, CEO

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July 22, 2020

Q2 2020

Financial information

Financial Information

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Key Figures

(\$ in millions, unless otherwise indicated)	Q2 2020	Q2 2019	CHANGE	
			US\$	Comparable ⁽¹⁾
Orders	6,054	7,401	-18%	-14%
Order backlog (end June)	13,917	14,016	-1%	5%
Revenues	6,154	7,171	-14%	-10%
Income from operations	571	123	364%	
Operational EBITA ⁽¹⁾	651	825	-21%	-20% ⁽²⁾
as % of operational revenues ⁽¹⁾	10.6%	11.5%	-0.9 pts	
Income from continuing operations, net of tax	395	(54)	n.a.	
Net income attributable to ABB	319	64	398%	
Basic earnings per share (\$)	0.15	0.03	398% ⁽³⁾	
Operational earnings per share ⁽¹⁾ (\$)	0.22	0.34	-35% ⁽³⁾	-33% ⁽³⁾
Cash flow from operating activities ⁽⁴⁾	680	-	n.a	

(\$ in millions, unless otherwise indicated)	H1 2020	H1 2019	CHANGE	
			US\$	Comparable ⁽¹⁾
Orders	13,400	15,014	-11%	-7%
Revenues	12,370	14,018	-12%	-8%
Income from operations	944	713	32%	
Operational EBITA ⁽¹⁾	1,287	1,591	-19%	-18% ⁽²⁾
as % of operational revenues ⁽¹⁾	10.4%	11.4%	-1.0 pts	
Income from continuing operations, net of tax	721	361	100%	
Net income attributable to ABB	695	599	16%	
Basic earnings per share (\$)	0.33	0.28	16% ⁽³⁾	
Operational earnings per share ⁽¹⁾ (\$)	0.52	0.64	-19% ⁽³⁾	-18% ⁽³⁾
Cash flow from operating activities ⁽⁴⁾	103	(256)	n.a	

(1) For a reconciliation of non-GAAP measures see “[Supplemental Reconciliations and Definitions](#)” on page 36.

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

(3) EPS growth rates are computed using unrounded amounts. Comparable operational earnings per share is in constant currency (2019 exchange rates not adjusted for changes in the business portfolio).

(4) Cash flow from operating activities includes both continuing and discontinued operations.

(\$ in millions, unless otherwise indicated)		Q2 2020	Q2 2019	CHANGE		
				US\$	Local	Comparable
Orders	ABB Group	6,054	7,401	-18%	-16%	-14%
	Electrification	2,737	3,339	-18%	-16%	-12%
	Industrial Automation	1,305	1,622	-20%	-17%	-17%
	Motion	1,586	1,762	-10%	-7%	-7%
	Robotics & Discrete Automation	638	883	-28%	-25%	-25%
	<i>Corporate and Other</i> <i>(incl. intersegment eliminations)</i>	(212)	(205)			
Order backlog (end June)	ABB Group	13,917	14,016	-1%	3%	5%
	Electrification	4,465	4,553	-2%	1%	6%
	Industrial Automation	5,210	5,240	-1%	3%	3%
	Motion	3,384	3,050	11%	13%	13%
	Robotics & Discrete Automation	1,478	1,586	-7%	-4%	-4%
	<i>Corporate and Other</i> <i>(incl. intersegment eliminations)</i>	(620)	(413)			
Revenues	ABB Group	6,154	7,171	-14%	-12%	-10%
	Electrification	2,764	3,272	-16%	-13%	-10%
	Industrial Automation	1,382	1,580	-13%	-9%	-9%
	Motion	1,583	1,641	-4%	-1%	-1%
	Robotics & Discrete Automation	629	845	-26%	-23%	-23%
	<i>Corporate and Other</i> <i>(incl. intersegment eliminations)</i>	(204)	(167)			
Income from operations	ABB Group	571	123			
	Electrification	305	(104)			
	Industrial Automation	117	187			
	Motion	284	249			
	Robotics & Discrete Automation	18	76			
	<i>Corporate and Other</i> <i>(incl. intersegment eliminations)</i>	(153)	(285)			
Income from operations %	ABB Group	9.3%	1.7%			
	Electrification	11.0%	(3.2)%			
	Industrial Automation	8.5%	11.8%			
	Motion	17.9%	15.2%			
	Robotics & Discrete Automation	2.9%	9.0%			
Operational EBITA	ABB Group	651	825	-21%	-20%	
	Electrification	348	440	-21%	-18%	
	Industrial Automation	115	190	-39%	-37%	
	Motion	279	275	1%	4%	
	Robotics & Discrete Automation	43	105	-59%	-58%	
	<i>Corporate and Other⁽¹⁾</i> <i>(incl. intersegment eliminations)</i>	(134)	(185)			
Operational EBITA %	ABB Group	10.6%	11.5%			
	Electrification	12.6%	13.5%			
	Industrial Automation	8.4%	12.1%			
	Motion	17.7%	16.7%			
	Robotics & Discrete Automation	6.8%	12.3%			
Cash flow from operating activities	ABB Group	680	-			
	Electrification	277	232			
	Industrial Automation	75	(4)			
	Motion	279	152			
	Robotics & Discrete Automation	57	67			
	<i>Corporate and Other</i> <i>(incl. intersegment eliminations)</i>	(40)	(516)			
	<i>Discontinued operations</i>	32	69			

(1) Corporate and Other includes Stranded corporate costs of \$19 million and \$66 million for the three months ended June 30, 2020 and 2019, respectively.

(\$ in millions, unless otherwise indicated)		H1 2020	H1 2019	CHANGE		
				US\$	Local	Comparable
Orders	ABB Group	13,400	15,014	-11%	-9%	-7%
	Electrification	5,858	6,702	-13%	-10%	-7%
	Industrial Automation	3,062	3,288	-7%	-4%	-4%
	Motion	3,487	3,562	-2%	0%	0%
	Robotics & Discrete Automation	1,449	1,850	-22%	-19%	-19%
	<i>Corporate and Other</i> <i>(incl. intersegment eliminations)</i>	(456)	(388)			
Order backlog (end June)	ABB Group	13,917	14,016	-1%	3%	5%
	Electrification	4,465	4,553	-2%	1%	6%
	Industrial Automation	5,210	5,240	-1%	3%	3%
	Motion	3,384	3,050	11%	13%	13%
	Robotics & Discrete Automation	1,478	1,586	-7%	-4%	-4%
	<i>Corporate and Other</i> <i>(incl. intersegment eliminations)</i>	(620)	(413)			
Revenues	ABB Group	12,370	14,018	-12%	-9%	-8%
	Electrification	5,537	6,329	-13%	-10%	-9%
	Industrial Automation	2,844	3,098	-8%	-5%	-5%
	Motion	3,093	3,246	-5%	-3%	-3%
	Robotics & Discrete Automation	1,300	1,696	-23%	-21%	-21%
	<i>Corporate and Other</i> <i>(incl. intersegment eliminations)</i>	(404)	(351)			
Income from operations	ABB Group	944	713			
	Electrification	504	193			
	Industrial Automation	241	382			
	Motion	475	500			
	Robotics & Discrete Automation	50	153			
	<i>Corporate and Other</i> <i>(incl. intersegment eliminations)</i>	(326)	(515)			
Income from operations %	ABB Group	7.6%	5.1%			
	Electrification	9.1%	3.0%			
	Industrial Automation	8.5%	12.3%			
	Motion	15.4%	15.4%			
	Robotics & Discrete Automation	3.8%	9.0%			
Operational EBITA	ABB Group	1,287	1,591	-19%	-18%	
	Electrification	666	817	-18%	-16%	
	Industrial Automation	259	395	-34%	-33%	
	Motion	509	538	-5%	-4%	
	Robotics & Discrete Automation	102	200	-49%	-47%	
	<i>Corporate and Other⁽¹⁾</i> <i>(incl. intersegment eliminations)</i>	(249)	(359)			
Operational EBITA %	ABB Group	10.4%	11.4%			
	Electrification	12.0%	12.9%			
	Industrial Automation	9.1%	12.8%			
	Motion	16.5%	16.6%			
	Robotics & Discrete Automation	7.8%	11.8%			
Cash flow from operating activities	ABB Group	103	(256)			
	Electrification	212	230			
	Industrial Automation	34	40			
	Motion	388	295			
	Robotics & Discrete Automation	110	95			
	<i>Corporate and Other</i> <i>(incl. intersegment eliminations)</i>	(492)	(826)			
	<i>Discontinued operations</i>	(149)	(90)			

(1) Corporate and Other includes Stranded corporate costs of \$40 million and \$133 million for the six months ended June 30, 2020 and 2019, respectively.

Operational EBITA

	ABB		Electrification		Industrial Automation		Motion		Robotics & Discrete Automation	
(\$ in millions, unless otherwise indicated)	Q2 20	Q2 19	Q2 20	Q2 19	Q2 20	Q2 19	Q2 20	Q2 19	Q2 20	Q2 19
Revenues	6,154	7,171	2,764	3,272	1,382	1,580	1,583	1,641	629	845
Foreign exchange/commodity timing differences in total revenues	(16)	3	–	(4)	(18)	(5)	(4)	1	4	7
Operational revenues	6,138	7,174	2,764	3,268	1,364	1,575	1,579	1,642	633	852
Income (loss) from operations	571	123	305	(104)	117	187	284	249	18	76
Acquisition-related amortization	65	67	29	30	1	1	13	13	19	19
Restructuring, related and implementation costs	67	74	29	13	13	7	9	2	4	2
Changes in obligations related to divested businesses	1	4	–	–	–	–	–	–	–	–
Changes in pre-acquisition estimates	–	13	–	13	–	–	–	–	–	–
Gains and losses from sale of businesses	4	3	4	(4)	–	–	–	–	–	–
Fair value adjustment on assets and liabilities held for sale	–	455	–	455	–	–	–	–	–	–
Acquisition- and divestment-related expenses and integration costs	16	30	16	29	–	–	–	–	–	1
Certain other non-operational items	–	43	(7)	1	1	–	4	2	1	1
Foreign exchange/commodity timing differences in income from operations	(73)	13	(28)	7	(17)	(5)	(31)	9	1	6
Operational EBITA	651	825	348	440	115	190	279	275	43	105
Operational EBITA margin (%)	10.6%	11.5%	12.6%	13.5%	8.4%	12.1%	17.7%	16.7%	6.8%	12.3%

	ABB		Electrification		Industrial Automation		Motion		Robotics & Discrete Automation	
(\$ in millions, unless otherwise indicated)	H1 20	H1 19	H1 20	H1 19	H1 20	H1 19	H1 20	H1 19	H1 20	H1 19
Revenues	12,370	14,018	5,537	6,329	2,844	3,098	3,093	3,246	1,300	1,696
Foreign exchange/commodity timing differences in total revenues	9	(8)	10	(9)	(1)	(5)	(7)	1	2	3
Operational revenues	12,379	14,010	5,547	6,320	2,843	3,093	3,086	3,247	1,302	1,699
Income from operations	944	713	504	193	241	382	475	500	50	153
Acquisition-related amortization	130	135	57	59	2	2	26	27	38	39
Restructuring, related and implementation costs	107	142	44	53	16	12	11	5	11	3
Changes in obligations related to divested businesses	1	7	–	–	–	–	–	–	–	–
Changes in pre-acquisition estimates	–	13	–	13	–	–	–	–	–	–
Gains and losses from sale of businesses	5	4	5	(3)	–	–	–	–	–	–
Fair value adjustment on assets and liabilities held for sale	19	455	19	455	–	–	–	–	–	–
Acquisition- and divestment-related expenses and integration costs	27	54	27	51	–	–	–	–	–	1
Certain other non-operational items	47	76	(7)	2	1	2	9	5	2	1
Foreign exchange/commodity timing differences in income from operations	7	(8)	17	(6)	(1)	(3)	(12)	1	1	3
Operational EBITA	1,287	1,591	666	817	259	395	509	538	102	200
Operational EBITA margin (%)	10.4%	11.4%	12.0%	12.9%	9.1%	12.8%	16.5%	16.6%	7.8%	11.8%

Depreciation and Amortization

	ABB		Electrification		Industrial Automation		Motion		Robotics & Discrete Automation	
(\$ in millions)	Q2 20	Q2 19	Q2 20	Q2 19	Q2 20	Q2 19	Q2 20	Q2 19	Q2 20	Q2 19
Depreciation	147	160	63	63	14	12	28	28	11	11
Amortization	81	89	34	39	3	2	13	14	19	20
including total acquisition-related amortization of:	65	67	29	30	1	1	13	13	19	19

	ABB		Electrification		Industrial Automation		Motion		Robotics & Discrete Automation	
(\$ in millions)	H1 20	H1 19	H1 20	H1 19	H1 20	H1 19	H1 20	H1 19	H1 20	H1 19
Depreciation	292	304	124	128	26	23	56	56	22	22
Amortization	163	176	68	76	5	4	27	29	39	40
including total acquisition-related amortization of:	130	135	57	59	2	2	26	27	38	39

Orders received and revenues by region

(\$ in millions, unless otherwise indicated)	Orders received		CHANGE			Revenues		CHANGE		
	Q2 20	Q2 19	US\$	Local	Comparable	Q2 20	Q2 19	US\$	Local	Comparable
Europe	2,181	2,658	-18%	-15%	-14%	2,217	2,535	-13%	-9%	-8%
The Americas	1,758	2,379	-26%	-24%	-23%	1,872	2,321	-19%	-18%	-17%
Asia, Middle East and Africa	2,056	2,321	-11%	-8%	-5%	2,004	2,258	-11%	-9%	-5%
Intersegment orders/revenues ⁽¹⁾	59	43				61	57			
ABB Group	6,054	7,401	-18%	-16%	-14%	6,154	7,171	-14%	-12%	-10%

(\$ in millions, unless otherwise indicated)	Orders received		CHANGE			Revenues		CHANGE		
	H1 20	H1 19	US\$	Local	Comparable	H1 20	H1 19	US\$	Local	Comparable
Europe	4,994	5,439	-8%	-5%	-4%	4,588	4,982	-8%	-5%	-4%
The Americas	3,998	4,611	-13%	-12%	-11%	3,964	4,519	-12%	-11%	-11%
Asia, Middle East and Africa	4,286	4,862	-12%	-9%	-6%	3,710	4,407	-16%	-14%	-11%
Intersegment orders/revenues ⁽¹⁾	122	102				108	110			
ABB Group	13,400	15,014	-11%	-9%	-7%	12,370	14,018	-12%	-9%	-8%

(1) Intersegment orders/revenues include sales to the Power Grids business which is presented as discontinued operations and are not eliminated from Total orders/revenues.

Consolidated Financial Information

ABB Ltd Consolidated Income Statements (unaudited)

(\$ in millions, except per share data in \$)	Six months ended		Three months ended	
	Jun. 30, 2020	Jun. 30, 2019	Jun. 30, 2020	Jun. 30, 2019
Sales of products	10,028	11,392	5,035	5,832
Sales of services and other	2,342	2,626	1,119	1,339
Total revenues	12,370	14,018	6,154	7,171
Cost of sales of products	(7,039)	(7,946)	(3,464)	(4,069)
Cost of services and other	(1,434)	(1,563)	(703)	(802)
Total cost of sales	(8,473)	(9,509)	(4,167)	(4,871)
Gross profit	3,897	4,509	1,987	2,300
Selling, general and administrative expenses	(2,432)	(2,784)	(1,180)	(1,429)
Non-order related research and development expenses	(521)	(583)	(262)	(298)
Other income (expense), net	–	(429)	26	(450)
Income from operations	944	713	571	123
Interest and dividend income	27	37	9	18
Interest and other finance expense	(112)	(123)	(90)	(61)
Non-operational pension (cost) credit	71	44	35	21
Income from continuing operations before taxes	930	671	525	101
Provision for taxes	(209)	(310)	(130)	(155)
Income (loss) from continuing operations, net of tax	721	361	395	(54)
Income (loss) from discontinued operations, net of tax	5	291	(49)	142
Net income	726	652	346	88
Net income attributable to noncontrolling interests	(31)	(53)	(27)	(24)
Net income attributable to ABB	695	599	319	64
Amounts attributable to ABB shareholders:				
Income (loss) from continuing operations, net of tax	703	325	378	(72)
Income (loss) from discontinued operations, net of tax	(8)	274	(59)	136
Net income	695	599	319	64
Basic earnings per share attributable to ABB shareholders:				
Income (loss) from continuing operations, net of tax	0.33	0.15	0.18	(0.03)
Income (loss) from discontinued operations, net of tax	0.00	0.13	(0.03)	0.06
Net income	0.33	0.28	0.15	0.03
Diluted earnings per share attributable to ABB shareholders:				
Income (loss) from continuing operations, net of tax	0.33	0.15	0.18	(0.03)
Income (loss) from discontinued operations, net of tax	0.00	0.13	(0.03)	0.06
Net income	0.33	0.28	0.15	0.03
Weighted-average number of shares outstanding (in millions) used to compute:				
Basic earnings per share attributable to ABB shareholders	2,134	2,132	2,134	2,132
Diluted earnings per share attributable to ABB shareholders	2,137	2,134	2,137	2,132

Due to rounding, numbers presented may not add to the totals provided.

See Notes to the Consolidated Financial Information

ABB Ltd Condensed Consolidated Statements of Comprehensive Income (unaudited)

(\$ in millions)	Six months ended		Three months ended	
	Jun. 30, 2020	Jun. 30, 2019	Jun. 30, 2020	Jun. 30, 2019
Total comprehensive income, net of tax	484	652	611	90
Total comprehensive income attributable to noncontrolling interests, net of tax	(27)	(54)	(31)	(19)
Total comprehensive income attributable to ABB shareholders, net of tax	457	598	580	71

Due to rounding, numbers presented may not add to the totals provided.

See Notes to the Consolidated Financial Information

ABB Ltd Consolidated Balance Sheets (unaudited)

(\$ in millions, except share data)	Jun. 30, 2020	Dec. 31, 2019
Cash and equivalents	2,518	3,544
Marketable securities and short-term investments	1,878	566
Receivables, net	6,150	6,434
Contract assets	1,110	1,025
Inventories, net	4,395	4,184
Prepaid expenses	256	191
Other current assets	668	674
Current assets held for sale and in discontinued operations	10,712	9,840
Total current assets	27,687	26,458
Property, plant and equipment, net	3,861	3,972
Operating lease right-of-use assets	890	994
Goodwill	10,830	10,825
Other intangible assets, net	2,112	2,252
Prepaid pension and other employee benefits	145	133
Investments in equity-accounted companies	37	33
Deferred taxes	840	910
Other non-current assets	501	531
Total assets	46,903	46,108
Accounts payable, trade	4,062	4,353
Contract liabilities	1,703	1,719
Short-term debt and current maturities of long-term debt	6,383	2,287
Current operating leases	282	305
Provisions for warranties	777	816
Other provisions	1,329	1,375
Other current liabilities	3,447	3,761
Current liabilities held for sale and in discontinued operations	5,226	5,650
Total current liabilities	23,209	20,266
Long-term debt	6,237	6,772
Non-current operating leases	635	717
Pension and other employee benefits	1,845	1,793
Deferred taxes	840	911
Other non-current liabilities	1,562	1,669
Total liabilities	34,328	32,128
<i>Commitments and contingencies</i>		
Stockholders' equity:		
Common stock, CHF 0.12 par value (2,168,148,264 issued shares at June 30, 2020, and December 31, 2019)	188	188
Additional paid-in capital	62	73
Retained earnings	18,495	19,640
Accumulated other comprehensive loss	(5,828)	(5,590)
Treasury stock, at cost (33,573,603 and 34,647,153 shares at June 30, 2020, and December 31, 2019, respectively)	(761)	(785)
Total ABB stockholders' equity	12,156	13,526
Noncontrolling interests	419	454
Total stockholders' equity	12,575	13,980
Total liabilities and stockholders' equity	46,903	46,108

Due to rounding, numbers presented may not add to the totals provided.

See Notes to the Consolidated Financial Information

ABB Ltd Consolidated Statements of Cash Flows (unaudited)

(\$ in millions)	Six months ended		Three months ended	
	Jun. 30, 2020	Jun. 30, 2019	Jun. 30, 2020	Jun. 30, 2019
Operating activities:				
Net income	726	652	346	88
Loss (income) from discontinued operations, net of tax	(5)	(291)	49	(142)
Adjustments to reconcile net income to net cash provided by (used in) operating activities:				
Depreciation and amortization	455	480	228	249
Deferred taxes	(1)	(62)	(45)	(33)
Net loss (gain) from derivatives and foreign exchange	25	(4)	(48)	22
Net loss (gain) from sale of property, plant and equipment	(4)	(40)	4	(6)
Net loss (gain) from sale of businesses	5	4	4	3
Fair value adjustment on assets and liabilities held for sale	19	455	–	455
Share-based payment arrangements	21	25	14	14
Other	(105)	(60)	(68)	(34)
Changes in operating assets and liabilities:				
Trade receivables, net	58	(151)	119	(66)
Contract assets and liabilities	(87)	(142)	(46)	(114)
Inventories, net	(114)	(286)	187	(73)
Accounts payable, trade	(214)	(195)	(147)	112
Accrued liabilities	(75)	(285)	(16)	(439)
Provisions, net	(60)	(5)	(7)	13
Income taxes payable and receivable	(157)	(30)	61	(41)
Other assets and liabilities, net	(235)	(231)	13	(77)
Net cash provided by (used in) operating activities – continuing operations	252	(166)	648	(69)
Net cash provided by (used in) operating activities – discontinued operations	(149)	(90)	32	69
Net cash provided by (used in) operating activities	103	(256)	680	–
Investing activities:				
Purchases of investments	(1,614)	(680)	(1,372)	(150)
Purchases of property, plant and equipment and intangible assets	(303)	(376)	(140)	(169)
Acquisition of businesses (net of cash acquired) and increases in cost- and equity-accounted companies	(80)	(6)	(7)	(4)
Proceeds from sales of investments	455	540	62	120
Proceeds from maturity of investments	–	80	–	80
Proceeds from sales of property, plant and equipment	27	54	4	6
Proceeds from sales of businesses (net of transaction costs and cash disposed) and cost- and equity-accounted companies	(142)	18	(2)	39
Net cash from settlement of foreign currency derivatives	(76)	(51)	53	(53)
Other investing activities	(14)	(4)	1	(4)
Net cash used in investing activities – continuing operations	(1,747)	(425)	(1,401)	(135)
Net cash used in investing activities – discontinued operations	(110)	(81)	(73)	(37)
Net cash used in investing activities	(1,857)	(506)	(1,474)	(172)
Financing activities:				
Net changes in debt with original maturities of 90 days or less	3,582	916	(146)	460
Increase in debt	315	2,230	251	1,369
Repayment of debt	(568)	(1,533)	(388)	(93)
Dividends paid	(1,736)	(1,675)	(1,736)	(1,675)
Dividends paid to noncontrolling shareholders	(71)	(73)	(69)	(71)
Other financing activities	(104)	23	–	7
Net cash provided by (used in) financing activities – continuing operations	1,418	(112)	(2,088)	(3)
Net cash provided by (used in) financing activities – discontinued operations	17	(51)	25	(27)
Net cash provided by (used in) financing activities	1,435	(163)	(2,063)	(30)
Effects of exchange rate changes on cash and equivalents	(98)	(8)	13	(20)
Adjustment for the net change in cash and equivalents in discontinued operations	(609)	–	(609)	–
Net change in cash and equivalents	(1,026)	(933)	(3,453)	(222)
Cash and equivalents, beginning of period	3,544	3,445	5,971	2,734
Cash and equivalents, end of period	2,518	2,512	2,518	2,512
Supplementary disclosure of cash flow information:				
Interest paid	102	158	86	100
Income taxes paid	462	487	196	261

Due to rounding, numbers presented may not add to the totals provided.

See Notes to the Consolidated Financial Information

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

(\$ in millions)	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive loss	Treasury stock	Total ABB stockholders' equity	Non-controlling interests	Total stockholders' equity
Balance at January 1, 2019	188	56	19,839	(5,311)	(820)	13,952	582	14,534
Adoption of accounting standard update			36	(36)		–		–
Comprehensive income:								
Net income			599			599	53	652
Foreign currency translation adjustments, net of tax of \$(4)				(54)		(54)	1	(53)
Effect of change in fair value of available-for-sale securities, net of tax of \$2				13		13		13
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax of \$15				35		35		35
Change in derivatives qualifying as cash flow hedges, net of tax of \$0				5		5		5
Total comprehensive income						598	54	652
Changes in noncontrolling interests		(5)				(5)	(1)	(6)
Fair value adjustment to noncontrolling interests recognized in business combination						–	(44)	(44)
Dividends to noncontrolling shareholders						–	(109)	(109)
Dividends paid to shareholders			(1,675)			(1,675)		(1,675)
Share-based payment arrangements		30				30		30
Delivery of shares		(20)			20	–		–
Balance at June 30, 2019	188	62	18,800	(5,349)	(801)	12,900	483	13,383
Balance at January 1, 2020	188	73	19,640	(5,590)	(785)	13,526	454	13,980
Adoption of accounting standard update			(82)			(82)	(9)	(91)
Comprehensive income:								
Net income			695			695	31	726
Foreign currency translation adjustments, net of tax of \$(2)				(283)		(283)	(4)	(287)
Effect of change in fair value of available-for-sale securities, net of tax of \$4				15		15		15
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax of \$7				34		34		34
Change in derivatives qualifying as cash flow hedges, net of tax of \$0				(4)		(4)		(4)
Total comprehensive income						457	27	484
Changes in noncontrolling interests		(16)				(16)	36	20
Dividends to noncontrolling shareholders						–	(88)	(88)
Dividends paid to shareholders			(1,758)			(1,758)		(1,758)
Share-based payment arrangements		30				30		30
Delivery of shares		(24)			24	–		–
Balance at June 30, 2020	188	62	18,495	(5,828)	(761)	12,156	419	12,575

Due to rounding, numbers presented may not add to the totals provided.

See Notes to the Consolidated Financial Information

Notes to the Consolidated Financial Information (unaudited)

Note 1

The Company and basis of presentation

ABB Ltd and its subsidiaries (collectively, the Company) together form a leading global technology company, connecting software to its electrification, robotics, automation and motion portfolio to drive performance to new levels.

The Company's 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 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, 2019.

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 Consolidated Financial Information. These accounting assumptions and estimates include:

- growth rates, discount rates and other assumptions used to determine impairment of long-lived assets and in testing goodwill for impairment,
- estimates to determine valuation allowances for deferred tax assets and amounts recorded for uncertain tax positions,
- assumptions used in determining inventory obsolescence and net realizable value,
- estimates and judgements used to measure credit losses,
- estimates and assumptions used in determining the fair values of assets and liabilities assumed in business combinations,
- assumptions used in the determination of corporate costs directly attributable to discontinued operations,
- 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,
- estimates used to record expected costs for employee severance in connection with restructuring programs,
- assumptions used in the calculation of pension and postretirement benefits and the fair value of pension plan assets, and
- assumptions and projections, principally related to future material, labor and project related overhead costs, used in determining the percentage of completion on projects, as well as the amount of variable consideration the Company expects to be entitled to.

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, contract assets, inventories and provisions related to these contracts which will not be realized within one year that have been classified as current.

Basis of presentation

In the opinion of management, the unaudited Consolidated Financial Information contains all necessary adjustments to present fairly the financial position, results of operations and cash flows for the reported periods. Management considers all such adjustments to be of a normal recurring nature. The Consolidated Financial Information is presented in United States dollars (\$) unless otherwise stated. Due to rounding, numbers presented in the Consolidated Financial Information may not add to the totals provided.

Adjustment related to prior periods

In the three months ended June 30, 2020, the Company recorded a cumulative adjustment to increase the value of certain privately-held equity investments to fair value based on observable market price changes for an identical or similar investment of the same issuer (Level 2 inputs). These changes in fair value primarily occurred in 2019 and 2018. The correction resulted in a gain of \$58 million being recorded in "Other income (expense)" in the Interim Consolidated Income Statements for the three months ended June 30, 2020. 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

Measurement of credit losses on financial instruments

In January 2020, the Company adopted a new accounting standard update, along with additional related updates containing targeted improvements and clarifications, that replaces the previous incurred loss impairment methodology for most financial assets with a new “current expected credit loss” model. The new model requires 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. Measurement of expected credit losses is now based on historical experience, current conditions, and reasonable and supportable forecasts. The update also requires additional disclosures related to estimates and judgments used to measure credit losses. Credit losses relating to available-for-sale debt securities are now measured in a manner similar to the loss impairment methodology, except that the losses are recorded through an allowance for credit losses rather than as a direct write-down of the security.

The Company has adopted these updates on a modified retrospective basis and has therefore recorded a cumulative-effect adjustment of \$91 million to the opening balance of retained earnings on January 1, 2020, relating to an increase in the allowance for credit losses on financial assets carried at amortized cost.

Disclosure Framework — Changes to the disclosure requirements for fair value measurement

In January 2020, the Company adopted a new accounting standard update which modified the disclosure requirements for fair value measurements. The update eliminates the requirements to disclose the amount of and reasons for transfers between Level 1 and 2 of the fair value hierarchy, the timing of transfers between levels and the Level 3 valuation process, while expanding the Level 3 disclosures to include the range and weighted-average used to develop significant unobservable inputs and the changes in unrealized gains and losses on recurring fair value measurements. This update was applied prospectively for the changes and modifications to the Level 3 disclosures, while all other amendments were applied retrospectively. The update does not have a significant impact on the Company's consolidated financial statements.

Applicable for future periods

Simplifying the accounting for income taxes

In December 2019, an accounting standard update was issued which enhances and simplifies various aspects of the income tax accounting guidance related to intraperiod tax allocations, ownership changes in investments, and certain aspects of interim period tax accounting. This update is effective for the Company for annual and interim periods beginning January 1, 2021, with early adoption in any interim period permitted. Depending on the amendment, adoption may be applied on a retrospective, modified retrospective or prospective basis. The Company is currently evaluating the impact of this update on its consolidated financial statements.

Facilitation of the effects of reference rate reform on financial reporting

In March 2020, an accounting standard update was issued which provides temporary optional expedients and exceptions to the current guidance on contract modifications and hedge accounting to ease the financial reporting burdens related to the expected market transition from the London Interbank Offered Rate (LIBOR) and other interbank offered rates to alternative reference rates. The update can be adopted and applied no later than December 31, 2022, with early adoption permitted. The Company is currently evaluating the impact of adopting this optional guidance on its consolidated financial statements.

Note 3

Discontinued operations, business divestments and assets held for sale

Discontinued operations

The Company reports a disposal, or planned disposal, of a component or a group of components as a discontinued operation if the disposal represents a strategic shift that has or will have a major effect on the Company's operations and financial results. A strategic shift could include a disposal of a major geographical area, a major line of business or other major parts of the Company. A component may be a reportable segment or an operating segment, a reporting unit, a subsidiary, or an asset group.

Assets and liabilities of a component reported as a discontinued operation are presented as held for sale and in discontinued operations in the Company's Consolidated Balance Sheets.

Interest expense that is not directly attributable to or related to the Company's continuing business or discontinued business is allocated to discontinued operations based on the ratio of net assets to be sold less debt that is required to be paid as a result of the planned disposal transaction to the sum of total net assets of the Company plus consolidated debt. General corporate overhead is not allocated to discontinued operations.

On December 17, 2018, the Company announced an agreement to divest 80.1 percent of its Power Grids business to Hitachi Ltd. (Hitachi) valuing the business at \$11 billion. As this divestment represents a strategic shift that will have a major effect on the Company's operations and financial results, the results of operations for this business have been presented as discontinued operations and the assets and liabilities are reflected as held for sale for all periods presented. In addition, amounts relating to stranded corporate costs have been excluded from discontinued operations and are included as a component of Corporate and Other. Stranded costs represent overhead and other management costs which were previously able to be included in the measure of segment profit (Operational EBITA) for the former Power Grids operating segment but are not directly attributable to the discontinued operation and thus do not qualify to be recorded as part of income from discontinued operations. The sale was completed on July 1, 2020. The assets and liabilities and results of operations related the Power Grids business remained classified as held for sale and discontinued operations as of June 30, 2020.

Operating results of the discontinued operations are summarized as follows:

(\$ in millions)	Six months ended		Three months ended	
	Jun. 30, 2020	Jun. 30, 2019	Jun. 30, 2020	Jun. 30, 2019
Total revenues	4,008	4,455	2,067	2,326
Total cost of sales	(3,058)	(3,382)	(1,587)	(1,792)
Gross profit	950	1,073	480	535
Expenses	(780)	(657)	(386)	(327)
Income from operations	170	417	94	208
Net interest and other finance expense	(5)	(28)	(2)	(14)
Non-operational pension (cost) credit	(94)	6	(97)	3
Income (loss) from discontinued operations before taxes	70	395	(6)	197
Provision for taxes	(65)	(104)	(43)	(55)
Income (loss) from discontinued operations, net of tax	5	291	(49)	142

Of the total Income (loss) from discontinued operations before taxes in the table above, \$55 million and \$379 million in the six months ended June 30, 2020 and 2019, respectively, and \$(17) million and \$193 million in the three months ended June 30, 2020 and 2019, respectively, are attributable to the Company, while the remainder is attributable to noncontrolling interests.

Income from discontinued operations before taxes excludes stranded costs which were previously able to be allocated to the former Power Grids operating segment. As a result, for the six months ended June 30, 2020 and 2019, \$40 million and \$133 million, respectively, and in the three months ended June 30, 2020 and 2019, \$19 million and \$66 million, respectively, of allocated overhead and other management costs, which were previously able to be included in the measure of segment profit for the Power Grids operating segment are now reported as part of Corporate and Other. In the table above, Net interest and other finance expense in the six months ended June 30, 2020 and 2019, includes \$20 million and \$24 million, respectively, and in the three months ended June 30, 2020 and 2019, includes \$11 million and \$12 million, respectively, of interest expense which has been recorded on an allocated basis in accordance with the Company's accounting policy election. In addition, as required by U.S. GAAP, subsequent to December 17, 2018, the Company has not recorded depreciation or amortization on the property, plant and equipment, and intangible assets reported as discontinued operations.

Included in the reported Total revenues of the Company for the six months ended June 30, 2020 and 2019, are revenues from the Company's operating segments' sales to the Power Grids business of \$108 million and \$109 million, respectively, and for the three months ended June 30, 2020 and 2019, of \$61 million and \$56 million, respectively, which represent intercompany transactions that, prior to Power Grids being classified as a discontinued operation, were eliminated in the Company's Consolidated Financial Information (see Note 16).

In addition, the Company also has retained obligations (primarily for environmental and taxes) related to other businesses disposed or otherwise exited that qualified as discontinued operations. Changes to these retained obligations are also included in Income from discontinued operations, net of tax, above.

The major components of assets and liabilities held for sale in the Company's Consolidated Balance Sheets are summarized as follows:

(\$ in millions)	Jun. 30, 2020	Dec. 31, 2019
Cash and equivalents	609	–
Receivables, net	2,393	2,541
Contract assets	1,269	1,243
Inventories, net	1,754	1,667
Property, plant and equipment, net	1,860	1,754
Goodwill	1,621	1,631
Other current assets	1,206	1,004
Current assets held for sale and in discontinued operations	10,712	9,840
Accounts payable, trade	1,594	1,722
Contract liabilities	1,273	1,121
Pension and other employee benefits	221	419
Other current liabilities	2,138	1,984
Current liabilities held for sale and in discontinued operations	5,226	5,246

Divestment of the solar inverters business

In February 2020, the Company completed the sale of its solar inverters business for no consideration. Under the agreement, which was reached in July 2019, the Company was required to transfer \$143 million of cash to the buyer on the closing date. In addition, payments totaling EUR 132 million (\$145 million) are required to be transferred to the buyer from 2020 through 2025. In the six months ended June 30, 2019, the Company recorded an initial loss of \$455 million representing the excess of the carrying value, which includes a loss of \$99 million arising from the cumulative translation adjustment, over the estimated fair value of this business. During the six months ended June 30, 2020, \$19 million was in "Other income (expense), net" for changes in fair value occurring prior to the date of sale. The loss in 2020 includes the \$99 million reclassification from other comprehensive income of the currency translation adjustment related to the business.

The fair value was based on the estimated current market values using Level 3 inputs, considering the agreed-upon sale terms with the buyer. The solar inverters business, which includes the solar inverters business acquired as part of the Power-One acquisition in 2013, is part of the Company's Electrification segment.

As this divestment does not qualify as a discontinued operation, the results of operations for this business prior to its disposal are included in the Company's continuing operations for all periods presented. The assets and liabilities of this business were shown as assets and liabilities held for sale in the Company's Consolidated Balance Sheet at December 31, 2019, and at that date, the carrying amounts of the major classes of these assets and liabilities held for sale were as follows:

(\$ in millions)	Dec. 31, 2019
Assets	
Receivables, net	70
Inventories, net	127
Property, plant and equipment, net	69
Other intangible assets, net	27
Other assets	26
Valuation allowance on assets held for sale	(319)
Current assets held for sale	–
Liabilities	
Accounts payable, trade	86
Contract liabilities	59
Provisions for warranties	108
Other liabilities	49
Fair value adjustment on disposal group	102
Current liabilities held for sale	404

Including the above loss of \$19 million, in the six months end June 30, 2020, Income from continuing operations before taxes includes net losses of \$33 million, from the solar inverters business prior to its sales. In the six and three months ended June 30, 2019, and including the \$455 million above, Income from continuing operations before taxes includes net losses of \$497 million and \$483 million, respectively, from this business.

Note 4

Cash and equivalents, marketable securities and short-term investments

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

June 30, 2020						
(\$ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents	Marketable securities and short-term investments
Changes in fair value recorded in net income						
Cash	1,551			1,551	1,551	
Time deposits	966			966	966	–
Other short-term investments						
Equity securities	1,350	4		1,354		1,354
	3,867	4	–	3,871	2,517	1,354
Changes in fair value recorded in other comprehensive income						
Debt securities available-for-sale:						
U.S. government obligations	274	22		296	1	295
European government obligations	154	4		158		158
Other government obligations						
Corporate	65	6		71		71
	493	32	–	525	1	524
Total	4,360	36	–	4,396	2,518	1,878

December 31, 2019						
(\$ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents	Marketable securities and short-term investments
Changes in fair value recorded in net income						
Cash	2,111			2,111	2,111	
Time deposits	1,433			1,433	1,433	–
Equity securities	294	10		304		304
	3,838	10	–	3,848	3,544	304
Changes in fair value recorded in other comprehensive income						
Debt securities available-for-sale:						
U.S. government obligations	191	7	(1)	197	–	197
Corporate	61	4		65	–	65
	252	11	(1)	262	–	262
Total	4,090	21	(1)	4,110	3,544	566

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 its 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 its 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		
	June 30, 2020	December 31, 2019	June 30, 2019
Foreign exchange contracts	16,505	15,015	12,977
Embedded foreign exchange derivatives	982	924	774
Interest rate contracts	4,335	5,188	4,453

Derivative commodity contracts

The Company uses derivatives to hedge its direct or indirect exposure to the movement in the prices of commodities which are primarily copper, silver and aluminum. The following table shows the notional amounts of outstanding derivatives (whether designated as hedges or not), on a net basis, to reflect the Company's requirements for these commodities:

Type of derivative	Unit	Total notional amounts at		
		June 30, 2020	December 31, 2019	June 30, 2019
Copper swaps	metric tonnes	38,935	42,494	44,936
Silver swaps	ounces	2,063,142	2,508,770	2,461,631
Aluminum swaps	metric tonnes	7,698	8,388	8,443

Equity derivatives

At June 30, 2020, December 31, 2019, and June 30, 2019, the Company held 37 million, 40 million and 36 million cash-settled call options indexed to ABB Ltd shares (conversion ratio 5:1) with a total fair value of \$21 million, \$26 million and \$7 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.

At June 30, 2020, and December 31, 2019, "Accumulated other comprehensive loss" included net unrealized losses of \$9 million and \$5 million, respectively, net of tax, on derivatives designated as cash flow hedges. Of the amount at June 30, 2020, net losses of \$2 million are expected to be reclassified to earnings in the following 12 months. At June 30, 2020, the longest maturity of a derivative classified as a cash flow hedge was 55 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 six and three months ended June 30, 2020 and 2019.

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 not significant.

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 six and three months ended June 30, 2020 and 2019, 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)	Six months ended June 30,		Three months ended June 30,	
	2020	2019	2020	2019
Gains (losses) recognized in Interest and other finance expense:				
- on derivatives designated as fair value hedges	26	57	2	31
- on hedged item	(27)	(57)	(2)	(31)

Derivatives not designated in hedge relationships

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

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

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

Type of derivative not designated as a hedge (\$ in millions)	Location	Gains (losses) recognized in income			
		Six months ended June 30,		Three months ended June 30,	
		2020	2019	2020	2019
Foreign exchange contracts	Total revenues	(67)	1	67	(2)
	Total cost of sales	43	(38)	(33)	(1)
	SG&A expenses ⁽¹⁾	4	(1)	(4)	2
	Non-order related research and development	(1)	1	-	1
	Interest and other finance expense	(32)	(79)	74	(59)
Embedded foreign exchange contracts	Total revenues	6	(3)	(26)	(1)
	Total cost of sales	(2)	-	2	-
Commodity contracts	Total cost of sales	(12)	(2)	54	(20)
Other	Interest and other finance expense	1	-	2	-
Total		(60)	(121)	136	(80)

(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)	June 30, 2020			
	Derivative assets		Derivative liabilities	
	Current in "Other current assets"	Non-current in "Other non-current assets"	Current in "Other current liabilities"	Non-current in "Other non-current liabilities"
Derivatives designated as hedging instruments:				
Foreign exchange contracts	-	-	2	6
Interest rate contracts	-	99	-	-
Cash-settled call options	8	13	-	-
Total	8	112	2	6
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	119	14	116	14
Commodity contracts	21	-	6	-
Cross-currency interest rate swaps	-	-	1	-
Embedded foreign exchange derivatives	13	4	16	5
Total	153	18	139	19
Total fair value	161	130	141	25

(\$ in millions)	December 31, 2019			
	Derivative assets		Derivative liabilities	
	Current in "Other current assets"	Non-current in "Other non-current assets"	Current in "Other current liabilities"	Non-current in "Other non-current liabilities"
Derivatives designated as hedging instruments:				
Foreign exchange contracts	–	–	2	6
Interest rate contracts	–	72	–	–
Cash-settled call options	11	14	–	–
Total	11	86	2	6
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	85	14	127	14
Commodity contracts	17	–	2	–
Cash-settled call options	–	1	–	–
Embedded foreign exchange derivatives	7	3	12	3
Total	109	18	141	17
Total fair value	120	104	143	23

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 June 30, 2020, and December 31, 2019, have been presented on a gross basis.

The Company's netting agreements and other similar arrangements allow net settlements under certain conditions. At June 30, 2020, and December 31, 2019, information related to these offsetting arrangements was as follows:

(\$ in millions)					
June 30, 2020					
Type of agreement or similar arrangement	Gross amount of recognized assets	Derivative liabilities eligible for set-off in case of default	Cash collateral received	Non-cash collateral received	Net asset exposure
Derivatives	274	(127)	–	–	147
Total	274	(127)	–	–	147

(\$ in millions)					
June 30, 2020					
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	145	(127)	–	–	18
Total	145	(127)	–	–	18

(\$ in millions)					
December 31, 2019					
Type of agreement or similar arrangement	Gross amount of recognized assets	Derivative liabilities eligible for set-off in case of default	Cash collateral received	Non-cash collateral received	Net asset exposure
Derivatives	214	(102)	–	–	112
Total	214	(102)	–	–	112

(\$ in millions)					
December 31, 2019					
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	151	(102)	–	–	49
Total	151	(102)	–	–	49

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 nature 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, 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)	June 30, 2020			
	Level 1	Level 2	Level 3	Total fair value
Assets				
Securities in “Marketable securities and short-term investments”:				
Equity securities	–	1,354	–	1,354
Debt securities—U.S. government obligations	295	–	–	295
Debt securities—European government obligations	158	–	–	158
Debt securities—Corporate	–	71	–	71
Derivative assets—current in “Other current assets”	–	161	–	161
Derivative assets—non-current in “Other non-current assets”	–	130	–	130
Total	453	1,716	–	2,169
Liabilities				
Derivative liabilities—current in “Other current liabilities”	–	141	–	141
Derivative liabilities—non-current in “Other non-current liabilities”	–	25	–	25
Total	–	166	–	166

(\$ in millions)	December 31, 2019			
	Level 1	Level 2	Level 3	Total fair value
Assets				
Securities in "Marketable securities and short-term investments":				
Equity securities	–	304	–	304
Debt securities—U.S. government obligations	197	–	–	197
Debt securities—Corporate	–	65	–	65
Derivative assets—current in "Other current assets"	–	120	–	120
Derivative assets—non-current in "Other non-current assets"	–	104	–	104
Total	197	593	–	790
Liabilities				
Derivative liabilities—current in "Other current liabilities"	–	143	–	143
Derivative liabilities—non-current in "Other non-current liabilities"	–	23	–	23
Total	–	166	–	166

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:

- **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 inputs). 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

The Company elects to record private equity investments without readily determinable fair values at cost, less impairment, adjusted by observable price changes. The Company reassesses at each reporting period whether these investments continue to qualify for this treatment. In the three months ended June 30, 2020, the Company recognized net increases in fair value of \$58 million related to certain of its private equity investments based on observable market price changes for an identical or similar investment of the same issuer (see Note 1 for additional details). The fair values of these investments totaled \$81 million and were determined using level 2 inputs.

In June 2019, upon meeting the criteria as held for sale, the Company adjusted the carrying value of the solar inverters business which was sold in February 2020 (See Note 3 for details). Apart from the transactions above, there were no additional significant non-recurring fair value measurements during the six and three months ended June 30, 2020 and 2019.

Disclosure about financial instruments carried on a cost basis

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

	June 30, 2020				
(\$ in millions)	Carrying value	Level 1	Level 2	Level 3	Total fair value
Assets					
Cash and equivalents (excluding securities with original maturities up to 3 months):					
Cash	1,551	1,551	–	–	1,551
Time deposits	966	–	966	–	966
Other non-current assets:					
Loans granted	33	–	36	–	36
Restricted time deposits	38	38	–	–	38
Liabilities					
Short-term debt and current maturities of long-term debt (excluding finance lease obligations)					
	6,361	1,241	5,120	–	6,361
Long-term debt (excluding finance lease obligations)	6,100	6,403	118	–	6,521

(\$ in millions)	December 31, 2019				
	Carrying value	Level 1	Level 2	Level 3	Total fair value
Assets					
Cash and equivalents (excluding securities with original maturities up to 3 months):					
Cash	2,111	2,111	–	–	2,111
Time deposits	1,433	–	1,433	–	1,433
Other non-current assets:					
Loans granted	30	–	31	–	31
Restricted time deposits	37	37	–	–	37
Liabilities					
Short-term debt and current maturities of long-term debt (excluding finance lease obligations)	2,270	1,534	736	–	2,270
Long-term debt (excluding finance lease obligations)	6,618	6,267	692	–	6,959

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

- Cash and equivalents (excluding securities with original maturities up to 3 months), and Marketable securities and short-term investments (excluding 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 time deposits whose fair values approximate the carrying amounts (Level 1 inputs).
- Short-term debt and current maturities of long-term debt (excluding finance 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 finance lease obligations, approximate their fair values.
- Long-term debt (excluding finance 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

Regulatory

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. In May 2020, the SFO closed its investigation, which it originally announced in February 2017, as the case did not meet the relevant test for prosecution. The Company continues to cooperate with the U.S. authorities as requested. At this time, it is not possible for the Company to make an informed judgment about the outcome of this matter.

Based on findings during an internal investigation, the Company self-reported to the SEC and the DoJ, to various authorities in South Africa and other countries as well as to certain multilateral financial institutions potential suspect payments and other compliance concerns in connection with some of the Company's dealings with Eskom and related persons. Many of those parties have expressed an interest in, or commenced an investigation into, these matters and the Company is cooperating fully with them. Although the Company believes that there may be an unfavorable outcome in one or more of these compliance-related matters, at this time it is not possible for the Company to make an informed judgment about the possible financial impact.

General

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 claims and legal proceedings, as well as investigations carried out by various law enforcement authorities. With respect to the above-mentioned claims, regulatory matters, and any related proceedings, the Company will bear the related costs, including costs necessary to resolve them.

Liabilities recognized

At June 30, 2020, and December 31, 2019, the Company had aggregate liabilities of \$155 million and \$157 million, respectively, 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, or reasonably predict, 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)	June 30, 2020	December 31, 2019
Performance guarantees	1,868	1,860
Financial guarantees	12	10
Indemnification guarantees	48	64
Total⁽¹⁾	1,928	1,934

(1) Maximum potential payments include amounts in both continuing and discontinued operations.

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 June 30, 2020, and December 31, 2019, 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 2027, 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/joint-venture 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 eight years.

In conjunction with the divestment of the high-voltage cable and cables accessories businesses, the Company has entered into various performance guarantees with other parties with respect to certain liabilities of the divested business. At June 30, 2020, and December 31, 2019, the maximum potential payable under these guarantees amounts to \$897 million and \$898 million, respectively, and these guarantees have various maturities ranging from one to ten 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 June 30, 2020, and December 31, 2019, the total outstanding performance bonds aggregated to \$6.8 billion and \$6.8 billion, respectively, of which \$3.3 billion and \$3.7 billion, respectively, relates to discontinued operations. There have been no significant amounts reimbursed to financial institutions under these types of arrangements in the six and three months ended June 30, 2020 and 2019.

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)	2020	2019
Balance at January 1,	816	948
Net change in warranties due to acquisitions, divestments and liabilities held for sale ⁽¹⁾	7	(105)
Claims paid in cash or in kind	(100)	(137)
Net increase in provision for changes in estimates, warranties issued and warranties expired	67	138
Exchange rate differences	(13)	(2)
Balance at June 30,	777	842

(1) Includes adjustments to the initial purchase price allocation recorded during the measurement period.

Note 8

Contract assets and liabilities

The following table provides information about Contract assets and Contract liabilities:

(\$ in millions)	June 30, 2020	December 31, 2019	June 30, 2019
Contract assets	1,110	1,025	1,159
Contract liabilities	1,703	1,719	1,610

Contract assets primarily relate to the Company's right to receive consideration for work completed but for which no invoice has been issued at the reporting date. Contract assets are transferred to receivables when rights to receive payment become unconditional.

Contract liabilities primarily relate to up-front advances received on orders from customers as well as amounts invoiced to customers in excess of revenues recognized, primarily for long-term projects. Contract liabilities are reduced as work is performed and as revenues are recognized.

The significant changes in the Contract assets and Contract liabilities balances were as follows:

(\$ in millions)	Six months ended June 30,			
	2020		2019	
	Contract assets	Contract liabilities	Contract assets	Contract liabilities
Revenue recognized, which was included in the Contract liabilities balance at Jan 1, 2020/2019		(600)		(543)
Additions to Contract liabilities - excluding amounts recognized as revenue during the period		633		482
Receivables recognized that were included in the Contract asset balance at Jan 1, 2020/2019	(373)		(455)	

At June 30, 2020, the Company had unsatisfied performance obligations totaling \$13,917 million and, of this amount, the Company expects to fulfill approximately 53 percent of the obligations in 2020, approximately 32 percent of the obligations in 2021 and the balance thereafter.

Note 9

Debt

The Company's total debt at June 30, 2020, and December 31, 2019, amounted to \$12,620 million and \$9,059 million, respectively.

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

The Company's "Short-term debt and current maturities of long-term debt" consisted of the following:

(\$ in millions)	June 30, 2020	December 31, 2019
Short-term debt	4,531	838
Current maturities of long-term debt	1,852	1,449
Total	6,383	2,287

Short-term debt primarily represented issued commercial paper and short-term bank borrowings from various banks. At June 30, 2020, and December 31, 2019, \$1,282 million and \$706 million, respectively, was outstanding under the \$2 billion commercial paper program in the United States. At June 30, 2020, \$1,571 million was outstanding under the \$2 billion Euro-commercial paper program. No amount was outstanding under this program at December 31, 2019.

On March 25, 2020, the Company entered into a bank-funded short-term EUR 2 billion Revolving Credit Agreement (the "Agreement"). The Agreement provided for fixed-term euro-denominated borrowings up to a maximum principal of EUR 2 billion and was to expire after six months, with the option for the Company to extend the Agreement to December 15, 2020. Outstanding amounts were subject to interest at the rate of EURIBOR plus a margin of 0.25 percent. The Company requested the full amount to be borrowed and the proceeds were received on March 31, 2020, amounting to \$2,183 million, net of issuance costs. At June 30, 2020, EUR 1.2 billion (equivalent to \$1,345 million) was outstanding under the Agreement. The Agreement required that all outstanding amounts repaid within 15 days after the completion of the sale of the Power Grids business and after the sale on July 1, 2020, the Company repaid the remaining EUR 1.2 billion outstanding (equivalent to \$1,354 million on the date of payment) on July 8, 2020, and the Agreement was terminated.

At June 30, 2020, the Company continues to have access to the full amount under its existing \$2 billion revolving credit facility.

On April 3, 2020, the Company repaid at maturity its USD 300 million 2.8% Notes.

Long-term debt

The Company's long-term debt at June 30, 2020, and December 31, 2019, amounted to \$6,237 million and \$6,772 million, respectively.

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

	June 30, 2020				December 31, 2019			
(in millions)	Nominal outstanding		Carrying value ⁽¹⁾		Nominal outstanding		Carrying value ⁽¹⁾	
Bonds:								
2.8% USD Notes, due 2020				–	USD	300	\$	300
Floating EUR Notes, due 2020	EUR	1,000	\$	1,121	EUR	1,000	\$	1,122
4.0% USD Notes, due 2021	USD	650	\$	648	USD	650	\$	648
2.25% CHF Bonds, due 2021	CHF	350	\$	377	CHF	350	\$	373
5.625% USD Notes, due 2021	USD	250	\$	257	USD	250	\$	260
2.875% USD Notes, due 2022	USD	1,250	\$	1,291	USD	1,250	\$	1,267
3.375% USD Notes, due 2023	USD	450	\$	449	USD	450	\$	448
0.625% EUR Instruments, due 2023	EUR	700	\$	801	EUR	700	\$	799
0.75% EUR Instruments, due 2024	EUR	750	\$	865	EUR	750	\$	859
0.3% CHF Notes, due 2024	CHF	280	\$	294	CHF	280	\$	288
3.8% USD Notes, due 2028	USD	750	\$	746	USD	750	\$	746
1.0% CHF Notes, due 2029	CHF	170	\$	179	CHF	170	\$	175
4.375% USD Notes, due 2042	USD	750	\$	725	USD	750	\$	724
Total			\$	7,753			\$	8,009

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

Subsequent events

At July 21, 2020, the amount outstanding under the \$2 billion program in the United States decreased to \$345 million from \$1,282 million at June 30, 2020 and the amount outstanding under the Euro-commercial \$2 billion decreased to \$89 million from \$1,571 million at June 30, 2020.

Note 10

Income taxes

In calculating the provision for income taxes, the Company uses an estimate of the annual effective tax rate based upon the facts and circumstances known at each interim period. On a quarterly basis, the actual effective tax rate is adjusted, as appropriate, based upon changed facts and circumstances, if any, as compared to those forecasted at the beginning of the year and each interim period thereafter.

The effective tax rate of 22.5 percent in the six months ended June 30, 2020, was lower than the effective tax rate of 46.2 percent in the six months ended June 30, 2019, primarily due to the non-tax-deductible loss recorded in the six months ended June 30, 2019, relating to the divestment of the solar inverters business (see Note 3). In addition, the lower rate was also due to a favorable resolution of an uncertain tax position during the first quarter of 2020, partially offset by increases to the valuation allowance in certain countries.

Note 11

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.

The following tables include amounts relating to defined benefit pension plans and other postretirement benefits for both continuing and discontinued operations.

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	
	Switzerland		International		benefits	
	2020	2019	2020	2019	2020	2019
Six months ended June 30,						
Operational pension cost:						
Service cost	45	38	50	56	–	–
Operational pension cost	45	38	50	56	–	–
Non-operational pension cost (credit):						
Interest cost	1	8	60	88	1	2
Expected return on plan assets	(65)	(56)	(133)	(138)	–	–
Amortization of prior service cost (credit)	(7)	(7)	1	1	(1)	(2)
Amortization of net actuarial loss	5	–	55	54	(2)	(1)
Curtailments, settlements and special termination benefits ⁽¹⁾	–	–	108	1	–	–
Non-operational pension cost (credit)	(66)	(55)	91	6	(2)	(1)
Net periodic benefit cost (credit)	(21)	(17)	141	62	(2)	(1)

(\$ in millions)	Defined pension benefits				Other postretirement	
	Switzerland		International		benefits	
	2020	2019	2020	2019	2020	2019
Three months ended June 30,						
Operational pension cost:						
Service cost	23	19	23	28	–	–
Operational pension cost	23	19	23	28	–	–
Non-operational pension cost (credit):						
Interest cost	1	4	28	44	–	1
Expected return on plan assets	(34)	(28)	(70)	(68)	–	–
Amortization of prior service cost (credit)	(3)	(3)	–	–	–	(1)
Amortization of net actuarial loss	3	–	30	27	(1)	–
Curtailments, settlements and special termination benefits ⁽¹⁾	–	–	108	–	–	–
Non-operational pension cost (credit)	(33)	(27)	96	3	(1)	–
Net periodic benefit cost (credit)	(10)	(8)	119	31	(1)	–

(1) Includes \$101 million in discontinued operations for the settlement of the pension plan in Sweden.

The components of net periodic benefit cost other than the service cost component are included in the line "Non-operational pension (cost) credit" in the income statement. Net periodic benefit cost includes \$121 million and \$20 million, for the six months ended June 30, 2020 and 2019, respectively and \$109 million and \$10 million for the three months ended June 30, 2020 and 2019, respectively, related to discontinued operations.

Employer contributions were as follows:

(\$ in millions)	Defined pension benefits				Other postretirement	
	Switzerland		International		benefits	
	2020	2019	2020	2019	2020	2019
Six months ended June 30,						
Total contributions to defined benefit pension and other postretirement benefit plans	48	48	47	44	3	4
Of which, discretionary contributions to defined benefit pension plans	–	2	143	–	–	–

(\$ in millions)	Defined pension benefits				Other postretirement	
	Switzerland		International		benefits	
	2020	2019	2020	2019	2020	2019
Three months ended June 30,						
Total contributions to defined benefit pension and other postretirement benefit plans	24	25	26	20	2	2
Of which, discretionary contributions to defined benefit pension plans	–	2	143	–	–	–

The Company expects to make contributions totaling approximately \$504 million and \$10 million to its defined pension plans and other postretirement benefit plans, respectively, for the full year 2020.

Note 12

Stockholder's equity

At the Annual General Meeting of Shareholders on March 26, 2020, shareholders approved the proposal of the Board of Directors to distribute 0.80 Swiss francs per share to shareholders. The declared dividend amounted to \$1,758 million and was paid in April 2020.

In July 2020, the Company announced it initially intends to buy 10 percent of its share capital through the recently announced share buyback program. This represents a maximum of 180 million shares, in addition to those already held in treasury. The share buyback program will be executed on a second trading line on the SIX Swiss Exchange and is planned to run until the Company's Annual General Meeting (AGM) on March 25, 2021. At the AGM, the Company intends to request shareholder approval to cancel the shares purchased through this program.

Note 13

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				
	Six months ended June 30,		Three months ended June 30,	
(\$ in millions, except per share data in \$)	2020	2019	2020	2019
<i>Amounts attributable to ABB shareholders:</i>				
Income (loss) from continuing operations, net of tax	703	325	378	(72)
Income (loss) from discontinued operations, net of tax	(8)	274	(59)	136
Net income	695	599	319	64
Weighted-average number of shares outstanding (in millions)	2,134	2,132	2,134	2,132
<i>Basic earnings per share attributable to ABB shareholders:</i>				
Income (loss) from continuing operations, net of tax	0.33	0.15	0.18	(0.03)
Income (loss) from discontinued operations, net of tax	0.00	0.13	(0.03)	0.06
Net income	0.33	0.28	0.15	0.03
Diluted earnings per share				
	Six months ended June 30,		Three months ended June 30,	
(\$ in millions, except per share data in \$)	2020	2019	2020	2019
<i>Amounts attributable to ABB shareholders:</i>				
Income (loss) from continuing operations, net of tax	703	325	378	(72)
Income (loss) from discontinued operations, net of tax	(8)	274	(59)	136
Net income	695	599	319	64
Weighted-average number of shares outstanding (in millions)	2,134	2,132	2,134	2,132
<i>Effect of dilutive securities:</i>				
Call options and shares	3	2	3	–
Adjusted weighted-average number of shares outstanding (in millions)	2,137	2,134	2,137	2,132
<i>Diluted earnings per share attributable to ABB shareholders:</i>				
Income (loss) from continuing operations, net of tax	0.33	0.15	0.18	(0.03)
Income (loss) from discontinued operations, net of tax	0.00	0.13	(0.03)	0.06
Net income	0.33	0.28	0.15	0.03

Note 14

Reclassifications out of accumulated other comprehensive loss

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

(\$ in millions)	Foreign currency translation adjustments	Unrealized gains (losses) on available-for-sale securities	Pension and other postretirement plan adjustments	Unrealized gains (losses) of cash flow hedge derivatives	Total OCI
Balance at January 1, 2019	(3,324)	(4)	(1,967)	(16)	(5,311)
Adoption of accounting standard update ⁽¹⁾	–	–	(36)	–	(36)
Other comprehensive (loss) income:					
Other comprehensive (loss) income before reclassifications	(53)	11	3	5	(34)
Amounts reclassified from OCI	–	2	32	–	34
Total other comprehensive (loss) income	(53)	13	35	5	–
Less:					
Amounts attributable to noncontrolling interests	1	–	–	–	1
Balance at June 30, 2019⁽²⁾	(3,378)	9	(1,968)	(11)	(5,349)

(\$ in millions)	Foreign currency translation adjustments	Unrealized gains (losses) on available-for-sale securities	Pension and other postretirement plan adjustments	Unrealized gains (losses) of cash flow hedge derivatives	Total OCI
Balance at January 1, 2020	(3,450)	10	(2,145)	(5)	(5,590)
Other comprehensive (loss) income:					
Other comprehensive (loss) income before reclassifications	(386)	18	(89)	(6)	(463)
Amounts reclassified from OCI	99	(3)	123	2	221
Total other comprehensive (loss) income	(287)	15	34	(4)	(242)
Less:					
Amounts attributable to noncontrolling interests	(4)	–	–	–	(4)
Balance at June 30, 2020	(3,733)	25	(2,111)	(9)	(5,828)

(1) Amount relates to the adoption of an accounting standard update in 2019 regarding the Tax Cuts and Jobs Act of 2017.

(2) Due to rounding numbers presented may not add to the totals provided.

The following table reflects amounts reclassified out of OCI in respect of Foreign currency translation adjustments and Pension and other postretirement plan adjustments:

(\$ in millions)	Location of (gains) losses reclassified from OCI	Six months ended June 30,		Three months ended June 30,	
Details about OCI components		2020	2019	2020	2019
Foreign currency translation adjustments:					
Translation loss on solar inverters business (see Note 3)	Other income (expense), net	99	–	–	–
Pension and other postretirement plan adjustments:					
Amortization of prior service cost (credit)	Non-operational pension (cost) credit ⁽¹⁾	(7)	(8)	(3)	(4)
Amortization of net actuarial loss	Non-operational pension (cost) credit ⁽¹⁾	58	53	32	27
Net gains from pension settlements and curtailments	Non-operational pension (cost) credit ⁽¹⁾	108	–	108	–
Total before tax		159	45	137	23
Tax	Provision for taxes	(36)	(13)	(30)	(6)
Amounts reclassified from OCI		123	32	107	17

(1) Amounts include a total of \$94 million and \$6 million for the six months ended June 30, 2020 and 2019, respectively, and \$97 million and \$3 million for the three months ended June 30, 2020 and 2019, respectively, reclassified from OCI to Income from discontinued operations.

The amounts in respect of Unrealized gains (losses) on available-for-sale securities and Unrealized gains (losses) of cash flow hedge derivatives were not significant for the six and three months ended June 30, 2020 and 2019.

Note 15

Restructuring and related expenses

OS program

In December 2018, the Company announced a two-year restructuring program with the objective of simplifying its business model and structure through the implementation of a new organizational structure driven by its businesses. The program includes the elimination of the country and regional structures within the current matrix organization, including the elimination of the three regional Executive Committee roles. The operating businesses will each be responsible for both their customer-facing activities and business support functions, while the remaining Group-level corporate activities will primarily focus on Group strategy, portfolio and performance management, capital allocation, core technologies and the ABB Ability™ platform. The program is expected to be performed over two years and incur restructuring expenses of \$350 million, primarily relating to employee severance costs.

The following table outlines the costs incurred in the six and three months ended June 30, 2020 and 2019, respectively, the cumulative costs incurred up to June 30, 2020, and the total amount of costs expected to be incurred under the program per operating segment:

(\$ in millions)	Cost incurred				Cumulative net cost incurred up to June 30, 2020	Total expected costs
	Six months ended June 30,		Three months ended June 30,			
	2020	2019	2020	2019		
Electrification	18	(4)	16	(2)	68	75
Industrial Automation	6	2	6	2	30	60
Motion	5	1	5	1	12	30
Robotics & Discrete Automation	7	3	1	3	15	20
Corporate and Other	21	24	11	23	86	165
Total	57	26	39	27	211	350

Of the total expected costs of \$350 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)	Six months ended June 30,		Three months ended June 30,		Cumulative costs incurred up to June 30, 2020
	2020	2019	2020	2019	
Employee severance costs	36	26	21	27	182
Estimated contract settlement, loss order and other costs	4	–	2	–	5
Inventory and long-lived asset impairments	17	–	16	–	24
Total	57	26	39	27	211

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

(\$ in millions)	Six months ended June 30,		Three months ended June 30,	
	2020	2019	2020	2019
Total cost of sales	11	–	8	1
Selling, general and administrative expenses	7	19	7	19
Other income (expense), net	39	7	24	7
Total	57	26	39	27

Liabilities associated with the OS program are primarily included in “Other provisions”. The following table shows the activity from the beginning of the program to June 30, 2020, by expense type:

(\$ in millions)	Employee severance costs	Contract settlement, loss order and other costs	Total
Liability at January 1, 2018	–	–	–
Expenses	65	–	65
Liability at December 31, 2018	65	–	65
Expenses	111	1	112
Cash payments	(44)	(1)	(45)
Change in estimates	(30)	–	(30)
Exchange rate differences	(3)	–	(3)
Liability at December 31, 2019	99	–	99
Expenses	41	4	45
Cash payments	(46)	(1)	(47)
Change in estimates	(5)	–	(5)
Exchange rate differences	–	(1)	(1)
Liability at June 30, 2020	89	2	91

Other restructuring-related activities

In the six months ended June 30, 2020 and 2019, the Company executed various other restructuring-related activities and incurred expenses. These expenses, which in the six months ended June 30, 2019, mainly relate to employee severance costs, are recorded in:

(\$ in millions)	Six months ended June 30,		Three months ended June 30,	
	2020	2019	2020	2019
Total cost of sales	2	32	2	10
Selling, general and administrative expenses	8	16	3	4
Non-order related research and development expenses	–	(1)	–	(1)
Other income (expenses), net	10	26	9	9
Total	20	73	14	22

At June 30, 2020, and December 31, 2019, \$130 million and \$189 million, respectively, was recorded for other restructuring-related liabilities and is primarily included in “Other provisions”.

Note 16

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 is organized into operating segments based on products and services and these operating segments consist of Electrification, Industrial Automation, Motion, and Robotics & Discrete Automation. The remaining operations of the Company are included in Corporate and Other.

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

- **Electrification:** manufactures and sells electrical products and solutions which are designed to provide sustainable, smarter and safer electrical flow from the substation to the socket. The portfolio of increasingly digital and connected solutions includes electric vehicle charging infrastructure, solar power solutions, modular substation packages, distribution automation products, switchboard and panelboards, switchgear, UPS solutions, circuit breakers, measuring and sensing devices, control products, wiring accessories, enclosures and cabling systems and intelligent home and building solutions, designed to integrate and automate lighting, heating, ventilation, security and data communication networks.
- **Industrial Automation:** develops and sells integrated automation and electrification systems and solutions, such as process and discrete control solutions, advanced process control software and manufacturing execution systems, sensing, measurement and analytical instrumentation and solutions, electric ship propulsion systems, as well as large turbochargers. In addition, the business offers a comprehensive range of services ranging from repair to advanced services such as remote monitoring, preventive maintenance and cybersecurity services.
- **Motion:** manufactures and sells motors, generators, drives, wind converters, mechanical power transmissions, complete electrical powertrain systems and related services and digital solutions for a wide range of applications in industry, transportation, infrastructure, and utilities.
- **Robotics & Discrete Automation:** develops and sells robotics and machinery automation solutions, including robots, controllers, software, function packages, cells, programmable logic controllers (PLC), industrial PCs (IPC), servo motion, engineered manufacturing solutions, turn-key solutions and collaborative robot solutions for a wide range of applications. In addition, the business offers a comprehensive range of digital solutions as well as field and after sales service.
- **Corporate and Other:** includes headquarters, central research and development, the Company’s real estate activities, Corporate Treasury Operations and other non-core operating activities.

The primary measure of profitability on which the operating segments are evaluated is Operational EBITA, which represents income from operations excluding:

- amortization expense on intangibles arising upon acquisitions (acquisition-related amortization),
- restructuring, related and implementation costs,
- changes in the amount recorded for obligations related to divested businesses occurring after the divestment date (changes in obligations related to 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 (including fair value adjustment on assets and liabilities held for sale),
- acquisition- and divestment-related expenses and integration costs,
- certain other 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).

Certain other non-operational items generally includes certain regulatory, compliance and legal costs, certain asset write downs/impairments and other fair value changes, as well as other items which are determined by management on a case-by-case basis.

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 disaggregated segment revenues from contracts with customers, Operational EBITA, and the reconciliations of consolidated Operational EBITA to Income from continuing operations before taxes for the six and three months ended June 30, 2020 and 2019, as well as total assets at June 30, 2020, and December 31, 2019.

Six months ended June 30, 2020						
(\$ in millions)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Total
Geographical markets						
Europe	1,842	1,126	937	652	31	4,588
The Americas	1971	689	1,115	187	2	3,964
of which USA	1550	445	955	128	1	3,079
Asia, Middle East and Africa	1513	959	797	428	13	3,710
of which China	761	268	370	279	1	1,679
	5,326	2,774	2,849	1,267	46	12,262
End Customer Markets						
Utilities	879	470	374	–	5	1,728
Industry	2,564	1,624	1,781	1,231	21	7,221
Transport & infrastructure	1,883	680	694	36	20	3,313
	5,326	2,774	2,849	1,267	46	12,262
Product type						
Products	4,636	634	2,444	754	41	8,509
Systems	289	800	–	317	5	1,411
Services and other	401	1,340	405	196	–	2,342
	5,326	2,774	2,849	1,267	46	12,262
Third-party revenues	5,326	2,774	2,849	1,267	46	12,262
Intersegment revenues ⁽¹⁾	211	70	244	33	(450)	108
Total Revenues⁽²⁾	5,537	2,844	3,093	1,300	(404)	12,370

Six months ended June 30, 2019						
(\$ in millions)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Total
Geographical markets						
Europe	1,995	1,194	929	830	35	4,983
The Americas	2,325	777	1,182	232	3	4,519
of which USA	1,808	469	1,004	149	–	3,430
Asia, Middle East and Africa	1,784	1,069	881	603	70	4,407
of which China	840	302	416	440	–	1,998
	6,104	3,040	2,992	1,665	108	13,909
End Customer Markets						
Utilities	1,060	526	334	–	42	1,962
Industry	2,502	1,816	1,952	1,630	49	7,949
Transport & infrastructure	2,542	698	706	35	17	3,998
	6,104	3,040	2,992	1,665	108	13,909
Product type						
Products	5,300	774	2,573	937	61	9,645
Systems	308	796	–	487	47	1,638
Services and other	496	1,470	419	241	–	2,626
	6,104	3,040	2,992	1,665	108	13,909
Third-party revenues	6,104	3,040	2,992	1,665	108	13,909
Intersegment revenues ⁽¹⁾	225	58	254	31	(459)	109
Total Revenues⁽²⁾	6,329	3,098	3,246	1,696	(351)	14,018

Three months ended June 30, 2020						
(\$ in millions)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Total
Geographical markets						
Europe	878	549	486	299	5	2,217
The Americas	940	299	546	84	3	1,872
of which: United States	749	198	463	58	1	1,469
Asia, Middle East and Africa	835	500	429	230	10	2,004
of which: China	478	158	216	160	1	1,012
	2,653	1,348	1,461	613	18	6,093
End Customer Markets						
Utilities	448	234	213	–	3	898
Industry	1,279	795	897	595	15	3,581
Transport & infrastructure	926	319	351	18	–	1,614
	2,653	1,348	1,461	613	18	6,093
Product type						
Products	2,274	328	1,246	367	16	4,231
Systems	177	404	–	160	2	743
Services and other	202	616	215	86	–	1,119
	2,653	1,348	1,461	613	18	6,093
Third-party revenues	2,653	1,348	1,461	613	18	6,093
Intersegment revenues ⁽¹⁾	111	34	122	16	(222)	61
Total Revenues⁽²⁾	2,764	1,382	1,583	629	(204)	6,154

Three months ended June 30, 2019						
(\$ in millions)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Total
Geographical markets						
Europe	1,012	609	487	409	19	2,536
The Americas	1,219	405	582	112	3	2,321
of which: United States	946	240	489	74	1	1,750
Asia, Middle East and Africa	919	536	449	306	48	2,258
of which: China	441	155	214	219	–	1,029
	3,150	1,550	1,518	827	70	7,115
End Customer Markets						
Utilities	600	277	187	–	39	1,103
Industry	1,351	923	962	808	22	4,066
Transport & infrastructure	1,199	350	369	19	9	1,946
	3,150	1,550	1,518	827	70	7,115
Product type						
Products	2,723	419	1,306	460	22	4,930
Systems	168	379	–	251	48	846
Services and other	259	752	212	116	–	1,339
	3,150	1,550	1,518	827	70	7,115
Third-party revenues	3,150	1,550	1,518	827	70	7,115
Intersegment revenues ⁽¹⁾	122	30	123	18	(237)	56
Total Revenues⁽²⁾	3,272	1,580	1,641	845	(167)	7,171

(1) Intersegment revenues include sales to the Power Grids business which is presented as discontinued operations and are not eliminated from Total revenues.

(2) Due to rounding, numbers presented may not add to the totals provided.

(\$ in millions)	Six months ended		Three months ended	
	June 30,		June 30,	
	2020	2019	2020	2019
Operational EBITA:				
Electrification	666	817	348	440
Industrial Automation	259	395	115	190
Motion	509	538	279	275
Robotics & Discrete Automation	102	200	43	105
Corporate and Other				
– Non-core and divested businesses	(19)	(43)	(8)	(3)
– Stranded corporate costs	(40)	(133)	(19)	(66)
– Corporate costs and Other Intersegment elimination	(190)	(183)	(107)	(116)
Total	1,287	1,591	651	825
Acquisition-related amortization	(130)	(135)	(65)	(67)
Restructuring, related and implementation costs ⁽¹⁾	(107)	(142)	(67)	(74)
Changes in obligations related to divested businesses	(1)	(7)	(1)	(4)
Changes in pre-acquisition estimates	–	(13)	–	(13)
Gains and losses from sale of businesses	(5)	(4)	(4)	(3)
Fair value adjustment on assets and liabilities held for sale	(19)	(455)	–	(455)
Acquisition- and divestment-related expenses and integration costs	(27)	(54)	(16)	(30)
Foreign exchange/commodity timing differences in income from operations:				
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	7	13	81	7
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(3)	(3)	1	(2)
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(11)	(2)	(9)	(18)
Certain other non-operational items:				
Costs for planned divestment of Power Grids	(99)	(58)	(55)	(38)
Regulatory, compliance and legal costs	–	(8)	–	–
Business transformation costs	(12)	(6)	(5)	(3)
Executive Committee transition costs	2	(14)	–	(14)
Favorable resolution of an uncertain purchase price adjustment	8	–	8	–
Gain on sale of investments	–	15	–	15
Asset write downs/impairments and other fair value changes	58	–	58	–
Other non-operational items	(4)	(5)	(6)	(3)
Income from operations	944	713	571	123
Interest and dividend income	27	37	9	18
Interest and other finance expense	(112)	(123)	(90)	(61)
Non-operational pension (cost) credit	71	44	35	21
Income from continuing operations before taxes	930	671	525	101

(1) Amounts include implementation costs in relation to the OS program of \$30 million and \$43 million for the six months ended June 30, 2020 and 2019, respectively, and \$14 million and \$24 million for the three months ended June 30, 2020 and 2019, respectively.

(\$ in millions)	Total assets ^{(1), (2)}	
	June 30, 2020	December 31, 2019
Electrification	11,746	11,671
Industrial Automation	4,505	4,559
Motion	6,158	6,149
Robotics & Discrete Automation	4,588	4,661
Corporate and Other	19,906	19,068
Consolidated	46,903	46,108

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

(2) At June 30, 2020, and December 31, 2019, respectively, Corporate and Other includes \$10,712 million and \$9,840 million of assets in the Power Grids business which is reported as discontinued operations (see Note 3).

Supplemental Reconciliations and Definitions

The following reconciliations and definitions include measures which ABB uses to supplement its 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 Consolidated Financial Information (unaudited) prepared in accordance with U.S. GAAP as of and for the six and three months ended June 30, 2020.

On January 1, 2019, the Company adopted a new accounting standard for lease accounting and on January 1, 2020, the Company adopted a new accounting update for the measurement of credit losses on financial instruments (see Note 2 to the Consolidated Financial Information). Consistent with the method of adoption elected, comparable information has not been restated to reflect the adoption of this new standard and accounting update and continues to be measured and reported under the accounting standard in effect for those periods presented.

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.

Comparable growth rate reconciliation by business

Business	Q2 2020 compared to Q2 2019							
	Order growth rate				Revenue growth rate			
	US\$	Foreign	Portfolio changes	Comparable	US\$	Foreign	Portfolio changes	Comparable
	(as reported)	exchange impact			(as reported)	exchange impact		
Electrification	-18%	2%	4%	-12%	-16%	3%	3%	-10%
Industrial Automation	-20%	3%	0%	-17%	-13%	4%	0%	-9%
Motion	-10%	3%	0%	-7%	-4%	3%	0%	-1%
Robotics & Discrete Automation	-28%	3%	0%	-25%	-26%	3%	0%	-23%
ABB Group	-18%	2%	2%	-14%	-14%	2%	2%	-10%

Business	H1 2020 compared to H1 2019							
	Order growth rate				Revenue growth rate			
	US\$	Foreign	Portfolio changes	Comparable	US\$	Foreign	Portfolio changes	Comparable
	(as reported)	exchange impact			(as reported)	exchange impact		
Electrification	-13%	3%	3%	-7%	-13%	2%	2%	-9%
Industrial Automation	-7%	3%	0%	-4%	-8%	3%	0%	-5%
Motion	-2%	2%	0%	0%	-5%	2%	0%	-3%
Robotics & Discrete Automation	-22%	3%	0%	-19%	-23%	2%	0%	-21%
ABB Group	-11%	2%	2%	-7%	-12%	3%	1%	-8%

Regional comparable growth rate reconciliation

Region	Q2 2020 compared to Q2 2019							
	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Europe	-18%	3%	1%	-14%	-13%	4%	1%	-8%
The Americas	-26%	2%	1%	-23%	-19%	1%	1%	-17%
Asia, Middle East and Africa	-11%	3%	3%	-5%	-11%	2%	4%	-5%
ABB Group	-18%	2%	2%	-14%	-14%	2%	2%	-10%

Region	H1 2020 compared to H1 2019							
	Order growth rate				Revenue growth rate			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Europe	-8%	3%	1%	-4%	-8%	3%	1%	-4%
The Americas	-13%	1%	1%	-11%	-12%	1%	0%	-11%
Asia, Middle East and Africa	-12%	3%	3%	-6%	-16%	2%	3%	-11%
ABB Group	-11%	2%	2%	-7%	-12%	3%	1%	-8%

Order backlog growth rate reconciliation

Business	June 30, 2020 compared to June 30, 2019			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Electrification	-2%	3%	5%	6%
Industrial Automation	-1%	4%	0%	3%
Motion	11%	2%	0%	13%
Robotics & Discrete Automation	-7%	3%	0%	-4%
ABB Group	-1%	4%	2%	5%

Other growth rate reconciliations

	Q2 2020 compared to Q2 2019				H1 2020 compared to H1 2019			
	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US\$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Service orders	-24%	3%	0%	-21%	-15%	3%	0%	-12%
Service revenues	-16%	3%	0%	-13%	-11%	3%	0%	-8%

Operational EBITA as % of operational revenues (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, related and implementation costs,
- changes in the amount recorded for obligations related to divested businesses occurring after the divestment date (changes in obligations related to 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 (including fair value adjustment on assets and liabilities held for sale),
- acquisition- and divestment-related expenses and integration costs,
- certain other 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).

Certain other non-operational items generally includes: certain regulatory, compliance and legal costs, certain asset write downs/impairments as well as other items which are determined by management on a case-by-case basis.

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.

Restructuring, related and implementation costs

Restructuring, related and implementation costs consists of restructuring and other related expenses, as well as internal and external costs relating to the implementation of group-wide restructuring programs.

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.

Reconciliation

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

Reconciliation of consolidated Operational EBITA to Net Income

(\$ in millions)	Six months ended June 30,		Three months ended June 30,	
	2020	2019	2020	2019
Operational EBITA	1,287	1,591	651	825
Acquisition-related amortization	(130)	(135)	(65)	(67)
Restructuring, related and implementation costs ⁽¹⁾	(107)	(142)	(67)	(74)
Changes in obligations related to divested businesses	(1)	(7)	(1)	(4)
Changes in pre-acquisition estimates	–	(13)	–	(13)
Gains and losses from sale of businesses	(5)	(4)	(4)	(3)
Fair value adjustment on assets and liabilities held for sale	(19)	(455)	–	(455)
Acquisition- and divestment-related expenses and integration costs	(27)	(54)	(16)	(30)
Certain other non-operational items	(47)	(76)	–	(43)
Foreign exchange/commodity timing differences in income from operations	(7)	8	73	(13)
Income from operations	944	713	571	123
Interest and dividend income	27	37	9	18
Interest and other finance expense	(112)	(123)	(90)	(61)
Non-operational pension (cost) credit	71	44	35	21
Income from continuing operations before taxes	930	671	525	101
Provision for taxes	(209)	(310)	(130)	(155)
Income from continuing operations, net of tax	721	361	395	(54)
Income from discontinued operations, net of tax	5	291	(49)	142
Net income	726	652	346	88

(1) Amounts include implementation costs in relation to the OS program of \$30 million and \$43 million for the six months ended June 30, 2020 and 2019, respectively, and \$14 million and \$24 million for the three months ended June 30, 2020 and 2019, respectively.

Reconciliation of Operational EBITA margin by business

(\$ in millions, unless otherwise indicated)	Three months ended June 30, 2020					Consolidated
	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other and Intersegment elimination	
Total revenues	2,764	1,382	1,583	629	(204)	6,154
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(23)	(30)	(13)	(3)	(1)	(70)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	(1)	–	1	–	–
Unrealized foreign exchange movements on receivables (and related assets)	23	13	9	6	3	54
Operational revenues	2,764	1,364	1,579	633	(202)	6,138
Income (loss) from operations	305	117	284	18	(153)	571
Acquisition-related amortization	29	1	13	19	3	65
Restructuring, related and implementation costs	29	13	9	4	12	67
Changes in obligations related to divested businesses	–	–	–	–	1	1
Gains and losses from sale of businesses	4	–	–	–	–	4
Acquisition- and divestment-related expenses and integration costs	16	–	–	–	–	16
Certain other non-operational items	(7)	1	4	1	1	–
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(30)	(23)	(30)	(2)	4	(81)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(1)	–	–	1	(1)	(1)
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	3	6	(1)	2	(1)	9
Operational EBITA	348	115	279	43	(134)	651
Operational EBITA margin (%)	12.6%	8.4%	17.7%	6.8%	n.a.	10.6%

In the three months ended June 30, 2020, Certain other non-operational items in the table above includes the following:

(\$ in millions, unless otherwise indicated)	Three months ended June 30, 2020					Consolidated
	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	
Certain other non-operational items:						
Costs for planned divestment of Power Grids	–	–	–	–	55	55
Asset write downs/impairments and other fair value changes	–	–	–	–	(58)	(58)
Business transformation costs	1	–	4	1	(1)	5
Favorable resolution of an uncertain purchase price adjustment	(8)	–	–	–	–	(8)
Other non-operational items	–	1	–	–	5	6
Total	(7)	1	4	1	1	–

Three months ended June 30, 2019						
(\$ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete	Corporate and Other and	Consolidated
				Automation	Intersegment elimination	
Total revenues	3,272	1,580	1,641	845	(167)	7,171
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(9)	(10)	–	6	(1)	(14)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	5	–	–	–	5
Unrealized foreign exchange movements on receivables (and related assets)	5	–	1	1	5	12
Operational revenues	3,268	1,575	1,642	852	(163)	7,174
Income (loss) from operations	(104)	187	249	76	(285)	123
Acquisition-related amortization	30	1	13	19	4	67
Restructuring, related and implementation costs	13	7	2	2	50	74
Changes in obligations related to divested businesses	–	–	–	–	4	4
Changes in pre-acquisition estimates	13	–	–	–	–	13
Gains and losses from sale of businesses	(4)	–	–	–	7	3
Fair value adjustment on assets and liabilities held for sale	455	–	–	–	–	455
Acquisition- and divestment-related expenses and integration costs	29	–	–	1	–	30
Certain other non-operational items	1	–	2	1	39	43
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	2	(11)	6	5	(9)	(7)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(1)	3	–	(1)	1	2
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	6	3	3	2	4	18
Operational EBITA	440	190	275	105	(185)	825
Operational EBITA margin (%)	13.5%	12.1%	16.7%	12.3%	n.a.	11.5%

In the three months ended June 30, 2019, Certain other non-operational items in the table above includes the following:

Three months ended June 30, 2019						
(\$ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete	Corporate and Other	Consolidated
				Automation		
Certain other non-operational items:						
Costs for planned divestment of Power Grids	–	–	–	–	38	38
Business transformation costs	–	–	2	1	–	3
Executive Committee transition costs	–	–	–	–	14	14
Gain on sale of investments	–	–	–	–	(15)	(15)
Other non-operational items	1	–	–	–	2	3
Total	1	–	2	1	39	43

Six months ended June 30, 2020						
(\$ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other and Intersegment	Consolidated
					elimination	
Total revenues	5,537	2,844	3,093	1,300	(404)	12,370
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	15	(1)	(3)	3	2	16
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	1	7	–	1	(2)	7
Unrealized foreign exchange movements on receivables (and related assets)	(6)	(7)	(4)	(2)	5	(14)
Operational revenues	5,547	2,843	3,086	1,302	(399)	12,379
Income (loss) from operations	504	241	475	50	(326)	944
Acquisition-related amortization	57	2	26	38	7	130
Restructuring, related and implementation costs	44	16	11	11	25	107
Changes in obligations related to divested businesses	–	–	–	–	1	1
Gains and losses from sale of businesses	5	–	–	–	–	5
Fair value adjustment on assets and liabilities held for sale	19	–	–	–	–	19
Acquisition- and divestment-related expenses and integration costs	27	–	–	–	–	27
Certain other non-operational items	(7)	1	9	2	42	47
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	12	(5)	(11)	–	(3)	(7)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(1)	6	–	1	(3)	3
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	6	(2)	(1)	–	8	11
Operational EBITA	666	259	509	102	(249)	1,287
Operational EBITA margin (%)	12.0%	9.1%	16.5%	7.8%	n.a.	10.4%

In the six months ended June 30, 2020, Certain other non-operational items in the table above includes the following:

Six months ended June 30, 2020						
(\$ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Consolidated
Certain other non-operational items:						
Costs for planned divestment of Power Grids	–	–	–	–	99	99
Asset write downs/impairments and other fair value changes	–	–	–	–	(58)	(58)
Business transformation costs	1	–	9	2	–	12
Executive Committee transition costs	–	–	–	–	(2)	(2)
Favorable resolution of an uncertain purchase price adjustment	(8)	–	–	–	–	(8)
Other non-operational items	–	1	–	–	3	4
Total	(7)	1	9	2	42	47

Six months ended June 30, 2019						
(\$ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete	Corporate and Other and	Consolidated
				Automation	Intersegment elimination	
Total revenues	6,329	3,098	3,246	1,696	(351)	14,018
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(10)	(9)	–	4	(2)	(17)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	1	–	(1)	1	1
Unrealized foreign exchange movements on receivables (and related assets)	1	3	1	–	3	8
Operational revenues	6,320	3,093	3,247	1,699	(349)	14,010
Income (loss) from operations	193	382	500	153	(515)	713
Acquisition-related amortization	59	2	27	39	8	135
Restructuring, related and implementation costs	53	12	5	3	69	142
Changes in obligations related to divested businesses	–	–	–	–	7	7
Changes in pre-acquisition estimates	13	–	–	–	–	13
Gains and losses from sale of businesses	(3)	–	–	–	7	4
Fair value adjustment on assets and liabilities held for sale	455	–	–	–	–	455
Acquisition- and divestment-related expenses and integration costs	51	–	–	1	2	54
Certain other non-operational items	2	2	5	1	66	76
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(5)	(6)	–	3	(5)	(13)
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	1	2	–	(1)	1	3
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(2)	1	1	1	1	2
Operational EBITA	817	395	538	200	(359)	1,591
Operational EBITA margin (%)	12.9%	12.8%	16.6%	11.8%	n.a.	11.4%

In the six months ended June 30, 2019, Certain other non-operational items in the table above includes the following:

Six months ended June 30, 2019						
(\$ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete	Corporate and Other	Consolidated
				Automation		
Certain other non-operational items:						
Costs for planned divestment of Power Grids	–	–	–	–	58	58
Regulatory, compliance and legal costs	–	–	–	–	8	8
Business transformation costs	–	–	5	1	–	6
Executive Committee transition costs	–	–	–	–	14	14
Gain on sale of investments	–	–	–	–	(15)	(15)
Other non-operational items	2	2	–	–	1	5
Total	2	2	5	1	66	76

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, related and implementation costs
- (iii) non-operational pension cost (credit),
- (iv) changes in obligations related to divested businesses,
- (v) changes in pre-acquisition estimates,
- (vi) gains and losses from sale of businesses (including fair value adjustment on assets and liabilities held for sale),
- (vii) acquisition- and divestment-related expenses and integration costs,
- (viii) certain other non-operational items,
- (ix) 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),
- (x) 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 (ix) above, and
- (xi) Certain other non-operational amounts recorded within Provision for taxes.

Adjustment for certain non-operational amounts recorded within Provision for taxes

Adjustments are made for certain amounts recorded within Provision for taxes primarily when the amount recorded has no corresponding underlying transaction recorded within income from continuing or discontinued operations before taxes. This would include the amounts recorded in connection with internal reorganizations of the corporate structure of the Company.

Restructuring, related and implementation costs

Restructuring, related and implementation costs consists of restructuring and other related expenses, as well as internal and external costs relating to the implementation of group-wide restructuring programs.

Adjusted Group effective tax rate

The Adjusted Group effective tax rate is computed by dividing a combined adjusted provision for taxes (for both continuing and discontinued operations) by a combined adjusted pre-tax income (from both continuing and discontinued operations). Certain amounts recorded in income before taxes and the related provision for taxes (primarily gains and losses from sale of businesses) are excluded to arrive at the computation. Amounts recorded in Provision for taxes for certain non-operational items and quantified in the table below are also excluded from the computation of the Adjusted Group effective tax rate.

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

We compute the constant currency operational net income using the relevant monthly exchange rates which were in effect during 2019 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 \$)	Six months ended June 30,		
	2020	2019	Growth ⁽³⁾
Net income (attributable to ABB)	695	599	16%
Non-operational adjustments:			
Acquisition-related amortization	130	135	
Restructuring, related and implementation costs ⁽¹⁾	107	142	
Non-operational pension cost (credit)	(71)	(44)	
Changes in obligations related to divested businesses	1	7	
Changes in pre-acquisition estimates	–	13	
Gains and losses from sale of businesses	5	4	
Fair value adjustment on assets and liabilities held for sale	19	455	
Acquisition- and divestment-related expenses and integration costs	27	54	
Certain other non-operational items	47	76	
FX/commodity timing differences in income from operations	7	(8)	
Non-operational adjustments in discontinued operations	196	56	
Tax on non-operational adjustments ⁽²⁾	(62)	(124)	
Operational net income	1,101	1,365	-19%
Weighted-average number of shares outstanding (in millions)	2,134	2,132	
Operational EPS	0.52	0.64	-19%
Constant currency Operational EPS adjustment	0.01	–	
Operational EPS (constant currency basis)	0.53	0.64	-18%

(\$ in millions, except per share data in \$)	Three months ended June 30,		
	2020	2019	Growth ⁽³⁾
Net income (attributable to ABB)	319	64	398%
Non-operational adjustments:			
Acquisition-related amortization	65	67	
Restructuring, related and implementation costs ⁽¹⁾	67	74	
Non-operational pension cost (credit)	(35)	(21)	
Changes in obligations related to divested businesses	1	4	
Changes in pre-acquisition estimates	–	13	
Gains and losses from sale of businesses	4	3	
Fair value adjustment on assets and liabilities held for sale	–	455	
Acquisition- and divestment-related expenses and integration costs	16	30	
Certain other non-operational items	–	43	
Foreign exchange/commodity timing differences in income from operations	(73)	13	
Non-operational adjustments in discontinued operations	119	56	
Tax on non-operational adjustments ⁽²⁾	(15)	(83)	
Operational net income	468	718	-35%
Weighted-average number of shares outstanding (in millions)	2,134	2,132	
Operational EPS	0.22	0.34	-35%
Constant currency Operational EPS adjustment	–	–	
Operational EPS (constant currency basis)	0.22	0.34	-33%

(1) Amounts include implementation costs in relation to the OS program of \$30 million and \$43 million for the six months ended June 30, 2020 and 2019, respectively, and \$14 million and \$24 million for the three months ended June 30, 2020 and 2019, respectively.

(2) Tax amount is computed by applying the Adjusted Group effective tax rate to the non-operational adjustments, except for certain costs for the planned divestment of the Power Grids business, gains and losses from sale of businesses (including fair value adjustment on assets and liabilities held for sale) and certain non-operational pension costs in discontinued operations, 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)	June 30, 2020	December 31, 2019
Short-term debt and current maturities of long-term debt	6,383	2,287
Long-term debt	6,237	6,772
Total debt	12,620	9,059
Cash and equivalents	2,518	3,544
Cash and equivalents in discontinued operations	609	–
Marketable securities and short-term investments	1,878	566
Cash and marketable securities	5,005	4,110
Net debt	7,615	4,949

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) contract assets, (iii) inventories, net, and (iv) prepaid expenses; less (v) accounts payable, trade, (vi) contract liabilities, and (vii) other current liabilities (excluding primarily: (a) income taxes payable, (b) current derivative liabilities, and (c) pension and other employee benefits); and including the amounts related to these accounts which have been presented as either assets or liabilities held for sale but excluding any amounts included in discontinued operations.

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)	June 30, 2020	June 30, 2019
Net working capital:		
Receivables, net	6,150	6,517
Contract assets	1,110	1,159
Inventories, net	4,395	4,456
Prepaid expenses	256	250
Accounts payable, trade	(4,062)	(4,107)
Contract liabilities	(1,703)	(1,610)
Other current liabilities ⁽¹⁾	(2,869)	(2,881)
Net working capital in assets and liabilities held for sale	–	69
Net working capital	3,277	3,853
Total revenues for the three months ended:		
June 30, 2020 / 2019	6,154	7,171
March 31, 2020 / 2019	6,216	6,847
December 31, 2019 / 2018	7,068	7,395
September 30, 2019 / 2018	6,892	7,095
Adjustment to annualize/eliminate revenues of certain acquisitions/divestments	(269)	(119)
Adjusted revenues for the trailing twelve months	26,061	28,389
Net working capital as a percentage of revenues (%)	12.6%	13.6%

(1) Amounts exclude \$578 million and \$566 million at June 30, 2020 and 2019, respectively, related primarily to (a) income taxes payable, (b) current derivative liabilities, and (c) pension and other employee benefits.

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

Free cash flow is calculated as net cash provided by operating activities adjusted for: (i) purchases of property, plant and equipment and intangible assets, and (ii) proceeds from sales of property, plant and equipment.

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	
	June 30, 2020	December 31, 2019
Net cash provided by operating activities	2,684	2,325
Adjusted for the effects of:		
Continuing operations:		
Purchases of property, plant and equipment and intangible assets	(689)	(762)
Proceeds from sale of property, plant and equipment	55	82
Discontinued operations:		
Purchases of property, plant and equipment and intangible assets	(179)	(167)
Proceeds from sale of property, plant and equipment	8	8
Free cash flow	1,879	1,486
Net income attributable to ABB	1,535	1,439
Free cash flow conversion to net income	122%	103%

Reconciliation of the trailing twelve months to June 30, 2020

(\$ in millions)	Net cash provided by operating activities	Continuing operations		Discontinued operations		Net income attributable to ABB
		Purchases of property, plant and equipment and intangible assets	Proceeds from sale of property, plant and equipment	Purchases of property, plant and equipment and intangible assets	Proceeds from sale of property, plant and equipment	
Q3 2019	670	(152)	13	(38)	8	515
Q4 2019	1,911	(234)	15	(48)	–	325
Q1 2020	(577)	(163)	23	(33)	–	376
Q2 2020	680	(140)	4	(60)	–	319
Total for the trailing twelve months to June 30, 2020	2,684	(689)	55	(179)	8	1,535

Net finance expenses

Definition

Net finance expenses is calculated as Interest and dividend income less Interest and other finance expense.

Reconciliation

(\$ in millions)	Six months ended June 30,		Three months ended June 30,	
	2020	2019	2020	2019
Interest and dividend income	27	37	9	18
Interest and other finance expense	(112)	(123)	(90)	(61)
Net finance expenses	(85)	(86)	(81)	(43)

Book-to-bill ratio

Definition

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

Reconciliation

(\$ in millions, unless otherwise indicated)	Six months ended June 30,		Three months ended June 30,	
	2020	2019	2020	2019
Orders received	13,400	15,014	6,054	7,401
Total revenues	12,370	14,018	6,154	7,171
Book-to-bill ratio	1.08	1.07	0.98	1.03

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