

Boeing

Ticker Site BiG	BA
Ticker BiGlobal Trade	BA
Ticker BT24	BA
Ticker BiG Power Trade	BA
P/E Ratio 2020E	19,9
EV/EBITDA	33,67

Source: BiG Research;

Price and Performance (Values in USD)

Price	330,35
52 week high	446,01
52 week low	319,55
YTD	1,4%
Average daily volume (un)	4.805.140
Market Capitalization (mn)	185.918
Beta	0,94
Dividend	7,19
EPS	18,05

Source: BiG Research;

Consenso de analistas (últimos 3m)

Comprar	18
Manter	10
Vender	0

Source: BiG Research;

Financial Data

Sales (USD mn)	101.127
EBITDA (USD mn)	14.101
Number of Employees	153.000
ROA	3,1%
D/E	13,9%
Dividend Yield	2,49%

Source: BiG Research;

Notes:

All quotes were updated in Bloomberg at 15h45 of January 8th, 2020.

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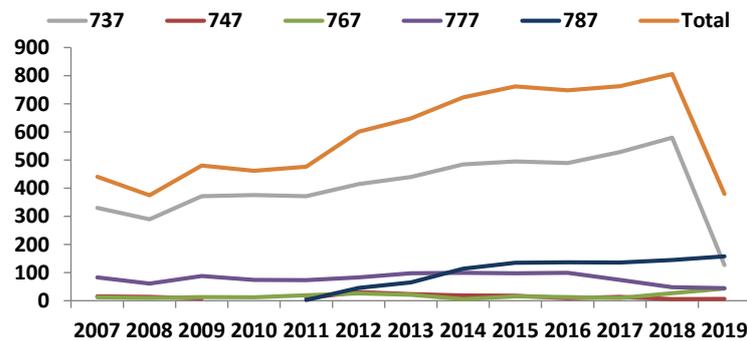
Boeing (Ticker: BA US)

Description

Boeing produces commercial airplanes, helicopters, military airplanes, defense systems and aerospace products. In 2018, delivered 806 commercial airplanes, of which 580 were 737 models. Due to the restrictions imposed by the FAA (airlines regulator in US) and other regulators, the sale of 737 MAX model came to a stall which impacted significantly the deliveries in the first 3 quarters of 2019 as seen below.

Boeing trades in the NYSE with a market cap around USD 186 bn and has more than 150 thousand employees.

Deliveries (units)



Source: Company data

Strategy

Currently Boeing is focused on solving the 737 MAX crisis. At the same time, the success of the Airbus A321neo capable of crossing the Atlantic Ocean, led Boeing thinking about the possible future models. The new CEO says it is a priority to find the new model that makes sense for clients but does not cannibalize sales of the wide body model 787.

Investment Case

Boeing is in a duopoly market with Airbus in the commercial airplanes industry. This confers it a great power with suppliers. Also due to the very steep growth of the industry in recent years, airplane orders have been increasing at a very high rhythm and Boeing already has backlog for at least 4 years of production.

However the recent 737 MAX crisis is far from over and its consequences may go from loss of orders and revenue to lawsuits and fines by the regulator.

Consequently we do not see the current price of the company as an opportunity and would rather wait for a further decrease in its value before taking a position.

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Income Statement (USD mr)	2019	2018	2017
Sales of Products	66.094	90.229	83.740
Sales of Services	10.465	10.898	10.265
Revenues	76.559	101.127	94.005
Cost of goods sold	62.877	72.922	68.879
Cost of services	9.154	8.499	7.663
Research & Development	3.219	3.269	3.179
Marketing, General and admin.	3.909	4.567	4.095
Other expenses	-625	-117	-155
Operating Expenses	78.534	89.140	83.661
EBIT	-1.975	11.987	10.344
Interest expenses	284	383	237
EBT	-2.259	11.604	10.107
Taxes	-1.623	1.144	1.649
Net Income	-636	10.460	8.458
Earnings Per Share	-1,12	17,85	13,85

Source: Company's data

Free Cash Flow (USD mn)	2019	2018	2017
Operational Cash Flow	-2.446	15.322	13.346
Business Net Income	-636	10.460	8.458
Depreciation and Amortization	2.271	2.114	2.047
Changes in Working Capital	-4.629	2.284	2.252
Others	548	464	589
Investment Cash Flow	-1.530	-4.621	-2.058
Capex	-1.491	-4.832	-1.971
Financial investments & others	101	291	38
Others	-140	-80	-125
Financial Cash Flow	5.739	-11.722	-11.350
Debt change	13.218	1.365	1.124
Share buyback	-2.651	-8.919	-8.925
Dividends	-4.630	-3.946	-3.417
Others	-198	-222	-132
Change in free cash flow	1.763	-1.021	-62
Foreign exchange	-5	-53	80
Cash at the end of period	9.571	7.813	8.887

Source: Company's data

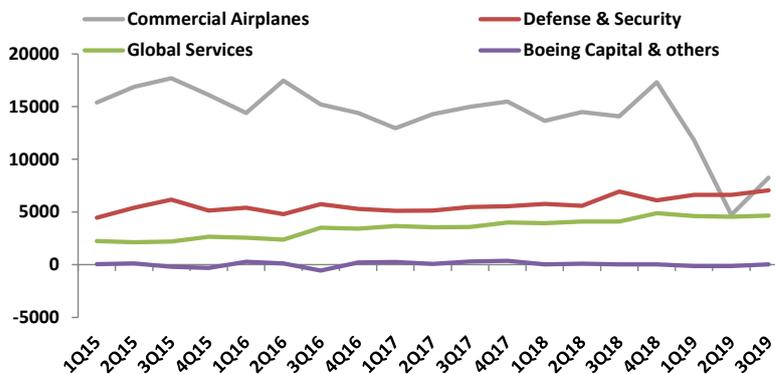
Balance Sheet (USD mn)	2019	2018	2017
Assets	133625	117359	92333
Cash & Equivalents	10030	8564	9992
Receivables & customer fin	14607	16782	13565
Property Plant & Equipment	12502	12645	12672
Inventories	76622	62567	44344
Intangible Assets & Goodwill	11398	11269	8132
Other Assets	8466	5532	3628
Liabilities	141925	116949	91921
Short term Debt	7340	3190	1335
Long term Debt	19962	10657	9782
Payables & accrued expense	89972	78400	54934
Pension deficit	20816	19907	22016
Other liabilities	3835	4795	3854
Total Shareowner's Equity	-8300	410	412
Total Equity and Liabilities	133625	117359	92333

Source: Company's data

Income Statement

Commercial airplanes represented around 60% of revenues in 2018, however due to the fall in deliveries of the largest sales model 737, these revenues fell sharply during 2019. These were partially offset by an increase in revenues from the Defense & Security. In the end of the year, revenues amounted to USD 76.6 bn vs USD 101 bn in 2018.

Revenues (USD mn)



Source: Company data

Free Cash Flow

Boeing was able in 2018 to generate more than USD 15 bn in OCF, using around USD 5bn in capex and distributed almost USD 4bn in dividends and did share buybacks of around USD 9bn. Due to the decrease in revenues in 2019, OCF dropped to USD -2.4 bn which forced the company to decrease share buybacks.

Balance Sheet

As of end of 2019, Boeing had in its BS around USD 10bn in cash and around USD 27bn in debt. Recently Boeing requested loans of around USD 10bn to refinance its operations and help dealing with the 737 MAX crisis.

Financial impact of 737 crisis

In the 4th quarter, besides the loss of revenues due to suspension of sales of Boeing 737 MAX, Boeing recorded a USD 2.6 bn additional costs to the program and booked a USDF 2.6 bn charge related with estimated potential concessions and other considerations to customers (which totalized in 2019 USD 8.3 bn). The company already estimates around USD 4bn of abnormal production costs to be expensed as incurred in 2020.

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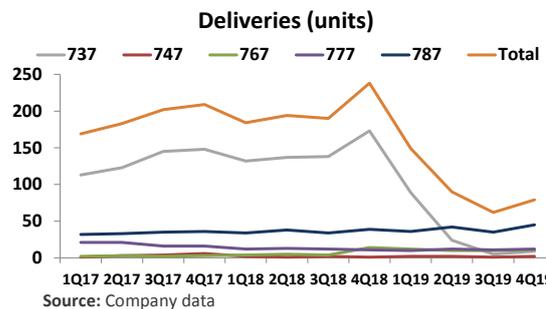
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▲ **737 MAX crisis**

The problem: On October of 2018, a Lion Air flight using a Boeing 737 MAX crashed. In March 2019, another Boeing 737 MAX crashed, belonging to Ethiopian airlines. The cause of both accidents was an automatic system that overrode pilots' commands and prompted the nose of the airplane down.

The consequence: On the month of the second incident, there was a worldwide grounding of all Boeing 737 MAX planes, close to 400 airplanes of more than 50 airlines. Following the ban, Boeing started to redesign the system and work with regulators to enable again the use of these airplanes.

Impact on revenues: Boeing is being deeply affected by the grounding as this model represents a very significant part of revenues and deliveries. At end of 2019, Boeing had delivered only 381 planes vs 863 of Airbus:



Impact on orders: Moreover, Boeing orders have been weaker vs Airbus and according to a recent news article, citing sources, China Aviation Supplies Holding (which handles orders for Chinese companies) is negotiating a big order with Airbus while Boeing is for now set aside. What is saving a rapid decline in the order book of Boeing is that Airbus' book is completely filled for at least the next 2 years. This means that a new recent order will take a long time to be filled, so airlines prefer to patiently wait for the approval of the 737 MAX. Still, Xiamen Airlines, an airline which used Boeing exclusively, already made an order for 10 Airbus A321neo jets.

Possible impact from lawsuits: Additionally, there are several lawsuits pending from families of the victims that blame Boeing for the plane crashes. Boeing may have to pay a considerable settlement. Families accuse Boeing of dismissing training for the new model 737 MAX for pilots already flying other Boeing 737 models, and recent leaked documents show signs that this may have been the case.

Possible loss of negotiating power: As compensation for airlines, Boeing is expected to concede significant discounts in future airplane orders. For airlines, this has been a big problem, because they were forced to cancel flights which were done by 737 MAX airplanes and due to suspension of deliveries of 737 MAX they cannot expand their routes with new airplanes.

Last developments: On January of 2020, a new software flaw was discovered which will require more work on the airplane and probably more delays on its approval, according to press sources. On the same month, Fitch downgraded the company's rating to A-, with an outlook stable. According to sources, Boeing is trying to get a new loan from several banks to deal with the production halt of 737 MAX of mid January of 2020. Southwest Airlines, one of the main airlines using Boeing 737 MAX expects no flights with this aircraft for at least until June 2020. The CEO of Boeing was replaced in January 2020.

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▲ Main segments**Boeing Commercial Aircrafts:**

Boeing 737: These airplanes have the capacity for between 126 and 204 passengers and a flight range between 6,100 km and 7,130 km (more or less the distance between Lisbon and NY). Its length is between 36 m and 44m and the length of the wing is around 36 m. On average Boeing produced around 52 of these per month, however due to the 737 MAX crisis its production has been halted since January 2020.



Boeing 747: This model has one additional row of passengers above the first, which gives it the capacity for 410 people in 3 different classes. The flight range is around 15,000 km and its length is 76m with a wing span of 68 m. The cargo version has the capacity for 137 tons. The average production rhythm is around 0.5 airplanes per month.



Boeing 767 cargo: This airplane has the capacity for 53 tons and a flight range of 6,000 km. Its length is 55m and the wing span around 48m. The average production is around 2.5 airplanes per month.



Boeing 777: With a capacity for 317 to 425 people, it has a flight range between 13,600 km to 16,000 km, being able of making a trip between NY and Hong Kong. Its length is between 64m and 77m and wing span of around 65m. Its price is around USD 370 mn. The cargo version has the capacity for 100 tons. The average production is around 5 airplanes per month.



Boeing 787: This type of airplane has the capacity for between 240 to 330 passengers and a flight range between 12,000km and 13,600 km. Its length goes from 57m to 68 m and the wing span is around 60m. The average production is 12 planes per month.



Defense: In this division, Boeing manufactures helicopters, combat jets like F18, military cargo planes, drones and the Air Force One which is used by the President of USA.

Space division: In this segment are included the satellites, launch stations, space stations and the Phantom Express, a prototype to launch satellites for space without tripulation and that can be reutilized.

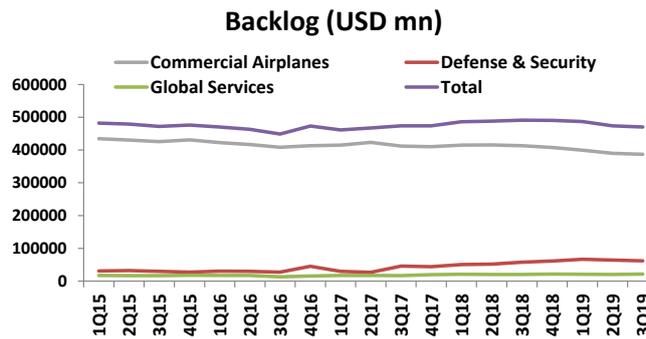
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Backlog



Source: Company data

Management



Source: Company data

David Calhoun: At 62 years old he was chosen to replace former CEO Dennis Muilenburg in January of 2020 following the 737 MAX crisis. David has been pragmatic in its first moves, choosing to release internal messages that showed employees of Boeing mocking FAA regulators and was also involved in the decision to reverse Boeing’s opinion in relation to the need of new training for pilots of 737 MAX. Dave was formerly responsible for GE Aviation and was involved in the development and sale of the GENx turbofan engine (one of the fastest selling engine of GE). Recently he also helped Caterpillar to restructure its business and was also CEO of Nielsen Holdings.

In 2017, Dennis (former CEO), received from Boeing around USD 16.9 mn, including salary (USD 1.6 mn), bonus, stock awards and other benefits.

Mergers & Acquisitions

Boeing & Embraer: Boeing will acquire a 80% stake in a joint venture with the commercial airplanes business of Embraer for USD 3.8 bn in order to compete with the JV between Airbus and Bombardier. These JVs will build commercial airplanes of smaller capacity than the standard models like the 737.

Purchase of KLX: Boeing bought for USD 4.25bn the airplanes’ parts manufacturer KLX. This company will be incorporated in the services segment jointly with Aviall. The company anticipates synergies of USD 70 mn by 2021.

Comparative Analysis

The P/E ratio of the table below is estimating earnings around USD 9 bn for 2020, however if the suspension of deliveries of Boeing 737 MAX extend through the first half of 2020 the earnings will be reduced significantly. Net debt/EBITDA should also increase as Boeing’s cash flow deteriorates and the company raises debt to finance the 737 MAX problem resolution.

Name	Country	Market Cap (mn)	Currency	P/E 2020E	EV/EBITDA	1 Yr. Price Δ	NetDebt/EBITDA	Margin EBITDA
EMBRAER SA	BRAZIL	15.187	BRL	27,3	20,7	-4,0%	-5,9	4,0
BOMBARDIER INC-B	CANADA	4.640	CAD	52,1	7,0	-11,2%	4,2	12,1
LOCKHEED MARTIN CORP	UNITED STATES	117.944	USD	17,2	12,5	54,9%	1,3	16,4
AIRBUS SE	FRANCE	105.603	EUR	18,4	11,4	55,6%	0,2	11,9
BOEING CO/THE	UNITED STATES	185.918	USD	19,9	33,7	-3,0%	2,2	7,8
Média exc. Boeing				28,7	12,9	23,84%	-0,1	11,1

Fonte: Bloomberg; BiG Research

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▲ Risks

737 MAX crisis: The main risks are the fall in revenues, margins and cash flow, followed by potential lawsuits and loss of orders to its main competitor Airbus. A full explanation of these risks is above in the 737 MAX crisis segment.

Suppliers: The delivery of airplanes parts to the different assemblies of Boeing by the suppliers is crucial to keep a high pace of production. A failure to do so, as delays or a problem like the one that happened with Rolls Royce engines will lead to delays in deliveries.

Pension Fund: Boeing has a pension fund deficit of around USD 20 bn. This will eventually have to be paid, so Boeing has to gradually make contributions to offset this deficit, which will be harder now due to the fall in revenues and cash flows due to 737 MAX problem.

Rating		
Agency	Rating	Outlook
S&P	A-	DEVELOP
Moody's	A3	STABLE
Fitch	A-	STABLE

Source: Company data

▲ Graph



Source: BiGlobal Trade (partner Saxo Bank); BiG Research

▲ Calendar

January 29th 2020: 4Q 2019 earnings

February 13th 2020: Ex-date quarterly dividend of USD 2,055

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