



The Boeing Company

Student Managed Fund 2019 Analyst Report

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The Boeing Company (NYSE: BA)

Sector: Industrials



Purchase Price	Current Price	Target Price	52 Week Range	Market Cap	P/E	Beta	Dividend Yield
\$329	\$380.07	\$416.47	\$292.47-\$446.01	\$214.54Bn	21.29x	1.33	2.16%

Figure 1: Stock Return Comparison

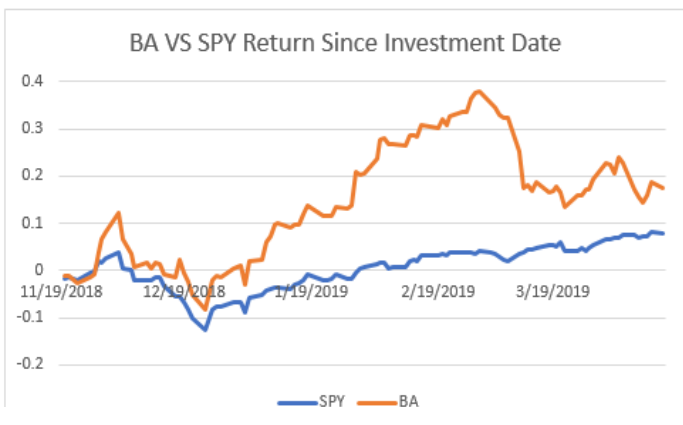


Figure 2: Current Product



KC-46A Pegasus Tanker

Maritime Surveillance Aircraft

MH-139

MQ-25



P-8



P-8 Training



Phantom Eye



QF-16

Investment Highlights

We recommend a Buy rating for Boeing Company (BA) based on a price target of \$416.47, resulting in a margin of safety of 10% given April 19, 2018's share price of \$380. In addition to some key catalysts, our recommendation is driven by three long-term factors:

- Wide economic moat protects attractive margins and market position

Boeing Company is a global market leader in the aerospace sector. The aerospace industry has a very high barrier to entry, which creates a competitive advantage for the company. Defense business is highly regulated and Boeing bolsters its economic moat via its institutionalized knowledge of contracting rules governing international and domestic defense procurement.

- Strong organic growth with great Industry Outlook
According to Boeing, the long-term outlook for the industry continues to remain positive due to the fundamental drivers of air travel growth: economic growth and the increasing propensity to travel due to increased trade, globalization, and improved airline services driven by liberalization of air traffic rights between countries. BA's 20-year forecast projects a long-term average growth rate of 4.7% per year for passenger traffic and 4.2% for cargo traffic. Based on long-term global economic growth projections of 2.8% average annual GDP growth, Boeing projects a \$6.3 trillion market for approximately 42,700 new airplanes over the next 20 years.

- Healthy Backlog order signal strong revenue growth
The total backlog rose to \$491 billion in 2018, with Commercial Airplanes accounting for \$412 billion and nearly 5,900 jetliners-worth about seven years of production. Boeing remains in a strong position to be competitive across addressable commercial airplane markets. The strong backlog provides growth opportunity for future revenue.

Business Description

Boeing Company is a global market leader in the design, development, manufacture, sale, service and support of commercial jetliners, military aircraft, satellites, missile defense, human space flight and launch systems and services. It is one of the two major manufacturers of 100+ seat airplanes for the worldwide commercial airline industry and one of the largest defense contractors in the U.S. While the company's principal operations are in the U.S. which contributes 44.2% of the total revenue, the company conduct operations in an expanding number of countries and rely on an extensive network of non-U.S. partners, key suppliers and subcontractors.

Business Strength - Porter's Five Forces

The aircraft production industry is heavily regulated. Creating an airplane is very costly and incredibly lengthy. Supplier power is low. Boeing outsources components from over 100 firms and the bargaining power is high due to large economic scale. Buyer power is low, due to strong demand for aircraft and the long-term contract for purchasing aircraft. This leads to low bargaining power and a high switching cost. Substitutes are mild, given the current advancement on bullet trains and cars, short-range air travel might be overestimated, however, the advantage for Boeing is large aircraft for longer range travel. The substitution in this arena is low. Industry Rivalry competition is high, two industry leaders (Boeing and Airbus) are highly competitive online of quality and innovation.

Business Segments

The company operates in four reportable segments: Commercial Airplanes (BCA); Defense, Space & Security (BDS); Global Services (BGS); Boeing Capital (BCC).

BCA is committed to be the leader in commercial aviation by offering airplanes and services that deliver superior design, efficiency and value to customers around the world. The revenue in the BCA segment accounts for 65% of the total revenue. BDS integrates its resources in defense, intelligence, communications, security, space and services to deliver capability-driven solutions to customers at reduced costs. The revenue in this segment accounts for 13% of total revenue. BDS strategy is to leverage core businesses to capture key next-generation programs while expanding presence in adjacent and international markets, underscored by an intense focus on growth and productivity. BGS provides support for commercial and defense through innovative, comprehensive, and cost-competitive product and service solutions. This segment contributes 21% of the total revenue. BCC facilitates, arranges, structures and provides selective financing solutions for Boeing customer and contributes to 1% of the total revenue.

Figure 3: Revenue by Segment (in 2018)

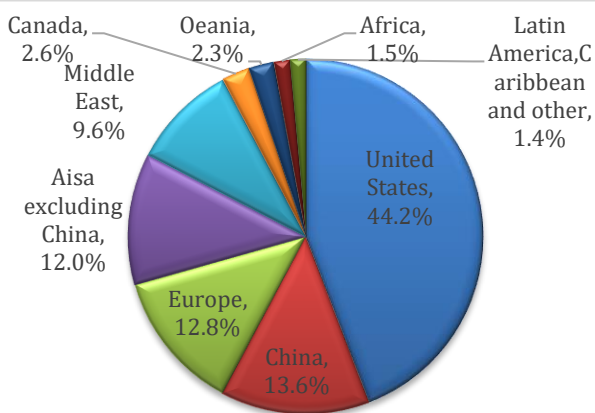
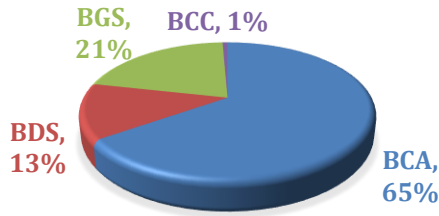


Figure 4: Revenue by Geography (in 2018)

Figure 5: Porter's Five Forces



Figure 6: Historical Revenue by Aircraft Program (Millions)

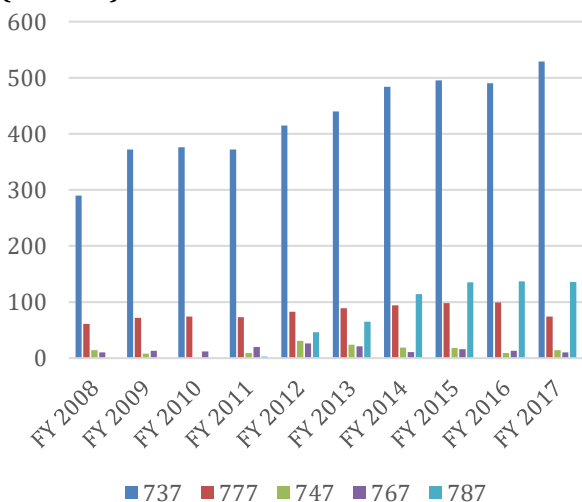


Figure 7: Historical Backlog (in Millions)

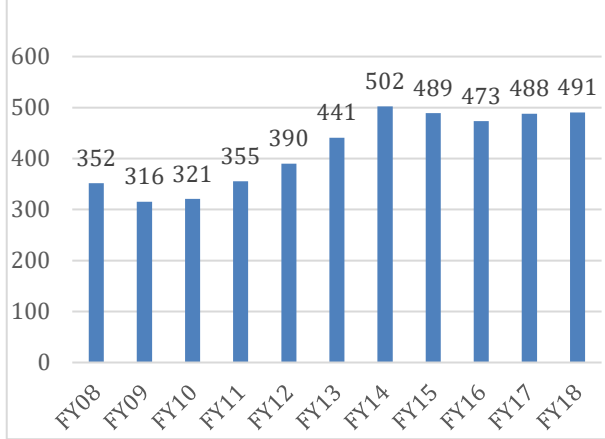


Figure 8: BCA Backlog

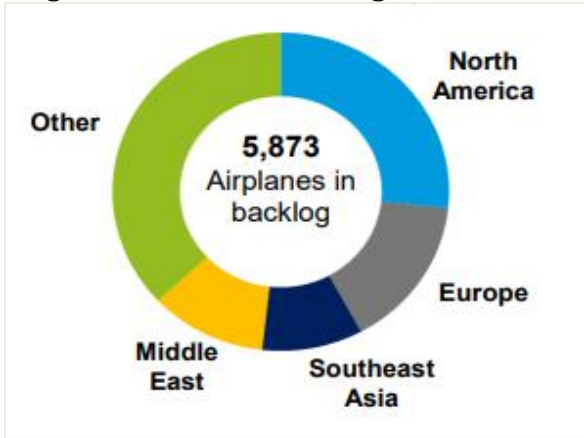
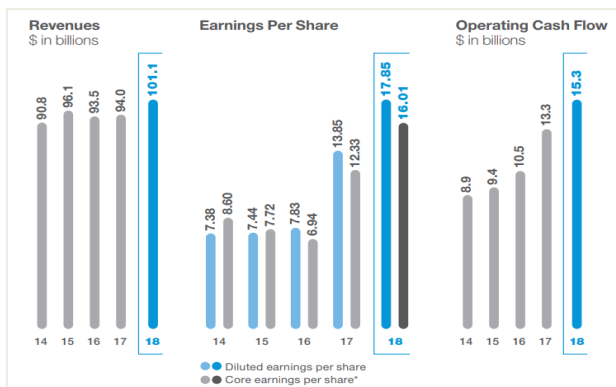


Figure 9: Propensity to Travel



Figure 10: Financial Highlights (in Millions)



Industry Outlook

We hold an overall positive outlook for the Aerospace and Defense sector. This is mostly supported by robust air travel growth and positive defense budget outlook.

Robust Commercial Aircraft Demand

Largely driven by rising in the middle class and robust demand for air travel. The average backlog orders for the single-aisle twin-engine aircraft (the most popular aircraft) was about 8-9 years production. Due to strong globalization and urbanization, air travel demand is supported both developed markets and emerging markets. In the US and other developed nations, airlines continue to replace older and less efficient aircraft with the new one (Average aircraft lifespan: 15-20 years). In under-flown markets, airlines are increasing their fleet size and aggressively gain market share. In addition, market liberalization and better regulatory environment are also a growth contributor. More route entries, lower pricing and higher service capability after a broad scale of airport infrastructure development have accelerated growth in air travel. The overall commercial aircraft market is worth about \$6.3trillion and growing at 6.5% for the last five years, which exceed its long-term average of 5%.

Stable Defense and Security Spending

As Air Force aircraft ages, the cost of operation increases. U.S. Air Force has been one of the most important segments in Defense Budget. Although It is impossible to predict the future Defense Budget trend, as current fighter jets getting older, it becomes less efficient and drives more demand for newer and technological advanced fighter jets. We believe this segment of the industry will continue to grow moderately in the next ten years. As the defense export growth number in the past 5 years suggests, this will continue to drive growth in the sector.

Investment summary

Boeing is the leader in the aircraft market and has positioned itself to be sustainable and dominant for many years to come. It is brand loyalty, product portfolio, and business model make it a sound long-term investment.

In addition to this, some catalysts will also strengthen Boeing.

Strong Backlog in track record

The total backlog rose to \$491 billion in 2018, with Commercial Airplanes accounting for nearly 5,900 jetliners-worth about seven years of production. Backlogs in each segment increased in 2018. BCA total backlog of \$412,307 million at December 31, 2018 increased from \$410,986 million at December 31, 2017. BGS total backlog of \$21,008 million at December 31, 2018

Figure 11: Initial DCF Valuation

Perpetuity Growth Method						
Current Price (USD)						369.34
Consensus Price Target						415.35
DCF Estimated Value per Share (USD)						469.28
DCF Estimated Upside						27%
Perpetuity Growth						
	2.7%	3.2%	3.7%	4.2%	4.7%	
Discount Rate (WACC)	7.5%	485.40	532.27	531.50	668.73	773.65
	8.0%	439.94	477.25	523.25	581.40	657.21
	8.5%	402.36	432.66	469.28	514.44	571.52
	9.0%	370.76	395.78	425.53	461.48	505.82
	9.5%	343.84	364.78	389.35	418.55	453.86
		2.7%	3.2%	3.7%	4.2%	4.7%
	7.5%	31%	44%	60%	81%	109%
	8.0%	19%	29%	42%	57%	78%
	8.5%	9%	17%	27%	39%	55%
	9.0%	0%	7%	15%	25%	37%
	9.5%	-7%	-1%	5%	13%	23%

increased from \$410,986 million at December 31, 2017. BGS total backlog of \$21,008 million at December 31, 2018, increased by 7% from \$19,605 million at December 31, 2017. BDS total backlog of \$57,166 million at December 31, 2018, increased by 30% from \$44,049 million at December 31, 2017. Boeing remains in a strong position to be competitive across addressable commercial airplane markets. The strong backlog provides growth opportunity for future revenue.

Won key defense franchises and solid on-going orders

The company won 893 Commercial Airplanes net orders and delivered a record 806 Commercial Airplanes in 2018, maintaining market share lead for the seventh consecutive year. Offering strong portfolio growth, Defense, Space & Security secured wins for the T-X trainer, MQ-25 and MH-139. The T-X Trainer program and MQ-25 contract are valued at \$12B. Booked \$36 billion of new Defense, Space and Security orders for a backlog of \$57 billion, 30 percent of which came from international customers.

Healthy Business and Sustainable Long-term Growth Strategy

Revenue in 2018 was a record \$101.1 billion—the first time the company has reported annual revenue of more than \$100 billion. Reflecting strong performance and solid deliveries, core earnings per share of \$16.01, core operating earnings of \$10.7 billion and operating cash flow of \$15.3 billion were all company records in 2018. Based on strong cash generation and confidence in the company’s outlook, the board of directors in December increased the quarterly dividend per share by 20 percent and replaced the existing share repurchase program with a new \$20 billion authorization. The dividend has increased more than 180 percent over the past five years; while nearly \$28 billion has been invested in key areas to support sustainable growth. The company increased operating cash flow to a record \$15.3 billion and maintained cash and marketable securities of \$8.6 billion, providing strong liquidity. The strong cash flow reflects a healthy business.

Figure 12: Initial EV/EBITDA Multiple Valuation

EBITDA Multiple Method						
Current Price (USD)						369.34
Consensus Price Target						415.35
DCF Estimated Value per Share (USD)						433.64
DCF Estimated Upside						17%
Terminal EBITDA Multiple						
	13.4x	14.9x	16.4x	17.9x	19.4x	
Discount Rate (WACC)	7.5%	387.49	413.65	451.82	483.98	516.15
	8.0%	379.75	411.18	442.61	474.04	505.46
	8.5%	372.22	402.93	433.64	464.35	495.06
	9.0%	364.89	394.90	424.91	454.92	484.94
	9.5%	357.74	387.08	416.41	445.74	475.07
		13.4x	14.9x	16.4x	17.9x	19.4x
	7.5%	5%	14%	22%	31%	40%
	8.0%	3%	11%	20%	28%	37%
	8.5%	1%	9%	17%	26%	34%
	9.0%	-1%	7%	15%	23%	31%
	9.5%	-3%	5%	13%	21%	29%

Figure 13: Changes in assumptions after Q4 2018

	2018	2019	2020	2021	2022	2023	2024
Revenue Growth Estimation							
Initial Valuation Model	6.56%	6.00%	7.13%	4.50%	4.00%	3.50%	
Revised Valuation Model	8.00%	8.00%	5.75%	4.88%	4.00%	3.75%	3.00%
Tax Rate Estimation							
Initial Valuation Model	19%	19%	19%	19%	19%	19%	
Revised Valuation Model	10%	16%	16%	16%	16%	16%	16%
WACC Estimation							
Initial Valuation Model	8.50%						
Revised Valuation Model	9.05%						

Figure 14: Changes in assumptions after 737 MAX crash

Changes in Valuation	Bearish	Base	Bull	
Reduction in Revenue contributed from 737 Crash	12%	5%	0%	*According to 2018 revenue, 737 MAX contribute to around
Compensation estimate for aircraft grounding (\$29bn per year)	29000	29000	29000	*One time loss compensation to airlines and legal
1st layer of insurance coverage for compensation to each victim (one time)	\$3m/victim + 15% deductible	\$2m/victim + 10% deductible	not liable	
	\$ 70.65	\$ 31.40	not liable	
Total One time expense	\$ 29,070.65	\$ 29,031.40		
Rise in Insurance Premium	Not available yet	Not available	Not available yet	
Weights for each scenario	50%	25%	25%	
DCF	\$ 342.06	\$ 622.31	\$ 692.99	40%
EBITDA Multiple	\$ 234.75	\$ 457.05	\$ 516.98	60%
Weighted Average Price	\$ 277.68	\$ 523.16	\$ 587.38	
New target price/share:	\$416.47			

Valuation

Boeing was purchased at \$329 for 67 shares which are 5% of our portfolio on Nov 19, 2018. We sold 34 shares which are half of the position on Mar 13, 2019 to reduce the investment risk related to the 737 MAX crash. Our valuation model was updated twice to reflect the Q4 2018 earning call and the 737 MAX crash and are described below.

Initial Valuation Model (Figure 11,12)

We made Bull, Base and Bear case assumptions. Then we took 25%, 50%, 25% probability respectively to get these assumptions: Revenue growth for 2018 is 7%, 6% in 2019, 7% in 2020, 4% in 2021-2022, 3% in 2023%. The tax rate is assumed to be 19%. CAPEX is 2% in 2018 and 2023. WACC is 8.5% and Exit EBITDA multiple is 16.4. Terminal growth is 3.7%. Based on these assumptions, we arrived at the target price of \$469.28 and \$433.64 using the perpetuity growth method and the terminal EBITDA method respectively. With 10% weight to DCF and 90% weight to EBITDA method, this is because we believe the high volatility in FCF leads to less credibility in the DCF method. In the end, we arrived at the target price of \$437.2 with 18% Margin of safety.

Valuation Update after Q4 2018 earning call (Figure 13)

After the Q4 2018 earnings call, we made changes in our valuation model which is consistent with the management team's outlook. For revenue growth rate, the initial model has an estimation at 6.5% for 2018, 6% for 2019. Our revised model has increased the estimation for 2019 at 8.5%. According to the Q4 result, revenue had 8% growth in 2018 and the guidance for 2019 revenue growth is 8.28% to 10.26%. For the tax rate, our initial model has an estimation at 19%. Our Revised model has an estimation of 16%. For WACC, our initial model is 8.5%. Our revised model is 9%, which is changed according to the lower tax rate. Our new target price after the earnings call is \$453.31.

Valuation Update after the 737 MAX crash (Figure 14)

After the 737- Max crash, we sold half of the Boeing position to reduce our risk exposure to the stock. And with more information coming out, we changed our valuation again. The new valuation model takes the crash related cost which includes revenue reduction, compensation cost and software fix cost into consideration. Our new target price is \$416.47 with a 10% margin of safety (compared with the price on April 19, 2019)

Figure 15: Relative Valuation

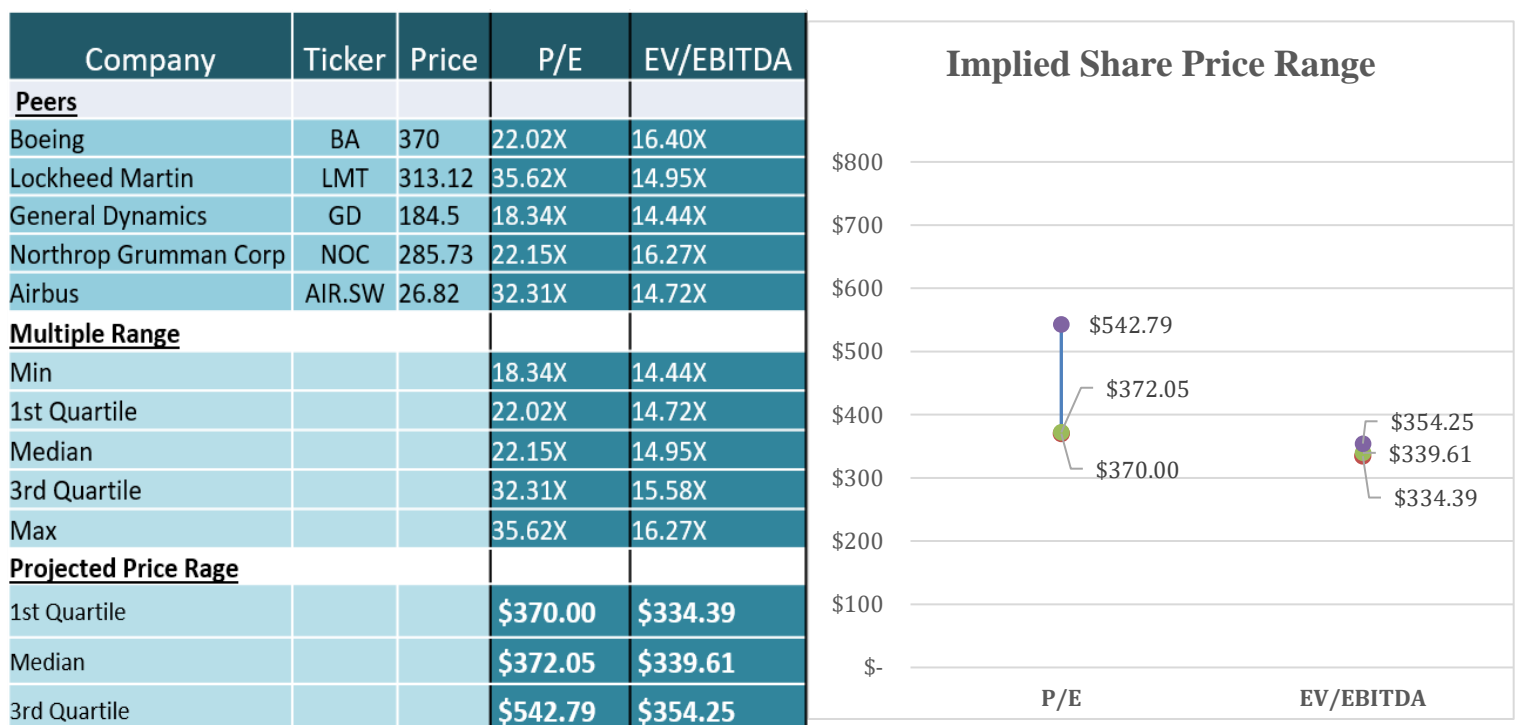
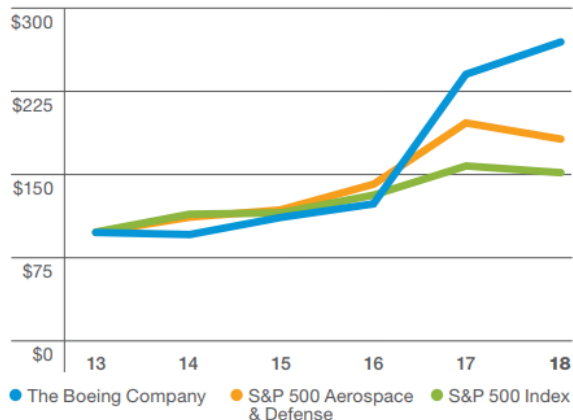


Figure 16: Comparison of cumulative 5-year Total Shareholders return

Company/Index	Base Period 2013	Years Ending December				
		2014	2015	2016	2017	2018
Boeing	100	97.47	111.17	123.75	241.03	268.82
S&P 500 Aerospace & Defense	100	111.43	117.49	139.70	197.50	181.56
S&P 500 Index	100	113.69	115.26	129.05	157.22	150.33

*Cumulative return assumes \$100 invested; includes reinvestment of dividends.



Financial Highlights

Over the last five years, Boeing has repurchased more than 205 million shares and increased the dividend by more than 180%. At the same time, the company has invested nearly \$35 billion in key strategic areas of the business to support long-term growth sustainability, for its customers and shareholders. The company remains committed to execute on balanced cash deployment strategy going forward.

In Figure 15, we calculate the cumulative 5-year total shareholders return for Boeing, S&P 500 Aerospace & Defense sector and S&P 500 index assuming \$100 invested in 2013. The shareholders return from Boeing is much larger than the returns from the S&P 500 Aerospace & Defense sector and S&P 500 index in recent years. The dividend per share has a very sustainable growth rate in the past five years.

All of these are consistent with the company's long term growth strategy.

Investment Risks

Execution Risk and Aircraft Risk

Just like any innovative companies, as BA develop new flight technology and newer aircraft models, it requires a rigorous certification process. Failure to pass or unsuccessful design could lead to a significant loss in operating income and branding quality. As an example, two most recent crashes are all related to an anti-stall mechanism (MCAS) which was triggered by an erroneous sensor reading (Angle of Attack). This caused two catastrophic air crashes in Indonesia and Ethiopia. These series of the event are both related to Boeing's new designed model 737-Max. Despite the effort, the company is trying to update the software and restore a "safe" branding. The plane was grounded internationally and remained unclear when the updated plane will be safely back to service. This cause the stock price felled 18% and the management halted their 2019 guidance. This is just an example of the underlying risk involved in BA. We believe it is extremely important to continue to analyze their track of record and closer analyze their safety culture.

Trade disputes

The recent trade disputes led by current U.S. officials have threatened most of U.S. net exporting companies. Notwithstanding, BA is a net exporter for aircraft. As of April 25th, the retaliating countries to U.S. tariff threat has not included commercial aircraft in the list. But any escalation could threat BA's financial performance.

Figure 17: Dividend per Share Growth Rate

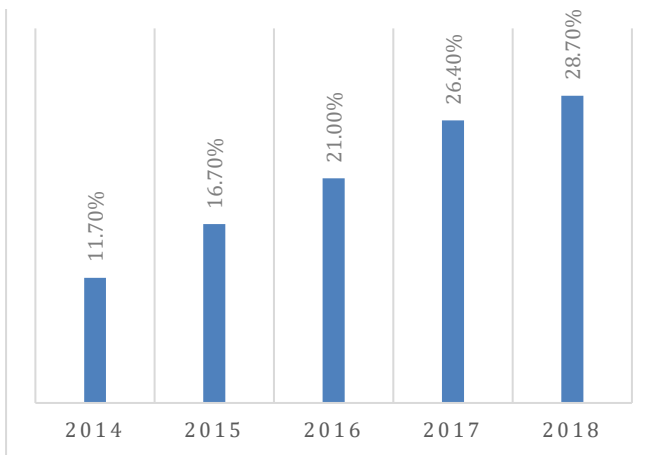


Figure 18: Impact on Q1 Earning Result

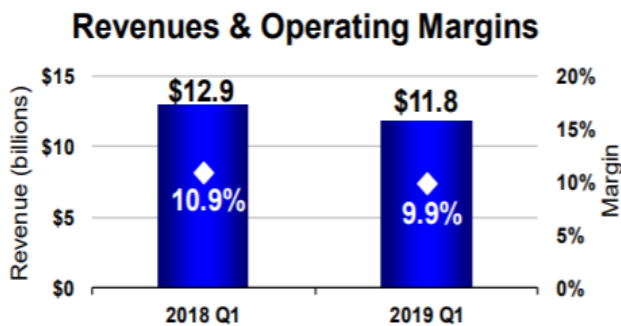
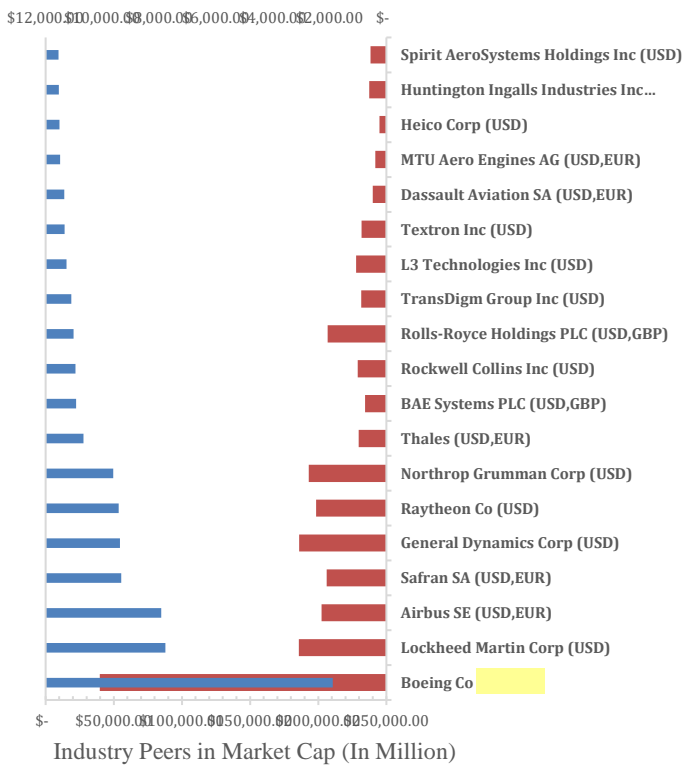


Figure 19: Industry Peers in Net Income (In Million)



Conclusion

In summary, both from a qualitative and quantitative perspective, the Boeing Company is a great business and currently trading below their intrinsic value. We believe this investment is consistent with our investment philosophy and we are confident that adding this investment in our portfolio will help us to achieve our objective of outperforming the S&P500 benchmark over a 10-year investment horizon. We think the growth in this company is supported by a positive industry outlook, the financial performance in the past years shows strength to overcome this difficult time. We are not changing our initial conclusion back in November 2018. Despite the looming threat of continuing grounding of 737-Max, we think the current market valuation make this an even more attractive investment and BA is able to overcome through this disaster even safer and resilient to future challenges. Given the tight backlog orders among aircraft manufacturers, and contractual obligations airlines carriers have on in their pre-orders. We think the short-term disruptions in their deliver rate will fade away very quickly as the updated jets are approved to be safe to fly.

Appendix

Management Team

Boeing's management team is composed of individuals with a wide range of experience in the industrials sector. The team recognize that the long-term interests of the company are advanced when they are responsive to the concerns of communities, customers, employees, public officials, shareholders and suppliers.



Dennis A. Muilenburg

Chairman, President and CEO
Joined in 1985



Kevin McAllister

Executive Vice President
President, CEO of BCA



Leanne Caret

Executive Vice President
President, CEO of BDS
Joined in 1988



Timothy Myers

President of BCC
Joined in 2005



Stanley A. Deal

Executive Vice
President
CEO of BGS
Joined in 1986

Environment & Society & Governance

Strategy for Environmental Leadership

Strong Performance Encourages Bold, New 2025 Reduction Targets



Boeing's environment strategy is guided by a comprehensive review and assessment of the most significant environmental challenges, including climate change risks and opportunities.

Total Giving = \$284.3 Million

\$243.7M + **\$37.6M** + **\$3.0M**
Charitable and Business Contributions Employee Giving Charitable Trust

In 2018, Boeing and its employees and retirees invested a record \$284 million—more than \$100 million than the year before—plus thousands of employee volunteer hours to improve lives and communities where we live and work globally.

Valuation from a derivation of LBO Model

EBITDA CAGR: 7.42% from 2013 to 2023 (projected after 2018)

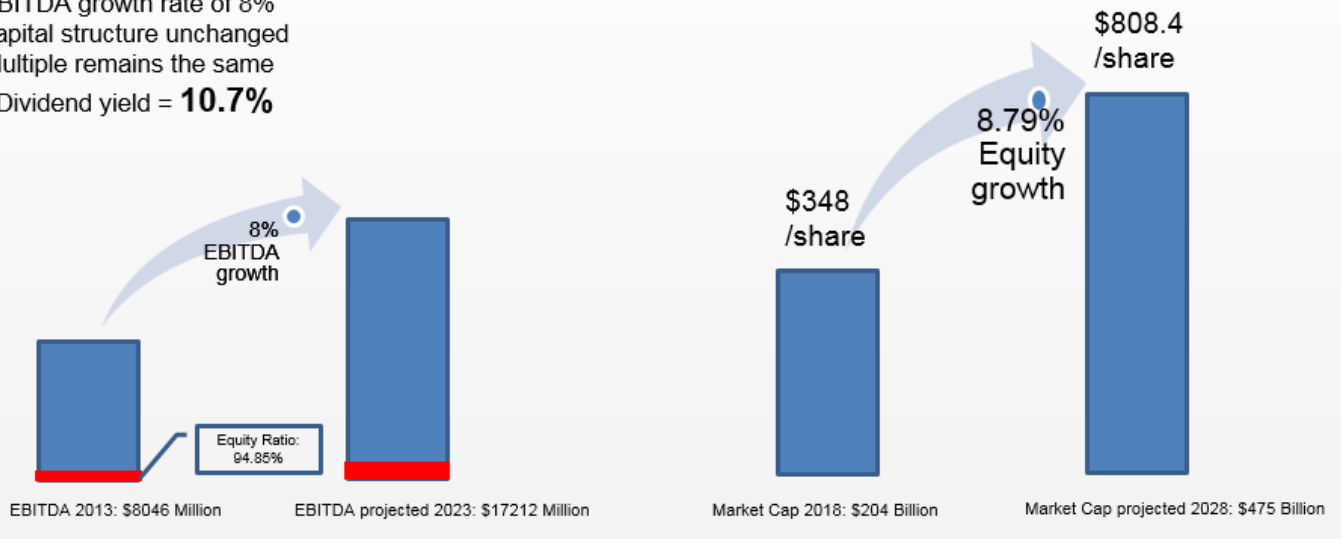
EBITDA simple average growth rate: 9%

Assume: EBITDA growth rate of 8%

capital structure unchanged

Multiple remains the same

Plus 1.9% Dividend yield = **10.7%**



Comparable Company Model

Name	P/E LF	EV / EBITDA Adj LF	ROIC Avg (5Yr)	ROE Avg (5Yr)	OPM:Q	Rev Gr Adj 5Y CAGR LF	Debt/EBIT DA LF	Dvd Yld	EBITDA Growth 5 Year CAGR LF	Market Cap LF	Beta:M-6	S&P LT LC
Average	18.92	12.58	17	29.9	9.43	2.54	2.26	2.5	4.34	1.0012E+11	1.02	
BOEING CO/THE	24.1608	16.481	36.5818	319.2172	8.8563	2.5882	0.9167	1.9497	3.9936	\$ 211,610,746,880	1.1714	A
CATERPILLAR INC	13.8761	8.1167	4.8275	21.7388	15.8031	0.1293	3.453	3.124	5.38	\$ 89,985,376,256	1.4529	A
CSX CORP	22.3483	12.6053	9.5838	16.6291	41.3231	0.9467	2.2711	1.1844	7.8119	\$ 62,529,327,104	1.0653	BBB+
FEDEX CORP	15.1189	8.9481	10.7032	19.7238	6.2808	9.1157	2.1244	1.1249	5.5542	\$ 64,284,692,480	1.1509	BBB
GENERAL DYNAMICS CORP	18.8895	14.6364	19.9569	24.0208	12.4808	3.2902	2.6577	1.983	4.4097	\$ 60,627,779,584	1.0261	A+
GENERAL ELECTRIC CO	13.5378	12.9773	1.908	9.5697	-77.5749	-3.4767		5.985		\$ 98,201,714,688	0.6279	BBB+
HONEYWELL INTERNATIONAL INC	18.3616	13.0399	11.9582	28.8431	15.6291	2.2116	2.2686	2.0061	2.8744	\$ 124,289,155,072	0.9281	A
LOCKHEED MARTIN CORP	19.2573	12.838	41.8762	116.9713	13.71	4.7612	1.7296	2.6557	8.6894	\$ 98,598,600,704	0.8927	BBB+
RAYTHEON COMPANY	23.3796	13.1172	19.013	20.6417	17.3817	3.1018	1.0616	1.8673	8.8441	\$ 58,898,100,224	0.9204	A+
UNION PACIFIC CORP	21.9813	13.3751	12.5159	21.754	38.276	1.2427	2.0894	1.9317	3.1714	\$ 120,090,075,136	0.9976	A-
UNITED PARCEL SERVICE-CL B	16.7407	11.9614	23.8467	301.0163	9.9003	5.2271	2.6569	4.0603	-0.1151	\$ 100,288,249,856	1.0127	A+
UNITED TECHNOLOGIES CORP	19.3827	12.8335	10.9912	18.7391	11.1326	1.3203	3.6585	2.1786	-2.9113	\$ 111,985,598,464	1.0379	A-

Discounted Cash Flow Valuation-Base Case

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Revenue (Estimat	86,623	96,620	102,417	99,344	100,338	108,365	111,182	117,853	123,156	128,083	133,206	137,202	
% YoY Growth(assun		11.54%	6.00%	-3.00%	1.00%	8.00%	8.00%	6.00%	4.50%	4.00%	4.00%	3.00%	
Actual Growth (after crash)							2.60%	6.00%	4.50%	4.00%	4.00%	3.00%	
(-) Cost of Revenue	71,897	80,194	82,958	82,456	81,274	87,775	92,281	96,640	100,988	103,747	107,897	111,134	
% of Revenue	83.00%	83.00%	81.00%	83.00%	81.00%	81.00%	83.00%	82.00%	82.00%	81.00%	81.00%	81.00%	
(=) Gross Profit	14,726	16,425	19,459	16,889	19,064	20,589	18,901	21,214	22,168	24,336	25,309	26,068	
% Margin	17.00%	17.00%	19.00%	17.00%	19.00%	19.00%	17.00%	18.00%	18.00%	19.00%	19.00%	19.00%	
(-) Operating Expense	6,930	6,763	7,169	7,948	7,024	8,669	8,895	8,250	9,853	8,966	9,324	9,604	
% of Revenue	8.00%	7.00%	7.00%	8.00%	7.00%	8.00%	8.00%	7.00%	8.00%	7.00%	7.00%	7.00%	
(=) Operating Incc	7,796	9,662	12,290	8,941	12,041	11,920	(4,525)	12,964	12,316	15,370	15,985	16,464	
% Margin	9%	10%	12%	9%	12%	11%	-4%	11%	10%	12%	12%	12%	
(-) Tax on Operating Ir	2,027	2,319	3,441	1,162	1,926	1,192	-	2,074	1,971	2,613	2,717	2,799	
% Tax Rate	26%	24%	28%	13%	16%	10%	16%	16%	16%	17%	17%	17%	
(=) NOPAT	5,769	7,343	8,849	7,779	10,114	10,728	(4,525)	10,890	10,345	12,757	13,267	13,665	
% Margin	7%	8%	9%	8%	10%	10%	-4%	9%	8%	10%	10%	10%	
(+) Depreciation & Arr	1,732	1,932	2,048	1,987	2,007	2,167	3,335	4,125	4,310	4,483	3,996	4,116	
% of Revenue	2%	2%	2%	2%	2%	2%	3%	4%	4%	4%	3%	3%	
(-) Capital Expenditure	1,732	1,932	3,073	2,980	2,007	2,167	2,224	2,357	2,463	2,562	2,664	1,372	
% of Revenue	2%	2%	3%	3%	2%	2%	2%	2%	2%	2%	2%	1%	
(-) Changes in Net 'w/c	2,599	6,763	(1,024)	(2,980)	11,037	(2,167)	(1,112)	(1,179)	1,232	1,281	1,332	1,372	
% of Revenue	3%	7%	-1%	-3%	11%	-2%	-1%	-1%	1%	1%	1%	1%	
(+) Changes in Net Lo	(205)	4,831	256	(993)	1,003	488	1,112	177	123	128	107	1,372	
% of Revenue	-0.24%	5.00%	0.25%	-1.00%	1.00%	0.45%	1.00%	0.15%	0.10%	0.10%	0.08%	1.00%	
(=) Free Cash Flo	2,966	5,411	9,105	8,772	80	13,383	(1,190)	14,013	11,084	13,526	13,374	16,409	15,702
% Margin	3.42%	5.60%	8.89%	8.83%	0.08%	12.35%	-1.07%	11.89%	9.00%	10.56%	10.04%	11.96%	
% of the Free Cash Flow to be discounted							23%	100%	100%	100%	100%	77%	
Period for Discount Factor (Mid-Year Convention)							0.12	0.73	1.73	2.73	3.73	4.62	
Discount Factor @9.05%WACC							0.99	0.94	0.86	0.79	0.72	0.67	
Present Value of Free Cash Flow (5 Years)							(274)	13,151	9,539	10,674	9,678	8,438	
EBITDA	9,529	11,594	14,338	10,928	14,047	14,087	(1,190)	17,089	16,626	19,853	19,981	20,580	20,441
% Margin	11.00%	12.00%	14.00%	11.00%	14.00%	13.00%	-1.07%	14.50%	13.50%	15.50%	15.00%	15.00%	

Key Financials

Financial Ratios	Dec-31-2014	Dec-31-2015	Dec-31-2016	Dec-31-2017	Dec-31-2018
Profitability					
Return on Assets %	4.8%	4.8%	4.7%	6.2%	6.4%
Return on Capital %	21.2%	26.2%	32.1%	53.4%	54.7%
Return on Equity %	45.8%	68.2%	138.4%	653.1%	985.4%
Margin Analysis					
Gross Margin %	15.4%	14.6%	15.5%	18.5%	19.4%
SG&A Margin %	4.2%	3.7%	4.4%	4.4%	4.5%
EBITDA Margin %	10.0%	9.4%	9.5%	12.9%	13.8%
EBITA Margin %	7.9%	7.5%	7.5%	11.0%	12.0%
EBIT Margin %	7.9%	7.5%	7.5%	10.8%	11.7%
Asset Turnover					
Total Asset Turnover	1.0x	1.0x	1.0x	0.9x	0.9x
Fixed Asset Turnover	8.5x	8.3x	7.5x	7.4x	8.0x
Accounts Receivable Turnover	13.3x	12.1x	11.2x	9.7x	8.1x
Short Term Liquidity					
Current Ratio	1.4x	1.4x	1.2x	1.1x	1.1x
Long Term Solvency					
Total Debt/Equity	103.2%	155.8%	1,134.8%	649.0%	3,377.3%
Total Debt/Capital	50.8%	60.9%	91.9%	86.6%	97.1%
Total Liabilities/Total Assets	90.5%	93.2%	99.0%	98.5%	99.7%

Key Ratios	Dec-31-2014	Dec-31-2015	Dec-31-2016	Dec-31-2017	Dec-31-2018
Total Revenue	90,762.0	96,114.0	93,496.0	94,005.0	101,127.0
<i>Growth Over Prior Year</i>	4.8%	5.9%	(2.7%)	0.5%	7.6%
Gross Profit	14,010.0	14,026.0	14,470.0	17,393.0	19,637.0
<i>Margin %</i>	15.4%	14.6%	15.5%	18.5%	19.4%
EBITDA	9,102.0	9,003.0	8,877.0	12,160.0	13,957.0
<i>Margin %</i>	10.0%	9.4%	9.5%	12.9%	13.8%
EBIT	7,196.0	7,170.0	6,988.0	10,113.0	11,843.0
<i>Margin %</i>	7.9%	7.5%	7.5%	10.8%	11.7%
Earnings from Cont. Ops.	5,446.0	5,176.0	5,034.0	8,458.0	10,460.0
<i>Margin %</i>	6.0%	5.4%	5.4%	9.0%	10.3%
Net Income	5,446.0	5,176.0	5,034.0	8,458.0	10,460.0
<i>Margin %</i>	6.0%	5.4%	5.4%	9.0%	10.3%
Diluted EPS Excl. Extra Items³	7.38	7.44	7.83	13.85	17.85
<i>Growth Over Prior Year</i>	23.8%	0.8%	5.2%	76.9%	28.9%

References

Boeing 10K 2018

Boeing Q1 2019 Earning Call Presentation

Boeing 10Q

Value Line

Net Advantage

Morning Star

Bloomberg

Thomson One Banker