

ABB Limited Co.

Ticker Site BiG	ABB
Ticker BiGlobal Trade	ABB
Ticker BT24	ABB
Ticker BiG Power Trade	ABB
P/E Ratio 2020E	28.82
EV/EBITDA	18.56

Source: Company's data;

Price and Performance (Values in USD)

Price	25.74
52 week high	26.48
52 week low	14.71
YTD	6.8%
Average daily volume (un)	2,544,060
Market Capitalization (mn)	55,808

Source: Company's data;

Analysts Consensus (last 3 months)

Buy	2
Hold	1
Sell	2

Source: Company's data;

Financial Data

Sales (USD mn)	27,978
EBITDA (USD mn)	2,897
Number of Employees	144,000
ROA	3.3%
ROE	12.3%
Dividend Yield	3.21%

Source: Company's data;

Notes:

All quotes were updated in Bloomberg at 10h49 of July 27th, 2020.

Relevant Information:

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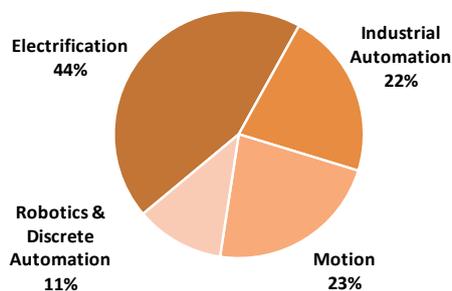
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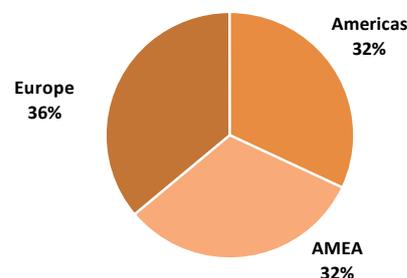
ABB Limited Co. (Ticker: ABB US)
Description

ABB is a company specialized in providing solutions to improve efficiency and processes of industrial clients. It has 4 main segments: Electrification, Industrial Automation, Motion and Robotics. Despite being a leader or number 2 in these segments, ABB has not been able to translate this leadership into margin expansion and profit growth. For that reason there has been a reshuffling of the strategy, towards a decentralized business model.

ABB has an ADR in US with a market capitalization of USD 55bn and has more than 144,000 employees.

2019 Revenues


Source: Company Data;

2019 Revenues

Investment Case

Risk on ABB's exposure to struggling industries: The Covid-19 pandemic has affected multiple industries such as automobile, oil & gas and pulp & paper to cut their capex. This cut in capex will affect orders of ABB which in the 2Q 2020 already declined -14% yoy.

Exposure to electric vehicles: ABB has more than 5,000 electric charging stations worldwide. IONITY, a partnership between Daimler, BMW, Ford and VW, chose ABB as partner for creating a charging network in Europe for electric vehicles. IONITY hopes to reach 400 charging stations in 2020 in 24 countries in Europe. Electrify, an american company also chose ABB as partner to supply charging stations. Currently ABB is the main sponsor of Formula E, the "electric Formula 1".

Industrial Automation growth: With the current technological advances, there are more companies looking for ways to modernize their industrial facilities to increase efficiency and drive down costs (for example by replacing employees by machines). ABB has products and solutions to help these companies and thus its automation segment and robotics is registering a high growth. In 2022 China may be ABB's biggest market where the company already has a USD 150 mn robotic factory.

Analyst:

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Research:
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Income Statement (USD mn)	2019	2018
Product sales	22554	22366
Services	5424	5296
Revenues	27978	27662
Cost of product sales	15811	15961
Cost of services	3261	3157
Research and development	1198	1147
Other costs (profits)	323	-124
General and administrative costs	5447	5295
Operational costs	26040	25436
EBIT	1938	2226
Interest	76	107
EBT	1862	2119
Taxes	772	544
Other costs (profits)	-438	-723
Net Income	1528	2298
Earnings per share	0.67	1.02

Source: Company's data

Free Cash Flow (USD mn)	2019	2018
Operational	2325	2924
Net Income	1528	2298
Depreciation and Amortization	961	916
Change in Working Capital	-372	50
Others	208	-340
Investment	-815	-3085
Capex	-633	-3364
Short term investments	81	405
Others	-263	-126
Financial	-1383	-789
Debt change	414	1305
Share buyback	10	-208
Dividends	-1765	-1803
Others	-42	-83
Change in cash flow	127	-950
Foreign exchange effects	-28	-131
Cash and equivalents at end	3544	3445

Source: Company's data

Balance Sheet (USD mn)	2Q2020	2019	2018
Assets	46903	46108	44441
Cash & Equivalents	2518	3544	3445
Receivables	6150	6434	6386
Property Plant & Equipment	3861	3972	4133
Inventories	4395	4184	4284
Short term investments	1878	566	712
Intangible Assets & Goodwill	12942	13077	13371
Other Assets	15159	14331	12110
Liabilities	34328	32128	29907
Short term Debt	6383	2287	2031
Long term Debt	6237	6772	6587
Payables & accrued expenses	4062	4353	4424
Pension liabilities	1845	1793	1828
Advances from customers	1703	1719	1707
Other liabilities	14098	15204	13330
Total Shareowner's Equity	12575	13980	14534
Total Equity and Liabilities	46903	46108	44441

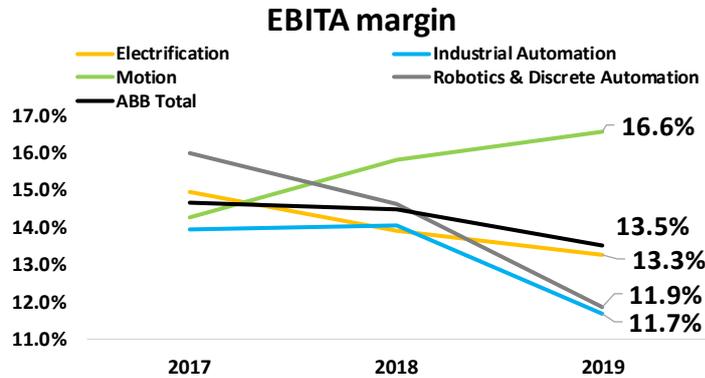
Source: Company's data

Income Statement

In 2019, ABB revenues reached USD 28bn, increasing by 5% on local currency (excluding the power grids division which will be divested). There was a decline in revenues of Robotics & Discrete Automation due to weakness in automotive-related sectors, while Electrification revenues benefitted from the full consolidation of GEIS business.

Orders increased by 4% in local currencies, reflecting organic growth in Electrification and Motion divisions, but negatively impacted by a decline in Industrial Automation and Robotics & Discrete Automation.

Costs consist primarily of labor, raw materials and component costs.



Source: Company Data;

Free Cash Flow

In 2018 the company spent more capex due to the acquisition of GE IS and consequently had to increase debt. It paid USD 1.8bn in dividends. In 2019, capex declined to mainly maintenance, leaving around USD 1.5 bn for dividends, which led the company to increase debt to maintain dividends at USD 1.7bn. By divesting the Power Grid business, ABB has now between USD 7.6 and 7.8 bn in funds to invest in a share buyback of 180 million shares.

Balance Sheet

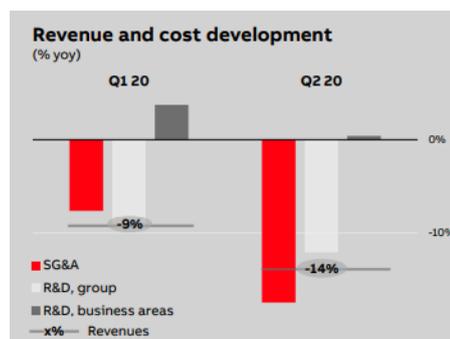
Net debt increased to USD 7.6 bn at end of June 2020.

2Q 2020 Earnings

In the quarter (on a comparable basis), orders declined by -14% and revenues by -10%. Operational EBITA declined to USD 651 mn, leading to a margin of 10.6% (vs 13.5% in 2019). Net income was USD 319 mn.

Orders in automotive and related sectors, and in machine builders were severely impacted. Marine and renewables activities declined steeply.

Cost cuts implemented during the Covid-19 include, discretionary spending (travels and tradeshow), modifications in staff and pay, external resources (consultants) and postponement of non-critical investments.



Source: Company Data;

Analyst:

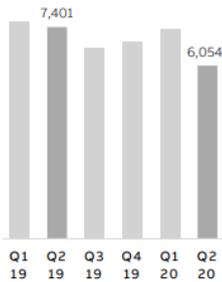
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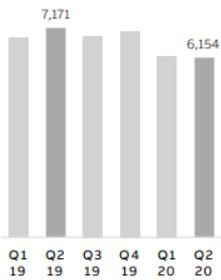
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Orders -14%¹



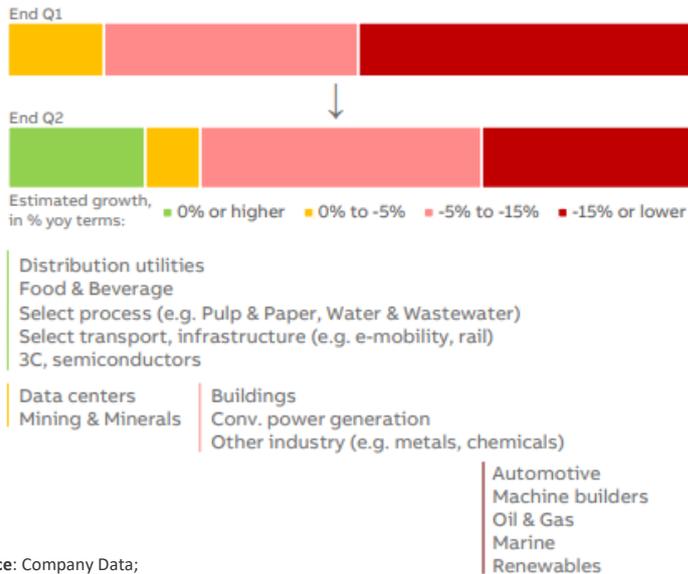
Revenues -10%¹



Source: Company Data;

Guidance: ABB expects revenues to be significantly impacted yoy in 2020, at best recovering in the last quarter, while orders may recover slightly in 3Q 2020. ABB sees major impact from Covid-19 on oil & gas, conventional power generation, automotive, marine and buildings industries. Electrical distribution, transport, data centers and food and beverage should continue to show resilience.

Short-term outlook, by end-market



Source: Company Data;

Q&A (paraphrasing):

- **There are concerns about a space of 3 to 6 months with suspended order activities. What impact do you foresee?**
On Electrification, in North America, is a distributor oriented market, so it will take a little bit of time before bouncing back. On the Industrial Automation it is more project oriented, so more quick. Services on the other hand have suffered in this pandemic significantly, despite usually being resilient in crisis.
- **Has this crisis accelerated the demand for automation?**
Robotics is where we see the biggest headwinds due to automotive industry which had total shutdown during the quarter. However we have seen more connected robots, with connectivity growing by 400%, driven by the need to monitor robots externally. We feel the trend will accelerate but is only been 3 months since Covid.
- **Has China recovered completely?**
We had a 3% growth in China in the quarter, but depends on the business. Motion and Electrification are quite good while Industrial Automation is weaker, and Robotics is flat due to an increase in electronics industry orders.

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Management

Bjorn Rosengren (CEO)
Source: Company's data

Bjorn Rosengren (CEO): Joined the company and begun his role as CEO in 1Q 2020. Previously worked as CEO of Sandvik since 2015, a global engineering group serving multiple industries such as aerospace, auto, mining, oil&gas, renewables and processing. In Sandvik he implemented a decentralized structure and improved both profitability and financial strength, which helped the company to almost double its share price since then. Held previously roles such as CEO of Wartsila (provided technologies and solutions for marine and energy markets) and president of construction and mining technique in Atlas Copco. Bjorn was born in Sweden in 1959.

- **Management style:** Bjorn affirms he is a believer in performance management, and accountability, transparency and speed of doing business is key of business success. The new strategy goes through a focus on giving more responsibility for the heads of each division to take actions and control of the business vs a centralized corporate office that runs all the businesses. In terms of portfolio management Bjorn intends to first drive profitability of each division and only then drive growth. If the business continues to have low profitability then ABB should study if it makes sense to keep it or divest it. In terms of R&D Bjorn said he needs division leaders that understand that innovation is key for leading technology, so he intends to keep R&D at current levels, which are a bit higher than industry average in terms of revenue. "We are not planning to become a software company", software is part of the product, but not the final product.
- **Ulrich Spiesshofer (former CEO):** Ulrich joined ABB in 2005 after spending several years as a consultant in AT Kearney and Roland Berger. In 2010 was elected head of automation segment and led the Baldor Electric acquisition of USD 4.2bn. Ulrich was born in Germany in 1964 and completed its doctorate in Economics as well as an MBA in Engineering in Stuttgart.



Peter Voser (Chairman)
Source: Company's data

Peter Voser (Chairman): Was elected Chairman in 2015, after holding roles in Shell as CEO from 2009 to 2013 and CFO from 2004 to 2009. From 2002 to 2004 he was CFO of ABB. Voser has also board experience in Roche, IBM, Catalyst, Temasek and PSA International. His salary in 2019 was CHF 3.4 mn.



Timo Ihamuotila (CFO)
Source: Company's data

Timo Ihamuotila (CFO): Timo was appointed CFO in 2017. Previously was CFO in Nokia since 2009, having joined the company in 1999. His salary in 2019 was CHF 3.8 mn.

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▲ **Priorities for 2020:**

- Licence to operate:** ABB affirms that before thinking about any business strategy it must achieve fundamental requirements to run a business in today's digital world. These include taking responsibility for health, safety and environment and integrity. It also includes cybersecurity.
- Customers:** Give operational responsibility for all functions and territories to adapt solutions to their customers, translating into a customer-centric approach.
- People:** Empower and motivate ABB's people and attract best talent globally. CEO had as priority in 2019 to initiate dialogue with employees to create a culture of openness and collaboration. There was a survey also for employees to contribute with ideas for the business.
- Technology and digital:** Collaboration with universities and startups to develop new technologies and opening of ABB's first research facility on the campus of the Texas Medical Center in Houston, to work on medical robot systems (non-surgical) to automate repetitive and low-value tasks.
- Financial Performance:** generate long term returns for our shareholders.

Group mid-term targets

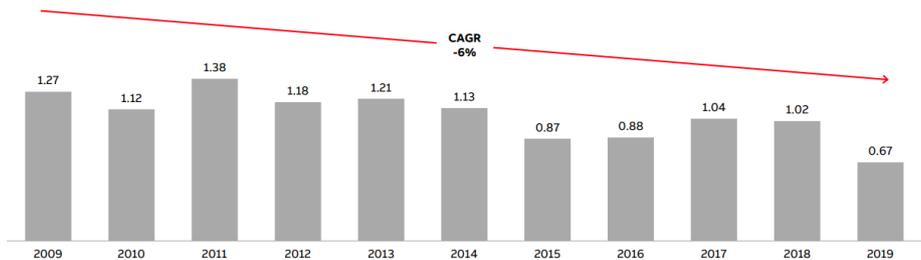
- 3-6%** comparable revenue growth, p.a.
- 13-16%** operational EBITA margin
- ~100%** cash conversion
- 15-20%** ROCE
- EPS growth > revenue growth

Long-term **sustainability targets**

Source: Company Data;

Board and Management focus is on reversing the trend of declining EPS:

ABB's EPS on downward trajectory for past 10 years



Source: Company Data;

New framework for divisions and business areas to drive profitability:

	From: ABB-OS	To: ABB Way
SIMPLIFICATION	<ul style="list-style-type: none"> - ABB-OS simplification program ~\$500 mn p.a. net savings, full run-rate benefit during 2021 - Corporate and Other cost run-rate ~\$300 mn mid-term 	<ul style="list-style-type: none"> - On track for faster delivery of ~\$500 mn p.a. net savings - ~\$300 mn Corporate and Other cost run-rate during 2021 - No cost allocations to Business Areas and Divisions from 2021 onwards
PERFORMANCE MANAGEMENT	<ul style="list-style-type: none"> - Annual budgets replaced by 5Q rolling forecasts - Common Business level KPIs 	<ul style="list-style-type: none"> - Division level scorecard system. Comparable time series standardized KPI's driving continuous improvement
PORTFOLIO MANAGEMENT	<ul style="list-style-type: none"> - Identified review / transform category of ~\$3 bn revenues 	<ul style="list-style-type: none"> - Systematic portfolio evaluation at Division level - Corporate defined systematic portfolio management process

This decentralized model was developed at Atlas Copco and Bjorn (CEO) applied it to Sandvik successfully. When asked about the complexity of ABB and the applicability of this model to the company, the CEO expressed that after analyzing all the divisions he did not see any major complexities as each business can be managed separately and be driven by performance despite having some connections with other divisions that should be treated as a regular customer.

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▲ **Main segments**

Smart Power



~\$3 bn¹

Smart Buildings



~\$3 bn¹

Distribution Solutions



~\$5 bn¹

#1 Medium voltage

Installation Products



~\$2 bn¹

Electrification Products (2019 Rev. USD 12.7 bn, +8.5%, EBITA mg 13.3%): This division sells products with medium and low voltage which include solar energy, energy distribution, cables, electricity wires, sensors etc. Its main customers are OEMs, engineering, procurement and construction contracting companies, energy suppliers, architects, builders and even end users. The charging stations for electric vehicles (already more than 5,000 worldwide) are included in this division. It has around 53,000 employees.

Orders +10%, at USD 13 bn leading to a backlog at end of 2019 of USD 4.5bn.

Around 2/3 are for products with short delivery time within a 3-month period. The remaining are smaller projects with longer lead time or large projects that require engineering and installation. ½ is received via 3rd party distributors, so there is not many client data. In 2019 orders grew by 10% driven mainly by utilities, oil&gas, renewables, EV infrastructure, and data centers. Construction was positive but growth declined.

Revenues by region: Americas were USD 4.6bn, in Europe USD 4bn and in AMEA USD 3.7bn.

- **Smart Power:** low voltage breakers and switchers, motor and power protection, and EV charging infrastructure and services.
- **Smart Buildings:** miniature breakers, wiring accessories and building automation.
- **Distribution Solutions:** medium and low voltage control and protection.
- **Installation Products:** wire and cable management, termination and fittings.
- **Power Conversion:** DC Power systems division from GEIS.

Integration of GE Industrial Solutions: One third of the acquisition of June of 2018, is already completed. It includes expansion of ABB's market to North America, access GEIS global installed base, combine ABB products into the offering and develop strategic supply partnerships. About 13 thousand employees from GEIS have been integrated into ABB. 4 facility expansions are underway in North America and synergies are expected to reach USD 200 mn.

Mid-term priorities

	Distribution Solutions	Smart Power	Smart Buildings	Installation Products
Focus	Margin	Profitable growth	Profitable growth	Turnaround
Priorities	Integrate GEIS New solutions design ABB Ability™ Asset mgmt.	Integrate GEIS ABB Ability™ Energy mgmt. Solar inverter business carve-out	Integrate GEIS ABB Ability™ Building mgmt. and IoT ecosystem	Turnaround Simplify portfolio
Skills & capabilities	Distribution grids Solution architects	Digital talent E-mobility	Building automation System integration	Operational excellence Supply chain turnaround
Salesforce spend	=	++	++	=
R&D investment	+	++	++	=
Capital intensity	=	=	=	=
Cash flow	++	+	+	++

Source: Company Data;

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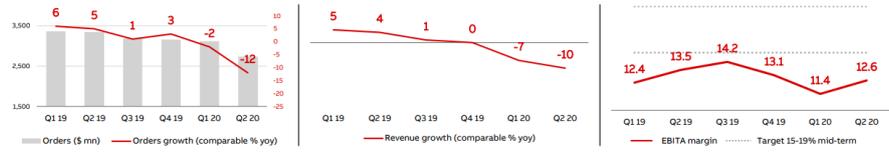
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Q2 2020 Electrification

Lower volumes weigh



Orders \$2,737 mn

Short-cycle demand fall incl. buildings
Steep drop in oil and gas, renewables
Distribution utilities, data centers, transport resilient

Revenues \$2,764 mn

Weaker short-cycle business
Constrained project activities in distribution solutions
Order backlog end Q1 +9%, end Q2 +6% yoy

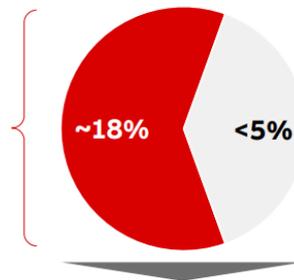
Operational EBITA \$348 mn

Margin yoy -90 bps
Lower volumes
Supportive cost savings, resilient pricing
GEIS, Installation Products turnaround firmly on track

Electrification operational EBITA margin

High performing businesses (~60% revenues)

- Distribution Solutions
- Smart Power
- Smart Buildings

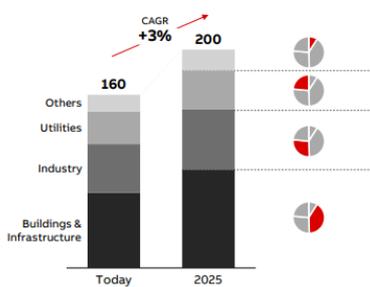


Businesses in change mode (~40% revenues)

- Solar inverters: Exit >50 bps accretion
- Installation Products: Turnaround
- GEIS: Integration into high performing businesses

Source: Company Data;

Global addressable market in \$ bn **Business exposure % of revenues**



Source: Company Data;

Industrial Automation

- Energy Industries
- Process Industries
- Marine & Ports
- Turbocharging
- Measurement & Analytics

Source: Company Data;

Industrial Automation (Rev. USD 6.3bn, -3%, EBITA mg 11.7%): This division specializes in offering customers in the process and hybrid industries a wide range of integrated automation, electrification and digitalization solutions. This includes products, systems and solutions which increase productivity in industrial processes, including control systems, measurement products, services to increase products' life cycle, maintenance outsourcing and other specific products to some industries (ex: electric motors for ships, test equipment for pulp and paper). It has around 22,300 employees.

Orders -4%, at USD 6.4bn, ending 2019 with a backlog of USD 5bn.

Capex of large projects in oil & gas and mining still low. However base business of investments in maintenance activities and digitalization upgrade improved for oil & gas, chemical and process industries.

Revenues by region: Americas were USD 1.6bn, in Europe USD 2.4bn and in AMEA USD 2.2bn.

Q2 2020 Industrial Automation

Downturn in all end-markets, negative mix, especially service



Orders \$1,305 mn

Broad-based end-market decline, select large order wins
Project pipeline deferrals, no order cancellations

Revenues \$1,382 mn

Substantial drop in book-and-bill, particularly mobility constrained services
Order backlog end Q1 +6%, end Q2 +3% yoy

Operational EBITA \$115 mn

Margin yoy -370 bps
Lower volumes, negative mix
Mobility constrained services

Source: Company Data;

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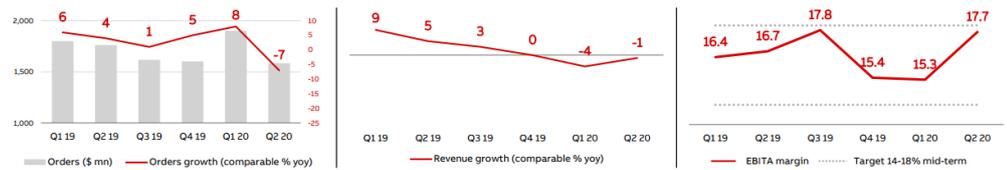


Motion (Rev. USD 6.5 bn, +1%, EBITA 16.6%): ABB is market leader in electric motors, generators, drives and power transmissions, and this division is expected to grow by 3% per year in the medium term. The division has 20,400 employees.

Orders: USD 6.7 bn, +1%, with a backlog at end of 2019 of USD 3bn. Orders driven mainly by process industries (oil&gas and chemicals) and transport and infrastructure sectors (rail, water and wind). There was slower demand from traditional heavy industries (mining & metals, minerals and pulp & paper).

Revenues by region: Americas were USD 2.3bn, in Europe USD 1.9bn and in AMEA USD 1.8bn.

Q2 2020 Motion
Strong performance



Orders \$1,586 mn	Revenues \$1,583 mn	Operational EBITA \$279 mn
Material downturn in many sectors e.g. wind, cement, oil & gas, buildings	Solid backlog execution	Margin yoy +100 bps
Resilience in chemicals, rail	Order backlog end Q1 +15%, end Q2 +13% yoy	Strong cost mitigation, favorable mix

Source: Company Data;

Source: Company Data;

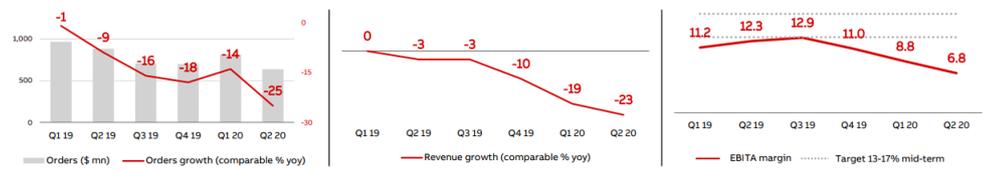


Robotics and Discrete Automation (Rev. USD 3.3 bn, -14%, EBITA mg 11.9%): ABB sells industrial robots, programable logical controllers, industrial PCs, servo motion control, track systems and software and engineering solutions. Its clients are from multiple industries such as metal fabrication, foundry, plastics, food & beverage, chemicals and pharmaceuticals, electronics and warehouse/logistics. This division has around 10,100 employees.

Orders: USD 3.3 bn (-14%), with a backlog at end of year of USD 1.4 bn. In 2019, automotive and related sectors showed weakening demand, as well as machine builders and electronics. Orders increased for robot systems for new electric vehicle manufacturing lines, although at a slower rate vs 2018.

Revenues by region: Americas were USD 0.5bn, in Europe USD 1.6bn and in AMEA USD 1.2bn.

Q2 2020 Robotics & Discrete Automation
Severe downturn continues



Orders \$638 mn	Revenues \$629 mn	Operational EBITA \$43 mn
Sharp, broad-based decline	All areas impacted; systems business and service activities constrained	Margin yoy -550 bps
Tough large order comparison	Order backlog end Q1 -2%, end Q2 -4% yoy	Steep volume decline
		Strong mitigating cost actions

Source: Company Data;

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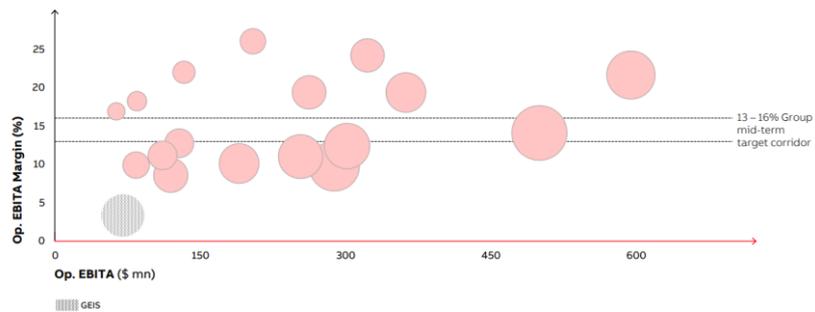
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M&A

The company affirmed in the beginning of 2020 that large acquisitions are off the table in the medium term, but that there could be some more asset disposals of lower performance businesses.

Acquisition of General Electric Industrial Solutions division: ABB announced the purchase of GE electric unit reinforcing its position as number 2 worldwide in this segment. Thus, it will increase its exposure to US market and achieve synergies of USD 200mn per year. The total cost of the acquisition was USD 2.6bn and was completed in June 2018.

A main objective for this area is to increase profitability to levels close to other ABB businesses:



Source: Company Data;

Divestment of Power Grids: ABB supplies products and services related to infrastructure of generation and distribution of energy. Its main clients are the operators of these infrastructure and also industrial consumers. This division has around 36,400 employees and generated around USD 10.4bn in revenues in 2017 with a USD 171mn capex. ABB sold 80% of this division to Hitachi, valuing it at USD 11bn. The proceeds of USD 7.6bn to USD 7.8bn will be used to initiate a share buyback program. The closing of the transaction was in July 2020.

Sale of Solar inverter business: This business was sold in 2019, leading to a negative impact in 2Q19 of USD 430 mn for ABB. The business was underperforming due to pricing pressures and its disposal was intended to allow electrification division to increase its average margin.

Acquisition of a majority stake in Shanghai Chargedot New Energy Technology: This company supplied AC and DC charging stations in China for electric vehicles. ABB intends with this acquisition to develop its relationship with EV manufacturers in China.

Risks

Trade Wars: ABB imports in US a very specific kind of steel which is impacted by tariffs and cannot be bought locally. ABB alerted that jobs could be at risk if tariffs are not reduced. Indirectly, the impact on global economy may lead to the postponing of projects by ABB clients which will impact the order book of the company.

Exposure to struggling industries: Automotive, Oil & Gas and Pulp and Paper represent a significant part of the client’s base, and these industries are going through a tough environment and cutting capex, which will reduce significantly the orders of the company.

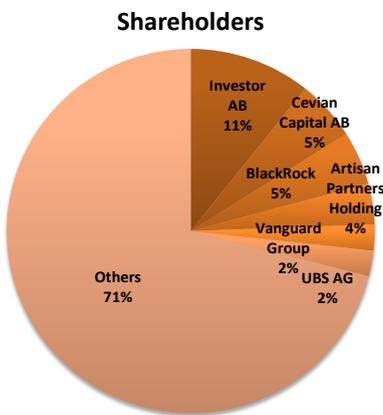
Foreign exchange: ABB reports in USD, while 80% of its revenues come from other currencies. A strong USD appreciation may hurt significantly company’s revenues.

Comparative analysis

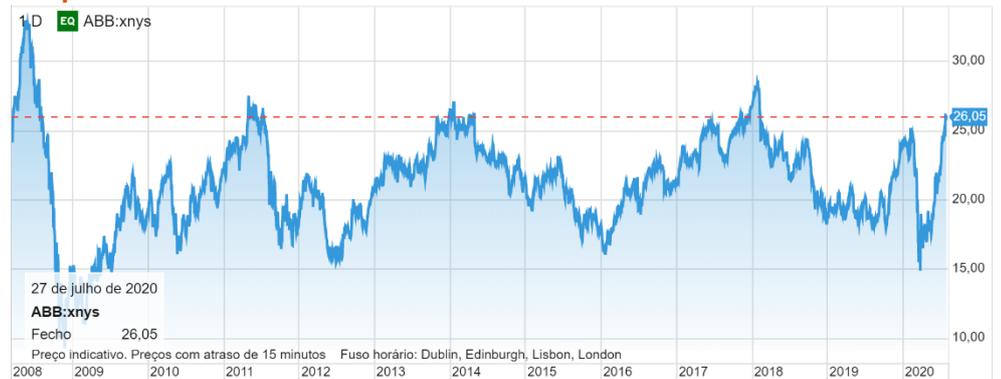
ABB P/E ratios are high vs main competitors, while margin EBITDA is below average. Net Debt / EBITDA despite being somewhat high will decrease as the payment for the disposal of power grids division is received.

Name	Country	Market Cap (mn)	Currency	P/E 2020E	YTD	NetDebt/ EBITDA	CFO/Capex	Margin EBITDA
JOHNSON CONTROLS INTERNATION	UNITED STATES	27,374	USD	19.2	-9.6%	2.0	2.1	8.9
EMERSON ELECTRIC CO	UNITED STATES	37,856	USD	21.0	-16.9%	1.4	5.1	21.2
SIEMENS AG-REG	GERMANY	96,339	EUR	22.0	-2.7%	3.0	2.8	11.9
KUKA AG	GERMANY	1,511	EUR	n.a.	4.1%	-0.3	2.0	4.4
SCHNEIDER ELECTRIC SE	FRANCE	56,735	EUR	26.4	9.3%	1.1	8.5	16.8
ABB LTD-SPON ADR	SWITZERLAND	55,808	USD	28.8	6.8%	2.9	3.1	11.8
Average exc. ABB				22.2	-3.16%	1.4	4.1	12.6

Fonte: Bloomberg; BiG Research



Graph



Calendar

November 2020: Capital Markets Day

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 - Accumulate, expected absolute return between +5% and +15%;
 - Keep/Neutral, expected absolute return between -5% and +5%;
 - Reduce, expected absolute return between -5% and -15%;
 - Sell, expected absolute return below -15%;
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- The update of the investment recommendations models and respective price-targets will occur, usually, in a period of 6 to 12 months.
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PSI20 Notes in the last 12 months as of 31st of December of 2018:

	Number of Recommendations	%
Accumulate/Buy	2	66,7%
Keep/Neutral	1	33,3%
Reduce/Sell	0	0,0%
Total	3	100,0%

Source: BiG Research

Trading Ideas in the last 12 months as of 31st of December of 2018:

	Number of Recommendations	%
Profit Taking	9	56,3%
Stop Loss	7	43,8%
In Place	0	0,0%
Total	16	100,0%

Pair Trades in the last 12 months as of 31st of December of 2018:

	Number of Recommendations	%
Profit Taking	0	0%
Stop Loss	0	0%
In Place	0	0%
Total	0	0%

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