February 4, 2021

Q4 2020

Financial information

Financial Information
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Key Figures

($ in millions, unless otherwise indicated)	Q4 2020	Q4 2019	CHANGE US$	CHANGE Comparable[1]
Orders	7,003	6,886	2%	-1%
Order backlog (end December)	14,303	13,324	7%	5%
Revenues	7,182	7,068	2%	0%
Income from operations	578	648	-11%	
Operational EBITA[1]	825	710	16%	12%[2]
as % of operational revenues[1]	11.5%	10.1%	+1.4 pts	
Income from continuing operations, net of tax	127	307	-59%	
Net income (loss) attributable to ABB	(79)	325	n.a	
Basic earnings per share ($)	(0.04)	0.15	n.a	
Operational earnings per share[1] ($)	0.26	0.27	-6%[3]	-10%[3]
Cash flow from operating activities[4]	1,182	1,911	-38%	

($ in millions, unless otherwise indicated)	FY 2020	FY 2019	CHANGE US$	CHANGE Comparable[1]
Orders	26,512	28,588	-7%	-6%
Revenues	26,134	27,978	-7%	-5%
Income from operations	1,593	1,938	-18%	
Operational EBITA[1]	2,899	3,107	-7%	-8%[2]
as % of operational revenues[1]	11.1%	11.1%	0 pts	
Income from continuing operations, net of tax	345	1,090	-68%	
Net income attributable to ABB	5,146	1,439	258%	
Basic earnings per share ($)	2.44	0.67	261%[3]	
Operational earnings per share[1] ($)	0.98	1.24	-21%[3]	-22%[3]
Cash flow from operating activities[4]	1,693	2,325	-27%	

(1) For a reconciliation of non-GAAP measures see "Supplemental Reconciliations and Definitions" on page 40.
(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)		Q4 2020	Q4 2019	CHANGE US$	Local	Comparable
Orders	**ABB Group**	**7,003**	**6,886**	**2%**	**-1%**	**-1%**
	Electrification	3,074	3,160	-3%	-5%	-2%
	Industrial Automation	1,918	1,706	12%	9%	9%
	Motion	1,552	1,602	-3%	-5%	-5%
	Robotics & Discrete Automation	699	701	0%	-5%	-5%
	Corporate and Other (incl. intersegment eliminations)	(240)	(283)			
Order backlog (end December)	**ABB Group**	**14,303**	**13,324**	**7%**	**3%**	**5%**
	Electrification	4,358	4,488	-3%	-5%	-1%
	Industrial Automation	5,805	5,077	14%	9%	9%
	Motion	3,320	2,967	12%	6%	6%
	Robotics & Discrete Automation	1,403	1,356	3%	-2%	-2%
	Corporate and Other (incl. intersegment eliminations)	(583)	(564)			
Revenues	**ABB Group**	**7,182**	**7,068**	**2%**	**-1%**	**0%**
	Electrification	3,356	3,238	4%	1%	5%
	Industrial Automation	1,545	1,683	-8%	-11%	-11%
	Motion	1,705	1,657	3%	0%	0%
	Robotics & Discrete Automation	801	787	2%	-3%	-3%
	Corporate and Other (incl. intersegment eliminations)	(225)	(297)			
Income from operations	**ABB Group**	**578**	**648**			
	Electrification	444	478			
	Industrial Automation	28	194			
	Motion	258	245			
	Robotics & Discrete Automation	23	62			
	Corporate and Other (incl. intersegment eliminations)	(175)	(331)			
Income from operations %	**ABB Group**	**8.0%**	**9.2%**			
	Electrification	13.2%	14.8%			
	Industrial Automation	1.8%	11.5%			
	Motion	15.1%	14.8%			
	Robotics & Discrete Automation	2.9%	7.9%			
Operational EBITA	**ABB Group**	**825**	**710**	**16%**	**12%**	
	Electrification	522	421	24%	19%	
	Industrial Automation	103	202	-49%	-50%	
	Motion	285	254	12%	7%	
	Robotics & Discrete Automation	59	86	-31%	-33%	
	Corporate and Other[1] *(incl. intersegment eliminations)*	(144)	(253)			
Operational EBITA %	**ABB Group**	**11.5%**	**10.1%**			
	Electrification	15.6%	13.1%			
	Industrial Automation	6.8%	12.1%			
	Motion	16.8%	15.4%			
	Robotics & Discrete Automation	7.3%	11.0%			
Cash flow from operating activities[2]	**ABB Group**	**1,182**	**1,911**			
	Electrification	874	969			
	Industrial Automation	192	338			
	Motion	420	410			
	Robotics & Discrete Automation	133	141			
	Corporate and Other (incl. intersegment eliminations)	(394)	(404)			
	Discontinued operations	(43)	457			

(1) Corporate and Other includes Stranded corporate costs of $40 million for the three months ended December 31, 2019.
(2) Commencing Q3 2020, taxes and interest previously allocated to each individual operating segment are now fully allocated to Corporate and other and the comparatives restated.

($ in millions, unless otherwise indicated)		FY 2020	FY 2019	CHANGE US$	CHANGE Local	CHANGE Comparable
Orders	**ABB Group**	**26,512**	**28,588**	**-7%**	**-7%**	**-6%**
	Electrification	11,884	13,050	-9%	-9%	-6%
	Industrial Automation	6,144	6,432	-4%	-4%	-4%
	Motion	6,574	6,782	-3%	-2%	-2%
	Robotics & Discrete Automation	2,868	3,260	-12%	-12%	-12%
	Corporate and Other (incl. intersegment eliminations)	(958)	(936)			
Order backlog (end December)	**ABB Group**	**14,303**	**13,324**	**7%**	**3%**	**5%**
	Electrification	4,358	4,488	-3%	-5%	-1%
	Industrial Automation	5,805	5,077	14%	9%	9%
	Motion	3,320	2,967	12%	6%	6%
	Robotics & Discrete Automation	1,403	1,356	3%	-2%	-2%
	Corporate and Other (incl. intersegment eliminations)	(583)	(564)			
Revenues	**ABB Group**	**26,134**	**27,978**	**-7%**	**-6%**	**-5%**
	Electrification	11,924	12,728	-6%	-6%	-3%
	Industrial Automation	5,792	6,273	-8%	-7%	-7%
	Motion	6,409	6,533	-2%	-2%	-2%
	Robotics & Discrete Automation	2,907	3,314	-12%	-13%	-13%
	Corporate and Other (incl. intersegment eliminations)	(898)	(870)			
Income from operations	**ABB Group**	**1,593**	**1,938**			
	Electrification	1,335	1,049			
	Industrial Automation	344	700			
	Motion	989	1,009			
	Robotics & Discrete Automation	(163)	298			
	Corporate and Other (incl. intersegment eliminations)	(912)	(1,118)			
Income from operations %	**ABB Group**	**6.1%**	**6.9%**			
	Electrification	11.2%	8.2%			
	Industrial Automation	5.9%	11.2%			
	Motion	15.4%	15.4%			
	Robotics & Discrete Automation	(5.6)%	9.0%			
Operational EBITA	**ABB Group**	**2,899**	**3,107**	**-7%**	**-8%**	
	Electrification	1,681	1,688	0%	-1%	
	Industrial Automation	451	732	-38%	-39%	
	Motion	1,075	1,082	-1%	-1%	
	Robotics & Discrete Automation	237	393	-40%	-40%	
	Corporate and Other(1) (incl. intersegment eliminations)	(545)	(788)			
Operational EBITA %	**ABB Group**	**11.1%**	**11.1%**			
	Electrification	14.1%	13.3%			
	Industrial Automation	7.8%	11.7%			
	Motion	16.8%	16.6%			
	Robotics & Discrete Automation	8.2%	11.9%			
Cash flow from operating activities(2)	**ABB Group**	**1,693**	**2,325**			
	Electrification	1,727	1,827			
	Industrial Automation	437	675			
	Motion	1,269	1,143			
	Robotics & Discrete Automation	373	343			
	Corporate and Other (incl. intersegment eliminations)	(1,931)	(2,089)			
	Discontinued operations	(182)	426			

(1) Corporate and Other includes Stranded corporate costs of $40 million and $225 million for the year ended December 31, 2020 and 2019, respectively.
(2) Commencing Q3 2020, taxes and interest previously allocated to each individual operating segment are now fully allocated to Corporate and other and the comparatives restated.

Operational EBITA

($ in millions, unless otherwise indicated)	ABB		Electrification		Industrial Automation		Motion		Robotics & Discrete Automation	
	Q4 20	Q4 19	Q4 20	Q4 19	Q4 20	Q4 19	Q4 20	Q4 19	Q4 20	Q4 19
Revenues	**7,182**	**7,068**	**3,356**	**3,238**	**1,545**	**1,683**	**1,705**	**1,657**	**801**	**787**
Foreign exchange/commodity timing differences in total revenues	(37)	(29)	(15)	(12)	(23)	(12)	(4)	(4)	3	(4)
Operational revenues	**7,145**	**7,039**	**3,341**	**3,226**	**1,522**	**1,671**	**1,701**	**1,653**	**804**	**783**
Income from operations	**578**	**648**	**444**	**478**	**28**	**194**	**258**	**245**	**23**	**62**
Acquisition-related amortization	66	60	29	28	1	1	13	13	20	19
Restructuring, related and implementation costs	220	99	62	51	88	7	24	2	12	4
Changes in obligations related to divested businesses	14	5	–	–	–	–	–	–	–	–
Changes in pre-acquisition estimates	–	9	–	9	–	–	–	–	–	–
Gains and losses from sale of businesses	(2)	(47)	(2)	(41)	–	–	–	–	–	–
Fair value adjustment on assets and liabilities held for sale	–	(45)	–	(45)	–	–	–	–	–	–
Acquisition- and divestment-related expenses and integration costs	31	49	31	50	1	–	–	–	–	–
Other income/expense relating to the Power Grids joint venture	5	–	–	–	–	–	–	–	–	–
Certain other non-operational items	(43)	(42)	(22)	(91)	–	–	4	6	2	2
Foreign exchange/commodity timing differences in income from operations	(44)	(26)	(20)	(18)	(15)	–	(14)	(12)	2	(1)
Operational EBITA	**825**	**710**	**522**	**421**	**103**	**202**	**285**	**254**	**59**	**86**
Operational EBITA margin (%)	**11.5%**	**10.1%**	**15.6%**	**13.1%**	**6.8%**	**12.1%**	**16.8%**	**15.4%**	**7.3%**	**11.0%**

($ in millions, unless otherwise indicated)	ABB		Electrification		Industrial Automation		Motion		Robotics & Discrete Automation	
	FY 20	FY 19	FY 20	FY 19	FY 20	FY 19	FY 20	FY 19	FY 20	FY 19
Revenues	**26,134**	**27,978**	**11,924**	**12,728**	**5,792**	**6,273**	**6,409**	**6,533**	**2,907**	**3,314**
Foreign exchange/commodity timing differences in total revenues	(41)	(17)	(13)	(11)	(30)	(4)	(7)	–	–	(2)
Operational revenues	**26,093**	**27,961**	**11,911**	**12,717**	**5,762**	**6,269**	**6,402**	**6,533**	**2,907**	**3,312**
Income (loss) from operations	**1,593**	**1,938**	**1,335**	**1,049**	**344**	**700**	**989**	**1,009**	**(163)**	**298**
Acquisition-related amortization	263	265	115	115	4	4	52	53	78	77
Restructuring, related and implementation costs	410	300	145	112	125	21	44	12	26	12
Changes in obligations related to divested businesses	218	36	15	–	–	–	–	–	–	–
Changes in pre-acquisition estimates	11	22	11	22	–	–	–	–	–	–
Gains and losses from sale of businesses	2	(55)	4	(42)	–	–	–	–	–	–
Fair value adjustment on assets and liabilities held for sale	33	421	33	421	–	–	–	–	–	–
Acquisition- and divestment-related expenses and integration costs	74	121	71	119	2	–	–	–	–	1
Other income/expense relating to the Power Grids joint venture	20	–	–	–	–	–	–	–	–	–
Certain other non-operational items	335	80	(27)	(89)	1	2	17	14	295	4
Foreign exchange/commodity timing differences in income from operations	(60)	(21)	(21)	(19)	(25)	5	(27)	(6)	1	1
Operational EBITA	**2,899**	**3,107**	**1,681**	**1,688**	**451**	**732**	**1,075**	**1,082**	**237**	**393**
Operational EBITA margin (%)	**11.1%**	**11.1%**	**14.1%**	**13.3%**	**7.8%**	**11.7%**	**16.8%**	**16.6%**	**8.2%**	**11.9%**

Depreciation and Amortization

($ in millions)	ABB		Electrification		Industrial Automation		Motion		Robotics & Discrete Automation	
	Q4 20	Q4 19	Q4 20	Q4 19	Q4 20	Q4 19	Q4 20	Q4 19	Q4 20	Q4 19
Depreciation	147	166	59	80	13	12	28	29	11	11
Amortization	82	80	33	33	3	2	14	14	21	20
including total acquisition-related amortization of:	66	60	29	28	1	1	13	13	20	19

($ in millions)	ABB		Electrification		Industrial Automation		Motion		Robotics & Discrete Automation	
	FY 20	FY 19	FY 20	FY 19	FY 20	FY 19	FY 20	FY 19	FY 20	FY 19
Depreciation	586	616	243	271	52	47	113	113	45	44
Amortization	329	345	138	143	11	8	55	56	81	80
including total acquisition-related amortization of:	263	265	115	115	4	4	52	53	78	77

Orders received and revenues by region

($ in millions, unless otherwise indicated)	Orders received		CHANGE			Revenues		CHANGE		
	Q4 20	Q4 19	US$	Local	Com-parable	Q4 20	Q4 19	US$	Local	Com-parable
Europe	2,497	2,719	-8%	-13%	-12%	2,710	2,573	5%	1%	1%
The Americas	2,002	2,160	-7%	-6%	-6%	2,045	2,160	-5%	-5%	-4%
of which United States	1,450	1,647	-12%	-12%	-12%	1,497	1,617	-7%	-8%	-7%
Asia, Middle East and Africa	2,504	1,956	28%	24%	23%	2,427	2,279	6%	2%	4%
of which China	1,071	870	23%	15%	21%	1,231	1,011	22%	14%	17%
Intersegment orders/revenues(1)	–	51				–	56			
ABB Group	**7,003**	**6,886**	**2%**	**-1%**	**-1%**	**7,182**	**7,068**	**2%**	**-1%**	**0%**

($ in millions, unless otherwise indicated)	Orders received		CHANGE			Revenues		CHANGE		
	FY 20	FY 19	US$	Local	Com-parable	FY 20	FY 19	US$	Local	Com-parable
Europe	9,559	10,424	-8%	-8%	-7%	9,708	10,004	-3%	-4%	-3%
The Americas	7,938	9,018	-12%	-11%	-10%	7,936	8,919	-11%	-9%	-9%
of which United States	5,962	6,780	-12%	-12%	-11%	6,019	6,735	-11%	-11%	-11%
Asia, Middle East and Africa	8,893	8,940	-1%	-1%	1%	8,382	8,842	-5%	-5%	-3%
of which China	4,107	4,107	0%	0%	3%	4,091	4,039	1%	1%	3%
Intersegment orders/revenues(1)	122	206				108	213			
ABB Group	**26,512**	**28,588**	**-7%**	**-7%**	**-6%**	**26,134**	**27,978**	**-7%**	**-6%**	**-5%**

(1) Intersegment orders/revenues until June 30, 2020, include sales to the Power Grids business which is presented as discontinued operations and thus these sales are not eliminated from Total orders/revenues.

Consolidated Financial Information

ABB Ltd Consolidated Income Statements (unaudited)

	Year ended		Three months ended	
($ in millions, except per share data in $)	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Sales of products	21,214	22,554	5,823	5,597
Sales of services and other	4,920	5,424	1,359	1,471
Total revenues	**26,134**	**27,978**	**7,182**	**7,068**
Cost of sales of products	(15,229)	(15,811)	(4,182)	(3,960)
Cost of services and other	(3,027)	(3,261)	(853)	(901)
Total cost of sales	**(18,256)**	**(19,072)**	**(5,035)**	**(4,861)**
Gross profit	**7,878**	**8,906**	**2,147**	**2,207**
Selling, general and administrative expenses	(4,895)	(5,447)	(1,271)	(1,365)
Non-order related research and development expenses	(1,127)	(1,198)	(336)	(332)
Impairment of goodwill	(311)	–	–	–
Other income (expense), net	48	(323)	38	138
Income from operations	**1,593**	**1,938**	**578**	**648**
Interest and dividend income	51	67	12	10
Interest and other finance expense	(240)	(215)	(49)	(36)
Losses from extinguishment of debt	(162)	–	(162)	–
Non-operational pension (cost) credit	(401)	72	(129)	5
Income from continuing operations before taxes	**841**	**1,862**	**250**	**627**
Income tax expense	(496)	(772)	(123)	(320)
Income from continuing operations, net of tax	**345**	**1,090**	**127**	**307**
Income (loss) from discontinued operations, net of tax	4,860	438	(183)	50
Net income (loss)	**5,205**	**1,528**	**(56)**	**357**
Net income attributable to noncontrolling interests	(59)	(89)	(23)	(32)
Net income (loss) attributable to ABB	**5,146**	**1,439**	**(79)**	**325**
Amounts attributable to ABB shareholders:				
Income from continuing operations, net of tax	294	1,043	104	291
Income (loss) from discontinued operations, net of tax	4,852	396	(183)	34
Net income (loss)	5,146	1,439	(79)	325
Basic earnings per share attributable to ABB shareholders:				
Income from continuing operations, net of tax	0.14	0.49	0.05	0.14
Income (loss) from discontinued operations, net of tax	2.30	0.19	(0.09)	0.02
Net income (loss)	2.44	0.67	(0.04)	0.15
Diluted earnings per share attributable to ABB shareholders:				
Income from continuing operations, net of tax	0.14	0.49	0.05	0.14
Income (loss) from discontinued operations, net of tax	2.29	0.19	(0.09)	0.02
Net income (loss)	2.43	0.67	(0.04)	0.15
Weighted-average number of shares outstanding (in millions) used to compute:				
Basic earnings per share attributable to ABB shareholders	2,111	2,133	2,059	2,133
Diluted earnings per share attributable to ABB shareholders	2,119	2,135	2,071	2,137

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)

	Year ended		Three months ended	
($ in millions)	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Total comprehensive income, net of tax	**6,820**	**1,279**	**576**	**315**
Total comprehensive income attributable to noncontrolling interests, net of tax	(86)	(83)	(28)	(36)
Total comprehensive income attributable to ABB shareholders, net of tax	**6,734**	**1,196**	**548**	**279**

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)	Dec. 31, 2020	Dec. 31, 2019
Cash and equivalents	3,278	3,508
Restricted cash	323	36
Marketable securities and short-term investments	2,108	566
Receivables, net	6,820	6,434
Contract assets	985	1,025
Inventories, net	4,469	4,184
Prepaid expenses	201	191
Other current assets	760	674
Current assets held for sale and in discontinued operations	282	9,840
Total current assets	**19,226**	**26,458**
Restricted cash, non-current	300	–
Property, plant and equipment, net	4,174	3,972
Operating lease right-of-use assets	969	994
Investments in equity-accounted companies	1,784	33
Prepaid pension and other employee benefits	360	133
Intangible assets, net	2,078	2,252
Goodwill	10,850	10,825
Deferred taxes	843	910
Other non-current assets	504	531
Total assets	**41,088**	**46,108**
Accounts payable, trade	4,571	4,353
Contract liabilities	1,903	1,719
Short-term debt and current maturities of long-term debt	1,293	2,287
Current operating leases	270	305
Provisions for warranties	1,035	816
Other provisions	1,519	1,375
Other current liabilities	4,181	3,761
Current liabilities held for sale and in discontinued operations	644	5,650
Total current liabilities	**15,416**	**20,266**
Long-term debt	4,828	6,772
Non-current operating leases	731	717
Pension and other employee benefits	1,231	1,793
Deferred taxes	661	911
Other non-current liabilities	2,025	1,669
Non-current liabilities held for sale and in discontinued operations	197	–
Total liabilities	**25,089**	**32,128**
Commitments and contingencies		
Stockholders' equity:		
Common stock, CHF 0.12 par value (2,168,148,264 issued shares at December 31, 2020 and 2019)	188	188
Additional paid-in capital	83	73
Retained earnings	22,946	19,640
Accumulated other comprehensive loss	(4,002)	(5,590)
Treasury stock, at cost (137,314,095 and 34,647,153 shares at December 31, 2020 and 2019, respectively)	(3,530)	(785)
Total ABB stockholders' equity	**15,685**	**13,526**
Noncontrolling interests	314	454
Total stockholders' equity	**15,999**	**13,980**
Total liabilities and stockholders' equity	**41,088**	**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)

	Year ended		Three months ended	
($ in millions)	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Operating activities:				
Net income (loss)	5,205	1,528	(56)	357
Loss (income) from discontinued operations, net of tax	(4,860)	(438)	183	(50)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:				
Depreciation and amortization	915	961	229	246
Impairment of goodwill	311	–	–	–
Pension and other employee benefits	50	(102)	77	(27)
Deferred taxes	(280)	(83)	(121)	35
Losses from extinguishment of debt	162	–	162	–
Net loss (gain) from derivatives and foreign exchange	(2)	1	(31)	(9)
Net loss (gain) from sale of property, plant and equipment	(37)	(51)	(13)	(3)
Net loss (gain) from sale of businesses	2	(55)	(2)	(47)
Fair value adjustment on assets and liabilities held for sale	33	421	–	(45)
Share-based payment arrangements	44	46	14	15
Other	(20)	43	(14)	23
Changes in operating assets and liabilities:				
Trade receivables, net	(100)	(202)	(63)	30
Contract assets and liabilities	186	128	145	182
Inventories, net	196	(182)	397	229
Accounts payable, trade	(13)	130	85	292
Accrued liabilities	(92)	(76)	(34)	12
Provisions, net	243	(36)	147	32
Income taxes payable and receivable	(76)	(3)	2	84
Other assets and liabilities, net	8	(131)	118	98
Net cash provided by operating activities – continuing operations	1,875	1,899	1,225	1,454
Net cash provided by (used in) operating activities – discontinued operations	(182)	426	(43)	457
Net cash provided by operating activities	**1,693**	**2,325**	**1,182**	**1,911**
Investing activities:				
Purchases of investments	(5,933)	(748)	49	(32)
Purchases of property, plant and equipment and intangible assets	(694)	(762)	(262)	(234)
Acquisition of businesses (net of cash acquired) and increases in cost- and equity-accounted companies	(121)	(22)	(22)	(9)
Proceeds from sales of investments	4,341	749	3,053	31
Proceeds from maturity of investments	11	80	10	–
Proceeds from sales of property, plant and equipment	114	82	46	15
Proceeds from sales of businesses (net of transaction costs and cash disposed) and cost- and equity-accounted companies	(136)	69	(3)	47
Net cash from settlement of foreign currency derivatives	138	(76)	44	(10)
Other investing activities	8	(23)	(3)	(21)
Net cash provided by (used in) investing activities – continuing operations	(2,272)	(651)	2,912	(213)
Net cash provided by (used in) investing activities – discontinued operations	9,032	(164)	(59)	(44)
Net cash provided by (used in) investing activities	**6,760**	**(815)**	**2,853**	**(257)**
Financing activities:				
Net changes in debt with original maturities of 90 days or less	(587)	164	(62)	(731)
Increase in debt	343	2,406	(17)	171
Repayment of debt	(3,459)	(2,156)	(2,796)	(144)
Delivery of shares	412	10	29	10
Purchase of treasury stock	(3,048)	–	(1,778)	–
Dividends paid	(1,736)	(1,675)	–	–
Dividends paid to noncontrolling shareholders	(82)	(90)	–	(15)
Other financing activities	(49)	13	18	(12)
Net cash used in financing activities – continuing operations	(8,206)	(1,328)	(4,606)	(721)
Net cash provided by (used in) financing activities – discontinued operations	31	(55)	–	(1)
Net cash used in financing activities	**(8,175)**	**(1,383)**	**(4,606)**	**(722)**
Effects of exchange rate changes on cash and equivalents and restricted cash	79	(28)	134	33
Net change in cash and equivalents and restricted cash	**357**	**99**	**(437)**	**965**
Cash and equivalents and restricted cash, beginning of period	3,544	3,445	4,338	2,579
Cash and equivalents and restricted cash, end of period	**3,901**	**3,544**	**3,901**	**3,544**
Supplementary disclosure of cash flow information:				
Interest paid	189	284	78	96
Income taxes paid	905	1,005	216	236

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			1,439			**1,439**	89	**1,528**
Foreign currency translation adjustments, net of tax of $0				(126)		**(126)**	(6)	**(132)**
Effect of change in fair value of available-for-sale securities, net of tax of $3				14		**14**		**14**
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax of $(36)				(142)		**(142)**		**(142)**
Change in derivatives qualifying as cash flow hedges, net of tax of $0				11		**11**		**11**
Total comprehensive income						**1,196**	**83**	**1,279**
Changes in noncontrolling interests		(17)				**(17)**	12	**(5)**
Fair value adjustment to noncontrolling interests recognized in business combination						**–**	(44)	**(44)**
Change in noncontrolling interests in connection with divestments						**–**	(55)	**(55)**
Dividends to noncontrolling shareholders						**–**	(122)	**(122)**
Dividends paid to shareholders			(1,675)			**(1,675)**		**(1,675)**
Share-based payment arrangements		55				**55**		**55**
Delivery of shares		(24)			34	**10**		**10**
Call options		4				**4**		**4**
Balance at December 31, 2019	**188**	**73**	**19,640**	**(5,590)**	**(785)**	**13,526**	**454**	**13,980**
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			5,146			**5,146**	59	**5,205**
Foreign currency translation adjustments, net of tax of $2				990		**990**	27	**1,017**
Effect of change in fair value of available-for-sale securities, net of tax of $3				7		**7**		**7**
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax of $161				589		**589**		**589**
Change in derivatives qualifying as cash flow hedges, net of tax of $(2)				2		**2**		**2**
Total comprehensive income						**6,734**	**86**	**6,820**
Changes in noncontrolling interests		(16)				**(16)**	19	**3**
Changes in noncontrolling interests in connection with divestments						**–**	(138)	**(138)**
Dividends to noncontrolling shareholders						**–**	(98)	**(98)**
Dividends paid to shareholders			(1,758)			**(1,758)**		**(1,758)**
Share-based payment arrangements		54				**54**		**54**
Purchase of treasury stock					(3,181)	**(3,181)**		**(3,181)**
Delivery of shares		(24)			436	**412**		**412**
Other		(3)				**(3)**		**(3)**
Balance at December 31, 2020	**188**	**83**	**22,946**	**(4,002)**	**(3,530)**	**15,685**	**314**	**15,999**

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 unrecognized tax benefits,
- 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 initial fair value of retained noncontrolling interest and certain obligations in connection with divestments,
- 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.

Certain amounts reported in the Interim Consolidated Financial Information for prior periods have been reclassified to conform to the current year's presentation. These changes primarily relate to the separate presentation of Restricted cash in the Consolidated Balance Sheets.

Adjustment related to prior periods
In the three months ended December 31, 2020, the Company corrected certain liabilities which were extinguished as part of the finalization of the purchase price of GEIS. The price agreement was reached in 2019 but the impact on these liabilities was not originally identified at that time by the Company. As a result, a gain of $28 million was recorded in the Interim Consolidated Income Statements for the three months ended December 31, 2020. As this gain results from the favorable resolution of a purchase price uncertainty with respect to the acquisition of GEIS, this amount has been excluded from the measure of segment performance, Operational EBITA (see Note 18) for the Electrification operating segment. 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.

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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. This adjustment consisted primarily of an impact on the opening balance of trade receivables of $98 million (excluding an offsetting amount for deferred tax), of which $56 million related to continuing operations and $42 million related to the Power Grids business, which is included in discontinued operations.

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. Depending on the amendment, adoption may be applied on a retrospective, modified retrospective or prospective basis. The Company does not expect the update to have a significant impact 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.

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Note 3
Discontinued operations

Divestment of the Power Grids business
On July 1, 2020, the Company completed the sale of 80.1 percent of its Powers Grids business to Hitachi Ltd (Hitachi). The transaction was executed through the sale of 80.1 percent of the shares of Hitachi ABB Power Grids Ltd (“Hitachi ABB PG” or “HAPG”). Cash consideration received at the closing date was $9,241 million net of cash disposed. Further, for accounting purposes, the 19.9 percent ownership interest retained by the Company is deemed to have been both divested and reacquired at its fair value on July 1, 2020. The Company also obtained a put option, exercisable commencing in April 2023, allowing the Company to require Hitachi to purchase the remaining interest for fair value, subject to a minimum floor price equivalent to a 10 percent discount compared to the price paid for the initial 80.1 percent. The combined fair value of the retained investment and the related put option, which amounted to $1,779 million, was recorded at fair value on July 1, 2020, and was accounted for as part of the proceeds for the sale of the entire Power Grids business (see Note 4). The Company also recorded a liability in discontinued operations for estimated future costs and other cash payments of $487 million for various contractual items relating to the sale of the business including required future cost reimbursements payable to HAPG, costs incurred by the Company for the direct benefit of HAPG, and an amount due to Hitachi Ltd in connection with the expected purchase price finalization of the closing debt and working capital balances. From the date of the disposal through December 31, 2020, $33 million of these liabilities had been paid and are reported as reductions in the cash consideration received, all of which was paid during the three months ended December 31, 2020.

As a result of the Power Grids sale, the Company has recognized a net gain of $5,141 million, net of transaction costs, for the sale of the entire Power Grids business which is included in Income from discontinued operations, net of tax, in the year ended December 31, 2020. Included in the net gain was a cumulative translation loss relating to the Power Grids business of $420 million which was reclassified from accumulated other comprehensive loss (see Note 16). Certain amounts included in the net gain are estimated or otherwise subject to change in value and, as a result, the Company may record additional adjustments to the gain in future periods which are not expected to have a material impact on the consolidated financial statements. In the three months ended December 31, 2020, these adjustments decreased the net gain by $179 million and are included in the $5,141 million above. In the year ended December 31, 2020, the Company has also recorded $262 million in Income tax expense within discontinued operations in connection with the reorganization of the legal entity structure of the Power Grids business required to facilitate its sale.

Certain entities of the Power Grids business for which the legal process or other regulatory delays resulted in the Company not yet having transferred legal titles to Hitachi have been accounted for as being sold since control of the business as well as all risks and rewards of the business have been fully transferred to Hitachi ABB PG. The proceeds for these entities are included in the cash proceeds described above and certain funds have been placed in escrow and are reflected as current restricted cash of $302 million at December 31, 2020. All entities are expected to be transferred by the first quarter of 2021.

The Company has recognized liabilities in discontinued operations in connection with the divestment for certain indemnities (see Note 9 for additional information). The Company has also recorded an initial liability of $258 million representing the fair value of the right granted to Hitachi ABB PG for the use of the ABB brand for up to 8 years.

Upon closing of the sale, the Company entered into various transition services agreements (TSAs). Pursuant to these TSAs, the Company and Hitachi ABB PG provide to each other, on an interim, transitional basis, various services. The services provided by the Company primarily include finance, information technology, human resources and certain other administrative services. Under the current terms, the TSAs will continue for up to 3 years, and can only be extended on an exceptional basis for business-critical services for an additional period which is reasonably necessary to avoid a material adverse impact on the business. In the year and three months ended December 31, 2020, the Company has recognized within its continuing operations, general and administrative expenses incurred to perform the TSA, offset by $91 million and $49 million, respectively, in TSA-related income for such services that is reported in Other income and expense, net.

Discontinued operations
As a result of the sale of the Power Grids business, substantially all Power Grids-related assets and liabilities have been sold. As this divestment represented a strategic shift that would 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 presented as held for sale and in discontinued operations for all periods presented. Certain of the business contracts in the Power Grids business continue to be executed by subsidiaries of the Company for the benefit/risk of Hitachi ABB PG. Assets and liabilities relating to, as well as the net financial results of, these contracts will continue to be included in discontinued operations until they have been completed or otherwise transferred to Hitachi ABB PG.

Prior to the divestment, interest expense that was not directly attributable to or related to the Company’s continuing business or discontinued business was allocated to discontinued operations based on the ratio of net assets to be sold less debt that was 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 was not allocated to discontinued operations.

Operating results of the discontinued operations, are summarized as follows:

	Year ended		Three months ended	
($ in millions)	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Total revenues	4,008	9,037	–	2,524
Total cost of sales	(3,058)	(6,983)	–	(1,974)
Gross profit	**950**	**2,054**	**–**	**550**
Expenses	(808)	(1,394)	(6)	(434)
Net gain recognized on sale of the Power Grids business	5,141	–	(179)	–
Income (loss) from operations	**5,282**	**660**	**(185)**	**115**
Net interest and other finance expense	(5)	(61)	–	(31)
Non-operational pension (cost) credit	(94)	5	–	(4)
Income (loss) from discontinued operations before taxes	**5,182**	**605**	**(185)**	**81**
Income tax	(322)	(167)	2	(31)
Income (loss) from discontinued operations, net of tax	**4,860**	**438**	**(183)**	**50**

Of the total Income (loss) from discontinued operations before taxes in the table above, $5,170 million and $566 million in the year ended December 31, 2020 and 2019, respectively, and $(185) million and $66 million in the three months ended December 31, 2020 and 2019, respectively, are attributable to the Company, while the remainder is attributable to noncontrolling interests.

Until the date of the divestment, Income from discontinued operations before taxes excluded stranded costs which were previously able to be allocated to the former Power Grids operating segment. As a result, for the year ended December 31, 2020 and 2019, $40 million and $225 million, respectively, and in the three months ended December 31, 2019, $40 million 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 were reported as part of Corporate and Other. In the table above, Net interest and other finance expense in the year ended December 31, 2020 and 2019, included $20 million and $44 million, respectively, and in the three months ended December 31, 2019, included $9 million of interest expense which was recorded on an allocated basis in accordance with the Company's accounting policy election until the divestment date. In addition, as required by U.S. GAAP, the Company did not record 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 year ended December 31, 2020 and 2019, are revenues from the Company's operating segments' sales to the Power Grids business of $108 million and $213 million, respectively, and for the three months ended December 31, 2019, $56 million, 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 18). Subsequent to the divestment, sales to Hitachi ABB PG are reported as third-party revenues.

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 and in discontinued operations in the Company's Consolidated Balance Sheets are summarized as follows:

($ in millions)	Dec. 31, 2020[1]	Dec. 31, 2019
Receivables, net	280	2,541
Contract assets	–	1,243
Inventories, net	1	1,667
Property, plant and equipment, net	–	1,754
Goodwill	–	1,631
Other current assets	1	1,004
Current assets held for sale and in discontinued operations	**282**	**9,840**
Accounts payable, trade	188	1,722
Contract liabilities	–	1,121
Pension and other employee benefits	–	419
Other liabilities	456	1,984
Current liabilities held for sale and in discontinued operations	**644**	**5,246**
Other non-current liabilities	197	–
Non-current liabilities held for sale and in discontinued operations	**197**	**–**

(1) At December 31, 2020, the balances reported as held for sale and in discontinued operations pertain to Power Grids activities and other obligations which will remain with the Company until such time as the obligation is settled or the activities are fully wound down.

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Note 4
Acquisitions, divestments and equity-accounted companies

Acquisition of noncontrolling interests
In connection with the divestment of its Power Grids business to Hitachi (see Note 3), the Company retained a 19.9 percent interest in the business. For accounting purposes, the 19.9 percent interest is deemed to have been both divested and reacquired, with a fair value at the transaction date of $1,661 million. The fair value was based on a discounted cash flow model considering the expected results of the future business operations of Hitachi ABB PG and using relevant market inputs including a risk-adjusted weighted-average cost of capital. The Company also obtained a right to require Hitachi to purchase this investment (see Note 3) with a floor price equivalent to a 10 percent discount compared to the price paid for the initial 80.1 percent. This option was valued at $118 million using a standard option pricing model with inputs considering the nature of the investment and the expected period until option exercise. As this option is not separable from the investment the value has been combined with the value of the underlying investment and is accounted for together.

The Company has concluded that based on its continuing involvement with the Power Grids business, including membership in its governing board of directors, it has significant influence over Hitachi ABB PG. As a result, the investment (including the value of the option) is accounted for using the equity method.

The difference between the initial carrying value of the Company's investment in Hitachi ABB PG at fair value and its proportionate share of the underlying net assets, created basis differences of $8,503 million ($1,692 million for the Company’s 19.9 percent ownership), which are allocated as follows:

($ in millions)	Allocated Amount	Weighted-average useful life
Inventory	169	5 months
Order backlog	727	2 years
Property, plant and equipment(1)	1,016	
Intangible assets(2)	1,731	9 years
Other contractual rights	251	2 years
Other assets	43	
Deferred tax liabilities	(942)	
Goodwill	5,959	
Less: Amount attributed to noncontrolling interest	(451)	
Basis difference	**8,503**	

(1) Property, plant and equipment includes assets subject to amortization having an initial fair value difference of $686 million and a weighted-average useful life of 14 years.

(2) Intangibles assets includes brand license agreement, technology and customer relationships.

For assets subject to depreciation or amortization, the Company amortizes these basis differences over the estimated remaining useful lives of the assets that gave rise to this difference, recording the amortization, net of related deferred tax benefit, as a reduction of income from equity accounted companies. Certain other assets are recorded as an expense as the benefits from the assets are realized. As of December 31, 2020, the Company determined that no impairment of its equity method investments existed.

The carrying value of the Company’s investments in equity-accounted companies and respective percentage of ownership is as follows:

	Ownership as of	Carrying value at	
($ in millions, expect ownership share in %)	December 31, 2020	December 31, 2020	December 31, 2019
Hitachi ABB Power Grids Ltd	19.9%	1,710	–
Others		74	33
Total		**1,784**	**33**

In the year and three months ended December 31, 2020, the Company recorded losses of $66 million and $26 million, respectively, in Other income (expense), net, representing the Company's share of the earnings of investees accounted for under the equity method of accounting, the components of which are as follows:

	Year ended December 31,		Three months ended December 31,	
($ in millions)	2020	2019	2020	2019
Income (loss) from equity accounted companies, net of taxes	29	8	17	3
Basis difference amortization (net of deferred income tax benefit)	(95)	–	(43)	–
Income (loss) from equity accounted companies	**(66)**	**8**	**(26)**	**3**

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 year and three months ended December 31, 2019, the Company recorded a loss of $421 million and a gain of $45 million, respectively, 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 year ended December 31, 2020, a loss of $33 million was in “Other income (expense), net” for changes in fair value of this business. 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, was 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)	**December 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 $33 million, in the year ended December 31, 2020, Income from continuing operations before taxes includes net losses of $63 million from the solar inverters business prior to its sale. In the year and three months ended December 31, 2019, and including the $421 million and gain of $45 million above, Income from continuing operations before taxes includes net losses of $490 million and $24 million, respectively, from this business.

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Note 5
Cash and equivalents, marketable securities and short-term investments

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

	December 31, 2020					
($ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents and restricted cash	Marketable securities and short-term investments
Changes in fair value recorded in net income						
Cash	2,388			**2,388**	2,388	
Time deposits	1,513			**1,513**	1,513	
Equity securities	1,704	12		**1,716**		1,716
	5,605	**12**	**–**	**5,617**	**3,901**	**1,716**
Changes in fair value recorded in other comprehensive income						
Debt securities available-for-sale:						
U.S. government obligations	274	19		**293**		293
European government obligations	24			**24**		24
Corporate	69	6		**75**		75
	367	**25**	**–**	**392**	**–**	**392**
Total	**5,972**	**37**	**–**	**6,009**	**3,901**	**2,108**
Of which:						
Restricted cash, current					323	
Restricted cash, non-current					300	

	December 31, 2019					
($ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents and restricted cash	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**
Of which:						
Restricted cash, current					36	

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Note 6
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	**Total notional amounts at**	
($ in millions)	**December 31, 2020**	**December 31, 2019**
Foreign exchange contracts	12,610	15,015
Embedded foreign exchange derivatives	1,134	924
Interest rate contracts	3,227	5,188

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**	
		December 31, 2020	**December 31, 2019**
Copper swaps	metric tonnes	39,390	42,494
Silver swaps	ounces	1,966,677	2,508,770
Aluminum swaps	metric tonnes	8,112	8,388

Equity derivatives

At December 31, 2020 and 2019, the Company held 22 million and 40 million cash-settled call options indexed to ABB Ltd shares (conversion ratio 5:1) with a total fair value of $21 million and $26 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 change 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 December 31, 2020 and 2019, "Accumulated other comprehensive loss" included net unrealized losses of $3 million and $5 million, respectively, net of tax, on derivatives designated as cash flow hedges. Of the amount at December 31, 2020, net losses of $1 million are expected to be reclassified to earnings in the following 12 months. At December 31, 2020, the longest maturity of a derivative classified as a cash flow hedge was 49 months.

The amount of gains or losses, net of tax, reclassified into earnings due to the discontinuance of cash flow hedge accounting were not significant in the year and three months ended December 31, 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”.

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

	Year ended December 31,		Three months ended December 31,	
($ in millions)	2020	2019	2020	2019
Gains (losses) recognized in Interest and other finance expense:				
- on derivatives designated as fair value hedges	11	38	(10)	(20)
- on hedged item	(11)	(38)	9	20

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		Gains (losses) recognized in income			
		Year ended December 31,		Three months ended December 31,	
($ in millions)	Location	2020	2019	2020	2019
Foreign exchange contracts	Total revenues	94	(7)	131	53
	Total cost of sales	–	(64)	(53)	(22)
	SG&A expenses(1)	(11)	2	(9)	(4)
	Non-order related research and development	(2)	1	(1)	–
	Interest and other finance expense	207	(122)	100	(62)
Embedded foreign exchange contracts	Total revenues	(34)	17	(30)	4
	Total cost of sales	(1)	(6)	1	1
Commodity contracts	Total cost of sales	56	12	44	16
Other	Interest and other finance expense	1	–	–	1
Total		**310**	**(167)**	**183**	**(13)**

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

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

	December 31, 2020			
	Derivative assets		Derivative liabilities	
($ in millions)	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	–	1	2	4
Interest rate contracts	6	78	–	–
Cash-settled call options	10	11	–	–
Total	**16**	**90**	**2**	**4**
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	221	22	106	26
Commodity contracts	59	–	7	–
Interest rate contracts	2	–	2	–
Embedded foreign exchange derivatives	10	2	28	16
Total	**292**	**24**	**143**	**42**
Total fair value	**308**	**114**	**145**	**46**

	December 31, 2019			
	Derivative assets		Derivative liabilities	
($ in millions)	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 December 31, 2020 and 2019, have been presented on a gross basis.

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

($ in millions)	December 31, 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	410	(106)	–	–	**304**
Total	**410**	**(106)**	**–**	**–**	**304**

($ in millions)	December 31, 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	147	(106)	–	–	**41**
Total	**147**	**(106)**	**–**	**–**	**41**

($ 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**

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Note 7
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:

	December 31, 2020			
($ in millions)	Level 1	Level 2	Level 3	Total fair value
Assets				
Securities in "Marketable securities and short-term investments":				
Equity securities		1,716		**1,716**
Debt securities—U.S. government obligations	293			**293**
Debt securities—European government obligations	24			**24**
Debt securities—Corporate		75		**75**
Derivative assets—current in "Other current assets"		308		**308**
Derivative assets—non-current in "Other non-current assets"		114		**114**
Total	**317**	**2,213**	**–**	**2,530**
Liabilities				
Derivative liabilities—current in "Other current liabilities"		145		**145**
Derivative liabilities—non-current in "Other non-current liabilities"		46		**46**
Total	**–**	**191**	**–**	**191**

	December 31, 2019			
($ in millions)	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 year ended December 31, 2020, the Company recognized net increases in fair value of $73 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. At December 31, 2020, the fair values of these investments totaled $105 million and were determined using level 2 inputs.

Based on valuations at July 1, 2020, the Company recorded goodwill impairment charges of $311 million in the third quarter of 2020. The fair value measurements used in the analyses were calculated using the income approach (discounted cash flow method). The discounted cash flow models were calculated using unobservable inputs, which classified the fair value measurement as Level 3 (see Note 8 for additional information including further detailed information related to these charges and significant unobservable 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 4 for details). Apart from the transactions above, there were no additional significant non-recurring fair value measurements during the year and three months ended December 31, 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:

	December 31, 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	1,765	1,765			**1,765**
Time deposits	1,513		1,513		**1,513**
Restricted cash	323	323			**323**
Marketable securities and short-term investments (excluding securities):					
Restricted cash non-current	300	300			**300**
Liabilities					
Short-term debt and current maturities of long-term debt (excluding finance lease obligations)	1,266	497	769		**1,266**
Long-term debt (excluding finance lease obligations)	4,668	4,909	89		**4,998**

($ in millions)	Carrying value	December 31, 2019 Level 1	Level 2	Level 3	Total fair value
Assets					
Cash and equivalents (excluding securities with original maturities up to 3 months):					
Cash	2,075	2,075			**2,075**
Time deposits	1,433		1,433		**1,433**
Restricted cash	36	36			**36**
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), Restricted cash, and Marketable securities and short-term investments (excluding securities): The carrying amounts approximate the fair values as the items are short-term in nature or, for cash held in banks, are equal to the deposit amount.
- 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 8
Goodwill

Goodwill is reviewed for impairment annually as of October 1, or more frequently if events or circumstances indicate that the carrying value may not be recoverable.

Goodwill is evaluated for impairment at the reporting unit level. A reporting unit is an operating segment or one level below an operating segment. For the annual impairment review performed in 2020, the reporting units were determined to be one level below the operating segments.

When evaluating goodwill for impairment, the Company uses either a qualitative or quantitative assessment method for each reporting unit. The qualitative assessment involves determining, based on an evaluation of qualitative factors, if it is more likely than not that the fair value of a reporting unit is less than its carrying value. If, based on this qualitative assessment, it is determined to be more likely than not that the reporting unit’s fair value is less than its carrying value, a quantitative impairment test (described below) is performed, otherwise no further analysis is required. If the Company elects not to perform the qualitative assessment for a reporting unit, then a quantitative impairment test is performed.

When performing a quantitative impairment test, the Company calculates the fair value of a reporting unit using an income approach based on the present value of future cash flows, applying a discount rate that represents the reporting unit’s weighted-average cost of capital, and compares it to the reporting unit’s carrying value. If the carrying value of the net assets of a reporting unit exceeds the fair value of the reporting unit then the Company records an impairment charge equal to the difference, provided that the loss recognized does not exceed the total amount of goodwill allocated to that reporting unit.

The changes in “Goodwill” were as follows:

($ in millions)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Total
Balance at January 1, 2019	**4,276**	**1,616**	**2,441**	**2,410**	**21**	**10,764**
Goodwill acquired during the year[(1)]	92	–	–	–	–	**92**
Goodwill allocated to disposals	(18)	–	–	–	–	**(18)**
Exchange rate differences and other	22	(1)	(5)	(29)	–	**(13)**
Balance at December 31, 2019	**4,372**	**1,615**	**2,436**	**2,381**	**21**	**10,825**
Goodwill acquired during the year	71	–	–	21	–	**92**
Impairment of Goodwill	–	–	–	(290)	(21)	**(311)**
Exchange rate differences and other	84	24	20	116	–	**244**
Balance at December 31, 2020[(2)]	**4,527**	**1,639**	**2,456**	**2,228**	**–**	**10,850**

(1) Amount consists of adjustments arising during the twelve-month measurement period subsequent to the respective acquisition date (see Note 4).

(2) At December 31, 2020, the gross goodwill amounted to $11,152 million. The accumulated impairment charges amounted to $302 million and relates to the Robotics & Discrete Automation segment.

The Company adopted a new operating model on July 1, 2020, which resulted in a change to the identification of the goodwill reporting units. Previously, the reporting units were the same as the operating segments for Electrification, Motion and Robotics & Discrete Automation, while for the Industrial Automation operating segment the reporting units were determined to be at the Division level, which is one level below the operating segment. The new operating model provides the Divisions with full ownership and accountability for their respective strategies, performance and resources and based on these changes, the Company concluded that the reporting units would change and be the respective Divisions within each operating segment. This change resulted only in an allocation of goodwill within the operating segments and thus there is no change to segment level goodwill in the table above.

As a result of the new allocation of goodwill, an interim quantitative impairment test was conducted both before and after the changes which were effective July 1, 2020. In the “before” test, it was concluded that the fair value of the Company’s reporting units exceeded the carrying value under the historical reporting unit structure.

The impairment test was performed for the new reporting units and the fair value of each was determined using a discounted cash flow fair value estimate based on objective information available at the measurement date. The significant assumptions used to develop the estimates of fair value for each reporting unit included management’s best estimates of the expected future results and discount rates specific to the reporting unit. The fair value estimates were based on assumptions that the Company believed to be reasonable, but which are inherently uncertain and thus, actual results may differ from those estimates. The fair values for each of the individual reporting units and their associated goodwill are determined using Level 3 measurements.

The interim quantitative impairment test indicated that the estimated fair values of the reporting units were substantially in excess of their carrying value for all reporting units except for the Machine Automation reporting unit within the Robotics & Discrete Automation operating segment. The contraction of the global economy in 2020, particularly in end-customer industries related to this reporting unit and considerable uncertainty around the continued pace of macroeconomic recovery generally led to a reduction in the fair values of the reporting units, thus affecting this reporting unit. Also, at the division level, this reporting unit does not benefit from shared cash flows generated within an entire operating segment. In addition, the book value of the Machine Automation Division includes a significant amount of intangible assets recognized in past acquisitions, resulting in a proportionately higher book value than the other reporting unit within the Robotics & Discrete Automation Business Area. With the fair value of the reporting unit lower due to the economic conditions, the existing book value of the intangible assets combined with the newly allocated reporting unit goodwill led to the carrying value of the Machine Automation reporting unit exceeding its fair value. During 2020, a goodwill impairment charge of $290 million was recorded to reduce the carrying value of this reporting unit to its implied fair value. At December 31, 2020, the remaining goodwill for the Machine Automation reporting unit was $554 million.

The Company performed its annual impairment test as of October 1, 2020 using a qualitative assessment method for each reporting unit and determined it was not more likely than not that any reporting unit’s fair value is less than its carrying value.

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Note 9
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, in the United States, to the Special Investigating Unit (SIU) and the National Prosecuting Authority (NPA) in South Africa as well as to various authorities in other countries 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. The Company paid $104 million to Eskom in December 2020 as part of a full and final settlement with Eskom and the Special Investigating Unit relating to improper payments and other compliance issues associated with the Controls and Instrumentation Contract, and its Variation Orders for Units 1 and 2 at Kusile. The Company continues to cooperate fully with the National Prosecuting Authority in South Africa as well as other authorities in their review of the Kusile project. Although the Company believes that there could be an unfavorable outcome in one or more of these ongoing reviews, 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 December 31, 2020 and 2019, the Company had aggregate liabilities of $100 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 adverse outcomes beyond the amounts accrued.

Guarantees

General

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

Maximum potential payments ($ in millions)	December 31, 2020	December 31, 2019
Performance guarantees	6,726	1,860
Financial guarantees	339	10
Indemnification guarantees(1)	177	64
Total(2)	**7,242**	**1,934**

(1) Certain indemnifications provided to Hitachi in connection with the divestment of Power Grids are without limit.

(2) 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 December 31, 2020, amounted to $135 million, which is included in discontinued operations, while at December 31, 2019, balances 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 2035, 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 ten 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 December 31, 2020 and 2019, the maximum potential payable under these guarantees amounts to $994 million and $898 million, respectively, and these guarantees have various maturities ranging from one to ten years.

The Company retained obligations for financial, performance and indemnification guarantees related to the Power Grids business sold on July 1, 2020 (see Note 3 for details). The performance and financial guarantees have been indemnified by Hitachi, at the same proportion of its ownership in Hitachi ABB Power Grids (80.1 percent). These guarantees, which have various maturities up to 2035, primarily consist of bank guarantees, standby letters of credit, business performance guarantees and other trade-related guarantees, the majority of which have original maturity dates ranging from one to ten years. The maximum amount payable under the guarantees is approximately $5.5 billion and the carrying amounts of liabilities (recorded in discontinued operations) at December 31, 2020 amounted to $135 million.

Commercial commitments

In addition, in the normal course of bidding for and executing certain projects, the Company has entered into standby letters of credit, bid/performance bonds and surety bonds (collectively "performance bonds") with various financial institutions. Customers can draw on such performance bonds in the event that the Company does not fulfill its contractual obligations. The Company would then have an obligation to reimburse the financial institution for amounts paid under the performance bonds. At December 31, 2020 and 2019, the total outstanding performance bonds aggregated to $4.3 billion and $6.8 billion, respectively, of which $0.3 billion and $3.7 billion, respectively, relate to discontinued operations. There have been no significant amounts reimbursed to financial institutions under these types of arrangements in the year and three months ended December 31, 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)	8	(88)
Claims paid in cash or in kind	(209)	(310)
Net increase in provision for changes in estimates, warranties issued and warranties expired	369	276
Exchange rate differences	51	(10)
Balance at December 31,	**1,035**	**816**

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

During 2020, the Company recorded changes in a previously estimated amount for a product warranty relating to a divested business, increasing the related liability by $143 million during the year ended December 31, 2020. The corresponding increase was included in Cost of sales of products and as these costs relate to a divested business, they have been excluded from the Company's primary measure of segment performance, Operational EBITA (see Note 18). The warranty liability has been recorded based on the information currently available and is subject to change in the future.

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Note 10
Contract assets and liabilities

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

($ in millions)	December 31, 2020	December 31, 2019	December 31, 2018
Contract assets	985	1,025	1,082
Contract liabilities	1,903	1,719	1,707

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:

	Year ended December 31,			
	2020		2019	
($ in millions)	Contract assets	Contract liabilities	Contract assets	Contract liabilities
Revenue recognized, which was included in the Contract liabilities balance at Jan 1, 2020/2019		(1,011)		(1,158)
Additions to Contract liabilities - excluding amounts recognized as revenue during the period		1,129		1,255
Receivables recognized that were included in the Contract asset balance at Jan 1, 2020/2019	(680)		(786)	

At December 31, 2020, the Company had unsatisfied performance obligations totaling $14,303 million and, of this amount, the Company expects to fulfill approximately 73 percent of the obligations in 2021, approximately 15 percent of the obligations in 2022 and the balance thereafter.

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Note 11
Debt

The Company's total debt at December 31, 2020 and 2019, amounted to $6,121 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)	December 31, 2020	December 31, 2019
Short-term debt	153	838
Current maturities of long-term debt	1,140	1,449
Total	**1,293**	**2,287**

Short-term debt primarily represented issued commercial paper and short-term bank borrowings from various banks. At December 31, 2020 and 2019, $32 million and $708 million, respectively, was outstanding under the $2 billion commercial paper program in the United States. No amount was outstanding under the $2 billion Euro-commercial paper program at December 31, 2020, or December 31, 2019.

On March 25, 2020, the Company entered into a bank-funded short-term EUR 2 billion Revolving Credit Agreement (the "Agreement"). 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. The Agreement required that all outstanding amounts be repaid within 15 days after the completion of the sale of the Power Grids business and the remaining EUR 1.2 billion outstanding (equivalent to $1,354 million on the date of payment) was repaid on July 8, 2020. The Agreement was terminated after the final repayment.

At December 31, 2020, the Company continues to have access to the full amount under its existing $2 billion revolving credit facility.

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

In October 2020, the Company repaid at maturity its EUR 1,000 million floating rate notes, equivalent to $1,180 million on date of repayment.

Long-term debt
The Company's long-term debt at December 31, 2020 and 2019, amounted to $4,828 million and $6,772 million, respectively.

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

	December 31, 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	$	1,122
4.0% USD Notes, due 2021	USD	650	$	649	USD	650	$	648
2.25% CHF Bonds, due 2021	CHF	350	$	403	CHF	350	$	373
5.625% USD Notes, due 2021				–	USD	250	$	260
2.875% USD Notes, due 2022	USD	1,250	$	1,280	USD	1,250	$	1,267
3.375% USD Notes, due 2023				–	USD	450	$	448
0.625% EUR Instruments, due 2023	EUR	700	$	875	EUR	700	$	799
0.75% EUR Instruments, due 2024	EUR	750	$	946	EUR	750	$	859
0.3% CHF Notes, due 2024	CHF	280	$	317	CHF	280	$	288
3.8% USD Notes, due 2028	USD	383	$	381	USD	750	$	746
1.0% CHF Notes, due 2029	CHF	170	$	192	CHF	170	$	175
4.375% USD Notes, due 2042	USD	609	$	589	USD	750	$	724
Total			**$**	**5,632**			**$**	**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.

In November 2020, the Company completed a cash tender offer on its 3.8% USD Notes due 2028, and 4.375% USD Notes due 2042. As a result of this tender offer the Company redeemed principal amounts of $367 million of the 3.8% USD Notes due 2028 and $141 million of the 4.375% USD Notes due 2042 for a total cash payment of $629 million. The Company recognized losses from extinguishment of debt of $123 million for these two transactions, representing the premium associated with the early redemption, as well as the remaining unamortized issuance discounts and costs.

In December 2020, the Company redeemed in full its 5.625% USD Notes due 2021 and its 3.375% USD Notes due April 2023. Both USD Notes paid interest semi-annually in arrears. In connection with the redemption the Company recognized losses from extinguishment of debt of $39 million representing the premium associated with the early redemption, as well as the relevant remaining unamortized premium or discount and issuance costs.

Subsequent events
In January 2021, the Company issued zero percent notes having a principal amount of EUR 800 million and due in 2030. The Company recorded net proceeds (after underwriting fees) of EUR 791 million (equivalent to $960 million on the date of issuance).

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Note 12
Income taxes

The effective tax rate of 59.0 percent in 2020 was higher than the effective tax rate of 41.5 percent in 2019, due to significant impacts to both periods. In 2019, the effective rate reflects the impact of the non-tax-deductible loss relating to the divestment of the solar inverters business (see Note 4). In 2020, the effective rate reflects the non-deductible goodwill impairment (see Note 8), the non-deductibility of non-operational pension costs due to certain settlements (see Note 13) as well as the impact of no tax benefit being recorded for the charge recorded in connection with changes in estimated warranty provisions relating to a divested business (see Note 9). The effective rate in 2020 was also higher as no tax benefit was recorded for amounts recorded as losses on extinguishment of debt. In addition, the rate in 2020 was also impacted by a favorable resolution of an uncertain tax position during the first quarter as well as increases to the valuation allowance in certain countries.

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Note 13
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.

During the year and three months ended December 31, 2020, the Company took steps to transfer certain defined benefit pension risks in three International countries to external financial institutions and thus settle these obligations for accounting purposes. In connection with these transactions the Company made net payments of $36 million in the three months ended December 31, 2020, and incurred non-operational pension costs of $141 million which are included in curtailments, settlements and special termination benefits in the table below. During the year ended December 31, 2020, the Company made net payments of $309 million and incurred non-operational pension costs of $520 million for similar settlements of pension obligations. The Company also made cash payments of $143 million and recorded non-operational pension charges of $101 million in 2020 for the settlement of pension obligations in 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 benefits	
	Switzerland		International			
Year ended December 31,	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Operational pension cost:						
Service cost	74	76	92	113	1	1
Operational pension cost	**74**	**76**	**92**	**113**	**1**	**1**
Non-operational pension cost (credit):						
Interest cost	6	15	111	174	3	4
Expected return on plan assets	(123)	(112)	(253)	(276)	–	–
Amortization of prior service cost (credit)	(11)	(14)	2	2	(2)	(5)
Amortization of net actuarial loss	7	–	109	108	(3)	(3)
Curtailments, settlements and special termination benefits	6	11	644	27	–	(10)
Non-operational pension cost (credit)	**(115)**	**(100)**	**613**	**35**	**(2)**	**(14)**
Net periodic benefit cost (credit)	**(41)**	**(24)**	**705**	**148**	**(1)**	**(13)**

($ in millions)	Defined pension benefits				Other postretirement benefits	
	Switzerland		International			
Three months ended December 31,	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Operational pension cost:						
Service cost	14	20	26	31	1	–
Operational pension cost	**14**	**20**	**26**	**31**	**1**	**–**
Non-operational pension cost (credit):						
Interest cost	3	4	20	44	1	1
Expected return on plan assets	(30)	(28)	(57)	(78)	–	–
Amortization of prior service cost (credit)	(1)	(3)	1	–	–	(1)
Amortization of net actuarial loss	1	–	30	28	(1)	(1)
Curtailments, settlements and special termination benefits	6	11	157	20	–	–
Non-operational pension cost (credit)	**(21)**	**(16)**	**151**	**14**	**–**	**(1)**
Net periodic benefit cost (credit)	**(7)**	**4**	**177**	**45**	**1**	**(1)**

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 $47 million, for the year ended December 31, 2020 and 2019, respectively and $18 million for the three months ended December 31, 2019, related to discontinued operations.

Employer contributions were as follows:

($ in millions)	Defined pension benefits				Other postretirement benefits	
	Switzerland		International			
Year ended December 31,	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Total contributions to defined benefit pension and other postretirement benefit plans	228	91	611	115	12	10
Of which, discretionary contributions to defined benefit pension plans	152	2	520	8	–	–

($ in millions)	Defined pension benefits				Other postretirement benefits	
	Switzerland		International			
Three months ended December 31,	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Total contributions to defined benefit pension and other postretirement benefit plans	12	21	133	41	3	6
Of which, discretionary contributions to defined benefit pension plans	–	–	104	8	–	–

During the year and three months ended December 31, 2020, total contributions included non-cash contributions of marketable debt securities having a fair value at the contribution date of $224 million and $72 million, respectively. These non-cash contributions were made to certain of the Company's pension plans in Germany and the United Kingdom during the three months ended December 31, 2020, and to Switzerland in the previous quarter. During the year and three months ended December 31, 2019, total contributions included non-cash contributions of marketable debt securities having a fair value at the contribution date of $13 million, contributed to certain of the Company's pension plans in Germany and the United Kingdom.

Note 14
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 (which at the time of the announcement represented a maximum of 180 million shares, in addition to those already held in treasury) through the share buyback program that started on July 23, 2020. The share buyback program is 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. In 2020, under this program, the Company purchased 109 million shares for cancellation, resulting in an increase in Treasury stock of $2,835 million.

In addition to the ongoing share buyback program, in the fourth quarter of 2020, the Company purchased 13 million of its own shares on the open market mainly for use in connection with its employee share plans, resulting in an increase in Treasury stock of $346 million.

During 2020, the Company delivered, out of treasury stock, 17 million shares for options exercised in connection with its Management Incentive Plan.

Note 15
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

	Year ended December 31,		Three months ended December 31,	
($ in millions, except per share data in $)	**2020**	**2019**	**2020**	**2019**
Amounts attributable to ABB shareholders:				
Income from continuing operations, net of tax	294	1,043	104	291
Income (loss) from discontinued operations, net of tax	4,852	396	(183)	34
Net income (loss)	**5,146**	**1,439**	**(79)**	**325**
Weighted-average number of shares outstanding (in millions)	**2,111**	**2,133**	**2,059**	**2,133**
Basic earnings per share attributable to ABB shareholders:				
Income from continuing operations, net of tax	0.14	0.49	0.05	0.14
Income (loss) from discontinued operations, net of tax	2.30	0.19	(0.09)	0.02
Net income (loss)	**2.44**	**0.67**	**(0.04)**	**0.15**

Diluted earnings per share

	Year ended December 31,		Three months ended December 31,	
($ in millions, except per share data in $)	2020	2019	2020	2019
Amounts attributable to ABB shareholders:				
Income from continuing operations, net of tax	294	1,043	104	291
Income (loss) from discontinued operations, net of tax	4,852	396	(183)	34
Net income (loss)	**5,146**	**1,439**	**(79)**	**325**
Weighted-average number of shares outstanding (in millions)	2,111	2,133	2,059	2,133
Effect of dilutive securities:				
Call options and shares	8	2	12	4
Adjusted weighted-average number of shares outstanding (in millions)	**2,119**	**2,135**	**2,071**	**2,137**
Diluted earnings per share attributable to ABB shareholders:				
Income from continuing operations, net of tax	0.14	0.49	0.05	0.14
Income (loss) from discontinued operations, net of tax	2.29	0.19	(0.09)	0.02
Net income (loss)	**2.43**	**0.67**	**(0.04)**	**0.15**

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Note 16
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	(130)	14	(214)	20	**(310)**
Amounts reclassified from OCI	(2)	–	72	(9)	**61**
Total other comprehensive (loss) income	**(132)**	**14**	**(142)**	**11**	**(249)**
Less:					
Amounts attributable to noncontrolling interests	(6)	–	–	–	**(6)**
Balance at December 31, 2019	**(3,450)**	**10**	**(2,145)**	**(5)**	**(5,590)**
Other comprehensive (loss) income:					
Other comprehensive (loss) income before reclassifications	498	24	(157)	2	**367**
Amounts reclassified from OCI	519	(17)	746	–	**1,248**
Total other comprehensive (loss) income	**1,017**	**7**	**589**	**2**	**1,615**
Less:					
Amounts attributable to noncontrolling interests	27	–	–	–	**27**
Balance at December 31, 2020	**(2,460)**	**17**	**(1,556)**	**(3)**	**(4,002)**

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

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	Year ended December 31,		Three months ended December 31,	
Details about OCI components	**reclassified from OCI**	**2020**	**2019**	**2020**	**2019**
Foreign currency translation adjustments:					
Currency translation loss (gain): - Divestment of Power Grids business (see Note 3)	Income from discontinued operations, net of tax	420	–	(19)	–
Currency translation loss: - Divestment of solar inverters business (see Note 4)	Other income (expense), net	99	–	–	–
Currency translation gain: - Divestment of other businesses	Other income (expense), net	–	(2)	–	(2)
Amounts reclassified from OCI		519	**(2)**	(19)	**(2)**
Pension and other postretirement plan adjustments:					
Amortization of prior service cost (credit)	Non-operational pension (cost) credit[1]	(11)	(25)	(4)	(12)
Amortization of net actuarial loss	Non-operational pension (cost) credit[1]	113	99	30	27
Net loss from pension settlements and curtailments	Non-operational pension (cost) credit[1]	650	38	163	37
Reclassification of OCI relating to pensions on divestment of the Power Grids business	Income from discontinued operations, net of tax	186	–	100	–
Total before tax		**938**	**112**	**289**	**52**
Tax	Income tax expense	(157)	(40)	(30)	(25)
Reclassification of OCI relating to tax on pensions on divestment of the Power Grids business	Income from discontinued operations, net of tax	(35)	–	–	–
Amounts reclassified from OCI		**746**	**72**	**259**	**27**

(1) Amounts include a total of $94 million and $6 million for the year ended December 31, 2020 and 2019, respectively, and $3 million for the three months ended December 31, 2019, 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 year and three months ended December 31, 2020 and 2019.

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Note 17
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 resulted in the elimination of the country and regional structures within the previous matrix organization, including the elimination of the three regional Executive Committee roles. The operating businesses are now responsible for both their customer-facing activities and business support functions, while the remaining Group-level corporate activities primarily focus on Group strategy, portfolio and performance management and capital allocation.

During 2020, the total program costs, originally estimated to be $350 million, were reduced by $41 million to $309 million, mainly due to reductions in both estimated costs and number of projects planned. As of December 31, 2020, the OS program is substantially completed, and the Company had incurred substantially all costs related to the OS program.

The following table outlines the costs incurred in the year and three months ended December 31, 2020 and 2019, the cumulative costs incurred up to December 31, 2020, and the total amount of costs expected to be incurred under the program per operating segment:

	Cost incurred				Cumulative net	Total
	Year ended December 31,		Three months ended December 31,		cost incurred up to	expected
($ in millions)	**2020**	**2019**	**2020**	**2019**	**December 31, 2020**	**costs**
Electrification	35	18	2	20	85	85
Industrial Automation	37	3	30	2	61	61
Motion	18	6	8	5	25	25
Robotics & Discrete Automation	10	8	1	1	18	18
Corporate and Other	49	54	22	10	114	120
Total	**149**	**89**	**63**	**38**	**303**	**309**

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

($ in millions)	Year ended December 31, 2020	Year ended December 31, 2019	Three months ended December 31, 2020	Three months ended December 31, 2019	Cumulative costs incurred up to December 31, 2020
Employee severance costs	109	81	55	36	255
Estimated contract settlement, loss order and other costs	17	1	4	1	18
Inventory and long-lived asset impairments	23	7	4	1	30
Total	**149**	**89**	**63**	**38**	**303**

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

	Year ended December 31,		Three months ended December 31,	
($ in millions)	2020	2019	2020	2019
Total cost of sales	38	8	15	1
Selling, general and administrative expenses	37	46	27	22
Non-order related research and development expenses	4	1	4	–
Other income (expense), net	70	34	17	15
Total	**149**	**89**	**63**	**38**

Liabilities associated with the OS program are included primarily in Other provisions. The following table shows the activity from the beginning of the program to December 31, 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	119	17	**136**
Cash payments	(91)	(15)	**(106)**
Change in estimates	(10)	–	**(10)**
Exchange rate differences	4	–	**4**
Liability at December 31, 2020	**121**	2	**123**

Other restructuring-related activities

In addition, during 2020 and 2019, the Company executed various other restructuring-related activities and incurred the following charges, net of changes in estimates:

	Year ended December 31,		Three months ended December 31,	
($ in millions)	2020	2019	2020	2019
Employee severance costs	164	55	127	9
Estimated contract settlement, loss order and other costs	18	37	2	15
Inventory and long-lived asset impairments	12	22	8	11
Total	**194**	**114**	**137**	**35**

Expenses associated with these activities are recorded in the following line items in the Consolidated Income Statements:

	Year ended December 31,		Three months ended December 31,	
($ in millions)	2020	2019	2020	2019
Total cost of sales	95	46	82	2
Selling, general and administrative expenses	50	4	34	5
Non-order related research and development expenses	10	–	9	1
Other income (expenses), net	39	64	12	27
Total	**194**	**114**	**137**	**35**

At December 31, 2020 and 2019, $233 million and $189 million, respectively, were recorded for other restructuring-related liabilities and were included primarily in Other provisions.

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Note 18
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 the following segments, based on products and services: 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 safe, smart and sustainable electrical flow from the substation to the socket. The portfolio of increasingly digital and connected solutions includes electric vehicle charging infrastructure, renewable 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. The products and services are delivered through five operating Divisions: Distribution Solutions, Smart Power, Smart Buildings, Installation Products and Power Conversion.

- Industrial Automation: develops and sells a broad range of industry-specific, integrated automation and electrification systems and solutions, as well as digital solutions, lifecycle services and artificial intelligence applications for the process and hybrid industries. Products and solutions include process and discrete control technologies, advanced process control software and manufacturing execution systems, sensing, measurement and analytical instrumentation, electric ship propulsion systems and large turbochargers. In addition, the Business Area offers a comprehensive range of services ranging from repair to advanced services such as remote monitoring, preventive maintenance, asset performance management and cybersecurity services. The products and services are delivered through five operating Divisions: Energy Industries, Process Industries, Marine & Ports, Turbocharging, and Measurement & Analytics.

- Motion: manufactures and sells drives, motors, generators, traction converters and mechanical power transmission products that are driving the low-carbon future for industries, cities, infrastructure and transportation. These products, digital technology and related services enable industrial customers to increase energy efficiency, improve safety and reliability, and achieve precise control of their processes. Building on over 130 years of cumulative experience in electric powertrains, the Business Area combines domain expertise and technology to deliver the optimum solution for a wide range of applications in all industrial segments. In addition, the Business Area, along with partners, has an unmatched global service presence. These products and services are delivered through eight operating Divisions: Large Motors and Generators, IEC LV Motors, NEMA Motors, Drive Products, System Drives, Service, Traction and Mechanical Power Transmission.

- Robotics & Discrete Automation: delivers its products, solutions and services through two operating Divisions: Robotics and Machine Automation. Robotics includes: industrial robots, software, robotic solutions and systems, field services, spare parts, and digital services. Machine Automation specializes in solutions based on its programmable logic controllers (PLC), industrial PCs (IPC), servo motion, transport systems and machine vision. Both Divisions offer engineering and simulation software as well as a comprehensive range of digital solutions.

Corporate and Other: includes headquarters, central research and development, the Company's real estate activities, Corporate Treasury Operations, historical operating activities of certain divested businesses 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 acquisition (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,
- other income/expense relating to the Power Grids joint venture,
- 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 (including impairment of goodwill) and certain 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 year and three months ended December 31, 2020 and 2019, as well as total assets at December 31, 2020 and 2019.

	Year ended December 31, 2020					
($ in millions)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Total
Geographical markets						
Europe	4,008	2,322	1,934	1,429	15	**9,708**
The Americas	4,050	1,321	2,173	385	7	**7,936**
of which: United States	3,093	805	1,846	270	5	**6,019**
Asia, Middle East and Africa	3,506	2,038	1,807	1,024	7	**8,382**
of which: China	1,820	628	926	714	3	**4,091**
	11,564	**5,681**	**5,914**	**2,838**	**29**	**26,026**
Product type						
Products	9,951	1,263	5,040	1,635	53	**17,942**
Systems	743	1,665	–	780	(24)	**3,164**
Services and other	870	2,753	874	423	–	**4,920**
	11,564	**5,681**	**5,914**	**2,838**	**29**	**26,026**
Third-party revenues	11,564	5,681	5,914	2,838	29	**26,026**
Intersegment revenues(1)	360	111	495	69	(927)	**108**
Total Revenues(2)	**11,924**	**5,792**	**6,409**	**2,907**	**(898)**	**26,134**

	Year ended December 31, 2019					
($ in millions)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Total
Geographical markets						
Europe	4,039	2,416	1,879	1,634	36	**10,004**
The Americas	4,568	1,582	2,315	453	1	**8,919**
of which: United States	3,522	948	1,972	290	3	**6,735**
Asia, Middle East and Africa	3,665	2,153	1,827	1,157	40	**8,842**
of which: China	1,729	608	876	825	1	**4,039**
	12,272	**6,151**	**6,021**	**3,244**	**77**	**27,765**
Product type						
Products	10,315	1,439	5,152	1,785	65	**18,756**
Systems	958	1,648	–	968	12	**3,586**
Services and other	999	3,064	869	491	–	**5,423**
	12,272	**6,151**	**6,021**	**3,244**	**77**	**27,765**
Third-party revenues	12,272	6,151	6,021	3,244	77	**27,765**
Intersegment revenues(1)	456	122	512	70	(947)	**213**
Total Revenues(2)	**12,728**	**6,273**	**6,533**	**3,314**	**(870)**	**27,978**

($ in millions)	Three months ended December 31, 2020 Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Total
Geographical markets						
Europe	1,156	617	538	398	1	**2,710**
The Americas	1,084	334	527	96	4	**2,045**
of which: United States	797	189	442	67	2	**1,497**
Asia, Middle East and Africa	1,054	578	522	291	(18)	**2,427**
of which: China	550	195	268	216	2	**1,231**
	3,294	**1,529**	**1,587**	**785**	**(13)**	**7,182**
Product type						
Products	2,876	399	1,338	435	4	**5,052**
Systems	160	399	–	229	(17)	**771**
Services and other	258	731	249	121	–	**1,359**
	3,294	**1,529**	**1,587**	**785**	**(13)**	**7,182**
Third-party revenues	3,294	1,529	1,587	785	(13)	**7,182**
Intersegment revenues	62	16	118	16	(212)	**–**
Total Revenues[(2)]	**3,356**	**1,545**	**1,705**	**801**	**(225)**	**7,182**

($ in millions)	Three months ended December 31, 2019 Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Total
Geographical markets						
Europe	1,064	640	500	384	(15)	**2,573**
The Americas	1,086	422	545	108	(1)	**2,160**
of which: United States	832	248	464	71	2	**1,617**
Asia, Middle East and Africa	965	594	473	273	(26)	**2,279**
of which: China	446	162	223	179	1	**1,011**
	3,115	**1,656**	**1,518**	**765**	**(42)**	**7,012**
Product type						
Products	2,317	332	1,283	409	(22)	**4,319**
Systems	534	477	–	232	(20)	**1,223**
Services and other	264	847	235	124	–	**1,470**
	3,115	**1,656**	**1,518**	**765**	**(42)**	**7,012**
Third-party revenues	3,115	1,656	1,518	765	(42)	**7,012**
Intersegment revenues[(1)]	123	27	139	22	(255)	**56**
Total Revenues[(2)]	**3,238**	**1,683**	**1,657**	**787**	**(297)**	**7,068**

(1) Intersegment revenues until June 30, 2020, include sales to the Power Grids business which is presented as discontinued operations and thus these sales are not eliminated from total revenues.

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

($ in millions)	Year ended December 31, 2020	2019	Three months ended December 31, 2020	2019
Operational EBITA:				
Electrification	1,681	1,688	522	421
Industrial Automation	451	732	103	202
Motion	1,075	1,082	285	254
Robotics & Discrete Automation	237	393	59	86
Corporate and Other				
– Non-core and divested businesses	(133)	(145)	(26)	(79)
– Stranded corporate costs	(40)	(225)	–	(40)
– Corporate costs and Other Intersegment elimination	(372)	(418)	(118)	(134)
Total	**2,899**	**3,107**	**825**	**710**
Acquisition-related amortization	(263)	(265)	(66)	(60)
Restructuring, related and implementation costs(1)	(410)	(300)	(220)	(99)
Changes in obligations related to divested businesses	(218)	(36)	(14)	(5)
Changes in pre-acquisition estimates	(11)	(22)	–	(9)
Gains and losses from sale of businesses	(2)	55	2	47
Fair value adjustment on assets and liabilities held for sale	(33)	(421)	–	45
Acquisition- and divestment-related expenses and integration costs	(74)	(121)	(31)	(49)
Other income/expense relating to the Power Grids joint venture	(20)	–	(5)	–
Foreign exchange/commodity timing differences in income from operations:				
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	67	20	45	41
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	26	8	16	2
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(33)	(7)	(17)	(17)
Certain other non-operational items:				
Costs for divestment of Power Grids	(86)	(141)	24	(39)
Regulatory, compliance and legal costs	(7)	(7)	(1)	2
Business transformation costs	(31)	(19)	(12)	(6)
Executive Committee transition costs	(1)	(14)	(2)	(2)
Favorable resolution of an uncertain purchase price adjustment	36	92	28	92
Gain on sale of investments	–	15	–	–
Asset write downs/impairments & certain other fair value changes(2)	(239)	(4)	1	(4)
Other non-operational items	(7)	(2)	5	(1)
Income from operations	**1,593**	**1,938**	**578**	**648**
Interest and dividend income	51	67	12	10
Interest and other finance expense	(240)	(215)	(49)	(36)
Losses from extinguishment of debt	(162)	–	(162)	–
Non-operational pension (cost) credit	(401)	72	(129)	5
Income from continuing operations before taxes	**841**	**1,862**	**250**	**627**

(1) Amounts include implementation costs in relation to the OS program of $67 million and $97 million for the year ended December 31, 2020 and 2019, respectively, and $20 million and $26 million for the three months ended December 31, 2020 and 2019, respectively.
(2) Amounts include goodwill impairment charges of $311 million for the year ended December 31. 2020.

($ in millions)	Total assets(1), (2) December 31, 2020	December 31, 2019
Electrification	12,098	11,671
Industrial Automation	4,624	4,559
Motion	6,248	6,149
Robotics & Discrete Automation	4,660	4,661
Corporate and Other	13,458	19,068
Consolidated	**41,088**	**46,108**

(1) Total assets are after intersegment eliminations and therefore reflect third-party assets only.
(2) At December 31, 2020 and 2019, respectively, Corporate and Other includes $282 million and $9,840 million of assets in the Power Grids business which is reported as discontinued operations (see Note 3). In addition, at December 31, 2020, Corporate and Other includes $1,710 million related to the equity investment in Hitachi ABB Power Grids Ltd, (see Note 4).

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 year and three months ended December 31, 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

	Q4 2020 compared to Q4 2019							
	Order growth rate				Revenue growth rate			
Business	**US$ (as reported)**	**Foreign exchange impact**	**Portfolio changes**	**Comparable**	**US$ (as reported)**	**Foreign exchange impact**	**Portfolio changes**	**Comparable**
Electrification	-3%	-2%	3%	**-2%**	4%	-2%	3%	**5%**
Industrial Automation	12%	-3%	0%	**9%**	-8%	-3%	0%	**-11%**
Motion	-3%	-2%	0%	**-5%**	3%	-3%	0%	**0%**
Robotics & Discrete Automation	0%	-5%	0%	**-5%**	2%	-5%	0%	**-3%**
ABB Group	**2%**	**-3%**	**0%**	**-1%**	**2%**	**-3%**	**1%**	**0%**

	FY 2020 compared to FY 2019							
	Order growth rate				Revenue growth rate			
Business	**US$ (as reported)**	**Foreign exchange impact**	**Portfolio changes**	**Comparable**	**US$ (as reported)**	**Foreign exchange impact**	**Portfolio changes**	**Comparable**
Electrification	-9%	0%	3%	**-6%**	-6%	0%	3%	**-3%**
Industrial Automation	-4%	0%	0%	**-4%**	-8%	1%	0%	**-7%**
Motion	-3%	1%	0%	**-2%**	-2%	0%	0%	**-2%**
Robotics & Discrete Automation	-12%	0%	0%	**-12%**	-12%	-1%	0%	**-13%**
ABB Group	**-7%**	**0%**	**1%**	**-6%**	**-7%**	**1%**	**1%**	**-5%**

Regional comparable growth rate reconciliation

	Q4 2020 compared to Q4 2019							
	Order growth rate				Revenue growth rate			
Region	US$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Europe	-8%	-5%	1%	**-12%**	5%	-4%	0%	**1%**
The Americas	-7%	1%	0%	**-6%**	-5%	0%	1%	**-4%**
Asia, Middle East and Africa	28%	-4%	-1%	**23%**	6%	-4%	2%	**4%**
ABB Group	**2%**	**-3%**	**0%**	**-1%**	**2%**	**-3%**	**1%**	**0%**

	FY 2020 compared to FY 2019							
	Order growth rate				Revenue growth rate			
Region	US$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Europe	-8%	0%	1%	**-7%**	-3%	-1%	1%	**-3%**
The Americas	-12%	1%	1%	**-10%**	-11%	2%	0%	**-9%**
Asia, Middle East and Africa	-1%	0%	2%	**1%**	-5%	0%	2%	**-3%**
ABB Group	**-7%**	**0%**	**1%**	**-6%**	**-7%**	**1%**	**1%**	**-5%**

Order backlog growth rate reconciliation

	December 31, 2020 compared to December 31, 2019			
Business	US$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Electrification	-3%	-2%	4%	**-1%**
Industrial Automation	14%	-5%	0%	**9%**
Motion	12%	-6%	0%	**6%**
Robotics & Discrete Automation	3%	-5%	0%	**-2%**
ABB Group	**7%**	**-4%**	**2%**	**5%**

Other growth rate reconciliations

	Q4 2020 compared to Q4 2019				FY 2020 compared to FY 2019			
	US$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable	US$ (as reported)	Foreign exchange impact	Portfolio changes	Comparable
Service orders	-13%	-2%	0%	**-15%**	-15%	1%	0%	**-14%**
Service revenues	-8%	-2%	0%	**-10%**	-9%	0%	0%	**-9%**

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,
- other income/expense relating to the Power Grids joint venture,
- 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 (including impairment of goodwill) and certain other fair value changes, 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.

Other income/expense relating to the Power Grids joint venture

Other income/expense relating to the Power Grids joint venture consists of amounts recorded in Income from continuing operations before taxes relating to the divested Power Grids business including the income/loss under the equity method for the investment in Hitachi ABB Power Grids Ltd. (Hitachi ABB PG), amortization of deferred brand income as well as changes in value of other obligations relating to the divestment.

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

	Year ended December 31,		Three months ended December 31,	
($ in millions)	**2020**	**2019**	**2020**	**2019**
Operational EBITA	**2,899**	**3,107**	**825**	**710**
Acquisition-related amortization	(263)	(265)	(66)	(60)
Restructuring, related and implementation costs[(1)]	(410)	(300)	(220)	(99)
Changes in obligations related to divested businesses	(218)	(36)	(14)	(5)
Changes in pre-acquisition estimates	(11)	(22)	–	(9)
Gains and losses from sale of businesses	(2)	55	2	47
Fair value adjustment on assets and liabilities held for sale	(33)	(421)	–	45
Acquisition- and divestment-related expenses and integration costs	(74)	(121)	(31)	(49)
Other income/expense relating to the Power Grids joint venture	(20)	–	(5)	–
Certain other non-operational items[(2)]	(335)	(80)	43	42
Foreign exchange/commodity timing differences in income from operations	60	21	44	26
Income from operations	**1,593**	**1,938**	**578**	**648**
Interest and dividend income	51	67	12	10
Interest and other finance expense	(240)	(215)	(49)	(36)
Losses on extinguishment of debt	(162)	–	(162)	–
Non-operational pension (cost) credit	(401)	72	(129)	5
Income from continuing operations before taxes	**841**	**1,862**	**250**	**627**
Income tax expense	(496)	(772)	(123)	(320)
Income from continuing operations, net of tax	**345**	**1,090**	**127**	**307**
Income (loss) from discontinued operations, net of tax	4,860	438	(183)	50
Net income (loss)	**5,205**	**1,528**	**(56)**	**357**

(1) Amounts include implementation costs in relation to the OS program of $67 million and $97 million for the year ended December 31, 2020 and 2019, respectively, and $20 million and $26 million for the three months ended December 31, 2020 and 2019, respectively.

(2) Amounts include goodwill impairment charges of $311 million for the year ended December 31, 2020.

Reconciliation of Operational EBITA margin by business

($ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other and Intersegment elimination	Consolidated
	Three months ended December 31, 2020					
Total revenues	**3,356**	**1,545**	**1,705**	**801**	**(225)**	**7,182**
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(25)	(21)	(8)	(2)	–	**(56)**
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(2)	(15)	–	(1)	(2)	**(20)**
Unrealized foreign exchange movements on receivables (and related assets)	12	13	4	6	4	**39**
Operational revenues	**3,341**	**1,522**	**1,701**	**804**	**(223)**	**7,145**
Income (loss) from operations	**444**	**28**	**258**	**23**	**(175)**	**578**
Acquisition-related amortization	29	1	13	20	3	**66**
Restructuring, related and implementation costs	62	88	24	12	34	**220**
Changes in obligations related to divested businesses	–	–	–	–	14	**14**
Gains and losses from sale of businesses	(2)	–	–	–	–	**(2)**
Acquisition- and divestment-related expenses and integration costs	31	1	–	–	(1)	**31**
Other income/expense relating to the Power Grids joint venture	–	–	–	–	5	**5**
Certain other non-operational items	(22)	–	4	2	(27)	**(43)**
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(22)	(12)	(16)	(1)	6	**(45)**
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(2)	(11)	–	(1)	(2)	**(16)**
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	4	8	2	4	(1)	**17**
Operational EBITA	**522**	**103**	**285**	**59**	**(144)**	**825**
Operational EBITA margin (%)	**15.6%**	**6.8%**	**16.8%**	**7.3%**	**n.a.**	**11.5%**

In the three months ended December 31, 2020, Certain other non-operational items in the table above includes the following:

($ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Consolidated
	Three months ended December 31, 2020					
Certain other non-operational items:						
Costs for divestment of Power Grids	–	–	–	–	(24)	**(24)**
Regulatory, compliance and legal costs	–	–	–	–	1	**1**
Asset write downs/impairments and certain other fair value changes	–	–	–	–	(1)	**(1)**
Business transformation costs	4	–	4	2	2	**12**
Executive Committee transition costs	–	–	–	–	2	**2**
Favorable resolution of an uncertain purchase price adjustment	(28)	–	–	–	–	**(28)**
Other non-operational items	2	–	–	–	(7)	(5)
Total	**(22)**	**–**	**4**	**2**	**(27)**	**(43)**

	Three months ended December 31, 2019					
($ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other and Intersegment elimination	Consolidated
Total revenues	**3,238**	**1,683**	**1,657**	**787**	**(297)**	**7,068**
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(20)	(6)	(8)	(6)	(2)	**(42)**
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	(12)	–	(1)	3	**(10)**
Unrealized foreign exchange movements on receivables (and related assets)	8	6	4	3	2	**23**
Operational revenues	**3,226**	**1,671**	**1,653**	**783**	**(294)**	**7,039**
Income (loss) from operations	**478**	**194**	**245**	**62**	**(331)**	**648**
Acquisition-related amortization	28	1	13	19	(1)	**60**
Restructuring, related and implementation costs	51	7	2	4	35	**99**
Changes in obligations related to divested businesses	–	–	–	–	5	**5**
Changes in pre-acquisition estimates	9	–	–	–	–	**9**
Gains and losses from sale of businesses	(41)	–	–	–	(6)	**(47)**
Fair value adjustment on assets and liabilities held for sale	(45)	–	–	–	–	**(45)**
Acquisition- and divestment-related expenses and integration costs	50	–	–	–	(1)	**49**
Certain other non-operational items	(91)	–	6	2	41	**(42)**
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(27)	–	(15)	–	1	**(41)**
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	(3)	–	(1)	2	**(2)**
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	9	3	3	–	2	**17**
Operational EBITA	**421**	**202**	**254**	**86**	**(253)**	**710**
Operational EBITA margin (%)	**13.1%**	**12.1%**	**15.4%**	**11.0%**	**n.a.**	**10.1%**

In the three months ended December 31, 2019, Certain other non-operational items in the table above includes the following:

	Three months ended December 31, 2019					
($ 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	–	–	–	–	39	**39**
Regulatory, compliance and legal costs	–	–	–	–	(2)	**(2)**
Asset write downs/impairments and certain other fair value changes	–	–	–	–	4	**4**
Business transformation costs	(2)	–	6	2	–	**6**
Executive Committee transition costs	–	–	–	–	2	**2**
Favorable resolution of an uncertain purchase price adjustment	(92)	–	–	–	–	**(92)**
Other non-operational items	3	–	–	–	(2)	**1**
Total	**(91)**	**–**	**6**	**2**	**41**	**(42)**

($ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other and Intersegment elimination	Consolidated
	Year ended December 31, 2020					
Total revenues	**11,924**	**5,792**	**6,409**	**2,907**	**(898)**	**26,134**
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(11)	(15)	(5)	(3)	4	**(30)**
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(2)	(20)	–	1	(8)	**(29)**
Unrealized foreign exchange movements on receivables (and related assets)	–	5	(2)	2	13	**18**
Operational revenues	**11,911**	**5,762**	**6,402**	**2,907**	**(889)**	**26,093**
Income (loss) from operations	**1,335**	**344**	**989**	**(163)**	**(912)**	**1,593**
Acquisition-related amortization	115	4	52	78	14	**263**
Restructuring, related and implementation costs	145	125	44	26	70	**410**
Changes in obligations related to divested businesses	15	–	–	–	203	**218**
Changes in pre-acquisition estimates	11	–	–	–	–	**11**
Gains and losses from sale of businesses	4	–	–	–	(2)	**2**
Fair value adjustment on assets and liabilities held for sale	33	–	–	–	–	**33**
Acquisition- and divestment-related expenses and integration costs	71	2	–	–	1	**74**
Other income/expense relating to the Power Grids joint venture	–	–	–	–	20	**20**
Certain other non-operational items	(27)	1	17	295	49	**335**
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(31)	(14)	(28)	(3)	9	**(67)**
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(2)	(16)	–	1	(9)	**(26)**
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	12	5	1	3	12	**33**
Operational EBITA	**1,681**	**451**	**1,075**	**237**	**(545)**	**2,899**
Operational EBITA margin (%)	**14.1%**	**7.8%**	**16.8%**	**8.2%**	**n.a.**	**11.1%**

In the year ended December 31, 2020, Certain other non-operational items in the table above includes the following:

($ in millions, unless otherwise indicated)	Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Consolidated
	Year ended December 31, 2020					
Certain other non-operational items:						
Costs for divestment of Power Grids	–	–	–	–	86	**86**
Regulatory, compliance and legal costs	–	–	–	–	7	**7**
Asset write downs/impairments and certain other fair value changes	–	–	–	290	(51)	**239**
Business transformation costs	7	–	16	5	3	**31**
Executive Committee transition costs	–	–	–	–	1	**1**
Favorable resolution of an uncertain purchase price adjustment	(36)	–	–	–	–	**(36)**
Other non-operational items	2	1	1	–	3	**7**
Total	**(27)**	**1**	**17**	**295**	**49**	**335**

($ in millions, unless otherwise indicated)	Year ended December 31, 2019 Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other and Intersegment elimination	Consolidated
Total revenues	**12,728**	**6,273**	**6,533**	**3,314**	**(870)**	**27,978**
Foreign exchange/commodity timing differences in total revenues:						
Unrealized gains and losses on derivatives	(13)	1	(3)	(2)	(2)	**(19)**
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	–	(12)	–	(1)	(5)	**(18)**
Unrealized foreign exchange movements on receivables (and related assets)	2	7	3	1	7	**20**
Operational revenues	**12,717**	**6,269**	**6,533**	**3,312**	**(870)**	**27,961**
Income (loss) from operations	**1,049**	**700**	**1,009**	**298**	**(1,118)**	**1,938**
Acquisition-related amortization	115	4	53	77	16	**265**
Restructuring, related and implementation costs	112	21	12	12	143	**300**
Changes in obligations related to divested businesses	–	–	–	–	36	**36**
Changes in pre-acquisition estimates	22	–	–	–	–	**22**
Gains and losses from sale of businesses	(42)	–	–	–	(13)	**(55)**
Fair value adjustment on assets and liabilities held for sale	421	–	–	–	–	**421**
Acquisition- and divestment-related expenses and integration costs	119	–	–	1	1	**121**
Certain other non-operational items	(89)	2	14	4	149	**80**
Foreign exchange/commodity timing differences in income from operations:						
Unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives)	(23)	9	(7)	2	(1)	**(20)**
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	3	(3)	–	(1)	(7)	**(8)**
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	1	(1)	1	–	6	**7**
Operational EBITA	**1,688**	**732**	**1,082**	**393**	**(788)**	**3,107**
Operational EBITA margin (%)	**13.3%**	**11.7%**	**16.6%**	**11.9%**	**n.a.**	**11.1%**

In the year ended December 31, 2019, Certain other non-operational items in the table above includes the following:

($ in millions, unless otherwise indicated)	Year ended December 31, 2019 Electrification	Industrial Automation	Motion	Robotics & Discrete Automation	Corporate and Other	Consolidated
Certain other non-operational items:						
Costs for planned divestment of Power Grids	–	–	–	–	141	**141**
Regulatory, compliance and legal costs	–	–	–	–	7	**7**
Asset write downs/impairments and certain other fair value changes	–	–	–	–	4	**4**
Business transformation costs	1	–	14	4	–	**19**
Executive Committee transition costs	–	–	–	–	14	**14**
Favorable resolution of an uncertain purchase price adjustment	(92)	–	–	–	–	**(92)**
Gain on sale of investments	–	–	–	–	(15)	**(15)**
Other non-operational items	2	2	–	–	(2)	**2**
Total	**(89)**	**2**	**14**	**4**	**149**	**80**

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) gains/losses from extinguishment of debt,
(v) changes in obligations related to divested businesses,
(vi) changes in pre-acquisition estimates,
(vii) gains and losses from sale of businesses (including fair value adjustment on assets and liabilities held for sale),
(viii) acquisition- and divestment-related expenses and integration costs,
(ix) other income/expense relating to the Power Grids joint venture
(x) certain other non-operational items,
(xi) 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),
(xii) 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 (xi) above, and
(xiii) Certain other non-operational amounts recorded within Income tax expense.

Adjustment for certain non-operational amounts recorded within Income tax expense

Adjustments are made for certain amounts recorded within Income tax expense 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.

Adjusted Group effective tax rate

The Adjusted Group effective tax rate is computed by dividing a combined adjusted income tax expense (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 income tax expense (primarily gains and losses from sale of businesses) are excluded to arrive at the computation. Amounts recorded in income tax expense 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 $)	Year ended December 31, 2020	2019	Growth[3]
Net income (attributable to ABB)	**5,146**	**1,439**	**258%**
Non-operational adjustments:			
Acquisition-related amortization	263	265	
Restructuring, related and implementation costs[1]	410	300	
Non-operational pension cost (credit)	402	(72)	
Gains/losses from extinguishment of debt	162	–	
Changes in obligations related to divested businesses	218	36	
Changes in pre-acquisition estimates	11	22	
Gains and losses from sale of businesses	2	(55)	
Fair value adjustment on assets and liabilities held for sale	33	421	
Acquisition- and divestment-related expenses and integration costs	74	121	
Other income/expense relating to the Power Grids joint venture	20	–	
Certain other non-operational items	335	80	
FX/commodity timing differences in income from operations	(60)	(21)	
Non-operational adjustments in discontinued operations	(4,949)	218	
Tax on non-operational adjustments[2]	36	(228)	
Adjustment for non-operational amounts in Income tax expense	(28)	124	
Operational net income	**2,075**	**2,650**	**-22%**
Weighted-average number of shares outstanding (in millions)	**2,111**	**2,133**	
Operational EPS	**0.98**	**1.24**	**-21%**
Constant currency Operational EPS adjustment	(0.01)	–	
Operational EPS (constant currency basis)	**0.97**	**1.24**	**-22%**

($ in millions, except per share data in $)	Year ended December 31, 2020	2019
Net income from discontinued operations (attributable to ABB)	**4,852**	**396**
Non-operational adjustments in discontinued operations	(4,949)	218
Tax on non-operational adjustments[2]	238	(64)
Operational net income from discontinued operations	**141**	**550**
Weighted-average number of shares outstanding (in millions)	**2,111**	**2,133**
Operational EPS from discontinued operations	**0.07**	**0.26**
Operational EPS from continuing operations	0.92	0.98
Operational EPS	**0.98**	**1.24**

($ in millions, except per share data in $)	Three months ended December 31, 2020	2019	Growth[3]
Net income (loss) (attributable to ABB)	**(79)**	**325**	**-124%**
Non-operational adjustments:			
Acquisition-related amortization	66	60	
Restructuring, related and implementation costs[1]	220	99	
Non-operational pension cost (credit)	130	(4)	
Gains/losses from extinguishment of debt	162	–	
Changes in obligations related to divested businesses	14	5	
Changes in pre-acquisition estimates	–	9	
Gains and losses from sale of businesses	(2)	(47)	
Fair value adjustment on assets and liabilities held for sale	–	(45)	
Acquisition- and divestment-related expenses and integration costs	31	49	
Other income/expense relating to the Power Grids joint venture	5	–	
Certain other non-operational items	(43)	(42)	
Foreign exchange/commodity timing differences in income from operations	(44)	(26)	
Non-operational adjustments in discontinued operations	169	116	
Tax on non-operational adjustments[2]	(103)	(43)	
Adjustment for non-operational amounts in Income tax expense	–	124	
Operational net income	**526**	**580**	**-9%**
Weighted-average number of shares outstanding (in millions)	**2,059**	**2,133**	
Operational EPS	**0.26**	**0.27**	**-6%**
Constant currency Operational EPS adjustment	(0.02)	–	
Operational EPS (constant currency basis)	**0.24**	**0.27**	**-10%**

($ in millions, except per share data in $)	Three months ended December 31, 2020	2019
Net income (loss) from discontinued operations (attributable to ABB)	**(183)**	**34**
Non-operational adjustments in discontinued operations	169	116
Tax on non-operational adjustments[2]	2	(37)
Operational net income (loss) from discontinued operations	**(12)**	**113**
Weighted-average number of shares outstanding (in millions)	**2,059**	**2,133**
Operational EPS from discontinued operations	**(0.01)**	**0.05**
Operational EPS from continuing operations	0.26	0.22
Operational EPS	**0.26**	**0.27**

(1) Amounts include implementation costs in relation to the OS program of $67 million and $97 million for the year ended December 31, 2020 and 2019, respectively, and $20 million and $26 million for the three months ended December 31, 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 divestment of the Power Grids business, gains and losses from sale of businesses (including fair value adjustment on assets and liabilities held for sale), certain changes in obligations related to divested businesses, certain non-operational pension costs and debt extinguishment costs, for which the actual income tax expense 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, Restricted cash (current and non-current) and Marketable securities and short-term investments.

Reconciliation

	December 31,		
($ in millions)	2020	2019	2018
Short-term debt and current maturities of long-term debt	1,293	2,287	2,031
Long-term debt	4,828	6,772	6,587
Total debt	**6,121**	**9,059**	**8,618**
Cash and equivalents	3,278	3,508	3,422
Restricted cash - current	323	36	23
Marketable securities and short-term investments	2,108	566	712
Restricted cash - non-current	300	–	–
Cash and marketable securities	**6,009**	**4,110**	**4,157**
Net debt	**112**	**4,949**	**4,461**

Net debt/EBITDA Ratio

Definition

Net debt/EBITDA

Net debt/EBITDA is defined as Net debt divided by EBITDA.

EBITDA

EBITDA is defined as Income from operations for the trailing twelve months preceding the balance sheet date before depreciation and amortization for the same trailing twelve-month period.

Reconciliation

($ in millions, unless otherwise indicated)	December 31, 2020	December 31, 2019
Income from operations	1,593	1,938
Depreciation and Amortization	915	961
EBITDA	**2,508**	**2,899**
Net debt (as defined above)	**112**	**4,949**
Net debt / EBITDA	**0.04**	**1.7**

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, (c) pension and other employee benefits), (d) payables under the share buyback program and (e) liabilities related to the divestment of the Power Grids business; 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

	December 31,		
($ in millions, unless otherwise indicated)	2020	2019	2018
Net working capital:			
Receivables, net	6,820	6,434	6,386
Contract assets	985	1,025	1,082
Inventories, net	4,469	4,184	4,284
Prepaid expenses	201	191	176
Accounts payable, trade	(4,571)	(4,353)	(4,424)
Contract liabilities	(1,903)	(1,719)	(1,707)
Other current liabilities(1)	(3,283)	(3,069)	(3,213)
Net working capital in assets and liabilities held for sale	–	(34)	–
Net working capital	**2,718**	**2,659**	**2,584**
Total revenues for the twelve months ended	26,134	27,978	27,662
Adjustment to annualize/eliminate revenues of certain acquisitions/divestments	(167)	(113)	1,030
Adjusted revenues for the trailing twelve months	**25,967**	**27,865**	**28,692**
Net working capital as a percentage of revenues (%)	**10.5%**	**9.5%**	**9.0%**

(1) Amounts exclude $898 million, $692 million and $567 million at December 31, 2020, 2019 and 2018, respectively, related primarily to (a) income taxes payable, (b) current derivative liabilities, (c) pension and other employee benefits, (d) payables under the share buyback program and (e) liabilities related to the divestment of the Power Grids business.

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 Adjusted net income attributable to ABB.

Adjusted net income attributable to ABB

Adjusted net income attributable to ABB is calculated as net income attributable to ABB adjusted for: (i) impairment of goodwill, (ii) losses from extinguishment of debt, and (iii) gain on the sale of the Power Grids business included in discontinued operations.

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 conversion to net income

	Twelve months to	
($ in millions, unless otherwise indicated)	December 31, 2020	December 31, 2019
Net cash provided by operating activities – continuing operations	**1,875**	**1,899**
Adjusted for the effects of continuing operations:		
Purchases of property, plant and equipment and intangible assets	(694)	(762)
Proceeds from sale of property, plant and equipment	114	82
Free cash flow from continuing operations	**1,295**	**1,219**
Net cash provided by (used in) operating activities – discontinued operations	**(182)**	**426**
Adjusted for the effects of discontinued operations:		
Purchases of property, plant and equipment and intangible assets	(108)	(167)
Proceeds from sale of property, plant and equipment	1	8
Free cash flow	**1,006**	**1,486**
Adjusted net income attributable to ABB[1]	**478**	**1,439**
Free cash flow conversion to net income	**210%**	**103%**

(1) Adjusted net income attributable to ABB for the year ended December 31, 2020, is adjusted to exclude goodwill impairment charges of $311 million, loss from extinguishment of debt of $162 million and the gain on the sale of the Power Grids business included in discontinued operations of $5,141 million.

Net finance expenses

Definition
Net finance expenses is calculated as Interest and dividend income less Interest and other finance expense and losses from extinguishment of debt.

Reconciliation

	Year ended December 31,		Three months ended December 31,	
($ in millions)	2020	2019	2020	2019
Interest and dividend income	51	67	12	10
Interest and other finance expense	(240)	(215)	(49)	(36)
Losses on extinguishment of debt	(162)	–	(162)	–
Net finance expenses	**(351)**	**(148)**	**(199)**	**(26)**

Book-to-bill ratio

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

Reconciliation

	Year ended December 31,					
	2020			2019		
($ in millions, unless otherwise indicated)	Orders	Revenues	Book-to-bill	Orders	Revenues	Book-to-bill
Electrification	11,884	11,924	**1.00**	13,050	12,728	**1.03**
Industrial Automation	6,144	5,792	**1.06**	6,432	6,273	**1.03**
Motion	6,574	6,409	**1.03**	6,782	6,533	**1.04**
Robotics & Discrete Automation	2,868	2,907	**0.99**	3,260	3,314	**0.98**
Corporate and Other *(incl. intersegment eliminations)*	(958)	(898)	**n.a.**	(936)	(870)	**n.a.**
ABB Group	**26,512**	**26,134**	**1.01**	**28,588**	**27,978**	**1.02**

	Three months ended December 31,					
	2020			2019		
($ in millions, unless otherwise indicated)	Orders	Revenues	Book-to-bill	Orders	Revenues	Book-to-bill
Electrification	3,074	3,356	**0.92**	3,160	3,238	**0.98**
Industrial Automation	1,918	1,545	**1.24**	1,706	1,683	**1.01**
Motion	1,552	1,705	**0.91**	1,602	1,657	**0.97**
Robotics & Discrete Automation	699	801	**0.87**	701	787	**0.89**
Corporate and Other *(incl. intersegment eliminations)*	(240)	(225)	**n.a.**	(283)	(297)	**n.a.**
ABB Group	**7,003**	**7,182**	**0.98**	**6,886**	**7,068**	**0.97**

Return on Capital employed (ROCE)

Definition

Return on Capital employed (ROCE)

Return on Capital employed is calculated as Operational EBITA after tax, divided by the average of the period's opening and closing Capital employed, adjusted to reflect impacts from significant acquisitions/divestments occurring during the same period.

Capital employed

Capital employed is calculated as the sum of Adjusted total fixed assets and Net working capital (as defined above).

Adjusted total fixed assets

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

Notional tax on Operational EBITA

The Notional tax on Operational EBITA is computed using an adjusted group effective tax rate applicable to continuing operations. The rate applied is computed as described above in Operational EPS and excludes any impacts from discontinued operations.

Reconciliation

	December 31,		
($ in millions, unless otherwise indicated)	**2020**	**2019**	**2018**
Adjusted total fixed assets:			
Property, plant and equipment, net	4,174	3,972	4,133
Goodwill	10,850	10,825	10,764
Other intangible assets, net	2,078	2,252	2,607
Investments in equity-accounted companies	1,784	33	87
Operating lease right-of-use assets	969	994	1,196
Fixed assets included in assets held for sale(1)	–	69	–
Total fixed assets	**19,855**	**18,145**	**18,787**
Less: Deferred taxes recognized in certain acquisitions(2)	(597)	(663)	(765)
Adjusted total fixed assets	**19,258**	**17,482**	**18,022**
Net working capital - (as defined above)	**2,718**	**2,659**	**2,584**
Capital employed	**21,976**	**20,141**	**20,606**
Average Capital employed:			
Capital employed at the end of the previous year	20,141	20,606	
Capital employed at the end of the current year	21,976	20,141	
Average Capital employed	**21,059**	**20,374**	
Operational EBITA for the year ended	2,899	3,107	
Notional tax on Operational EBITA	(731)	(848)	
Operational EBITA after tax	**2,168**	**2,259**	
Return on capital employed (ROCE)	**10.3%**	**11.1%**	

(1) Held for sale: In 2020 and 2019 the Power Grids business is reported as a discontinued operation. In addition, for 2019, the solar inverters business has been presented as held for sale.

(2) Amount relates to GEIS acquired in 2018, B&R acquired in 2017, Power-One acquired in 2013, Thomas & Betts acquired in 2012 and Baldor acquired in 2011.

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