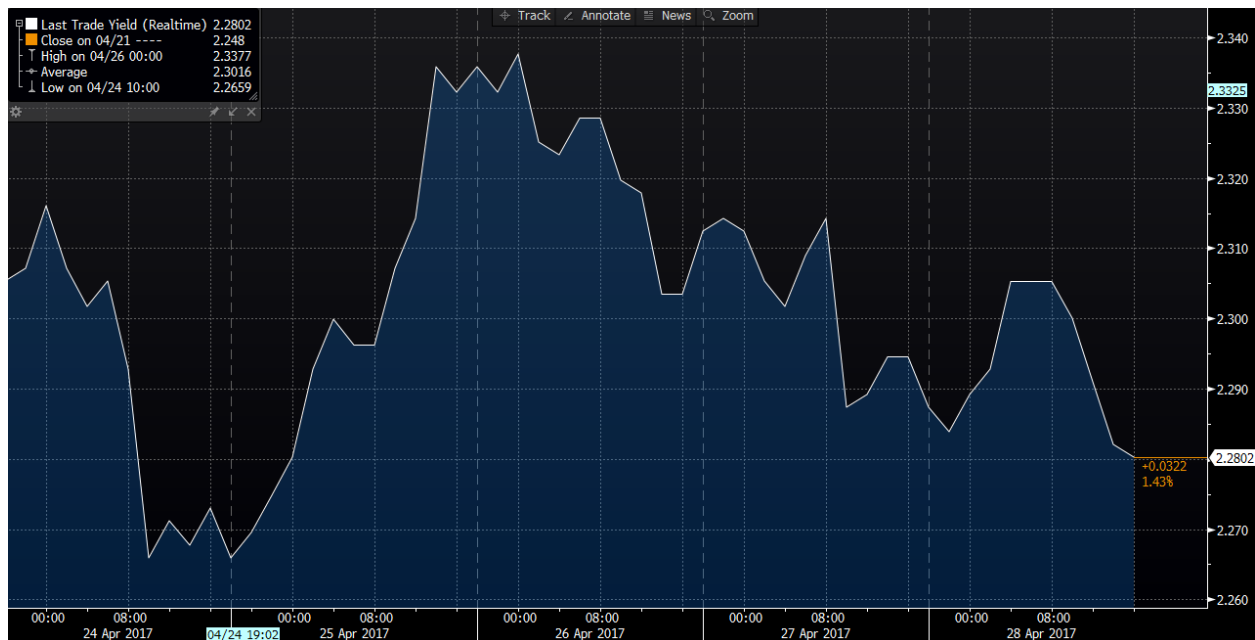
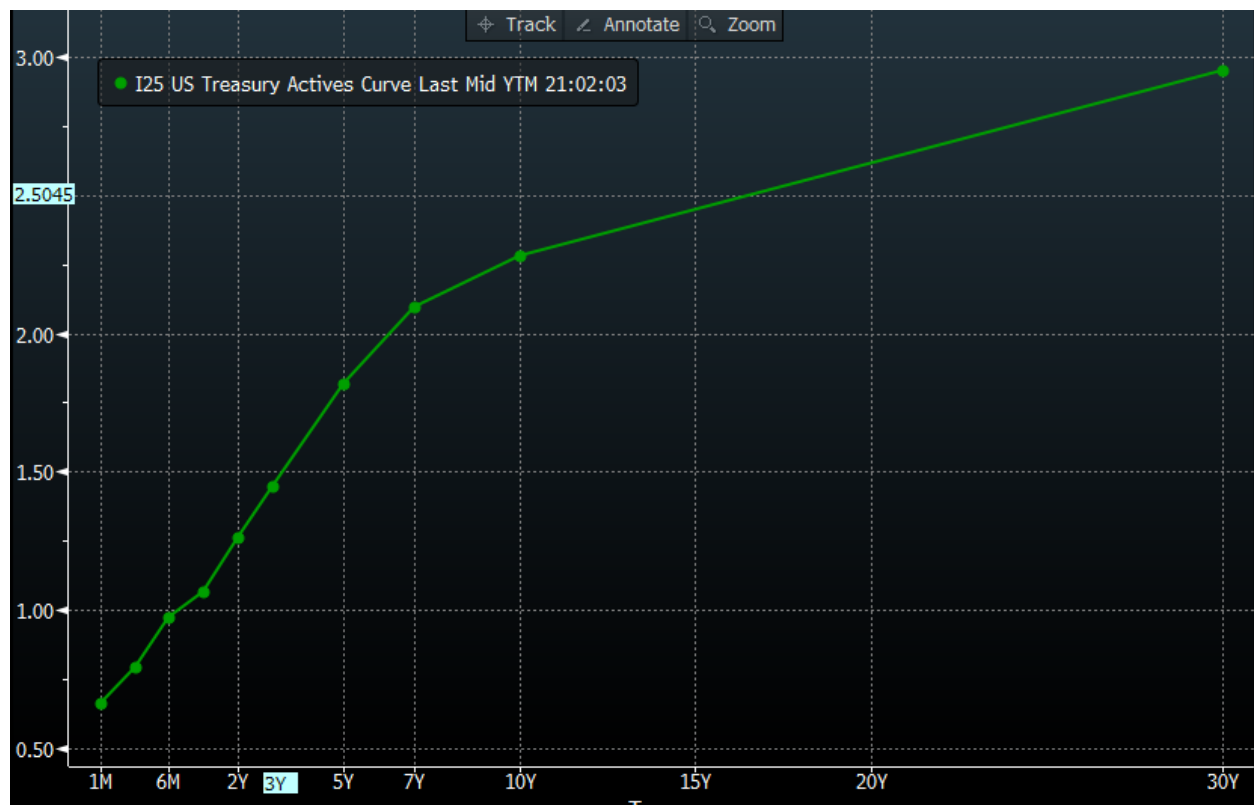


## Bond Report

Over the course of this past week, volatility was very present in the bond market from reactions to European primary news, ECB monetary policy and President Trump's tax plan being released. On Monday, yields fell with investors interest in the bond market when news of an ease of tension in the French presidential election was noticed after Sunday's primary. Tuesday, yields were driven upwards heavily as money was pulled from the bond market and put back into equities. Also, U.S. trade secretary Wilbur Ross eased investor concerns about a trade war with Canada, again driving yields up. On Wednesday, yields fell again with the release of Trump's tax plans. The tax plan can be named "aggressive" and the investor confidence in the ability of the proposed plan passing through Democrats in Congress. Therefore, we saw an increased demand in the bond market again. Thursday's trading found yields dropping off for another day in a row, based on those still reacting to the tax plan unveiling as well as ECB's decision to leave interest rates untouched. On Friday, yields rose midday from news of the PCE index beating the 2% target growth. However, they fell by the end of the day because of signs of a slowing economy through GDP tracking of the first quarter and lower consumption as represented as part of GDP. Overall, the 2-year note finished the week at 8.5 basis points up at a rate of 1.27%. The 10-year Treasury note ended the week on a 11.4 basis point decline, finishing at 2.28%. Lastly, the 30-year note finished the week at 2.952% after a decline in Fridays trading day.











## What's next and key events

The story of this fiscal year has been growth backed by volatility. We should continue to expect that this upcoming week as well. Coming off a very volatile week, we can only hope there will be a smoothing of the yield curve. Some key events to watch that will likely cause shifts in the yield include Chicago Fed National Activity index released Monday morning. Watch for any indicators of an expected growth for the GDP, which missed estimates last week. Other key events include the weekly Bloomberg Consumer comfort on Thursday, as well as the jobless claims. Thursday is also important to watch the EIA Natural Gas report for insight on the highly volatile commodity. On Friday, watch for the Corporate profits and expectations moving forward based on sentiment about tax plans. Overall, it is safe to say the volatility experienced will continue into this week and outside geopolitical tensions and spontaneous news about President Trump will continue to bring that to the bond market.

# Macroeconomic Overview

## Markets Gain on the Week but Weaker After Weak Q1 GDP

United States	Price		Day	Weekly	Monthly	Yearly
 Dow Jones	20973	▲ 34	0.16 %	2.07%	1.52%	18.00%
 S&P 500	2389	▲ 5	0.21 %	1.71%	1.17%	15.67%
 NASDAQ 100	5598	▲ 15	0.26 %	2.85%	3.08%	28.93%
 NASDAQ	6048	▼ 1	-0.02 %	2.32%	2.54%	26.64%
 Russell 2000	1400	▼ 0	0.00 %	1.49%	2.10%	23.84%
 S&P VIX	10.82	▲ 0.46	0.46%	-3.81%	-0.60%	-4.88%

The broader market gained on the week after many companies beat earnings estimates. Trump announcing his tax plan also accelerated the gains as it is not expected that we can reach new tax policy earlier than expected. We are seeing more confidence in Trump's economic policy to

boost growth as the 10-year Treasury has bounced back from lows indicating that investors believe we are going to see higher inflation. The 3 month LIBOR continues to climb steadily and in combination with the 10-year performance is an indicator of the overall performance of the banks and affects their lending revenues. GDP numbers were announced of Friday and the market reacted negatively early on but seemed to brush off the poor results later. Q1 has historically been weaker than the rest of the year so GDP, so far, is not the best gauge on economic performance.

## All Eyes on France

The French election is on everyone's watch list this week as fears that Le Pen, who is not pro EU, will gain support. It is not likely the Le Pen will beat Macron but after the results of the US election one can not be too cautious. The market should react positively to news indicating a Macron lead. The election plays into the equation of how markets react to the level of geopolitical risk which has been growing as of late. We want a Macron victory because he is less likely to disrupt the status quo in the EU and world relations.

## Earnings Season Recap and Takeaways

The major takeaway from earnings season is the fact that market valuations are not as high as investors thought and earnings can support them at this level. The banks overall have beat on earnings expectations and all have given positive guidance for the full year. Not only the banks but big tech has also beat performance expectations. Continuing into earnings season if we see more beats on expectations it will solidify the idea that equities aren't as overvalued as thought and may be undervalued.

April 28<sup>th</sup>, 2017

## Air Lease Corporation.: AL

Joseph Carey

Sector: Transportation

Industry: Transportation Services

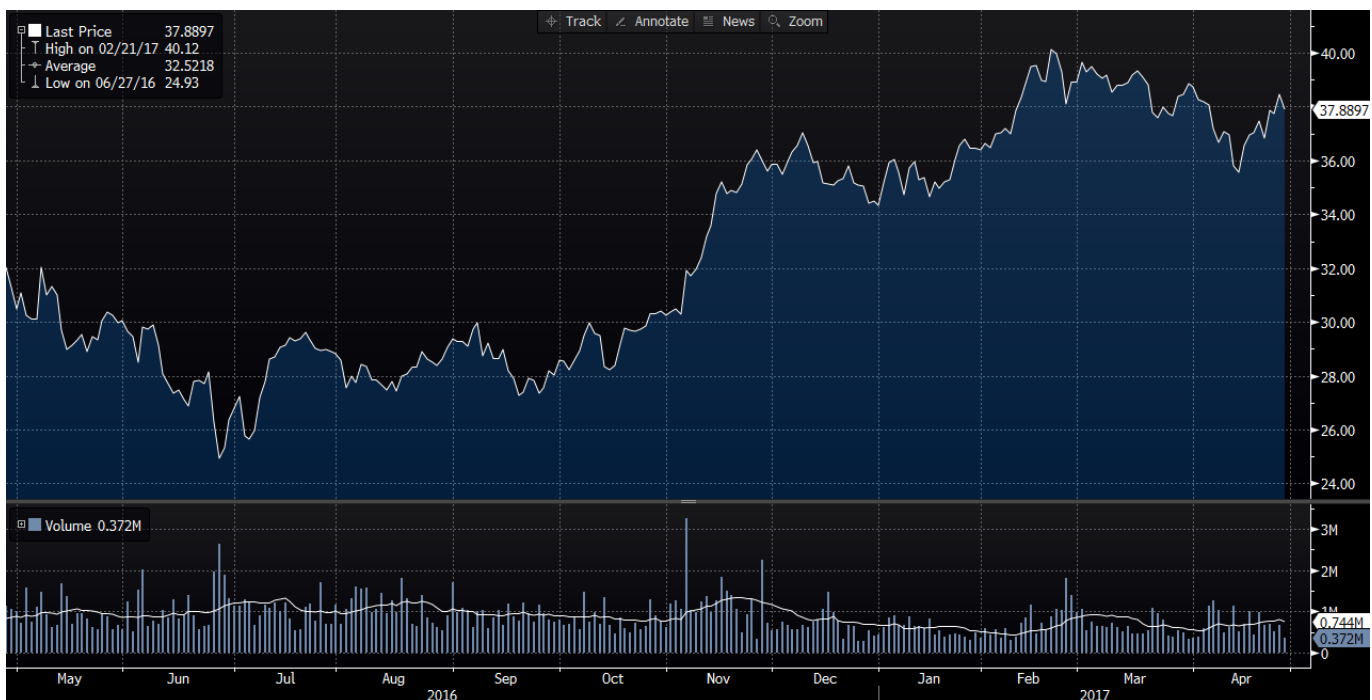
Current Price: \$ 37.78

Target Price: \$

**Company Description:** Air Lease Corporation is a leader primarily in the business of leasing their commercial aircraft to major airlines all over the world. Air Lease also is a sales provider of new and used aircraft. A small portion of their business includes fleet management for fee based revenue.

### Buy

Market Cap:	3.89B
Average Volume:	676,370
D/E Ratio:	2.58
D/IC:	
WACC:	6.71%
ROE:	11.71%
EPS:	\$3.44
EBITDA Margin:	92.59%



### Thesis:

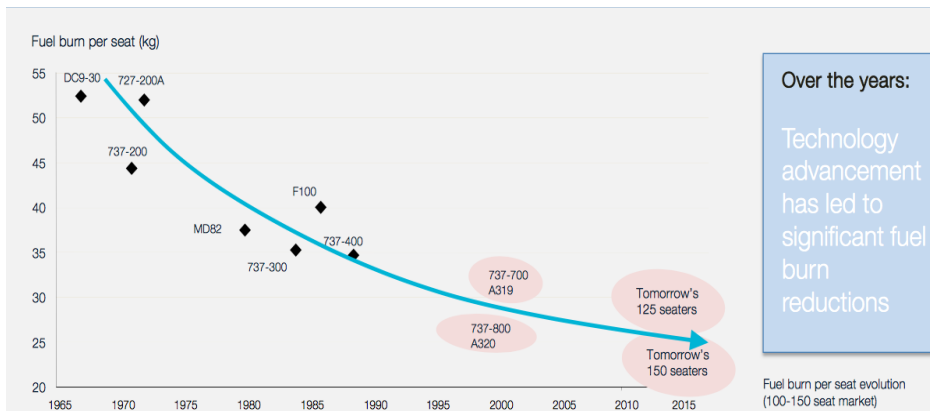
Air Lease Corporation is a leading provider of commercial aircraft all over the world. We can expect continual double digit revenue growth with consistent margins through 2020 at the very least. The value creation for this stock is based around earnings estimates being beat, as well as consistent investor sentiment in the airline production industry. To meet target goals past 2018, Air Lease needs to ensure they can supply booked out demand, which is on Airbus and Boeing.

### Catalysts:

- **Short Term (within the year):** Aircraft order deliveries into mid 2018
- **Mid Term (1-2 years):** Ability to lock in long term forwards for oil supply for fleet management fees
- **Long Term (3+):** Further Fleet delivery, matching backlog orders with aircraft

## Business Description:

Air Lease owns and manages a fleet of currently 237 commercial jet aircraft. Their primary focus of business is on commercial leases on newer aircraft, that on average have a duration of 7.3 years' lease life. All leases offered by Air Lease Corp are operating leases, for clarification. They currently are one of the largest commercial airline buyers directly from both Boeing and Airbus, with orders of 363 jets to be delivered by 2023. The lease market is highly dependent on consumer travel levels, which have been growing year over year since inception of the business. The

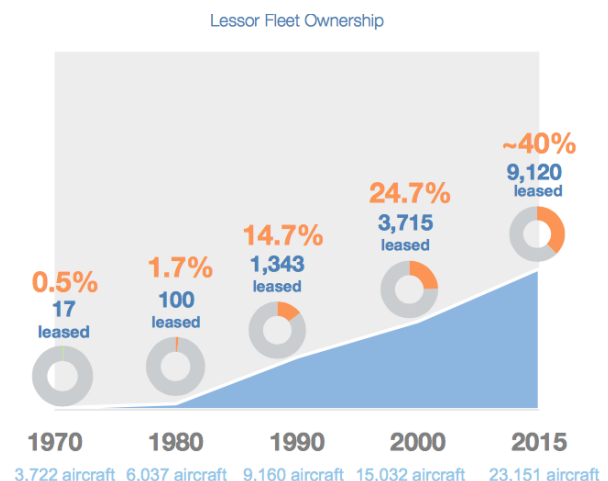


The second tier of their business includes the sale of their aircraft after 1/3 of their useful lives to maximize residual value and mitigate risk from obsolete technology. Currently, the average life of their fleet is 3.8 years, so they will be offloading a small portion of their fleet through 2019. Again, they have

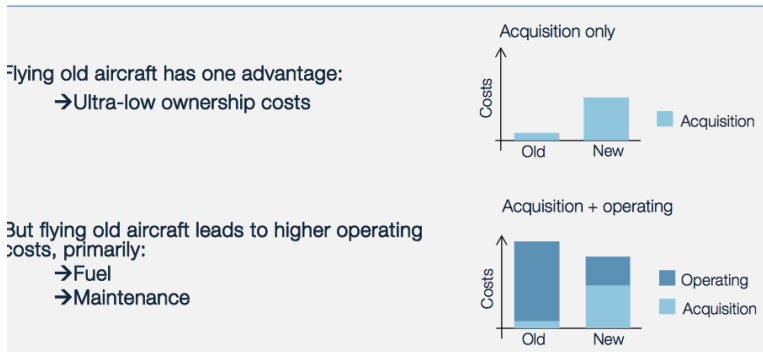
plans to replace and expand through 2023. The sale of older aircraft also boosts their lease interest, because the offload is replaced with new aircraft, which historically is becoming much more technologically advanced and fuel efficient. The fuel efficiency is the major driver of the business, because commercial airliners need improved efficiency to maintain profitability margins. On top of improved fuel consumption, added seats per aircraft is a major revenue booster, as they can charge more for leases.

## Growth Strategy:

Leasing is becoming a much more attractive option for commercial airlines to reduce costs of directly acquiring aircraft that is most fuel efficient and technologically advanced. As shown in the graph to the right, leasing has significantly grown in the past 15 years, and is expected to grow to a significantly greater percentage by 2025. To match the demand increase by airlines expected, Air Lease plans to add and replace a total of 167 aircraft by 2021, with another 196 expected from 2021 to 2023. That significant fleet expansion will cost a lot, but with sales of aging jets and their debt financing, it will create significant revenue growth for the next few years. The fleet expansion is very strategic itself, desiring only to add the most sophisticated aircraft that is in highest demand from the industry and what is wanted from customers. Air Lease directly orders with the



manufacturers, cutting out the middle man in the process and getting the jets at lowest cost. AL Corp, can also order third party parts for the final touches of the aircraft, which will be installed by the manufacturer and tailors the product for specific clients, again lowering adjustment costs. The plans to expand their fleet is the



main growth strategy in place, this is because they have very large margins that cannot be reduced any further. Therefore, the way to expand as a company is to increase fleet size and properly address consumer travel patterns to sufficiently meet that demand. Over the past 5 years, they have more than doubled their fleet size, from 102 in 2011 to 237 currently. With that significant increase in fleet came a Revenue CAGR of 38%. It shows, that the

expansion strategy in place is the only viable option, and has been historically proven to work. For safety, it is worth noting that only 10% of their leases are expiring over the next 3 years, so we can only expect expansions. Another key aspect of their growth strategy, is to mitigate risks that the industry and economy is now facing. 90% of the current active leases have floaters to protect Air Lease corp. in a rising interest rate environment. For any fixed leases that could come from the outstanding 10% left, will be significantly up-charged to account for the expectations of the interest rate rising environment.

## Profitability:

Air Lease Corp is leading the industry in terms of profitability. They have an operating margin of close to 93%, and Net Income margin of 61%. The industry median is 30% lower than that in comparison. However, Aircastle is the Air Lease's biggest threat, which poses margins very similar to Air Lease. The reason for large margins is the nature of the business model adopted by Air Lease. They own all of their fleet, and through

Name (BICS Best Fit)	Sales Growth (%)	EBITDA Growth (%)	EBITDA Margin	Operating Income Margin	Net Income Growth	Net Profit Margin	Net Profit/apex/Sales (%)	Return on Invested	Return on Assets	Return on
Median	4.30%	12.90%	62.11%	24.46%	24.98%	15.52%	54.73%	4.25%	2.16%	8.17%
100) AIR LEASE CORP	16.05%	16.91%	92.59%	60.69%	24.98%	26.18%	210.95%	4.87%	2.82%	11.61%
101) AIRCASTLE LTD	-5.65%	-6.41%	90.99%	51.50%	-7.81%	19.27%	172.20%	5.44%	2.16%	8.17%
102) GATX CORP	-4.41%	-5.92%	46.58%	24.46%	5.66%	13.12%	52.02%	4.25%	2.59%	13.65%
103) FORTRESS TRANSPORTAT...	8.90%	12.90%	39.63%	-4.52%	25.76%	-9.13%	9.20%	-1.10%	-0.85%	-1.22%
104) CIT GROUP INC	4.30%	16.54%	62.11%	22.26%	50.52%	15.52%	54.73%	2.86%	0.96%	5.86%

contracted leases that are staggered in duration they can lock in continual cash flow that doesn't vary much over the entire duration of the lease. Also, by owning the fleet and leasing through operating leases specifically, they are responsible for maintenance which are included into the costs of the lease. However, with the average life of their fleet the maintenance costs are very insignificant which provides greater margin on each specific lease. Their profitability is expected to remain the same, but grow as a total portion as the business, which will come from significant revenue growth until 2023. This is again from their fleet expansion, which is the major driver of revenue growth with Air Lease. With such large margins, having the amount of debt that they have, it easily covered as shown by the EBITDA/Interest margin at 3.273x. With current operating profit, they will have no issues in terms of liquidity.



## Industry Outlook:

The Transportation Services industry is rapidly changing because of the significant costs incurred to keep flights affordable for consumers. The rising costs of aircraft leaves commercial airline companies looking to lease rather than purchase, due to lower cost of operations. On top of that, the industry is heavily influenced by oil prices and those fluctuations. Locking in forwards on this heavily desired commodity is a must for airlines to remain profitable. If forwards cannot be locked in at favorable prices, it will result in higher ticket costs, which will in the end lead to decreased demand for travel. The underlying and most important driver of the industry is passenger traffic. It is projected that the global airline industry will maintain a 5% growth annually for the next 5 years. While the overall growth of the entire industry is more of a mature industry in nature, the projections on lease demand continues to become favorable in a rising price environment, so we can expect greater than industry growth there. This industry can become very volatile in the current economic conditions, when geopolitical tensions rise it will lead to fluctuations in oil prices if not perfectly hedged against. That increased cost will negatively hurt demand, but will also affect consumer sentiment about using commercial jet aircraft for travel purposes. Again, this can negatively affect demand and really hurt the industry in the end. With volatility, there is also a greater chance to capitalize and profit from the uncertainty. I suspect that oil is hedged enough for this industry based on consumer reports for at least 2 to 3 years. That hedging will mitigate the forward-looking risks, so a stable CAGR of 5%- 7% is still to be forecasted.

## Ownership Summary:

Air Lease is currently majority held by Investment Advisors, with a grown interest since the beginning of the 2017 calendar year. Also, there is about 10% held by Hedge Funds, which I believe is enough to signify the ideology of profiting off a growth stock and not worry about any shareholder activist strategies currently. The management of the firm has been there for a long time, and have continuously grown the company based on their fleet sales and fleet expansion strategy. There are very few stock options for Air Lease, so there should not be any justified worry of share dilution for current and future investors.

Ownership Type	01/29/17	Curr ↑	Change
11) Investment Advisor	77.77	78.94	+1.17
12) Hedge Fund Manager	9.29	9.07	-0.22
13) Individual	5.90	6.37	+0.47
14) Pension Fund	2.31	2.29	-0.02
15) Brokerage	1.06	1.01	-0.05
16) Government	0.84	0.90	+0.06
17) Bank	2.12	0.74	-1.38
18) Sovereign Wealth Fund	0.35	0.37	+0.02
19) Insurance Company	0.32	0.29	-0.03
20) Foundation	0.01	0.01	0.00
21) Other	0.01	0.00	-0.01

## Debt Obligations:

With such a highly levered company, it is very important to cover the debt used a financing tool and the perks and disadvantages of it. Air Lease currently has a Debt to Equity ratio of 2.58 with a target D/E of 2.5. In this industry, debt is the main financing for acquisition of aircraft and shown below, is the chart representing the negation for any concerns for such a highly levered company. It shows that Air Lease has one of the highest ratings held for their credit quality and have sufficient operating profit to cover interest payments.

Name (BICS Best Fit)	S&P Rating	Moody's Rating	Fitch Rating	Total Debt/ EBITDA	Total Debt/ Book Cap	EBITDA minus CAPEX/	EBITDA/ Interest
Median				6.41	71.07%	-1.48	3.42
100) AIR LEASE CORP	BBB	--	BBB	6.63	72.04%	-5.65	4.44
101) AIRCASTLE LTD	BB+	Ba1	--	6.41	71.07%	-2.55	2.74
102) GATX CORP	BBB	Baa2	WD	6.52	75.96%	-0.40	4.52
103) FORTRESS TRANSPORTAT...	B	B1	--	4.40	18.21%	2.05	3.42
104) CIT GROUP INC	BB+	Ba2	BB+	5.43	59.89%	--	2.84

Now that it's clear that this leverage is an industry norm, we must discuss Air Lease specific financing. They typically intend to borrow using unsecured debt, with the soonest maturing debt at 2.875%, coming due in between 2020 and 2023. This debt will need to be replaced, but since their latest round of financing, they have had their credit rating improved by both S&P and Fitch. Last year their net debt cost to the firm was 3.42%, which is very low and manageable for their future based on the firms CFFO. There is also very few covenant restrictions on their debt, only restricting leverage up to a certain degree and approval for certain liquidation of aircraft. In the event of liquidation, Investors may have a hard time receiving any residual value. This is not a concern in the growing industry and growing firm in the upcoming years.

## Conclusion:

Air Lease is great addition to our stock portfolio, with revenue expected to double in the next 6 years. While most profit is eaten at with debt, they use bonds and rotational lease programs to align maturing debt with significant cash flows from sales of aircraft. This strategy will keep margins the same and create significant stock appreciation through consistent met earnings. I believe that the market is mispricing the stock from belief of inability of Boeing and Airbus to meet production orders from Air Lease. This would put Air Lease in a bad spot as they are booked out \$22B in Revenue until 2019 with leases, but there is no reason to believe the orders can't be met. Therefore, we can capitalize on this mispricing



# Air Lease Corporation (al)

## CENTER FOR GLOBAL FINANCIAL STUDIES

NEUTRAL

Analysis by Joseph Carey  
4/28/2017

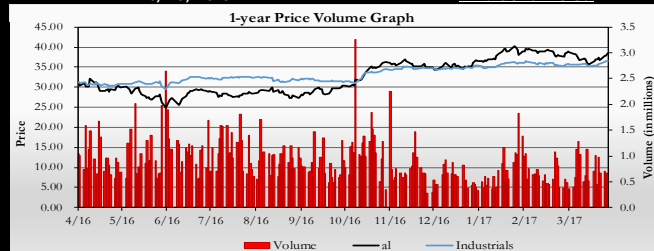
Current Price:  
Divident Yield:

\$38.14  
0.5%

Intrinsic Value  
Target Price:

\$41.74  
\$44.05

Target 1 year Return: 15.96%  
Probability of Price Increase: 64.4%

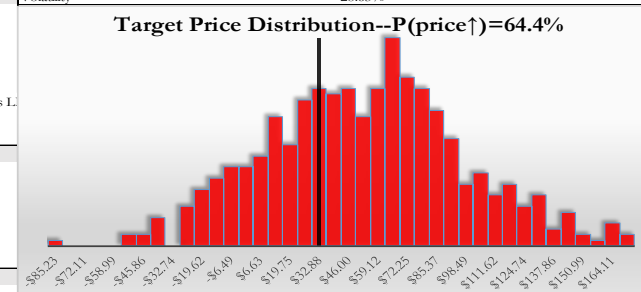


Description	
Air Lease Corporation, an aircraft leasing company, engages in the purchase and leasing of commercial jet transport aircraft to airlines in Asia, the Pacific Rim, Latin America, the Middle East, Europe, Africa, and North America.	
General Information	
Sector	Industrials
Industry	Trading Companies and Distributors
Last Guidance	November 3, 2015
Next earnings date	May 3, 2017
Estimated Country Risk Premium	4.25%
Effective Tax rate	27%
Effective Operating Tax rate	4%

Market Data	
Market Capitalization	\$3,928.52
Daily volume (mil)	0.67
Shares outstanding (mil)	103.00
Diluted shares outstanding (mil)	110.80
% shares held by institutions	94%
% shares held by investments Managers	80%
% shares held by hedge funds	7%
% shares held by insiders	6.91%
Short interest	6.45%
Days to cover short interest	9.52
52 week high	\$40.24
52-week low	\$24.49
Levered Beta	0.00
Volatility	28.63%

Past Earning Surprises	
Quarter ending	Revenue
12/31/2015	-3.59%
3/31/2016	0.24%
6/30/2016	-3.60%
9/30/2016	-2.63%
12/31/2016	-4.09%
Mean	-2.73%
Standard error	0.8%

Peers	
Aircastle Limited	
AerCap Holdings N.V.	
FLY Leasing Limited	
Willis Lease Finance Corporation	
AeroCentury Corp.	
Fortress Transportation and Infrastructure Investors L	



Management	
Udvar-Hazy, Steven	Founder and Executive Chairm
Plugger, John	Chief Executive Officer, Pre
Willis, Gregory	Chief Financial Officer and
Levy, Grant	Executive Vice President of
Baer, Marc	Executive Vice President of
Chen, Jie	Executive Vice President and

Total compensations growth	
-25.74% per annum over 6y	N/M
-17.22% per annum over 6y	N/M
27.25% per annum over 4y	10.76% per annum over 4y
-7.67% per annum over 6y	N/M
N/M	N/M
-4.79% per annum over 6y	N/M

Profitability	
at (LTM)	
ROIC	9.3%
NOPAT Margin	74%
Revenue/Invested Capital	0.13
ROE	23.3%
Adjusted net margin	60%
Revenue/Adjusted Book Value	0.39

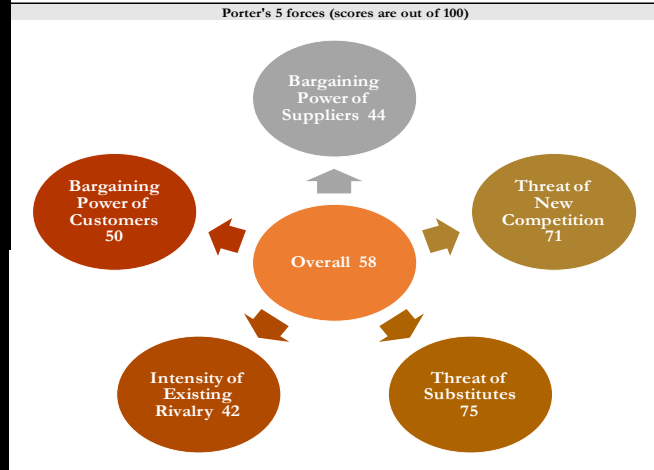
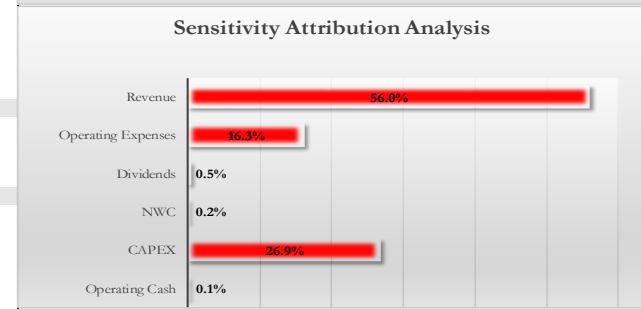
Industry (LTM)	
19.26%	
14.8%	
1.31	
64.73%	
13.0%	
4.99	

Invested Funds	
at (LTM)	
Total Cash/Total Capital	2.1%
Estimated Operating Cash/Total Capital	1.9%
Non-cash working Capital/Total Capital	-1.9%
Invested Capital/Total Capital	99.5%

Industry (LTM)	
5%	
N/A	
32%	
95%	

Capital Structure	
at (LTM)	
Total Debt/Common Equity (LTM)	2.47
Cost of Existing Debt	4.25%
Estimated Cost of new Borrowing	2.85%
CGFS Risk Rating	A
Unlevered Beta (LTM)	0.00
WACC	4.75%

Industry (LTM)	
2.75	
3.74%	
3.74%	
C	
1.04	
8.00%	



Porter's 5 forces (scores are out of 100)	
Period	Revenue growth
Base Year	16.0%
12/31/2017	4.1%
12/31/2018	13.0%
12/31/2019	8.5%
12/31/2020	7.9%
12/31/2021	7.4%
12/31/2022	6.8%
12/31/2023	6.2%
12/31/2024	5.7%
12/31/2025	5.1%
12/31/2026	4.6%
Continuing Period	4.0%
Period	Invested Capital
Base Year	\$4,575.74
12/31/2017	\$6,673.66
12/31/2018	\$8,430.91
12/31/2019	\$9,713.72
12/31/2020	\$11,335.03
12/31/2021	\$12,876.99
12/31/2022	\$14,018.66
12/31/2023	\$15,860.60
12/31/2024	\$17,233.01
12/31/2025	\$18,627.92
12/31/2026	\$20,032.42
Continuing Period	

Valuation	
NOPAT margin	ROIC/WACC
74.4%	1.96
53.9%	1.47
56.6%	1.59
61.3%	1.64
58.9%	1.56
56.5%	1.48
54.0%	1.39
51.4%	1.31
48.8%	1.23
46.2%	1.15
43.5%	1.07
40.8%	0.99
Net Claims	Price per share
\$8,668.65	\$43.35
\$9,168.30	\$47.08
\$10,228.81	\$51.10
\$10,662.31	\$55.66
\$11,083.77	\$60.57
\$11,487.58	\$65.83
\$11,867.00	\$71.46
\$12,214.85	\$77.49
\$12,523.65	\$83.94
\$12,785.74	\$90.82
\$12,993.40	\$98.15

April, 28<sup>th</sup>, 2017

## Cirrus Logic Inc: CRUS

Alexandre, THIAM

Sector: Technology

Industry: Semiconductor

Current Price: \$64.08

Target Price: \$75.89

Cirrus Logic is an American based semiconductor supplier that focuses on micro integrated circuits. The company was founded by Dr Suhas Patil in Austin, Texas 33 year ago. Cirrus Logic is a mid-size company that possesses more than a 1,000 patents and offers roughly 600 different services. The flagship product of the company is an audio processor featured in various devices such as, smartphones, tablets, and laptops.

### BUY

Current Price: \$64.11

Target Price: \$75.89

Market Cap: \$4.12B

Beta: 0.26



**Thesis:** .Cirrus Logic is a company with a history of performance. The company is posting good margins and operating performance as compared to most of its competitors. The company also has a lower P/E ratio than its peers which may indicate that the company is currently unfairly priced. In addition, I believe that the business model as well as the strategy pursued by the management of the firm will yield in the future.

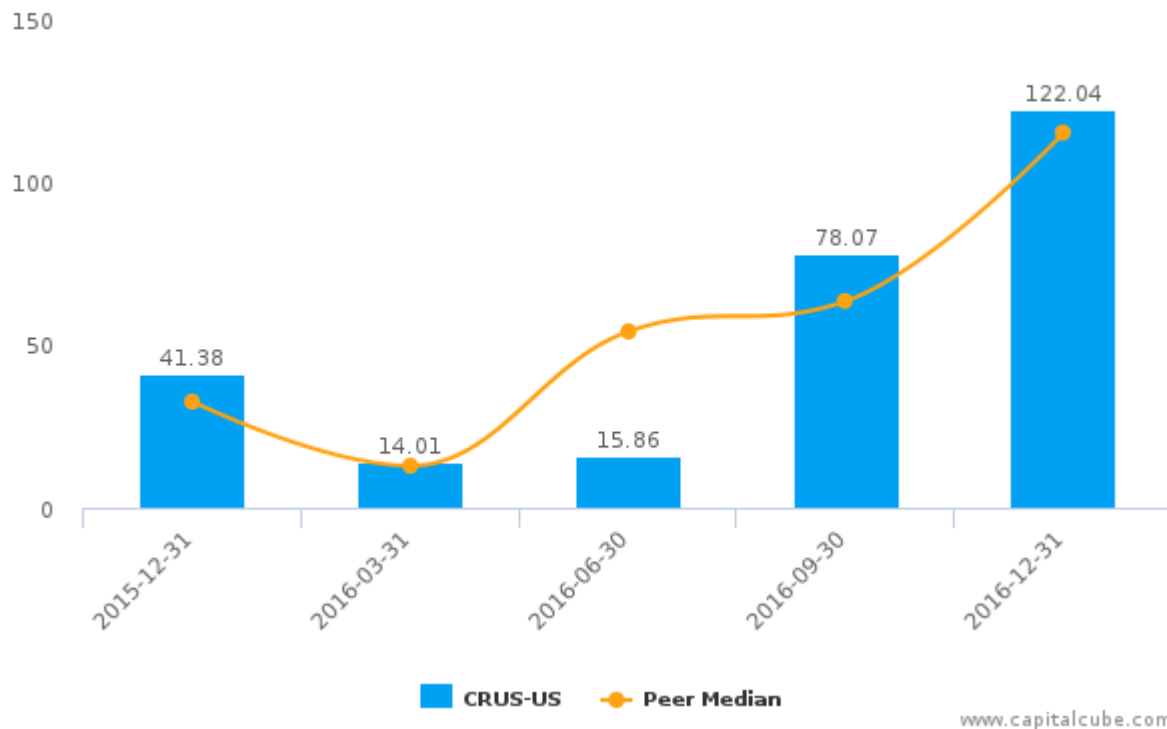
### Catalysts:

- Next earnings (May 3) surprise coefficient can drive the stock price higher
- Apple partnership, iPhone 8 launch next September.
- Healthy demand for audio chips fueled by efficient innovations.

## Earnings Performance:

Cirrus Logic saw its sales boosted by the fact that the company increased chip content in the new iPhone7. In November 2016, the company beaten estimates by 8% during Q3 and managed to top expectation of Q4 by 12%. Apple partnership represented 78% (\$334 million) of the Cirrus in Q3 up from 73% a year ago. In addition to the apple partnership, the diversification strategy undertaken by Cirrus helped the company to boost its overall sales for the year. The downside here, is that the company's performances solely rely on Apple sales at the present moment. In Q4 Samsung corp. represented 17% of the company's growing by 3% YoY and is expected to grow further in the future. The company's earnings constantly grew over the last 5 quarters (see table below)

**Earnings History**



## Industry Outlook:

The semiconductor industry is divided into 15 sub sectors, and Cirrus is operating under the semiconductor equipment sector. There are several drivers to that industry that can trigger stock price fluctuations. PricewaterhouseCoopers expects this sector to grow at a CAGR of 9.7% in the next two years. The US remains the largest market out there and this is also where Cirrus Logic makes most of its sales. As mentioned previously, Apple is the main customer while Samsung is expected to gain ground within the next few years. Although, according to a Global Industry Analyst report, Pacific/Asia is the fastest growing market. The overall market is expected to be worth \$60 billion in 2022. All in all, the growing middle class in Asia and different emerging markets is boosting the technological sector, therefore the sales of semiconductor suppliers such as Cirrus Logic. Furthermore, according to IDC estimates, the PC market is declining due to an increasing tablet and smartphones market that continuously gains ground. Consumers are turning their backs towards smaller devices that may appear more convenient (portable). The table is showing the expected growth from the IC (Integrated Circuit) industry:



## Products and Services:

As mentioned previously, Cirrus Logic produces circuits and chips to build audio device systems. The company's slogan is: "Audio is in everything we do"

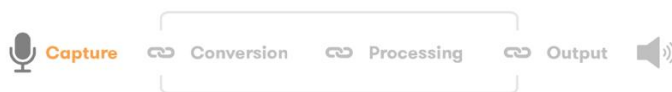
The company sells three types of products that serve many different purposes. Those three products are microphones, codecs (portable and smart), and amplifiers, and can be used in different devices (smartphones, headset, speaker, etc.)

**The smart codecs** are chips that give enhancing qualities to a given device. This smart codec can be found in headset, speakers, and smartphones. By the definition, the “smart” codec entails the device in which it is connected to an artificial intelligence that can interact with both the users and the environment. For instance in headsets, ANC (Active Noise Cancellation) is using microphone 9(if the device has one) to capture the noise of the users surroundings, and generate an “anti-noise” frequency. This aim at enhancing musical experience as well as speech quality. Those codecs were designed for high-end devices and flagships, but the company’s diversification strategy enabled mid-tier codecs to be produced. These codecs are efficient and are qualified as low power consuming.

**Portable codecs** are designed for devices that integrates wireless systems such as Bluetooth. These codecs provides the devices with a high dynamic range of features. These codecs along with smart ones, were the ones used to remove headphone jack in the iPhone 7. The Digital Signal Processor (DSP) chips used by Apple increased Cirrus logic dollar amount content per phone from \$3.5 to \$6.

**Voice capture**, in other words microphones, are the first elements of the Signal Chain (as shown below):

#### Signal Chain Position



These chips are used to capture voice patterns and identity thanks to a complex integrated circuit. In recent years, we saw the hatching of voice recognition market. According to Gartner, the market will grow at a CAGR of 24% from 2017 to 2022. All in all, the increase in technology, innovation and above all consumer appetite, could drag Cirrus Logic revenues higher.

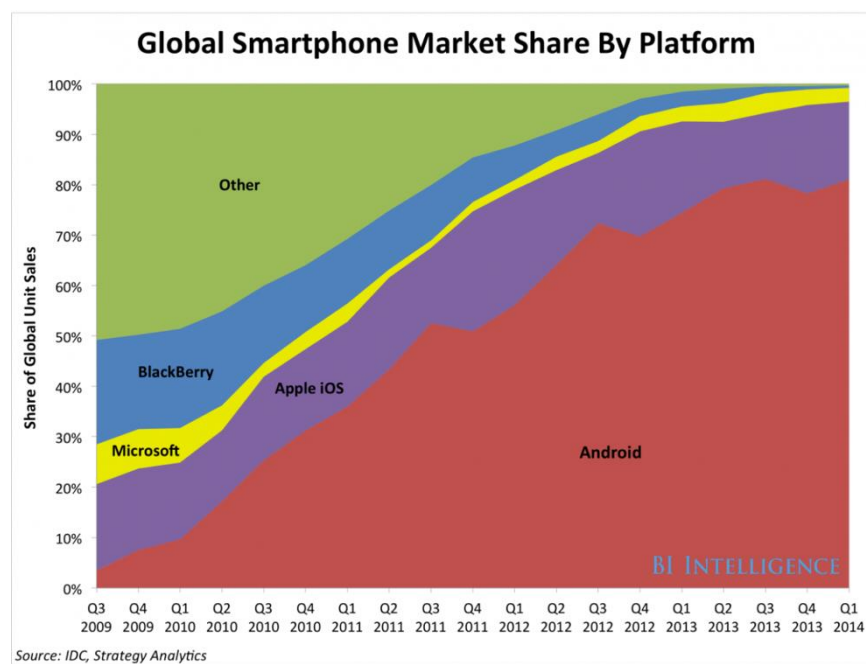
## Business Risk:

As previously mentioned, Cirrus Logic derives most of its revenues from Apple, which create a certain dependence. The most skeptical analysts believe that Cirrus Logic is too exposed to Apple to be an attractive investment. Indeed, these analysts are viewing Cirrus Logic as perfect hedge for an Apple Long. In other word if Apple stock price tank, being short in CRUS could offset the loss. To back this strategy, these analysts are mentioning Apple’s recent habit and trend to cut ties with some of its suppliers. Within the last 2 years, Apple ceased partnerships with Imagine Tech (down by 75% the following week) and GT Advanced Technologies in an effort to vertically integrate its production of iPhones. More recently, Apple entered a legal dispute against a long-standing partner, Qualcomm. The ongoing dispute is based on claims made by Apple that Qualcomm has been exercising a monopoly over modern chips that connects devices to Wi-Fi networks. This shows a trend by apple to cease some partnership in “desperate” nevertheless “unjustified” effort to cut costs. However, I believe that it does not necessarily applies to Cirrus Logic as relationship with apple is relatively different. First and foremost, chips produced by CRUS are said to be reasonably cheap and low power consuming, therefore cutting deals with Cirrus is not where Apple is going to save money. In addition, CRUS chips are protected by patents, apple would have to either buyback patents (costly) or worse spend money developing the chips.

Secondly, Apple has continuously been increasing deals amount with the company since they entered in partnership (2008). As I mentioned earlier, the dollar content went to \$6 in the iPhone 7 from \$3.5 in the iPhone 6.

## Diversification Strategy:

We saw in the earnings section that the company employed a diversification strategy in order to boost its revenues. In 2014 acquired one of its most ferocious competitors Wolfson Microelectronics in order to reduce its dependency on Apple and break in the Android market. The terms of the transaction recommended an acquisition at GBP 2.35 per share implying \$467 million in total. As I mentioned earlier, Cirrus began dealing with Samsung Electronics and it now represents slightly less than 20% of the revenues. “This acquisition strengthens Cirrus Logic’s core business as a leader in audio signal processing components, enhances our ability to differentiate our products with software, and adds new product categories such as MEMS microphones to our portfolio.” Said Jason Rode, CRUS Chief Executive Officer. To follow up with the risk, if the company manages to re-caliber its operating segmentation, the business risk would considerably be lowered. In addition, by entering this market the company could finally target more mid-range devices instead of solely high end ones. According to Business Insider Intelligence, android smartphones represented roughly 80% of global unit sales in 2014 and was set to increase to 85% in the next 10 years.



All in all, this shows a real effort on the end of Cirrus Logic put itself in a much more comfortable position by diversifying its revenue stream.



## Conclusion:

As we saw throughout the analysis, there are numerous factors that could cause an increase in stock price. The main catalyst at the present moment remains the launch of the iPhone 8. The phone is expected to be Apple largest launch since the iPhone 6 in 2014. Apple is expected to re-design its phone for the first time in 4 years, and smartphones expert judged by the low iPhone 7 holders, that iPhone 6 holders will renew by purchasing the iPhone 8. Hence the reason why if the sales are consequent, Cirrus Logic revenue and stock price could skyrocket. In addition, the ANC and DSP technologies are expected to flood the market in the next few quarters and the company had couple other innovation on hold that could yield in a near future. Financially, the company is currently striving as shown on the table below:

Name (BI Peers)	Sales Growth Yoy (%)	EBITDA Margin (%)	Gross Margin (%)	Return on Invested Capital (%)	COGS/Sales (%)	G&A/Sales (%)	R&D/Sales (%)	Capex/Sales (%)
Average	7.98%	13.73%	38.77%	6.49%	62.38	30.29	13.67	3.96%
100) CIRRUS LOGIC INC	27.57%	19.07%	48.78%	19.41%	50.88	29.18	20.20	2.19%
101) MONOLITHIC POWER SYS...	16.69%	18.00%	54.64%	12.63%	45.56	40.18	18.59	7.79%
102) MICROSEMI CORP	32.87%	13.76%	64.15%	3.38%	36.97	47.74	19.07	3.61%
103) ON SEMICONDUCTOR CORP	11.76%	16.95%	30.49%	6.36%	66.80	25.52	11.58	4.20%
104) SEMTECH CORP	11.03%	20.79%	59.63%	6.27%	40.31	47.12	18.98	13.69%
105) POWER INTEGRATIONS INC	12.62%	20.27%	48.84%	11.45%	50.65	35.14	16.08	4.08%
106) EXAR CORP	-7.82%	8.95%	49.43%	1.26%	53.73	45.24	18.56	1.38%
107) IXYS CORPORATION	-6.36%	12.74%	33.89%	5.70%	68.45	22.65	9.32	1.32%
108) SOLITRON DEVICES INC	-13.96%	0.15%	22.10%	-9.97%	82.86	25.76	0.00	1.86%

Both EBITDA and Gross margins are well above the industry with 19% and 48% respectively. Sales growth are also much faster than its peers with 27.575 and 7.98%. In terms of value creation, the company posted quite remarkable figures with Return On Invested Capital (ROIC) above 25% and a Weighted Average Cost of Capital (WACC) of 9.3%.

ROC /WACC		
	History	LFY
CRUS	2.98	2.39
Competitors	1.65	1.61

ROIC		
	History	LFY
CRUS	25.1%	20.9%
Competitors	16.6%	16.1%

WACC		
	History	LFY
CRUS	9.3%	8.7%
Competitors	9.9%	10.0%

This results in a considerable value creation with a ROIC to WACC of 2.98x against an industry average of 1.65x. All in all, the company is perfect financial shape and serves as best-in-class in many categories such as ROIC (see table above) and has a relatively low cost of capital of 9.3%. The cost of equity is also low at the same percentage of 9.3.



# Cirrus Logic, Inc. (CRUS)

## CENTER FOR GLOBAL FINANCIAL STUDIES

NEUTRAL

Analysis by  
4/28/2017

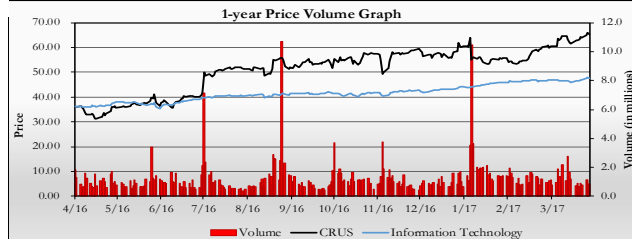
Current Price:  
Divident Yield:

\$64.03  
0.3%

Intrinsic Value  
Target Price

\$64.31  
\$75.89

Target 1 year Return: 18.8%  
Probability of Price Increase: 97.2%



**Description**  
Cirrus Logic, Inc., a fabless semiconductor company, develops, manufactures, and markets analog and mixed-signal integrated circuits (ICs) for a range of consumer and industrial markets.

**General Information**  
Sector: Information Technology  
Industry: Semiconductors and Semiconductor Equipment  
Last Guidance: November 3, 2015  
Next earnings date: May 3, 2017  
Estimated Country Risk Premium: 6.25%  
Effective Tax rate: 40%  
Effective Operating Tax rate: 42%

Market Data	
Market Capitalization	\$4,215.54
Daily volume (mil)	0.53
Shares outstanding (mil)	64.23
Diluted shares outstanding (mil)	66.14
% shares held by institutions	74%
% shares held by investments Managers	79%
% shares held by hedge funds	6%
% shares held by insiders	0.48%
Short interest	8.50%
Days to cover short interest	3.59
52 week high	\$66.28
52-week low	\$31.00
Levered Beta	0.28
Volatility	46.30%

### Past Earning Surprises

Quarter ending	Revenue	EBITDA
12/26/2015	0.25%	-12.40%
3/26/2016	-0.09%	-4.82%
6/25/2016	7.16%	-5.59%
9/24/2016	6.75%	2.22%
12/24/2016	4.91%	-0.69%
Mean	3.80%	-4.26%
Standard error	1.6%	2.5%

Peers	
Xilinx, Inc.	
Maxim Integrated Products, Inc.	
Synaptics Incorporated	
Silicon Laboratories Inc.	
Microchip Technology Incorporated	
Skyworks Solutions, Inc.	
Cypress Semiconductor Corporation	
Marvell Technology Group Ltd.	

Management	Position
Rhode, Jason	Chief Executive Officer, Pre
Case, Thurman	Chief Financial Officer, Pri
Thomas, Gregory	Vice President, Corporate Se
Brannan, Andrew	Vice President of Worldwide
Anderson, Scott	Senior Vice President and Ge
Kaller, Roy	Vice President of Quality an

Total compensations growth	Total return to shareholders
12.06% per annum over 6y	1.93% per annum over 6y
5.34% per annum over 6y	1.93% per annum over 6y
2.63% per annum over 6y	1.93% per annum over 6y
-15.5% per annum over 2y	32.77% per annum over 2y
2.12% per annum over 6y	1.93% per annum over 6y
N/M	N/M

Profitability	CRUS (LTM)
ROIC	25.3%
NOPAT Margin	22%
Revenue/Invested Capital	1.15
ROE	26.4%
Adjusted net margin	22%
Revenue/Adjusted Book Value	1.21

CRUS (5 years historical average)	Industry (LTM)
55.95%	9.85%
27.11%	16.7%
2.06	0.59
43.46%	10.86%
26.94%	15.6%
1.61	0.70

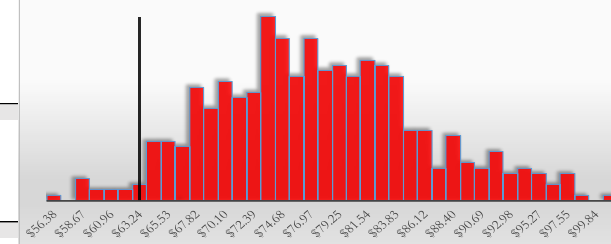
Invested Funds	CRUS (LTM)
Total Cash/Total Capital	16.8%
Estimated Operating Cash/Total Capital	6.4%
Non-cash working Capital/Total Capital	10.1%
Invested Capital/Total Capital	69.9%

CRUS (5 years historical average)	Industry (LTM)
17.4%	39%
6.0%	N/A
9.9%	9%
66.8%	56%

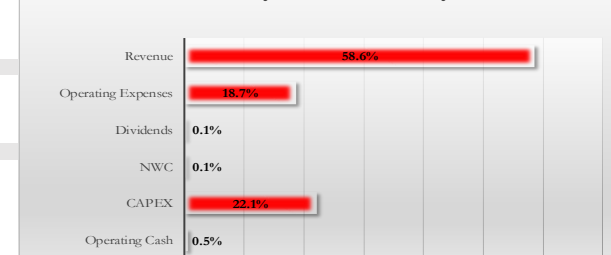
Capital Structure	CRUS (LTM)
Total Debt/Common Equity (LTM)	0.04
Cost of Existing Debt	2.69%
Estimated Cost of new Borrowing	4.65%
CGFS Risk Rating	CC
Unlevered Beta (LTM)	0.26
WACC	5.46%

CRUS (5 years historical average)	Industry (LTM)
0.05	0.13
5.42%	3.22%
4.52%	3.22%
CC	BB
0.62	1.23
7.91%	11.21%

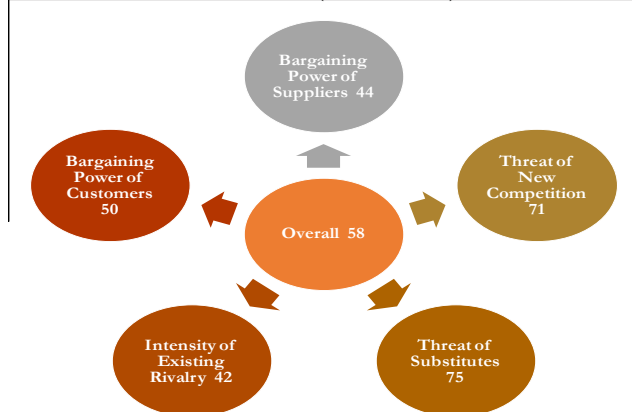
### Target Price Distribution--P(price↑)=97.2%



### Sensitivity Attribution Analysis



### Porter's 5 forces (scores are out of 100)



Period	Revenue growth	Valuation	ROIC/WACC
Base Year	21.0%	NOPAT margin	4.64
12/24/2017	10.4%		2.97
12/24/2018	5.9%		2.59
12/24/2019	5.7%		2.33
12/24/2020	5.5%		2.14
12/24/2021	5.3%		1.99
12/24/2022	5.1%		1.90
12/24/2023	4.9%		1.82
12/24/2024	4.7%		1.75
12/24/2025	4.5%		1.71
12/24/2026	4.3%		1.69
Continuing Period	4.1%		1.43
Period	Invested Capital	Net Claims	Price per share
Base Year	\$356.89	\$24.34	\$61.38
12/24/2017	\$615.07	-\$514.75	\$72.52
12/24/2018	\$599.90	-\$1,088.70	\$83.93
12/24/2019	\$866.49	-\$1,660.30	\$95.14
12/24/2020	\$1,252.50	-\$2,219.61	\$106.08
12/24/2021	\$1,591.45	-\$2,767.00	\$116.73
12/24/2022	\$1,845.09	-\$3,306.26	\$127.16
12/24/2023	\$2,068.88	-\$3,827.09	\$137.23
12/24/2024	\$2,269.59	-\$4,306.96	\$146.58
12/24/2025	\$2,454.32	-\$4,771.93	\$155.63
12/24/2026	\$2,619.26	-\$5,223.20	\$164.43
Continuing Period			

## Company Description:

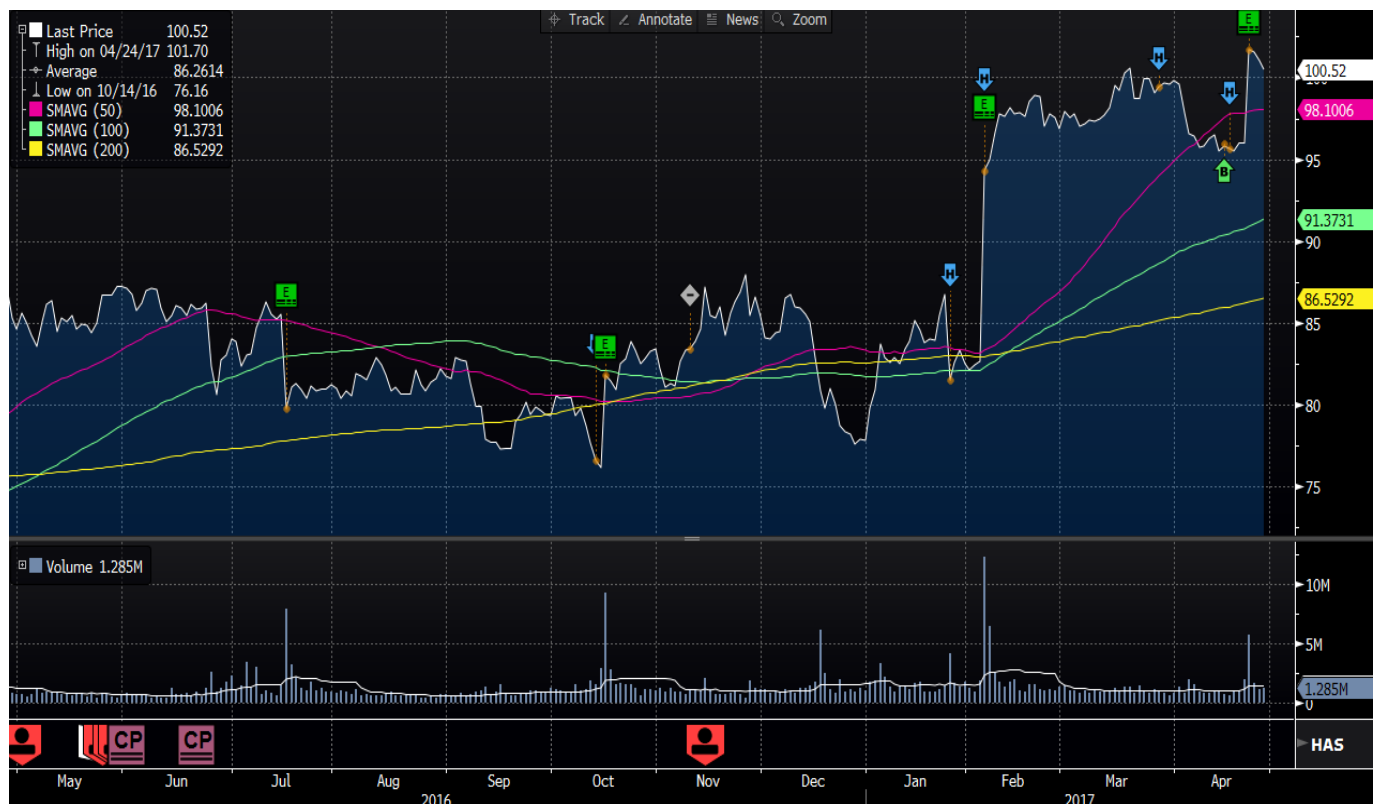
Hasbro is a global play and entertainment company committed to “Creating the World’s Best Play Experiences.” The company’s diverse products include toys and games to television, movies, and digital gaming and consumer products. Hasbro’s iconic brands include Nerf, Transformers, Play-Doh, Monopoly, My Little Pony, and Magic: The Gathering. Hasbro has a strategic partnership with Disney, which allows the company to license popular names and characters from Star Wars and Marvel movies along with other Disney movies. Hasbro was recently named the world’s most ethical company for the sixth year and ranked number one in Newsweek’s 2016 Green Rankings. Hasbro was founded in 1923 and was incorporated in 1968.

## BUY

Current Price:	\$99.11
Target Price:	\$118.92
Market Cap:	12.56B
Volume:	1.285M
S&P Debt Rating:	BBB
Ke:	8.3%
ROE:	33.89%
Net Income Margin:	10.98
Total Asset Multiplier:	1.02
Equity Multiplier:	2.78
Cash/Total Assets:	25.2%

## Catalysts:

- **Short Term (within the year):** Key licensing agreements with Hasbro's Partner Brands with key motion picture releases upcoming
- **Mid Term (1-2 years):** Hasbro shifting to consumer trends by premiering its own animated movie and increased presence in digital gaming
- **Long Term (3+):** Innovative new products that will lead to improving margins and differentiation from its competitors.

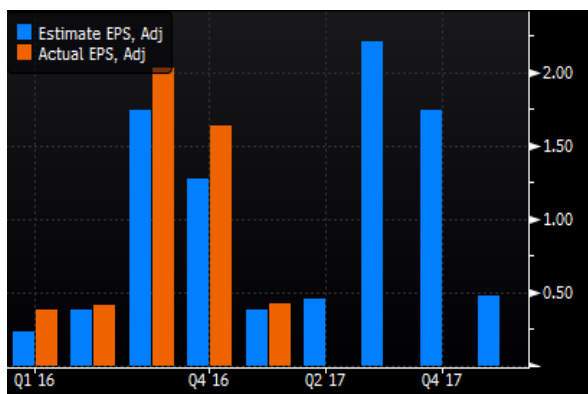


## Thesis:

Hasbro is the industry leader in the strength of its rich innovative brand portfolio. Also, with its strategic and licensing partnerships with premiere entertainment brands that attract fans and have key motion picture releases upcoming. Hasbro's 1st quarter earnings significant gains in its numerous brand portfolios and generating \$411.9M in operating cash flow positions the company well for the future. The leisure product industry continues to see significant global growth. Hasbro is shifting to consumer changing trends with the premier of its first animated film, "My Little Pony: The Movie," and increased presence in digital gaming with 43% growth from year-to-year due to its Backflip Studios. Also, with the demographic focus on girls and customers over the age of 14 have seen significant consumption growth. Hasbro uses a small amount of leverage and is much more profitable than its competitors which makes Hasbro the best in class of the Leisure Products industry. Hasbro with its Brand Blueprint strategy will continue to re-invest into its brands, create innovative new content, and connect with consumers.

## 1<sup>st</sup> Quarter Earnings Performance:

Hasbro's CEO stated, "Our first quarter results were consistent with the expectations we shared with you in February, and position us well to execute against the major theatrical and content releases as well as innovative new play experiences planned for the full year."



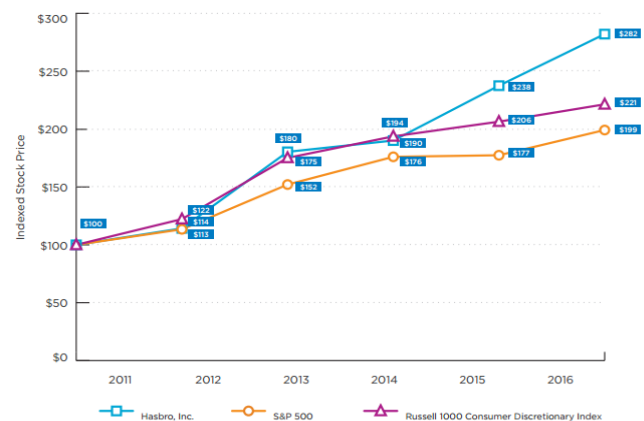
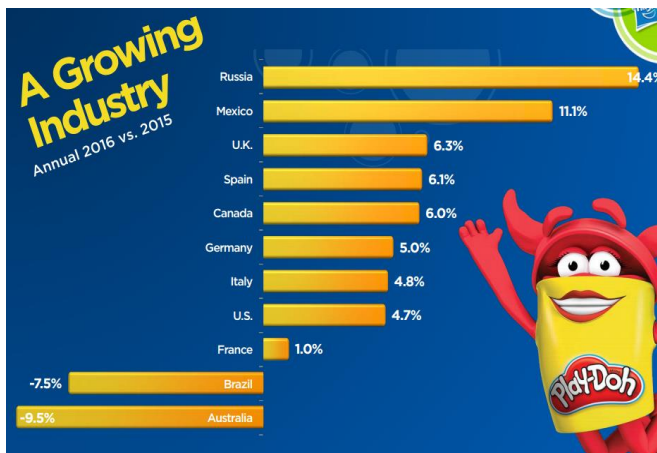
For the first quarter, net revenues were \$879.7M up 2% year-over-year. This included revenue growth of 2% in the U.S. and Canada segment, the International segment remained flat, and emerging market revenues increased 20%. The Entertainment and Licensing segment increased 24% driven by growth in digital gaming, including Backflip Studios. For brand portfolio performance, franchise brands were up 2% led by growth in Nerf, Transformers, and Monopoly. While, My Little Pony revenue declined. Partner brands revenues declined 18% as expected due to Star Wars

and Marvel ahead of movie releases later this year. One specific area of growth was Hasbro gaming up 43% due its diverse brand portfolio of news games, digital games, and classic gaming. This was driven by continued growth in the games Pie-Face and Speak Out. Emerging brand revenue increased 25% behind continued growth in Baby Alive and Furreal Friends. Hasbro's operating profit decreased by 9% due to the strategic shift in product mix to prepare for upcoming theatrical releases and this year's quarter having 14 weeks versus 13 weeks last year. Cost of sales increased 6% to 36% of revenues. Hasbro generated \$411.9M in operating cash flow in the quarter thus ending the quarter with \$1.5B in cash. In the quarter, Hasbro returned \$81.5M to shareholders through its dividend and its repurchase program.

## Industry Outlook:

Hasbro is the worldwide leader in the design, manufacture and marketing of the toys and games and other family entertainment offerings, but the industry is highly competitive. Competition is based primarily on meeting consumer entertainment preferences and on the quality and play value of products. In entertainment, Hasbro Studios and Discovery Family Channel compete with other children's and family television networks. There is also competition of obtaining trademarks and copyrights for the names or likeness of characters

from movies, television shows, and other entertainment media. The toys and games industry is a growing global industry. The image below highlights certain countries like Russia growing at 14.4% annually, Mexico at 11.1%, the U.K. at 6.3%, and even the mature U.S. toy industry still growing at 4.7%. The 5-year total return chart shows how Hasbro has outperformed the S&P 500 and Russell 1000 Consumer Discretionary Index. A \$100 initial investment in Hasbro has grown to \$282 in 5-years. This is due to capital appreciation, increasing dividend payout policy, and repurchasing program. Hasbro has been able to outperform its competitors due to its strong franchise brand portfolio and strategic partners in Star Wars, Frozen, The Avengers, and Jurassic World toys. While, competitors like Mattel have not been able to adapt to the changing consumer entertainment environment. For example, Hasbro has taken advantage of the mobile gaming market with its acquisition of Backflip Studios, allowing its classic games to be implemented to digital apps. This has led to revenue growth increase of 24% in the entertainment and licensing segment.



Hasbro is optimistic due to numerous upcoming theatrical releases and their licensing agreements. Firstly, on October 6, 2017 Hasbro's Allspark Pictures and Lionsgate will premier Hasbro's first animated film, "My Little Pony: The Movie." Also, Star Wars Forces of Destiny, an original micro series of animated shorts by Lucasfilms was recently announced along with the upcoming movie Star Wars: Han Solo. Lastly the launch of Hasbro's line of Disney Princess and Frozen fashion dolls with upcoming Disney princess films.











## Business Model:

Hasbro's rich portfolio of innovative brands are shown below. These include Franchise & Partner Brands, Gaming Brands, Challenger Brands, and New Brands/Franchise Brands in the Making.





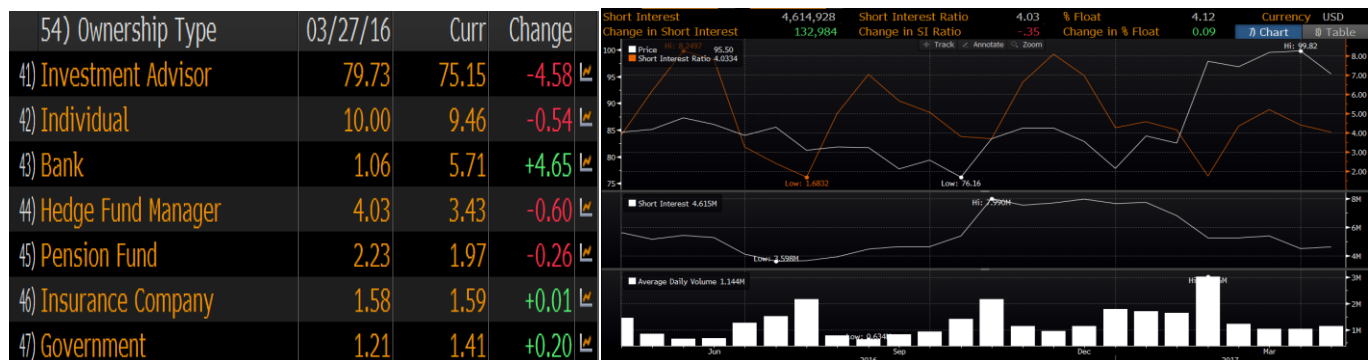
Hasbro operates under the following categories: Franchise Brands, Partner Brands, Hasbro Gaming, and Emerging Brands. The past four years, Hasbro's Franchise Brands revenue has remained relatively constant while losing revenue share to now 46.4% of revenue. Hasbro's Partner Brands have been rapidly increasing in revenue to 28.1% of revenue. Hasbro Gaming recently has recently rapidly increased approximately 23% due to Hasbro's presence in mobile gaming. Hasbro's brands are marketed under the following segments: (1) Boys, (2) Games, (3) Girls, and (4) Preschool Toys. An area of growth is the Girls' toy segment, which has grown in revenue by 28% to over \$1.19B from FY 2015 to FY 2016. This is due to the introduction of the Disney Princess and Frozen Dolls, Transformers toy sales amongst females tripled due to the introduction of strong female characters, and premiere of the "My Little Pony: The Movie" should help continue this positive trend. Hasbro's other rapidly growing demographic are products consumed by customers over 14 years of age, which consume 20% of Hasbro's projects. This is due to growing brands like Dungeons & Dragons that appeal to teenage gamers and digital gaming such as Monopoly, Scrabble, and Yahtzee.

In Millions of USD except Per Share	FY 2013	FY 2014	FY 2015	FY 2016
12 Months Ending	12/29/2013	12/28/2014	12/27/2015	12/25/2016
 Revenue	4,082.2 100.0%	4,277.2 100.0%	4,447.5 100.0%	5,019.8 100.0%
 Boys' Toys	1,237.6 30.3%	1,484.0 34.7%	1,775.9 39.9%	1,849.6 36.8%
 Games and Puzzles	1,311.2 32.1%	1,259.8 29.5%	1,276.5 28.7%	1,387.1 27.6%
 Girls' Toys	1,001.7 24.5%	1,022.6 23.9%	798.2 17.9%	1,193.9 23.8%
 Preschool Toys	531.6 13.0%	510.8 11.9%	596.8 13.4%	589.2 11.7%
 Revenue - Supplementary Breakd...	—	4,277.2 100.0%	4,447.5 100.0%	5,019.8 100.0%
 Franchise Brands	—	2,345.1 54.8%	2,285.4 51.4%	2,327.7 46.4%
 Partner Brands	—	654.1 15.3%	1,101.3 24.8%	1,412.8 28.1%
 Hasbro Gaming	—	643.6 15.0%	662.3 14.9%	813.4 16.2%
 Emerging Brands	—	634.4 14.8%	398.5 9.0%	466.0 9.3%

Revenues by geographic breakdown are 51% US/Canada, 28% Europe, 9% Latin America, 7% Asia Pacific, and 5% other. Hasbro's products are sold through wholesalers, distributors, chain stores, drug stores, mail order houses, catalog stores, and department stores. Wal-Mart accounts for 18% of revenue, Target for 9%, Toys R US for 9%, and Amazon for 3.17%. Hasbro continues to implement the Brand Blueprint strategy, which is building a 360-degree experience for its fans, children, and their families. Hasbro continuously identify proprietary insight, create engaging storytelling, invent innovative new play experiences, and execute in collaboration with global channel retailers.

## Management/Ownership:

The ownership type chart is shown below. Investment advisors own 79.73% and Individuals own 9.46% of common shares outstanding. There has been decreasing position in shares outstanding held by Investment Advisors from one year ago to now. The short interest is at approximately 4.6M and there has been a 134K positive change in short interest. The short interest ratio is at 4.03, which has decreased by 0.35. There is an average of 2.99 days to cover the short interest for Hasbro. Hasbro has a relatively low short interest.








Brian D. Goldner has been at Hasbro since 2000 and has been the Chairman and CEO of Hasbro since 2008. Goldner's compensation has decreased from \$27.4M in 2013 to \$10.58M in 2016, while Hasbro's stock price has increased by over 100% from 2013. Hasbro's total executive compensation has also decreased and has remained relatively stable in recent years. This could be explained by how Hasbro is recognized as one of the most corporate responsible and most ethical company. For example, Hasbro prides itself on being the industry leader with the lowest amount of product defects and recalls.

Name/Title ⓘ	2012	2013	2014	2015	2016
▶ Key Executive Compensation	15,441,658	33,866,914	23,598,541	20,584,496	22,778,768
▶ Brian D. Goldner/Chairman of the Board and Chief Executive Officer	9,684,285	27,440,726	14,623,112	10,285,987	10,542,242
▶ Deborah M. Thomas/Executive Vice President and Chief Financial Officer	1,939,511	2,087,636	2,158,674	2,555,102	2,962,256
▶ John Frascotti/President	1,795,953	2,165,090	2,108,356	2,927,941	3,568,465

## Capital Allocation Comparison:

Hasbro uses a small amount of debt for a company of its size and is highly liquid. For FY 2016, Hasbro had \$1.72B in debt compared to \$1.28B in cash. Cash represents approximately 25% of Hasbro's total assets. Total debt has decreased by 4% from 2014, while cash has increased by 43%. This piling of cash gives Hasbro flexibility to take advantage of future opportunities. Hasbro's capitalization is 0.13 compared to its competitors' average of 0.24. Hasbro is far less leveraged. The cost of debt and WACC for Hasbro is at 6% and 12.7%, which is higher than its competitors. However, Hasbro's ROC/WACC at 1.24 is higher than its competitors which is at 0.86. This means even though Hasbro's cost of capital is greater than its competitors, it is still able to have greater value creation due to its higher return on capital.

In Millions of USD	FY 2013	FY 2014	FY 2015	FY 2016
12 Months Ending	12/29/2013	12/28/2014	12/27/2015	12/25/2016
 Market Capitalization	7,129.4	6,916.2	8,438.7	9,754.8
 - Cash & Equivalents	682.4	893.2	976.8	1,282.3
 + Preferred & Other	45.4	42.7	40.2	22.7
 + Total Debt	1,396.6	1,798.3	1,711.7	1,721.0
 Enterprise Value	7,889.0	7,864.1	9,213.8	10,216.2

Capitalization (Debt/Equity)			Kd		WACC		ROC / WACC	
	History	LFY	History	LFY	History	LFY	History	LFY
HAS	0.20	0.13	HAS	5.7%	12.3%	12.7%	HAS	1.25
Competitors	0.24	0.24	Competitors	5.0%	12.3%	10.8%	Competitors	0.94
				6.0%				1.24
				4.7%				0.86

## Profitability Comparison:

Hasbro stands out from its competitors due to its profitability and higher margins. Hasbro's revenue, gross profit, EBITDA, net income, and EPS have had a positive trend the past four years. From the last fiscal year, revenue has increased 12.9%, gross profit by 12%, gross margin has remained stable, EBITDA by 15.5%, EBITDA margin by 2%, net income by 27% and net income margin by 13%. Hasbro is able to generate significantly greater revenue per employee at \$0.93 compared to its competitors average at \$0.38. Also, significantly greater ROIC at 15.8% compared to competitors' at 9.3%. Hasbro has an impressive ROE of

32.1%. Hasbro profitability margins are above the industry average in ROE, ROA, gross margin, and profit margin. Compared directly to its closest competitor Mattel, Hasbro has a significant advantage in terms of profitability. This is due to Hasbro developing its brands to adapt to consumer change, while Mattel has not been able to. In terms of activity ratios, Hasbro has a very high cash conversion cycle of 112.30 days compared to Mattel's of 69.28. This is an area where Hasbro needs to improve. Based on profitability, Hasbro is by far the best in class in the Leisure Products Industry. These margins have even greater growth potential with Hasbro's upcoming developments.

Revenue/Total Employees			ROIC		
	History	LFY		History	LFY
HAS	\$ 0.82	\$ 0.93	HAS	15.0%	15.8%
Competitors	\$ 0.39	\$ 0.38	Competitors	10.8%	9.3%

In Millions of USD		FY 2013	FY 2014	FY 2015	FY 2016
12 Months Ending		12/29/2013	12/28/2014	12/27/2015	12/25/2016
Revenue, Adj		4,082.2	4,277.2	4,447.5	5,019.8
Growth %, YoY		-0.2	4.8	4.0	12.9
Gross Profit, Adj		2,419.4	2,578.8	2,770.5	3,114.3
Margin %		59.3	60.3	62.3	62.0
EBITDA, Adj		778.4	791.8	844.2	975.4
Margin %		19.1	18.5	19.0	19.4
Net Income, Adj		372.3	408.7	445.0	566.1
Margin %		9.1	9.6	10.0	11.3
EPS, Adj		2.82	3.14	3.52	4.46
Growth %, YoY		0.8	11.4	11.8	26.7

Name	ROE:Y	ROA:Y	GM:Y	PM:Y	EBITA Mrgn:Y	Ast TO:Y	A/R Trnovr:Y	A/P Turnover:Y	Cash Conversion Cycle:Y	Finl Lev:Y
Median	11.25%	6.01%	50.33%	8.42%	16.51%	0.63	6.57	7.34	52.41	1.58
HASBRO INC	32.10%	11.54%	62.04%	11.28%	16.39%	1.02	3.96	6.81	112.30	2.78
MATTEL INC	14.64%	5.64%	46.81%	6.74%	10.00%	0.84	4.83	4.45	69.28	2.58
NEXON CO LTD	12.56%	10.82%	73.72%	25.63%	24.30%	0.42	6.15	4.73	--	1.16
BANDAI NAMCO HOLDIN...	11.52%	8.02%	35.20%	6.20%	--	1.29	7.23	6.28	36.07	1.44
NCSOFT CORP	14.95%	11.93%	80.93%	27.77%	34.04%	0.43	7.95	20.96	29.89	1.25
TAKE-TWO INTERACTIVE...	11.22%	2.67%	42.43%	4.54%	8.76%	0.59	7.32	23.39	42.45	4.21
KONAMI HOLDINGS CORP	9.00%	6.05%	34.99%	7.75%	--	0.78	9.22	8.89	23.33	1.49
UBISOFT ENTERTAINMENT	11.28%	5.97%	78.12%	8.08%	40.90%	0.74	6.29	2.03	-99.21	1.89

## Summary:

In conclusion, Hasbro is a buy at its current price due to its upward growth potential. Hasbro has the competitive advantage of a rich innovative brand portfolio and partnership with premiere entertainment brands. Hasbro has strong and consistent free cash flow grow generation, which is invested back into Hasbro's brands and returned to shareholders. Hasbro is continuously shifting its portfolio of brands into high growth areas such as mobile gaming and premiering box office movies. Hasbro has strong management leadership that has earned the awarded the company as the world's most ethical company for the sixth year and ranked number one in Newsweek's 2016 Green Rankings. Hasbro's one-year target price of \$118.92, a 19.99% return, is reasonable due to their upward growth potential.



# Hasbro, Inc. (HAS)

## CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Analysis by Joseph Nastasi  
4/27/2017

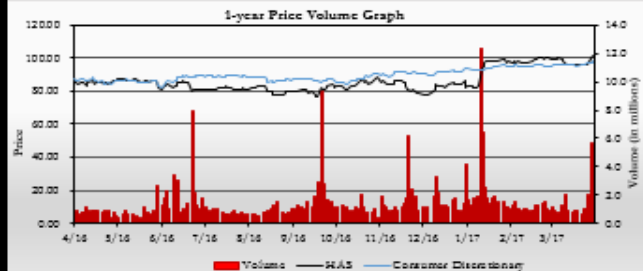
Current Price:  
Dividend Yield:

\$100.52  
2.1%

Intrinsic Value  
Target Price

\$112.33  
\$118.92

Target 1 year Return: 20.38%  
Probability of Price Increase: 96.8%



Description	
Hasbro, Inc., together with its subsidiaries, operates as a play and entertainment company.	
General Information	
Sector	Consumer Discretionary
Industry	Leisure Products
Last Guidance	November 3, 2015
Next earnings date	July 24, 2017
Estimated Country Risk Premium	8.24%
Effective Tax rate	33%
Effective Operating Tax rate	31%

Market Data	
Market Capitalization	\$12,565.68
Daily volume (mil)	1.28
Shares outstanding (mil)	125.01
Diluted shares outstanding (mil)	127.04
% shares held by institutions	74%
% shares held by investments Managers	72%
% shares held by hedge funds	4%
% shares held by insiders	8.67%
Short interest	3.63%
Days to cover short interest	2.93
52 week high	\$104.14
52-week low	\$76.14
Levered Beta	0.86
Volatility	22.76%

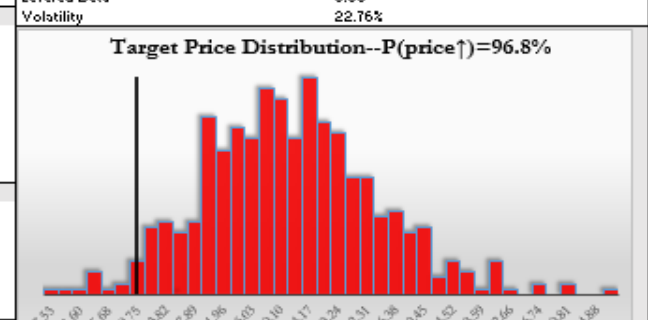
Past Earning Surprises	
Quarter ending	Revenue
3/27/2016	-0.18%
6/26/2016	-2.64%
9/25/2016	5.01%
12/25/2016	3.10%
4/2/2017	-3.03%
Mean	0.44%
Standard error	1.6%

EBITDA	
3/27/2016	24.33%
6/26/2016	-3.23%
9/25/2016	11.06%
12/25/2016	21.46%
4/2/2017	-21.21%
Mean	6.47%
Standard error	8.4%

Peers	
Mattel, Inc.	
Brunswick Corporation	
Harley-Davidson, Inc.	
Polaris Industries Inc.	
JAKKS Pacific, Inc.	
Activision Blizzard, Inc.	

Management	
Goldner, Brian	Chairman and Chief Executive
Frascotti, John	President
Thomas, Deborah	Chief Financial Officer and
Billing, Duncan	Chief Strategy Officer and E
Tinga, Wiebe	Chief Commercial Officer and
Courtney, Thomas	Executive Vice President of

Total compensations grow	
6.3% per annum over 5y	5.36% per annum over 5y
15.16% per annum over 5y	5.36% per annum over 5y
10.86% per annum over 5y	5.36% per annum over 5y
5.3% per annum over 5y	5.36% per annum over 5y
13.34% per annum over 2y	21.34% per annum over 2y
N/M	N/M



Profitability	
ROIC	16.3%
NOPAT Margin	15%
Revenue/Invested Capital	1.11
ROE	25.0%
Adjusted net margin	14%
Revenue/Adjusted Book Value	1.83

HAS (5 years historical average) Industry (LTM)	
ROIC	17.98%
NOPAT Margin	15.30%
Revenue/Invested Capital	1.18
ROE	32.55%
Adjusted net margin	13.63%
Revenue/Adjusted Book Value	2.33

Sensitivity Attribution Analysis	
Revenue	69.9%
Operating Expenses	17.4%
Dividends	0.7%
NWC	0.0%
CAPEX	12.5%
Operating Cash	0.4%

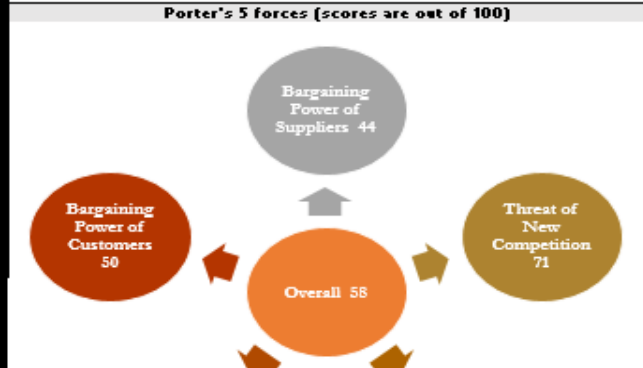
Invested Funds	
Total Cash/Total Capital	21.3%
Estimated Operating Cash/Total Capital	16.1%
Non-cash working Capital/Total Capital	8.2%
Invested Capital/Total Capital	82.7%

HAS (5 years historical average) Industry (LTM)	
Total Cash/Total Capital	20.7%
Estimated Operating Cash/Total Capital	17.3%
Non-cash working Capital/Total Capital	15.7%
Invested Capital/Total Capital	81.4%

Capital Structure	
Total Debt/Common Equity (LTM)	0.15
Cost of Existing Debt	5.82%
Estimated Cost of new Borrowing	5.06%
CGFS Risk Rating	C
Unlevered Beta (LTM)	0.76
WACC	3.35%

HAS (5 years historical average) Industry (LTM)	
Total Debt/Common Equity (LTM)	0.24
Cost of Existing Debt	6.05%
Estimated Cost of new Borrowing	4.81%
CGFS Risk Rating	CC
Unlevered Beta (LTM)	0.81
WACC	10.10%

Valuation	
NOPAT margin	15.2%
ROIC/WACC	1.70
Base Year	4/2/2018
4/2/2018	15.2%
4/2/2019	14.5%
4/2/2020	1.45
4/2/2021	1.56
4/2/2022	1.69
4/2/2023	1.83
4/2/2024	2.00
4/2/2025	2.18
4/2/2026	2.38
4/2/2027	2.58
Continuing Period	2.73
	2.57



Porter's 5 forces (scores are out of 100)	
Period	Revenue growth
Base Year	10.4%
4/2/2018	4.3%
4/2/2019	3.0%
4/2/2020	3.1%
4/2/2021	3.2%
4/2/2022	3.3%
4/2/2023	3.5%
4/2/2024	3.6%
4/2/2025	3.7%
4/2/2026	3.8%
4/2/2027	3.9%
Continuing Period	4.0%
Period	Invested Capital
Base Year	\$2,794.87
4/2/2018	\$3,380.51
4/2/2019	\$3,716.75
4/2/2020	\$4,109.56

Net Claims	
Base Year	\$1,786.14
4/2/2018	\$2,138.36
4/2/2019	\$1,433.07
4/2/2020	\$623.25
Price per share	
Base Year	\$113.40
4/2/2018	\$119.25
4/2/2019	\$133.73
4/2/2020	\$148.68

April 28<sup>th</sup>, 2017

**ICON plc: ICLR**

**Mateo Valdivieso**

**Sector: Healthcare**

**Industry: Life Sciences Tools and Services**

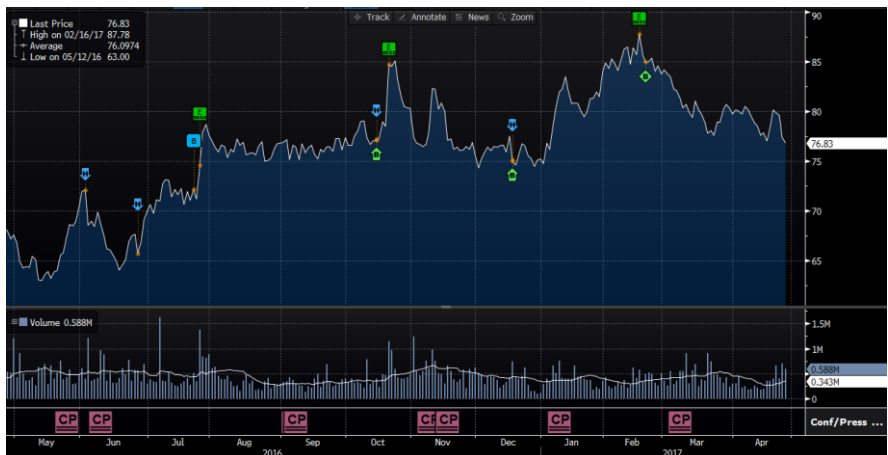
**Current Price: \$76.83**

**Target Price: \$94.38**

ICON plc is a contract research organization (“CRO”), incorporated in 1990, which provides outsourced development services on a global basis to the pharmaceutical, biotechnology and medical device industries. They specialize in the strategic development, management and analysis of programs that support all stages of the clinical development process - from compound selection to Phase I-IV clinical studies. The company earns revenues by providing several different services to its customers. These services, which are integral elements of the clinical development process, include clinical trials management, biometric activities, consulting, imaging, contract staffing, informatics and laboratory services. The company has the expertise and capability to conduct clinical trials in most major therapeutic areas on a global basis and has the operational flexibility to provide development services on a stand-alone basis or as part of an integrated “full service” solution. They have expanded predominately through organic growth, together with several strategic acquisitions to enhance its expertise and capabilities in certain areas of the clinical development process. ICON plc mission is to accelerate the development of drugs and devices that save lives and improve the quality of life. ICON plc vision is to be the Global CRO partner of choice in drug development by delivering best in class information, solutions and performance in clinical and outcomes research.

## LONG

Current Price: \$76.83  
 Target Price: \$94.38  
 Market Cap: 4.34B  
 Beta: .98



## Thesis:

ICON is well positioned to benefit from drug makers continued increase in outsourcing their R&D to CROs. This is a long-term trend that ICON can only benefit from. ICON also has plans to continue its acquisitions strategy that has helped them grow tremendously. Icon has also achieved further operational improvements and has been successful in the reduction of its customer revenue concentration.

## Catalysts:

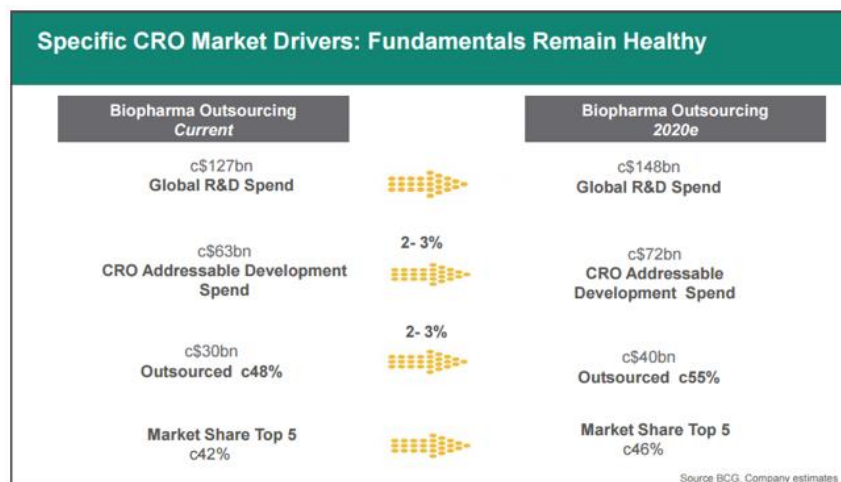
- Steady continued growth prospect
- Continued outsourcing of R&D from drug makers.
- Potential acquisitions

## Business Overview:

Founded in 1990, ICON's core business is the planning, management, execution, and analysis of Phase I to IV clinical trials, ranging from small projects to complex, multinational mega-studies. This business, specifically the late-stage Phase III and IV business, which accounts for well over half the company's revenue, benefits from substantial competitive advantages. Looking at Phase III trials; these trials usually require thousands of patients and usually trials take place across many geographic locations. The scale of these studies really limit the completion allowing for an oligopoly of large CROs to really compete. ICON thus has competitive advantage when being able to access enormous patient datasets. This because of its key partnerships and established relationships it has with trial sites. This has allowed the company to enroll patients a lot faster than a small competitor could be able to. In terms of how contracts are awarded; it's based on the CRO's brand and reputation it has. This has given ICON and additional advantage as they are already established players. However, these contracts could be lost at any time if there is even a slight error or abnormality through the clinical trial, this can cause regulators to reject the drug or even require a new trial. Thus, drug makers want to see a successful track record from a CRO before putting a potential multi-billion-dollar drug into the CRO's hand. In this regard, ICON has done exceptionally well in having a good reputation of success. As of recent large and medium drug manufactures have shifted from outsourcing clinical research on project by project basis to partnering one or two CROs to handle the entire pipeline. What this creates is longer contracts between CROs and drug manufactures. This also allows CROs to dive deeper into their client's drug development process but also create strong relationships and a higher switching cost. ICON has continued to prove itself through the industry and it has Pfizer, its oldest and largest client to prove it, as Pfizer has been with ICON for over a decade.

## Outsourcing opportunities brief:

Biopharma outsourcing spending is the single biggest driver for the company. I believe this will continue for the foreseeable future. ICON identifies growth opportunities across all phases of drug development. The fastest growth is expected to come from mid-sized and specialty biotech companies. Asia Pacific is expected to produce the fastest growth rate regarding regions. Biopharma outsourcing spending trends are shown in chart below.



## Research and Development spending and outsourcing is the key to growth:

Revenue since 1998 has increase from \$45m to \$1.8B in 2016 this is a CAGR of 22% and 12% on an organic basis. This tremendous increase is due to a combination of synergistic acquisitions and organic growth. Over the course of time this growth as naturally decreased as ICON has grown and other competitors have entered but also new regulations have come into existence. This doesn't take away the fact that ICON revenue CAGR is still higher than the industry average of 5-7%. Considering future growth, we can expect steady growth. excluding any potential M&A. ICON can increase its revenues at least by 7% CAGR for the upcoming years which will predominantly be driven by favorable outsourcing trends. To fully understand these trends let's take into consideration \$145.1B drug makers spent on R&D in the year 2016. When excluding cost that won't get outsourced, around \$74.5B can be directly addressed by CROs. As shown in chart 1 below only \$33.9B was outsourced which is less than half. The outsourced R&D is expected to grow 5.6% annually which would accumulate to \$41.2B by the year 2020, as shown in Chart 1. Looking on a segment basis, late-stage clinical trial outsourcing is expected to grow 5.8% per annum. Moreover, the complex clinical trial outsourcing sub-segment which is not broken out in Chart 1 is projected to grow at 10+% annually, which will greatly benefit ICON given its significant revenue concentration in this area. Looking furtherer, around one-third of ICON's new trials come from oncology. These studies normally require more complicated and longer testing protocols than other disease indications. This however requires CROs to have complex trial design expertise, which only Paraxel and INC Research have just to name a few. This creates a high demand for ICON's services and will continue to grow throughout the future. Taking all of this into account ICON will continue its growth and could outpace the overall industry growth moving forward.

(Data is in \$M)

	Total R&D Spend	Addressable R&D	Outsourced R&D	Early-Stage Clinical	Late-Stage Clinical	Other
2005	85,323	40,454	14,143	2,944	5,698	5,501
2006	99,986	48,289	16,916	3,587	6,742	6,587
2007	112,537	55,313	19,609	4,272	7,731	7,606
2008	122,833	61,076	22,089	4,647	9,032	8,410
2009	116,077	57,958	21,703	4,248	9,579	7,876
2010	121,442	61,516	22,879	4,356	10,391	8,132
2011	122,457	62,719	24,008	4,302	11,427	8,279
2012	125,499	64,538	25,628	4,350	12,677	8,601
2013	130,303	67,515	27,905	4,606	14,229	9,070
2014	135,787	70,281	30,206	4,855	15,696	9,655
2015	137,824	70,963	31,320	5,058	16,320	9,942
2016E	145,106	74,497	33,947	5,364	17,800	10,783
2017E	150,443	77,325	35,863	5,585	18,823	11,455
2018E	155,472	79,981	37,792	5,820	19,851	12,121
2019E	159,497	82,155	39,471	6,045	20,732	12,694
2020E	163,417	84,285	41,183	6,268	21,620	13,295
CAGR (05 - 10):	7.3%	8.7%	10.1%	8.2%	12.8%	8.1%
CAGR (10 - 15):	2.6%	2.9%	6.5%	3.0%	9.4%	4.1%
CAGR (15 - 20):	3.5%	3.5%	5.6%	4.4%	5.8%	6.0%

Source: A North Investments and Jefferies

Chart 1



## Operational Overview:

When comparing ICON operational efficiency to the same quarter from the previous year, net revenue in the fourth quarter rose to \$435 million. This represents 7.9 percent year-on-year growth and 8.4 percent growth on a constant currency basis. Looking on the other income statement lines, one can quickly notice some improvements in the operational section. Although gross margin seems to have flatten out last year due to competitive pricing pressures, operating profit margin continues its path within its growth channel. A noteworthy progress in Icon's operations is also obvious from the sum of Selling, General & Administrative Expenses, which, as percentage of revenue, decreased from 20.7 percent to 19.2 percent. This can be seen in the graph below which was provided by ICON investor presentation.

### Quarterly YOY Comparison



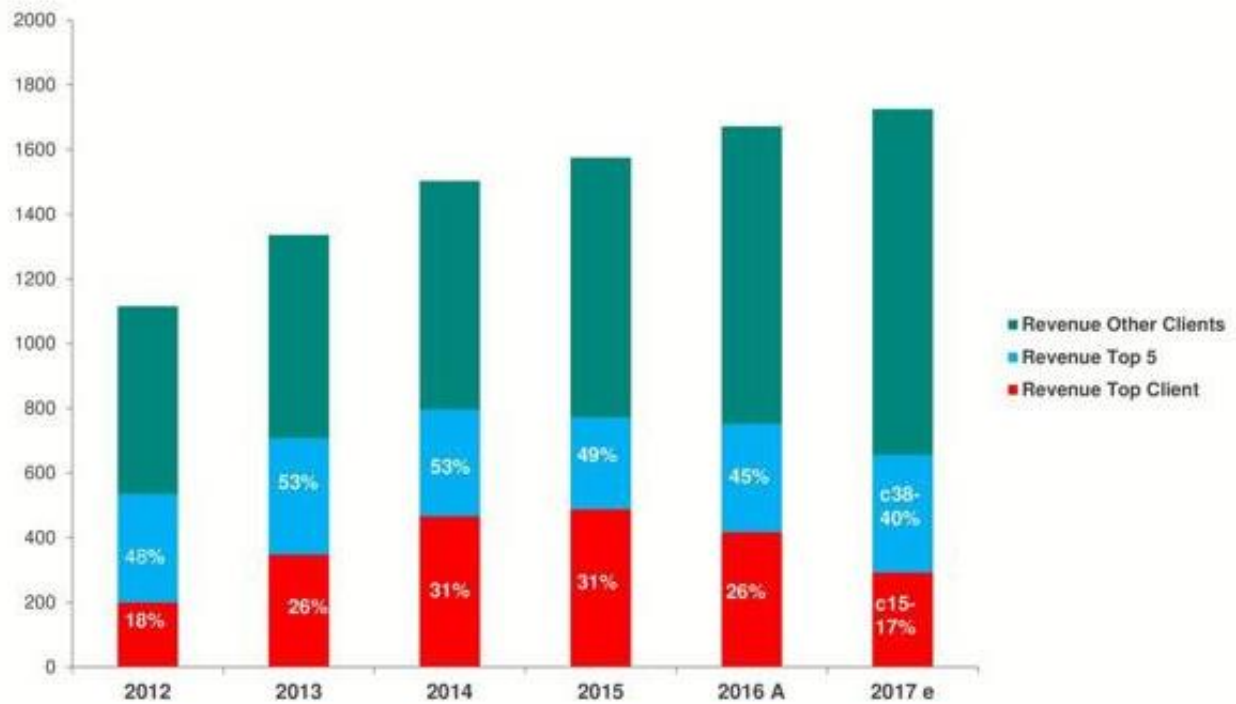
	Q4 2015	Q4 2016	Variance
<b>Net Revenue</b>	\$403m	\$435m	↑ 7.9% (constant currency 8.4%)
<b>Gross Margin</b>	43.1%	42.2%	↓ 90 bps
<b>SG&amp;A (% of revenue)</b>	20.7%	19.2%	↓ 150 bps
<b>Operating Margin</b>	18.7%	19.5%	↑ 80 bps
<b>Net Income Margin</b>	15.7%	17.1%	↑ 140 bps
<b>EPS</b>	\$1.11	\$1.33	↑ 19.8%

## Customer base revenue reduced:

ICON saw financial statements improvements but it also had considerable advances in terms of the number of customers they depend for their revenue. For the full-year 2016, Icon's top client Pfizer; Pfizer represented 26 percent of revenue compared to 31 percent last year. In the fourth quarter, Pfizer's business accounted for just 24 percent of ICON's total revenue and is expected to decrease even further to about 15 to 17 percent by the end of 2017 as shown in the graph below. In 2016, Icon's top five customers represented 45 percent of revenue compared to 49 percent last year, top 10 represented 58 percent compared to 63 percent last year and top 25 accounted for 75 percent compared to 78 percent last year. This decrease in Customer base is beneficial to ICON because of its reduction in risk associated with customer concentration. The main risk is that if anything

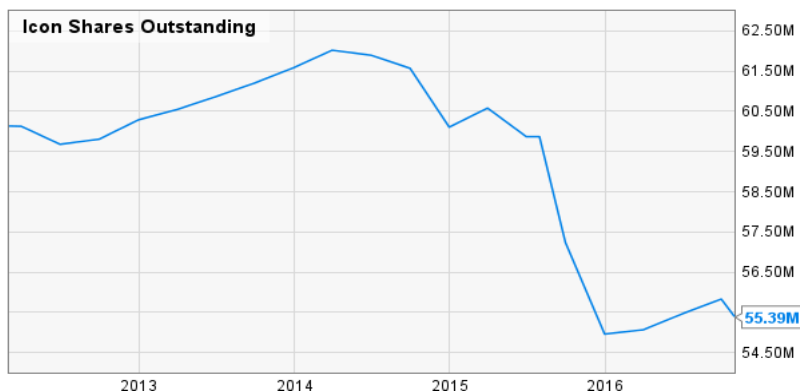
happens to one of ICON's major clients, ICON revenue would also be negatively affected. However, ICON has been doing well in reducing this issue and will continue to do so for the upcoming year.

## Reducing customer revenue concentration



## Stock buyback initiated while share outstanding continues to decrease:

October 1<sup>st</sup>, 2016 ICON had commenced a \$400m buyback program to be able to provide continued value to shareholders. During the fourth quarter ICON used \$110m of its current \$400m. The remaining \$290m according to ICON's management will be spent "opportunisticly" as there are a lot of assets ICON would want to acquire, but does not always succeed due to some pricing issues or other business factors that cause an impediment. Thus, it's important to note since 2013 we have a steady shrinkage of shares outstanding for ICON, as demonstrated by the graph below.



## M&A:

ICON has performed a good amount of M&A throughout years 2008 –2016. Spending roughly \$650m on mergers and acquisitions. It identifies medical devices, late phase services, among others as future areas for M&A investment. As of 2016 ICON continues its strategy of “tuck in” smaller CRO businesses. Management believe larger scale deals tend to be more value destroying rather than value creating. In September 2016, Icon acquired Clinical Research Management Inc., which ICON believes will bring significant experience when operating within government markets and NGO sponsored research markets. Ciaran Murray, former CEO stated “ClinicalRM has a strong track record of partnering successfully with government agencies and NGOs. They will provide a platform for ICON to further penetrate this significant market segment as we continue to grow and diversify our customer base. ClinicalRM's work in the area of global vaccine development will further enhance our capabilities in this important area to the benefit of customers and patients globally.” This acquisition will only further develop and ICON customer base will also helping reduce is customer risk concentration. ICON is hopeful to continue acquiring smaller end CROs when it sees the opportunity rise, but has yet to mention any potential acquisitions. It's important to note that when ICON acquired ClinicalRM stock price increased 11.6% so it's possible the market could react in shareholder's benefit should ICON find another company to acquire.

## Leading EBIT Margins with a share upside:

Late-stage clinical research is a relatively asset-light business. Unlike pre-clinical trials and some early-stage clinical trials, which normally involve extensive laboratory and animal testing, late-stage human studies require relatively minimal infrastructure investment. ICON essentially serves as a consultant, advising and helping its clients plan, set up, run, and evaluate their trials. Due to this, it's easy to understand why ICON is so profitable among being one if not the best CRO. Looking at its EBIT margin for 2016 it was a record high of 18.7% excluding the one-time \$8.2 million restructuring charge, EBIT was 19.2%. The industry median EBIT margin

(\$M except per share data)

Company	Ticker	Price	Mkt Cap	EV	EBIT	EV/EBIT
Quintiles	Q	77.42	18,248	24,405	642	38.0x
Qiagen	QGEN	27.20	6,145	6,679	167	40.0x
West Pharmaceutical	WST	77.02	5,642	5,668	197	28.8x
Parexel	PRXL	59.47	3,030	3,490	312	11.2x
Charles River	CRL	85.12	4,032	5,087	237	21.4x
PRA Health Sciences	PRAH	62.38	3,846	4,530	162	28.0x
Patheon	PTHN	24.63	3,574	5,592	212	26.4x
Bio-Techne	TECH	98.09	3,660	3,893	125	31.1x
Catalent	CTLT	27.11	3,383	5,151	195	26.4x
INC Research	INCR	41.68	2,251	2,580	171	15.1x
Ligand Pharmaceuticals	LGND	102.03	2,134	2,206	44	50.1x
Medpace	MEDP	28.18	1,148	1,274	52	24.5x
High			18,248	24,405	642	50.1x
Median			3,617	4,808	183	27.2x
Low			1,148	1,274	44	11.2x
<b>ICON</b>	<b>ICLR</b>	<b>75.09</b>	<b>4,095</b>	<b>4,118</b>	<b>320</b>	<b>12.9x</b>



around 12%. Even the “most high margin CROs” ever break the 15% barrier. This margin discrepancy between ICON and its peers should continue to widen over time. A 20-22% EBIT margin is a very conservative long-term target, assuming the company continues successfully leveraging its costs over a growing top line and it continues its M&A strategy. Looking at the graph below which also shows some of its competitors. ICON has an enterprise value to EBIT short of 13x, when compared to 27x for the media peer, ICON is at the cheaper end of CROs currently available. Though this is small discount which can be justified to account for the ICON's significant customer concentration. The current 50+% discount in comparison to the median is absurd as it completely ignores the company's robust growth prospects, industry-leading margins, and numerous competitive advantages like global economies of scale, barriers to entry, customer switching costs to name a few. Taking both the positives and negatives into consideration, I believe ICON can comfortably support a 20x EV/EBIT multiple which is 25% discount to peers. This would translate to a higher share value that could be beneficial to investors looking to buy into ICON.

Source: A North Investments, company reports

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## **Conclusion:**

In conclusion, I believe that Icon is an outstanding company. That's has an ongoing M&A appetite, relative high predictability of the business and bright outlook for the CRO industry. Also, ICON ability in diversifying customer base and having capable management are strong catalysts for the future. Overall, Icon remains one of the most profitable companies in the global CRO industry and well-poised to seize any additional opportunities as they arise.

# ICON Public Limited Company (ICLR)

## CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Analyst  
4/25/2017

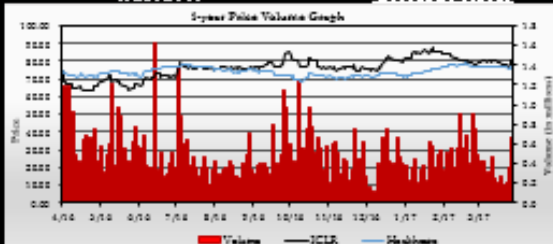
Current Price:  
Dividend Yield:

\$77.07  
0.3%

Intrinsic Value  
Target Price:

\$97.19  
\$94.34

Target 1 year Return: 22.74%  
Probability of Price Increase: 91.4%



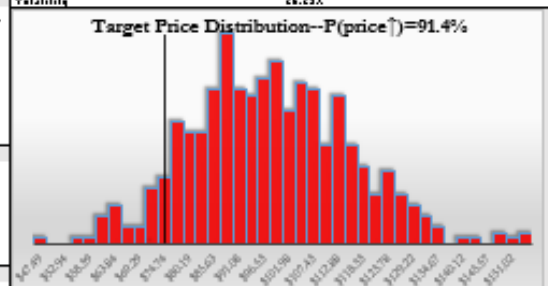
**Description**  
ICON Public Limited Company, a medical research organization, provides enhanced developmental services in the pharmaceutical, biotechnology, and medical device industries in Ireland, rest of Europe, the United States, and internationally.

**General Information**  
Sector: Healthcare  
Industry: Life Sciences Tools and Services  
Last Guidance: November 5, 2015  
Next earnings date: April 27, 2017  
Estimated Country Risk Premium: 3.48X  
Effective Tax rate: 15X  
Effective Operating Tax rate: 15X

Market Data	
Market Capitalization	\$4,335.82
Daily volume (mil)	0.58
Shares outstanding (mil)	56.53
Diluted shares outstanding (mil)	56.44
X shares held by institutions	79X
X shares held by investment managers	89X
X shares held by hedge funds	3X
X shares held by insiders	1.33X
Short interest	3.31X
Days to next short interest	5.52
52-week high	\$88.38
52-week low	\$62.51
Levered Beta	0.51
Volatility	26.25X

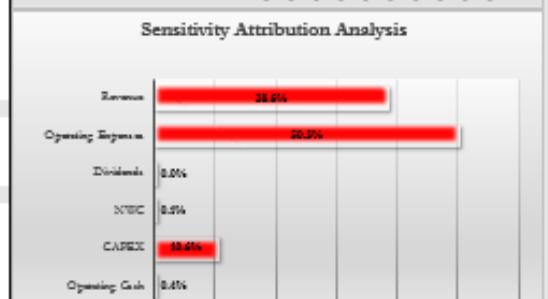
Quarter ending	
12/31/2015	-2.85X
3/31/2016	-5.53X
6/30/2016	-8.84X
9/30/2016	-1.13X
12/31/2016	-3.18X
Mean	-2.51X
Standard error	1.8X

Earnings Surprises	
Revenue	-1.32X
EBITDA	-2.74X
	-5.67X
	-3.31X
	-3.25X
	-2.35X
	0.4X



Management	
Murray, Claran	Executive Chairman
Deenan, Brendan	Chief Financial Officer
Callan, Steven	Chief Executive Officer and
O'Leary, Thomas	Chief Information Officer
Cunningham, Diarmuid	Chief Administrative Officer
Malone, Simon	Executive Vice President of

Total compensation year	
2015	\$7.85X per annum more 4q
2016	\$6.36X per annum more 4q
2017	\$5.36X per annum more 2q
2018	N/A
2019	N/A
2020	N/A
2021	N/A
2022	N/A
2023	N/A
2024	N/A
2025	N/A
2026	N/A



Profitability	
ROIC	16.3X
ROPAT Margin	21X
Revenue/Invested Capital	1.53
ROE	37.8X
Adjusted net margin	28X
Revenue/Adjusted Book Value	4.13

ICLR [LTM]	
2015	28.35X
2016	14.65X
2017	1.53
2018	26.41X
2019	15.71X
2020	1.53

Valuation	
ROPAT margin	1.32
ROIC/WACC	5.32
	5.17
	5.73
	5.74
	5.42
	5.38
	5.33
	4.67
	3.33
	3.32
	2.64
	1.64



Period	
Year Year	Revenue growth
12/31/2017	5.8X
12/31/2018	1.7X
12/31/2019	3.5X
12/31/2020	5.8X
12/31/2021	14.4X
12/31/2022	12.3X
12/31/2023	11.4X
12/31/2024	3.3X
12/31/2025	8.4X
12/31/2026	7.8X
12/31/2027	5.5X
12/31/2028	4.8X
Continuing Period	

Period	
Year Year	Invested Capital
12/31/2017	\$411.41
12/31/2018	\$443.33
12/31/2019	\$438.34
12/31/2020	\$438.44
12/31/2021	\$436.18
12/31/2022	\$4,198.78
12/31/2023	\$4,152.73
12/31/2024	\$4,232.36
12/31/2025	\$4,273.57
12/31/2026	\$4,484.38
12/31/2027	\$4,568.13
Continuing Period	

**Company Description:** Southwest Airlines is a passenger airline that provides scheduled air transportation services. They have 101 destinations in 40 states, Washington D.C., and the commonwealth of Puerto Rico. They fly 8 international destinations, which include Mexico, Jamaica, The Bahamas, Aruba, the Dominican Republic, Costa Rica, Belize, and Cuba. The company was founded in 1967 and is headquartered in Dallas, Texas.

## BUY

Current Price:	\$57.09
Target Price:	\$77.04
Market Cap:	34.52B
Beta:	1.22
52 week range:	35.42-59.68
Average Volume:	5,634,367
WACC:	9.3%
EBITDA Margin:	25.4%
ROIC:	16.29%



**Thesis:** Southwest continues to be one of the most successful airline company based out of the United States. Their low cost strategy was the first of its kind and has provided the company with value unlike their competitors. In the last 52 weeks the stock has surged from 35.42 to a high of 59.68. A weak Q1 earning call could set up a cheap price to buy LUV. Southwest is expected to return to its old self in future quarters, which would increase the stock price once again. In regards to the industry, Southwest has positioned itself in an industry that is growing and is expected to continue growing. Southwest is also able to block itself from the possible travel legislation that will be implemented because the company mostly operates in the United States. Southwest has also been able to meet its competitors or beat them in sales and margin growth.

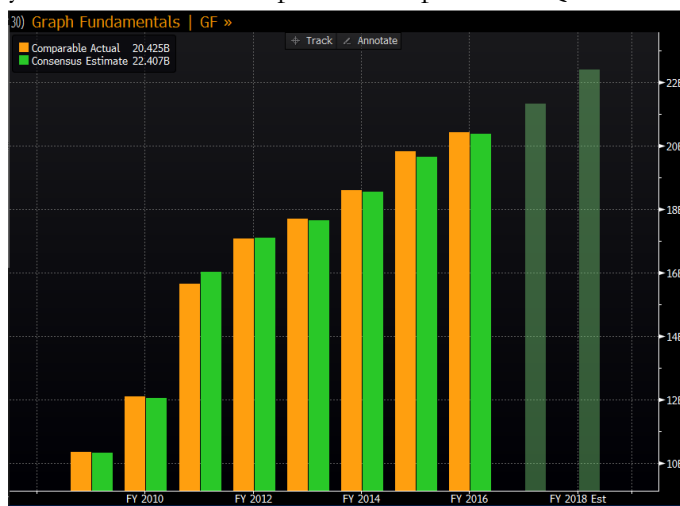
## Catalysts:

- Short Term(within the year): low buy price and positive Q2 earnings
- Mid Term(1-2 years): Increased revenues and margins due to strong unit cost performance
- Long Term(3+): If a strong economy continues the company will continue its success into the long term



## Earnings Performance:

Airlines stocks have known to be to struggle at times to make earnings because of high fuel costs, narrow profit margins, and troublesome labor. Although Southwest has been able to be a profitable company for the last 44 years. Revenues have also increased 3.05% from 2015 to 2016 and have increased 19.5% in the last 5 years. Their Q4 2016 earnings call beat estimates. Revenues totaled \$5.076B, which carried a 0.9% revenue surprise. Earnings per share rose beat estimates by 6 cents to finish the quarter at \$0.75. Earnings per share for the year finished at 3.75, a 6.5% increase from the year before and a 569.64% increase in the last 5 years. Southwest is expected to report their Q1 2017 results on April 27, before the market opens. Expectations

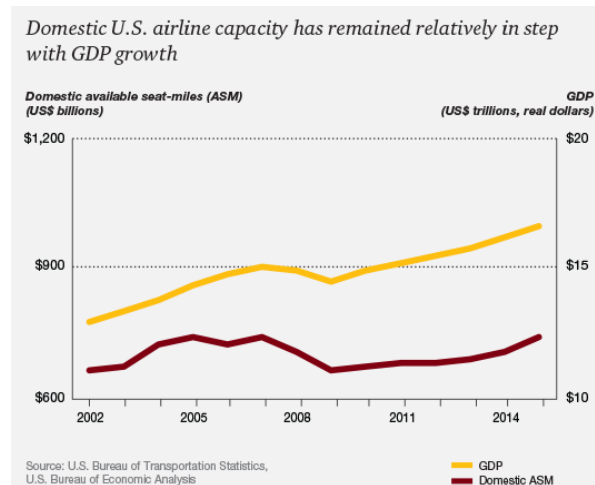


are an EPS of \$0.62 and a revenue of \$4.89 billion.

The decrease could be due to an expected increase of 6% to 7% in CASM (cost per available seat mile). Option markets expect a 4.5% potential stock move up or down after the report is released. Due to this, I'd wait for to buy the stock after the market has already reacted to the announcement. A potential 4.5% drop could set up a cheaper buy. For the longer run, Southwest is projected to finish 2017 with revenues of \$21323.7M, 4% increase from the year before. EPS are also expected to increase from 2016 to 2017 by 1.5%.

## Industry Outlook:

Passenger demand is measured by RPM (revenue passenger miles). The global airline industry demand grew 6.3% YoY. Regional and Legacy carriers both saw improvements in 2016. For the airline industry future demand is based on economic growth. Analysts believe expect more growth going into the future. Warren Buffet once described the industry as a "death trap for investors," has recently changed his tone. He has recently invested more than \$8 billion in U.S. commercial carriers: American Airlines, Delta, United Continental, and Southwest. Buffet expects the industry to stay hot. Although, there are a few factors that could harm the industry. The most important being the increase in oil prices. Oil prices have been known to seriously impact airline companies' margins. The industry is also extremely competitive and price wars can seriously impact these companies.

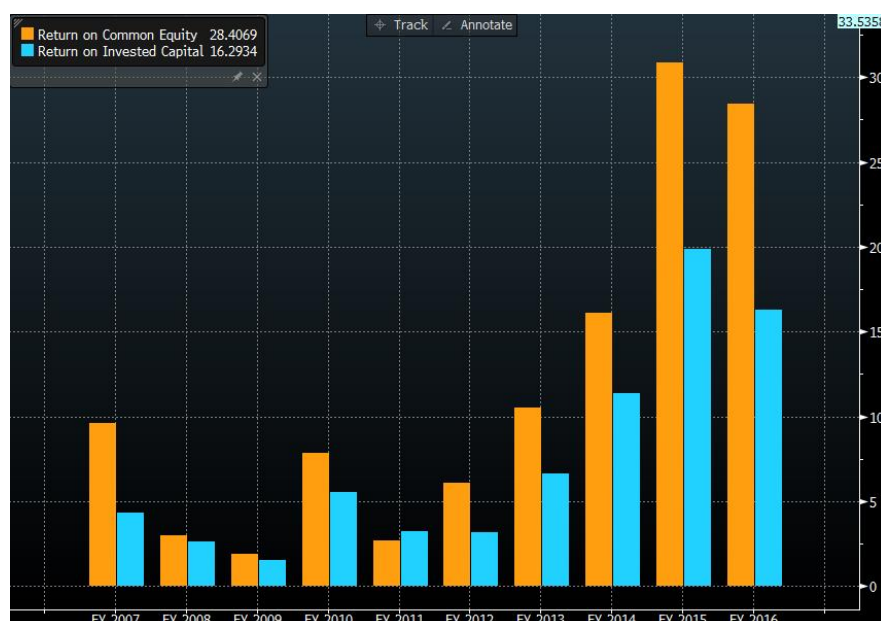


## US Travel:

Southwest does most of its travel in the United States and near-countries such as the Dominican Republic and Mexico. This makes them a more sheltered against international travel problems that have emerged in recent months. New legislation that may emerge will not harm southwest. This has them placed to outperform companies that focus more on international travel. According to IATA's 2017 Regional Analysis, North American carriers are expected to finish 2017 with a net margin of 8.5% and an average profit per passenger of \$19.58. The 8.5% net margin is the strongest out of any other region.

## Profitability:

Southwest has been able to make their company more profitable over the last few years. They been able to do this by improving their low cost strategy. In just 6 years their EBITDA margin has increased from 8.99% to 24% and is projected to increase to 24.2% in 2017 and 25.9% in 2018. Their return on invested capital has increased 948% to 28.41% in just 6 years. Their sustainable growth rate was last recorded at 25.43%.



## Chance to buy low:

The company is expected to report unfavorable earnings for Q1, because of this the stock is expected to drop around 4%. This hiccup will not indicate doom for the company, but will give investors the opportunity to buy the stock at a lower price. After the Q1 earnings report is released, LUV should be priced lower, which should give us a better price to buy at. This is because the company is expected to rebound in Q2 and further the company's success and growth.

## Competitors:

Southwest has been able to perform better than their competitors. The companies used to compare were Jet Blue, Spirit Airlines, Delta, and United. Southwest was able to match the median sales growth YoY at 1.18%. They also beat all competitors in operating margin (LTM) at 17.89% other than Spirit, who saw a 20.89% increase. For last year Southwest posted an EBITDA margin of 25.35%, better than all competitors except Jet Blue who recorded a margin of 25.71%. Keep in mind Spirit is a younger company that is prone to more growth. They also better the median return on assets at 9.45% and matched the median ROE at 27.7%. Southwest also led competitors in return on capital at 20.14%. This shows investors that Southwest is near the top of its class.

Name	Sales (LTM)	Operating Profit (LTM)	Net Income (LTM)	Salaries	Fuel Expense	Capital expenditures (LTM)	Sales Growth YoY	Operating Margin (LTM)	Return on Assets	Return on Equity	Return on Capital
Median	20.48B	3.67B	2.17B	6.80k	3.65k	-2.01B	1.18%	16.77%	8.27%	27.70%	15.10%
100) SOUTHWEST AIRLINES CO	20.48B	3.67B	2.17B	6.80k	3.65k	-2.01B	1.18%	17.89%	9.45%	27.70%	20.14%
101) JETBLUE AIRWAYS CORP	6.62B	1.11B	636.00M	1.70k	1.07k	-1.01B	-0.74%	16.77%	8.27%	20.77%	15.59%
102) SPIRIT AIRLINES INC	2.38B	485.04M	254.94M	472.47	447.55	-541.12M	9.96%	20.89%	10.27%	22.27%	14.60%
103) DELTA AIR LINES INC	39.54B	6.47B	3.55B	10.03k	5.99k	-3.32B	-1.11%	16.35%	6.78%	29.35%	--
104) UNITED CONTINENTAL HO...	36.78B	4.47B	2.55B	10.28k	5.81k	-3.10B	2.75%	12.14%	6.23%	31.31%	14.17%

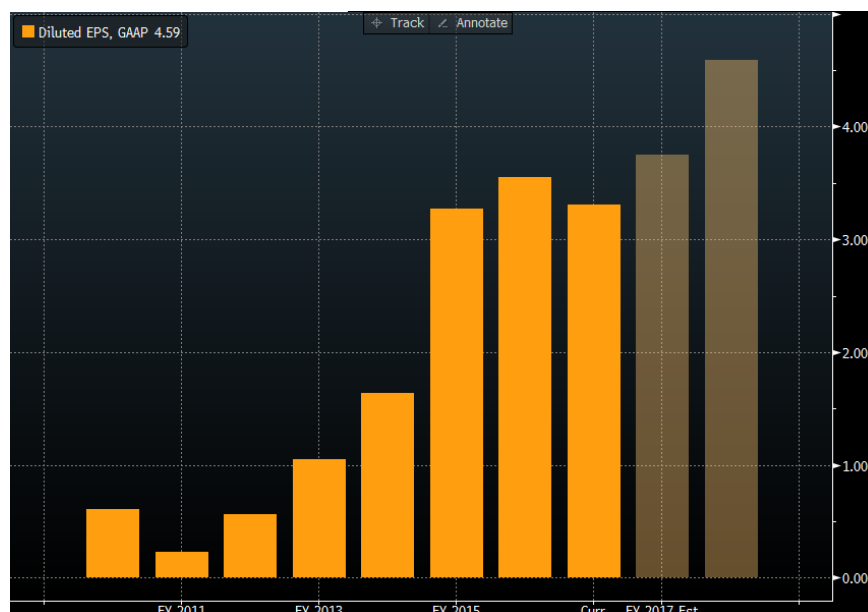
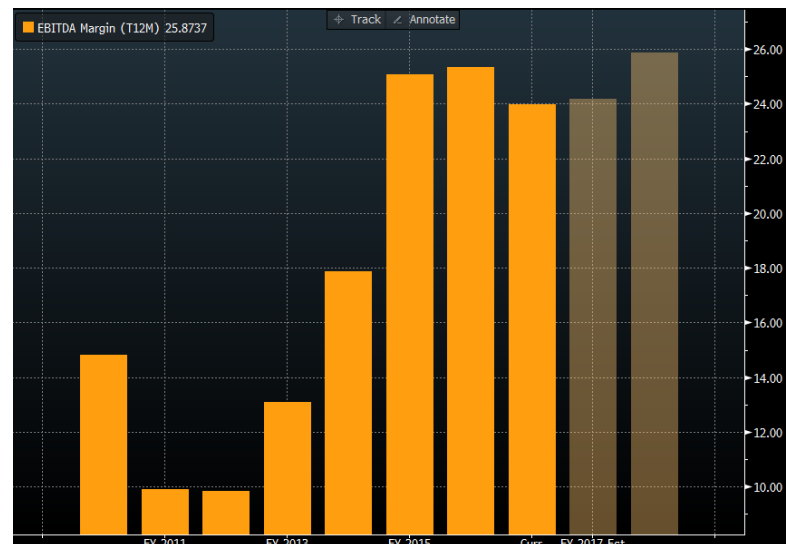


Metric	LUV	Low	Comp Range	High
Est P/E Current Yr	14.80	8.82		14.80
EV/T12 EBITDAR	6.64	4.24		6.64
Sales Growth Yoy (%)	3.05	-3.45		8.43
EBITDA Margin (%)	25.35	19.02		25.71
Yield per Passenge...	15.08	10.79		16.03

● LUV US ◆ Median

## The Future seems Bright:

Southwest hinted that future earnings will look a lot better than the projected Q1 earnings. Quarter 1 was hurt by rising non-fuel costs and big raises to several employee groups. These problems are supposed to be resolved in Q2 due to a projected increase in revenue. RASM is expected to rise 1% to 2% due to the increase in travel during the Easter season. Current cost pressure are also expected to end this year and by Q4 they are expected to be finished with its wage increases. Strong unit cost performance and profit growth is expected to return in at the end of 2017 or the beginning of 2018. Stock prices are expected to then rise during this time that is it is your best bet to buy LUV now while it is cheap.





## **Conclusion:**

Due to the information provided, LUV is at a great time to buy. The negative Q1 earnings call should decrease the price to a nice point for investors to get in. The company is then expected to rebound in later quarters, thus sending the price back up. Southwest is able free from seeing the backlash of possible travel legislation due to the fact much of its business is in the US. The airline industry itself has been doing well and is expected to continue into the next few years. If macro-economic conditions persist and Southwest can continue to create value, LUV should have no problem reaching the target price of 77.04.

## Southwest Airlines Co. (LUV)

## CENTER FOR GLOBAL FINANCIAL STUDIES

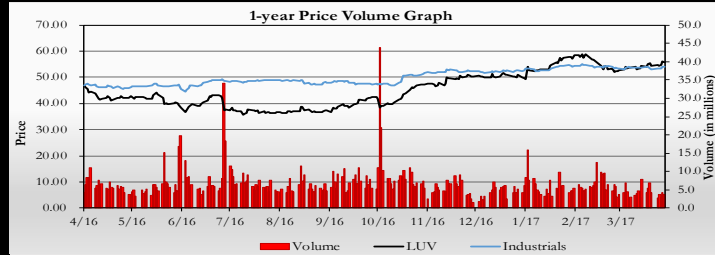
**BULLISH**

Analysis by Michael Capozzi  
4/25/2017

Current Price: **\$57.09**  
Divident Yield: **0.6%**

Intrinsic Value **\$119.78**  
Target Price **\$128.49**

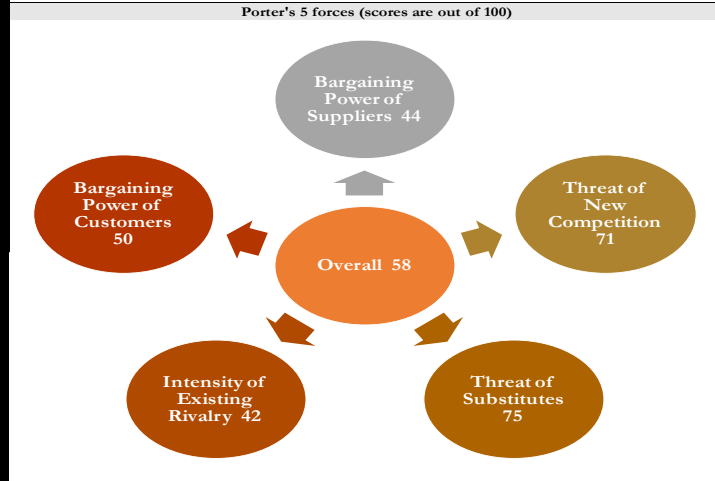
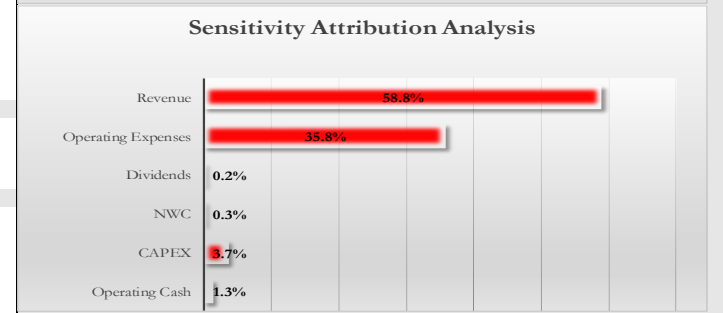
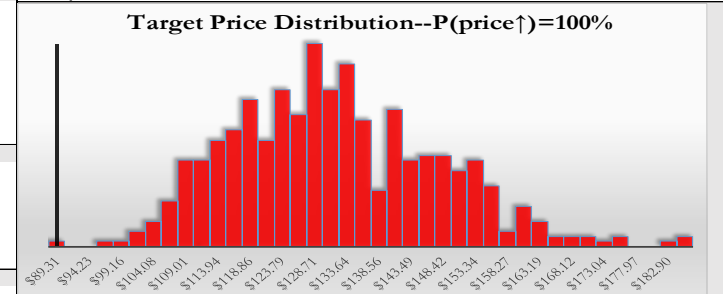
Target 1 year Return: 125.7%  
Probability of Price Increase: 100%



Description	
Southwest Airlines Co. operates a passenger airline that provides scheduled air transportation services in the United States and near-international markets.	
General Information	
Sector	Industrials
Industry	Airlines
Last Guidance	November 3, 2015
Next earnings date	April 27, 2017
Estimated Country Risk Premium	6.33%
Effective Tax rate	20%
Effective Operating Tax rate	-7%

Market Data	
Market Capitalization	\$34,517.18
Daily volume (mil)	5.24
Shares outstanding (mil)	604.61
Diluted shares outstanding (mil)	633.00
% shares held by institutions	74%
% shares held by investments Managers	69%
% shares held by hedge funds	9%
% shares held by insiders	0.21%
Short interest	1.38%
Days to cover short interest	1.44
52 week high	\$59.68
52-week low	\$35.42
Levered Beta	0.88
Volatility	26.98%

Past Earning Surprises		Peers	
Quarter ending	Revenue	EBITDA	
12/31/2015	-2.28%	-0.97%	American Airlines Group Inc.
3/31/2016	-0.08%	-4.02%	United Continental Holdings, Inc.
6/30/2016	-1.70%	-8.75%	Delta Air Lines, Inc.
9/30/2016	-1.59%	5.38%	JetBlue Airways Corporation
12/31/2016	0.26%	-3.99%	Alaska Air Group, Inc.
Mean	-1.08%	-2.47%	Spirit Airlines, Inc.
Standard error	0.5%	2.3%	Allegiant Travel Company
			SkyWest, Inc.
Management	Position	Total compensations growth	Total return to shareholders
Kelly, Gary	Chairman and Chief Executive	10.71% per annum over 6y	-5.38% per annum over 6y
Romo, Tammy	Chief Financial Officer and	26.92% per annum over 4y	25.85% per annum over 4y
Van de Ven, Michael	Chief Operating Officer	8.07% per annum over 6y	-5.38% per annum over 6y
Jordan, Robert	Chief Commercial Officer and	9.44% per annum over 6y	-5.38% per annum over 6y
Lamb, Arthur	Executive Vice President of	5.5% per annum over 1y	16.67% per annum over 1y
Nealon, Thomas	President	155.58% per annum over 5y	8.61% per annum over 5y
Profitability	LUV (LTM)	LUV (5 years historical average)	Industry (LTM)
ROIC	29.8%	10.07%	27.80%
NOPAT Margin	21%	7.88%	14.0%
Revenue/Invested Capital	1.39	1.28	1.98
ROE	64.1%	16.12%	38.88%
Adjusted net margin	20%	6.33%	12.6%
Revenue/Adjusted Book Value	3.19	2.54	3.09
Invested Funds	LUV (LTM)	LUV (5 years historical average)	Industry (LTM)
Total Cash/Total Capital	17.6%	17.3%	22%
Estimated Operating Cash/Total Capital	8.9%	7.8%	N/A
Non-cash working Capital/Total Capital	-27.1%	-25.1%	-38%
Invested Capital/Total Capital	84.2%	83.4%	100%
Capital Structure	LUV (LTM)	LUV (5 years historical average)	Industry (LTM)
Total Debt/Common Equity (LTM)	0.32	0.64	0.45
Cost of Existing Debt	3.85%	4.38%	4.01%
Estimated Cost of new Borrowing	4.32%	4.76%	4.01%
CGFS Risk Rating	CCC	CC	CC
Unlevered Beta (LTM)	0.69	0.63	0.69
WACC	7.94%	7.25%	8.16%



Porter's 5 forces (scores are out of 100)		Valuation	
Period	Revenue growth	NOPAT margin	ROIC/WACC
Base Year	4.0%	21.4%	3.75
12/31/2017	3.6%	9.4%	1.59
12/31/2018	4.3%	11.6%	1.79
12/31/2019	-9.0%	9.0%	1.19
12/31/2020	24.1%	12.6%	2.31
12/31/2021	21.2%	14.1%	2.76
12/31/2022	18.4%	14.9%	2.76
12/31/2023	15.5%	15.4%	2.72
12/31/2024	12.6%	15.7%	2.65
12/31/2025	9.8%	15.9%	2.57
12/31/2026	6.9%	16.0%	2.47
Continuing Period	4.1%	16.0%	2.22
Period	Invested Capital	Net Claims	Price per share
Base Year	\$15,357.05	\$8,337.75	\$119.26
12/31/2017	\$14,990.94	\$9,929.45	\$127.63
12/31/2018	\$15,000.34	\$9,660.76	\$137.10
12/31/2019	\$14,193.86	\$6,939.11	\$147.36
12/31/2020	\$14,663.41	\$7,329.82	\$158.12
12/31/2021	\$15,809.03	\$9,040.10	\$169.91
12/31/2022	\$18,018.85	\$10,049.68	\$182.81
12/31/2023	\$19,076.29	\$10,140.61	\$196.81
12/31/2024	\$16,970.27	\$9,062.92	\$211.91
12/31/2025	\$19,320.75	\$6,695.29	\$227.92
12/31/2026	\$24,176.45	\$2,590.18	\$244.78
Continuing Period			

Liberty Interactive Corporation (also referred as QVC Group) is an American Corporation headquartered in Englewood, Colorado. It was originally a division of Liberty Media, but became independent in 1999. Even though the company owns interests in various subsidiaries, its two main sources of operations and revenues are QVC and Zulily. The company mainly operates in the United States, but also has operations in Europe, Japan, and China.

## BUY

Current Price: \$21.37  
 Target Price: \$32.32  
 Market Cap: \$9.63 billion  
 Average Volume: 2.73 million  
 52-week High: \$27.25  
 52-week Low: \$17.24  
 Short Interest: 1.94% of Float

## Value Creation Ratios

Debt to Equity: 0.68  
 Cost of Debt: 4.5%  
 Cost of Equity: 11.8%  
 WACC: 9.1%  
 EBITA Margin: 13.4%  
 ROIC: 9.7%  
 ROIC/WACC: 1.07



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### Thesis:

Because of a year of sluggish growth, the market has made QVCA stock fall significantly from its recent high (-25% in the last 12 months). However, global consumer and technology trends, as well as a strong business model based on pricing power, exclusivity, and customer retention, are likely to send the stock back up in the next 2 years. In addition to that, the company can still improve when it comes to creating value and generating profits. Therefore, this stock is a safe investment that, in my opinion, has recently hit a bottom and can only increase in value in the next 24 months.

### Catalysts:

- Short Term(within the year): Ability to overcome current negative market expectations
- Mid Term(1-2 years): successful implementation of initiatives
- Long Term(3+): Ability to sustain the growing mobile trend

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### Products and Segments:

The first and main segment of Liberty Interactive Corporation is QVC (Quality Value Convenience). The company, which has been acquired by Liberty in 2003, generates revenue through its broadcasting network, televised home shopping, and online shopping. Through its online channel network and TV channel, it is able to broadcast live 24 hours a day, 364 days a year in the United States, almost reaching the entirety of American households. Thanks to this presence, QVC is the second highest television network when it comes to revenue generation, and it ranks as #1 when it comes to home shopping networks. On its website, QVC has three different live channels: QVC TV, QVC2TV, and Beauty iQ TV. The products offered range from clothing to accessories, jewelry, personal care, electronics, food, kitchen products, and House & Garden maintenance. Customers can buy easily the advertised products by calling the number displayed on TV. They can also buy online, as on any other online shopping website. Finally, even though it represents only a marginal share of QVC revenue, a few actual outlet stores exist in the United States. As of 2016, QVC US represents \$6.1 billion in revenue, roughly 60% of Liberty Interactive's total revenue. QVC also started operating in Europe in 1993 (in the United Kingdom), and has since expanded to France, Germany, and Italy. The company also went to Asia and has started operating in Japan and China. Overall, international operations account 25% of the Liberty Interactive's revenue (\$2.6 billion revenue in 2016).

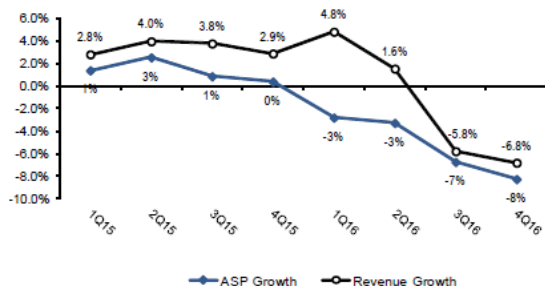
In addition to QVC, Liberty Interactive has acquired Zulily in 2015, for over \$2.5 billion. Zulily is also an online shopping company. However, unlike QVC, it does not have a broadcasting network. Therefore, Zulily is more of a classic Online Retail company. It mainly offers clothing and apparel, but also various goods like toys, kitchen products, bed linens, and any item for home. In 2016, Zulily generated \$1.55 billion in revenue (15% of QVCA total revenue).

## Current Market Pricing:

In the last year, QVCA stock has been struggling. As you may see on the price chart, earnings results in June 2016 led the share price to fall from its \$27-\$28 range (near its all-time high) to the \$20 range. As a matter of fact, after years of strong growth, the market was disappointed in the company's ability to generate revenue.

In Millions of USD except Per Share	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
12 Months Ending	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016
 Revenue	10,018.0	10,219.0	10,028.0	9,169.0	10,219.0

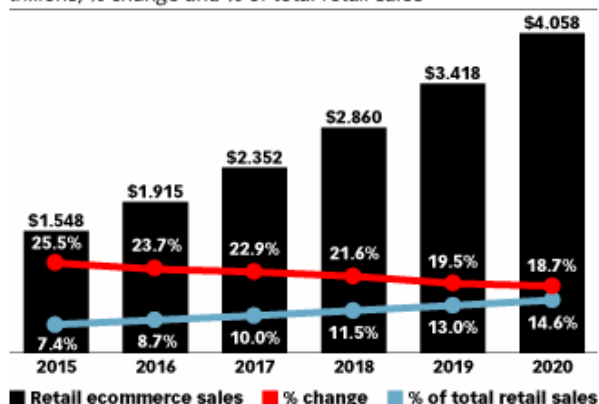
As seen in the above table, from 2014 to 2015, revenue fell by almost 10%, and the increase in revenue in 2016 was only due to the full integration of Zulily in the company's financial statements. The most worrying point for investors, other than bearish German and Japanese markets, have been the growth in the domestic market. As a matter of fact, after being slow but positive for several quarters (never more than 5%), sales growth in the United States eventually became significantly negative (-5.8% and -6.8% in the last two quarters). This led the



market to massively sell QVCA stock. QVCA stock is now underpriced when looking at multiples: 8.20 EV/EBITDA vs 13.23 for the industry, and 21.48 forward P/E ratio vs 29.89 for the industry. This underpricing could make sense considering the current negative growth of the company, but as explained in the next two sections, Liberty Interactive has everything to prove the market wrong in the coming years.

## Strong Business Model and positive trends:

**Retail Ecommerce Sales Worldwide, 2015-2020**  
trillions, % change and % of total retail sales



inventory held for every product makes customers more likely to purchase immediately, without waiting for discounts. Furthermore, as QVC is the only seller of its products, customers cannot compare price and quality, leaving a strong pricing power to the company. Finally, the company's customers mainly have sufficient income to purchase products repetitively and remain customers in the long run. AS pointed out by the same Aegis

In spite of the current market pricing due to the sluggish revenue growth, two things have to be noted. First, QVCA has a strong business model that will most likely lead to steady revenue and customer base. Then, the current global trends in consumption and e-commerce make me believe the coming years will be way more bullish for Liberty Interactive. To begin with, QVC (85% of the company's revenue) has a competitive advantage: exclusivity. As a matter of fact, as quote by an Aegis Capital Corp report, over 75% of the products displayed on QVC channels and networks can only be purchased through QVC at the time of airing. In addition to this exclusivity, the limited

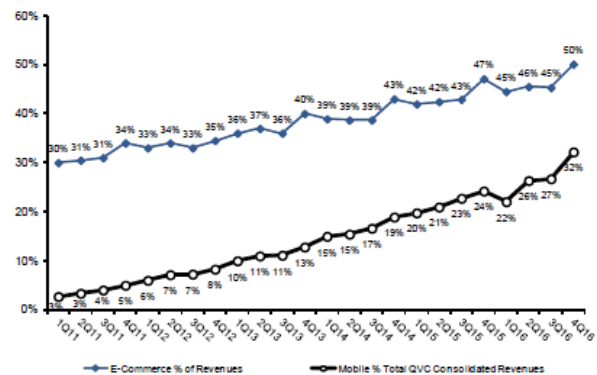


research, “Close to 90% of the customer base are women with above average income and household wealth, they make 24 purchases per year, and the customer base has a high 89% retention”.

In addition to this stability in the revenue, pricing power, and customer base, the global trend when it comes to e-commerce, and the increasing portion of QVC it represents, add up to give potential for growth for Liberty Interactive.

As shown in the above graph, the size of the retail e-commerce market is expected to double in the next 4 years, averaging a 20% annual growth rate. Eventually,

by 2020, ecommerce sales will represent as much as 14.6% of total retail sales worldwide. Given the current importance of e-commerce for QVC, it is beneficial that this market is expected to grow fast. Indeed, as of Q4 2016, e-commerce represented 50% of the company revenue. This increasing share is partially due to the early launch and success of QVC app that allows customers to make purchases directly from their mobile phones or tablets. Mobile revenues now account for 32% of QVC total revenue. It only represented 1% of consolidated revenue 6 years ago. If this trend keeps on going, it is fair to assume QVC will be able to get back to sustainable revenue growth.



## Current Initiatives:

To boost revenue and send QVC domestic back in the positive growth, Management has decided to take on initiatives, and these have been shared in SEC filings and earnings calls. To begin with, merchandising actions are being undertaken to improve efficiency in the sales generation. First for accessories (13% of global sales), focus will be made on promoting comfort sleepwear and lounge wear, where growth has been the strongest in the past quarters. For jewelry (9% of total sales), growth has been too low in the past quarters. To remediate it, the company will perform inventory clearance and reduce the amount of time awarded to advertising these products. Growth will be brought back with the sale of products that were not available at QVC in the past like Grace Kelly or Fossil watches products. Then, the company needs to bring in more new customers (2.1 million new customers in the USA in 2016, below 2015 numbers of 2.5 million). To do so, the company will use if Beauty IQ network and Facebook live, as well as various advertising campaigns, to promote kitchen, electronics, and beauty products. These product lines together account for almost half the company’s revenue in the United States. Finally, the company will invest heavily in its smaller networks. According to management, Beauty IQ (reaches only 40 million households against 100 million for main networks) has customers that “are 6 years younger, make more money, are more educated, and purchase more frequently”. Therefore, substantial investment will be made in this network. Then, Facebook live content will also be a significant area of improvement.

## Profitability:

When it comes to profitability, the company has been performing slightly better than its industry in the past year. According to Capital IQ Data, latest EBITA margin for QVCA was 13.4%, whereas it was only 9.3%. However, we can see on the EBITA Margin table that the trend is rather

	EBITA Margin	
	History	LFY
qvca	16.3%	13.4%
Competitors	5.9%	9.3%

positive for competitors, and negative for QVCA (historical EBITA: 16.3% vs 5.9% for competitors). As a matter of fact, as written earlier, Liberty Interactive depends heavily on revenue growth to improve profitability (through economies of scale). However, even though the below table from Bloomberg shows a better than average revenue growth for Liberty Interactive, one should not forget it is not organic growth. The sales growth percentage for 2016 because of the full integration of Zulily for the full year (+1 billion compared to previous year). Without this additional \$1 billion, revenue growth would have been perfectly flat. This flat revenue is the

Name (BICS Best Fit)	Sales Growth (%)	EBITDA Growth (%)	EBITDA Margin	Operating Income Margin
Average	5.83%	-6.72%	12.25%	8.93%
100) LIBERTY INTERACTIVE C...	11.45%	1.86%	18.21%	9.89%

main reason why Liberty Interactive is losing its advantage over competitors. However, as the company has made decisions to help QVC grow again, and as the expected revenue trends are all bullish, it is safe to say the EBITDA/EBITA will change direction and increase again in the near future to send QVCA back with the top performers when it comes to Operating Margins. This will lead to an increase in ROIC that will eventually match competitors' (competitors, in spite of lower EBITA, have better ROIC as they have a higher Capital Usage ratio currently).

## Financial Health and Value Creation:

Description <sup>A</sup>	Type	Principal Due (USD)	Coupon/Base Rate	Floating Rate
1% Exchangeable Senior Debentures Due 2043	Bonds and Notes	-	1.000%	NA
3.125% Senior Secured Notes Due 2019	Bonds and Notes	399.0	3.125%	NA
4.375% Senior Secured Notes Due 2023	Bonds and Notes	750.0	4.375%	NA
4.45% Senior Secured Notes Due 2025	Bonds and Notes	599.0	4.450%	NA
4.85% Senior Secured Notes Due 2024	Bonds and Notes	600.0	4.850%	NA
5.125% Senior Secured Notes Due 2022	Bonds and Notes	500.0	5.125%	NA
5.45% Senior Secured Notes Due 2034	Bonds and Notes	399.0	5.450%	NA
5.95% Senior Secured Notes Due 2043	Bonds and Notes	300.0	5.950%	NA
8.25% Senior Debentures Due 2030	Bonds and Notes	504.0	8.250%	NA
8.5% Senior Debentures Due 2029	Bonds and Notes	287.0	8.500%	NA
Bank Credit Facilities	Revolving Credit	1,896.0	2.200%	Benchmark

To finance all of its acquisitions and investments in networks and advertising, will need to raise capital. As a matter of fact, as of December 2016, the company only had \$338 million in cash, which represented less than 2.5% of their total assets. Raising equity would probably threaten the stock's value, as it would prove the company cannot afford to take on more debt. Therefore, any further investment will require the

Kd	History	LFY
qvca	5.2%	4.5%
Competitors	4.1%	3.5%

company to take

on more debt. One could be worried, as the company's current capital structure is already leveraged, with a Debt-to-Equity ratio of 0.68. Because of this, and of the low liquidity of the company, the rating QVC Group is

2) Standard & Poor's	
3) Outlook	NEG
4) LT Foreign Issuer Credit	BB
5) LT Local Issuer Credit	BB

not as great as it could be for such a company: Its S&P500 rating is only BB. Because of this risk, the company's long term debt rate is rather high: 8.5% for bonds maturing in 2029. However, most of the company's debt consists of a revolving credit at LIBOR + 2.2%. This eventually leads the current Cost of Debt of QVC Group to be quite low, at 4.5%. However, it is still 1 percentage point above competitors, which shows the relative financial risk that QVC Group and its investors have to assume. Once Cost of Equity has been accounted for, WACC is at 9.1%, below ROIC of 9.7%. Therefore, the company's ROIC/WACC ratio is 1.07, showing the company is creating value. It is still however lower than its competitors that managed to generate higher ROIC, and have a ROIC/WACC ratio of 1.60. As the company has been struggling generating revenue growth and has been investing in Zulily to make it profitable, it has agreed to temporarily lower its profitability (ROIC/WACC had been 1.38 historically) to promote organic growth and bring more profits to its shareholders in the future. In the future, the gap will most likely close, and QVCA will probably match and maybe surpass its competitors when it comes to value creation, leading to significant stock price appreciation.

## Conclusion:

Overall, if Liberty Interactive Corporation's common stock is at its current price level today, it is mainly due to fear of the market regarding its ability to overcome the current revenue growth issues. Another concern from investors might be the high level of leverage of the company that brings some financial risk. However, management, which is composed of experienced members (CEO was CMO of Dell, CFO was senior manager for Procter & Gamble) has understand how to remediate revenue issues, and actions undertaken will most likely send the company back on a profitable path. Within the next 2 years, I expect the price to reach at least \$32, which is in line with my pro forma valuation.

## QVC Group (qvca)

## CENTER FOR GLOBAL FINANCIAL STUDIES

**BULLISH**

Analysis by Maxime Lattanzio  
4/27/2017

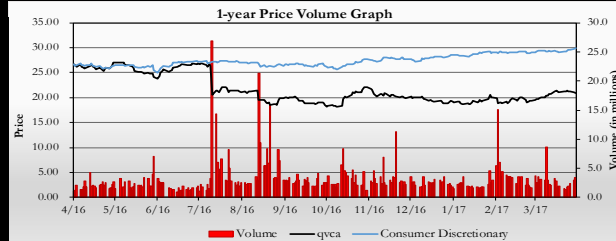
Current Price:  
Divident Yield:

\$21.37  
0.0%

Intrinsic Value  
Target Price:

\$27.15  
\$32.32

Target 1 year Return: 51.23%  
Probability of Price Increase: 99.2%

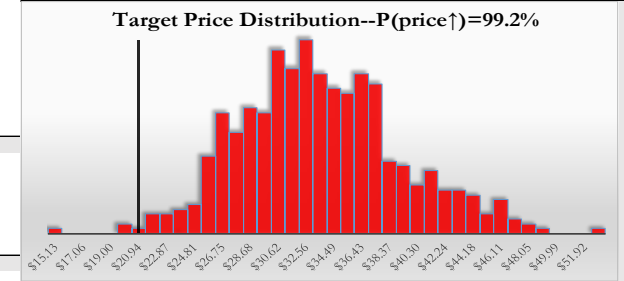


Description	
QVC Group markets and sells various consumer products primarily through live merchandise-focused televised shopping programs, Internet, and mobile applications.	
General Information	
Sector	Consumer Discretionary
Industry	Internet and Direct Marketing Retail
Last Guidance	November 3, 2015
Next earnings date	May 8, 2017
Estimated Country Risk Premium	7.27%
Effective Tax rate	18%
Effective Operating Tax rate	34%

Market Data	
Market Capitalization	\$9,707.40
Daily volume (mil)	1.75
Shares outstanding (mil)	454.57
Diluted shares outstanding (mil)	481.00
% shares held by institutions	85%
% shares held by investments Managers	72%
% shares held by hedge funds	8%
% shares held by insiders	8.44%
Short interest	1.73%
Days to cover short interest	2.56
52 week high	\$27.25
52-week low	\$17.24
Levered Beta	1.06
Volatility	0.00%

Past Earning Surprises		
Quarter ending	Revenue	EBITDA
12/31/2015	-1.71%	-16.00%
3/31/2016	-0.50%	-11.14%
6/30/2016	-0.70%	-9.36%
9/30/2016	-2.21%	-9.00%
12/31/2016	-4.59%	-8.43%
Mean	-1.94%	-10.78%
Standard error	0.7%	1.4%

Peers	
HSN, Inc.	
Wayfair Inc.	
The Liberty SiriusXM Group	
Duluth Holdings Inc.	
Overstock.com, Inc.	
Lands' End, Inc.	



Management	
George, Michael	Chief Executive Officer and President and Director
Maffei, Gregory	Chief Financial Officer
Carleton, Mark	Chief Information Officer
Sprinkle, Todd	Senior Vice President and Ge
Baer, Richard	Chief Corporate Development
Rosenthaler, Albert	

Total compensations growth	
N/M	N/M
N/M	N/M
N/M	N/M
N/M	N/M
N/M	N/M
N/M	N/M

Profitability	
ROIC	18.7%
NOPAT Margin	7%
Revenue/Invested Capital	2.51
ROE	-22.6%
Adjusted net margin	5%
Revenue/Adjusted Book Value	-4.39

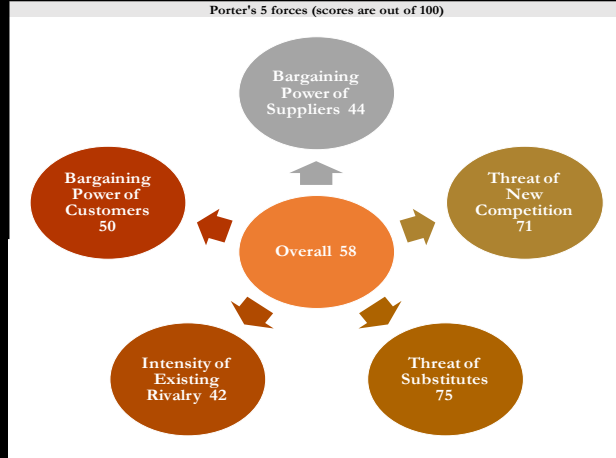
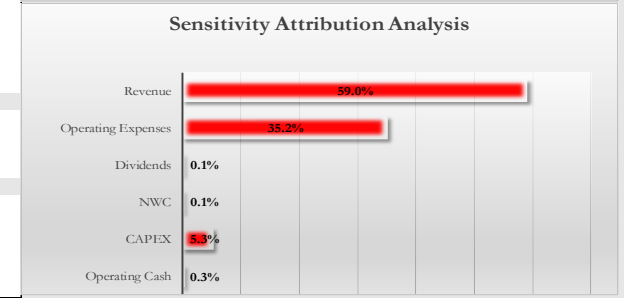
Industry (LTM)	
qvca (5 years historical average)	10.43%
14.11%	11.5%
2.44	0.91
-271.64%	10.92%
11.54%	10.3%
-23.53	1.06

Invested Funds	
Total Cash/Total Capital	2.3%
Estimated Operating Cash/Total Capital	2.2%
Non-cash working Capital/Total Capital	3.8%
Invested Capital/Total Capital	29.4%

Industry (LTM)	
qvca (5 years historical average)	36%
3.5%	N/A
3.3%	N/A
4.4%	-28%
27.5%	72%

Capital Structure	
Total Debt/Common Equity (LTM)	0.68
Cost of Existing Debt	4.58%
Estimated Cost of new Borrowing	3.64%
CGFS Risk Rating	BB
Unlevered Beta (LTM)	0.76
WACC	9.11%

Industry (LTM)	
qvca (5 years historical average)	10.83%
0.22	13.50%
6.61%	
4.04%	
0.94	
10.83%	



Period	
Base Year	11.5%
12/31/2017	-1.7%
12/31/2018	3.5%
12/31/2019	3.8%
12/31/2020	2.9%
12/31/2021	2.9%
12/31/2022	2.9%
12/31/2023	2.9%
12/31/2024	2.9%
12/31/2025	3.0%
12/31/2026	3.0%
Continuing Period	4.0%

Valuation	
NOPAT margin	7.5%
10.0%	2.06
10.9%	2.54
11.4%	2.72
11.8%	2.90
13.0%	3.03
13.5%	3.38
13.9%	3.53
14.4%	3.67
14.8%	3.82
15.3%	3.96
10.7%	4.11
2.92	

Continuing Period

April 28<sup>th</sup>, 2017

## Triton International: TRTN (Long)

John Garrity

**Sector:** Customer Services / Trading Companies  
& Distributors

**Industry:**

**Current Price:** \$30.61

**Target Price:** \$75.74

## Company Description:

Triton International Limited is the world's largest lessor of intermodal containers and chassis. Intermodal containers are large, standardized steel boxes used to transport freight by ship, rail, or truck. Due to the handling of efficiencies worldwide, intermodal containers are the primary means by which many materials are shipped internationally. Chassis are used for transportation of containers. Triton's business is supported by a worldwide network of independent container depots and several active independent agent. Triton operates in two segments the intermodal transportation industry, equipment leasing and equipment trading. Triton owns, leases, and disposes containers and chassis from their lease fleet and manage containers owned by third parties in their equipment leasing business. In their equipment trading business, Triton purchases containers from shipping line customers and resell these containers to retailers and other users for storage or one-way shipment.

## Key Statistics:

Market Price: \$30.61  
Market Cap: \$2,280.4M  
WACC: 5.75%  
ROIC: 2.03%  
EBITDA Margin: 74.6%  
Ke (WACC): 9.84%

ROE: 13.54%  
Credit Rating: BB+  
Debt/Assets: 72.9 %  
P/E: 24.75 x  
Volume: .218 M  
Effective Tax: 11.6%

## Catalysts:

> Containerized trade volume (ST)  
 > Increase in average lease rates (ST)  
 > Utilization recovery (ST)  
 > Increased leasing demand (MT)  
 > International trade growth (MT)  
 > Container price increase (LT)



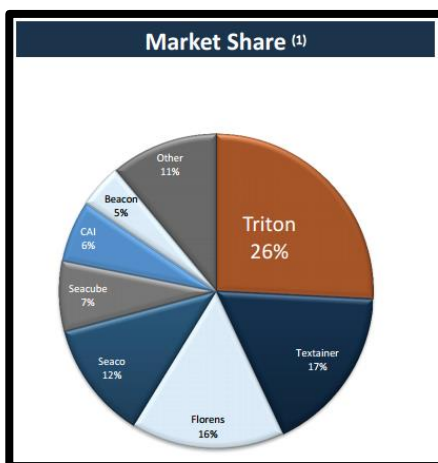


## Thesis:

Triton International is the largest container leasing company in the world as of July 2016 through the merger of Triton Container and TAL International. According to Triton, key stakeholders including customers, lenders, and suppliers are reacting favorably to the merger and express strong interest in working with them being the market leader. The merger has increased Triton's competitiveness from other leasing companies through new scale and cost advantages, superior supply capability, and access to large amounts of capital. They have a preferred supplier status with many customers and strong reputation for reliability making it very hard for a competitor to cut their market share. Triton operates globally, with facilities in South Korea, China, Japan, Australia, India, South Africa, and Brazil. They also have facilities in Seattle, San Francisco, Houston, NY, NJ, Miami, London, Hamburg, and Bermuda. Triton is able to offer the lowest unit cost, and provides unrivaled operating and marketing capabilities compared to their peers. The past few years were tough on the container leasing market, but due to a rebound in container prices and a better supply/demand balance for containers, Triton is poised to have a much improved 2017 and beyond. The fourth quarter limited the pace of financial recovery due to lost revenues from a bankrupted customer; Hanjin, and increased repair expense to meet demand. Over 2017, Triton will experience lower pressure from lease re-pricing and sales of used containers to increase, making them a valuable growth stock.

## Industry Outlook:

Intermodal containers are a secure and cost-effective method of transporting raw materials, component parts, and finished goods because they can be transported in a multitude of ways. The main competitors to Triton International are Textainer, Florens, Seaco, and Seacube. Triton has the number one leasing fleet of dry, refrigerated, and special containers worldwide and respectfully make up 61%, 30%, and 5% of their revenue.



The current demand for dry containers are strong for the first time since 2014, thanks to the combination of trade growth and limited new container production. Triton's strong leasing portfolio will give them protection from any unfavorable market conditions, if any, because 76% of their containers are long-term/finance leases. Triton benefits from being a low-cost operator because they can stretch deals to sign the cheaper contracts for customers. In fact, they have the number one position with 4 of the top 5 carriers, and 7 of the top 10 carriers, and many of these customers have been loyal for the past decades. In August 2016, Hanjin Shipping Co., the 7th largest shipping company in the world filed for bankruptcy after the owners refused to invest incremental capital requested by lenders. They operated 98 ships and carried 3 percent of the world's vessel capacity. This

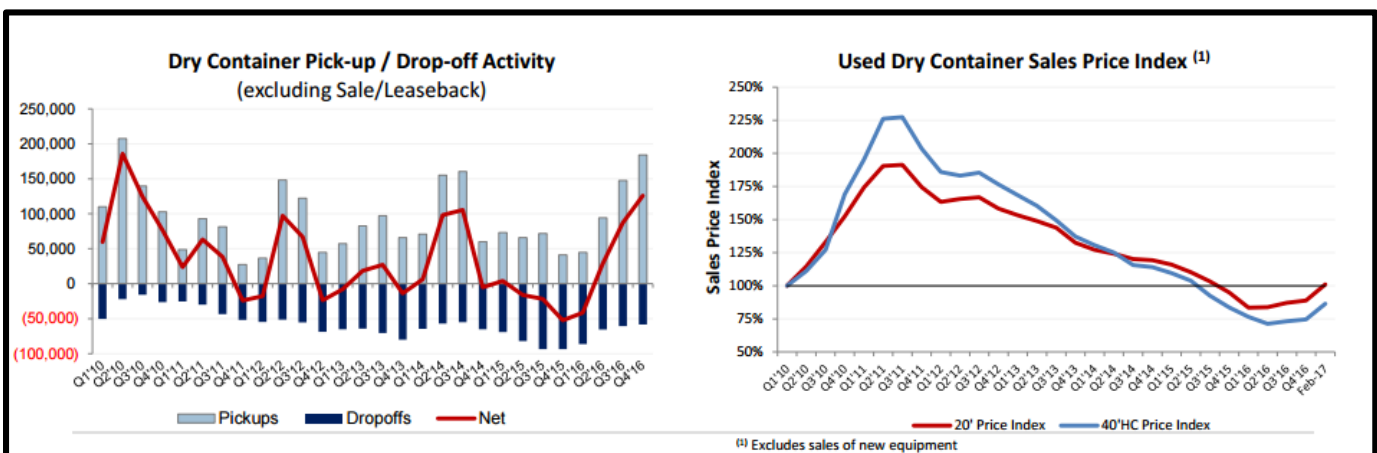
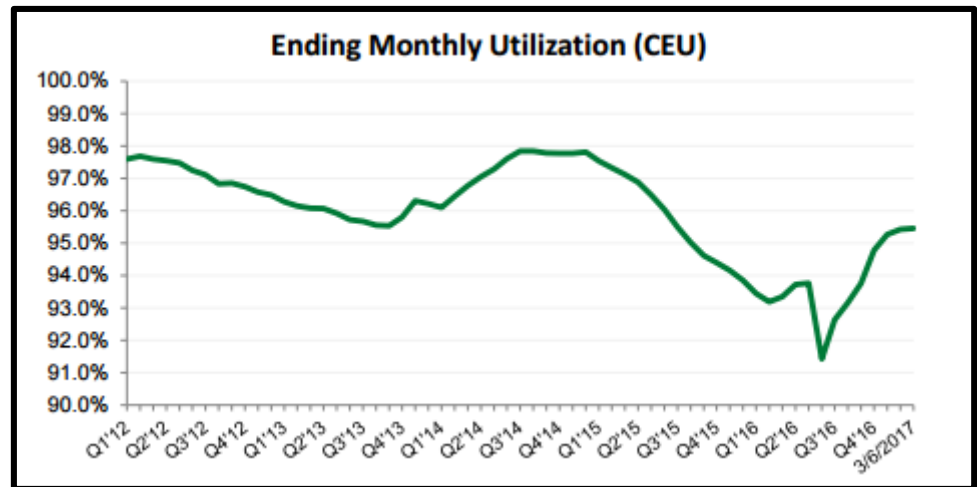
caused significant cargo flow disruptions for their many of their creditors, including Triton. Most of Hanjin's vessels have been kept out of ports

Company	1H 2016 Revenue <sup>(1)</sup>		1H 2016 EBIT <sup>(1)(2)</sup>		EBIT Margin		Volume	
	USDm	Y/Y% Change	USDm	Diff Y/Y (USDm)	1H16	1H15	000 TEU	Y/Y % Change
Maersk Line	\$10,035	(20%)	(\$107)	(\$1,373)	(1.1%)	5.7%	10,032	7%
Hapag-Lloyd	\$4,186	(20%)	(\$44)	(\$343)	(1.1%)	5.7%	3,703	0%
MOL (containerships) <sup>(3)</sup>	\$2,810	(15%)	(\$212)	(\$144)	(7.5%)	(2.1%)	1,990	(4%)
NYK (liner) <sup>(3)</sup>	\$2,761	(9%)	(\$96)	(\$161)	(3.5%)	2.1%	n.a.	n.a.
OOCL (container transport and logistics)	\$2,574	(15%)	(\$76)	(\$287)	(3.0%)	6.9%	2,890	6%
K Line (containerships) <sup>(3)</sup>	\$2,296	(21%)	(\$170)	(\$224)	(7.4%)	1.9%	1,446	(3%)
<b>Sample</b>	<b>\$24,662</b>	<b>(18%)</b>	<b>(\$705)</b>	<b>(\$2,532)</b>	<b>(2.9%)</b>	<b>6.1%</b>	<b>20,061</b>	<b>3%</b>

due to risk of seizure and inability to pay for unloading, causing much of Triton and others' fleet to await recovery. Any disruptions attributable to Hanjin should lead to a demand increase over the next several quarters due to the void that Hanjin left in the market. Still, most of the competitors to Triton have been operating at a loss due to the decrease in freight rates. This can be partly attributed to the unusually low cost of containers when compared to the cost of steel, and the price will likely increase back to equilibrium.

## Business Segments:

Triton International has two business segments in the intermodal transportation equipment industry; equipment leasing and equipment trading. The leasing segment makes up roughly 98 percent of Triton's revenue and offers leasing services to about 460 third party container depot facilities in 46 countries, and lease out dry freight containers (used for general cargo, such as parts, consumer staples, electronics, and apparel), refrigerated containers (used for fresh and frozen food), special containers (used for heavy and oversized cargo like building products and machinery), tank containers (used for liquid products and containers), and chassis (used for transportation of containers) under long-term, finance, and service leases. The merger of TAL and Triton have solidified them as the world leading seller of used containers. Dry containers make up 61 percent of Triton's revenue, as they are the least expensive and most widely used form of intermodal container. Many trends in the dry container leasing segment are improving, such as utilization, which shows how much of the fleet is being utilized. It is also important to note that new dry container production has been declining since 2015, which bodes well for those who are leasing out such containers. Important drivers of revenue in this segment are equipment fleet size, utilization rate, and average rental rates. For added revenue, Triton will sell the containers that are returned by the customer when they are returned. In the equipment trading segment, Triton buys containers from large shipping line customers and resells them to users of containers for storage and one-way shipments.



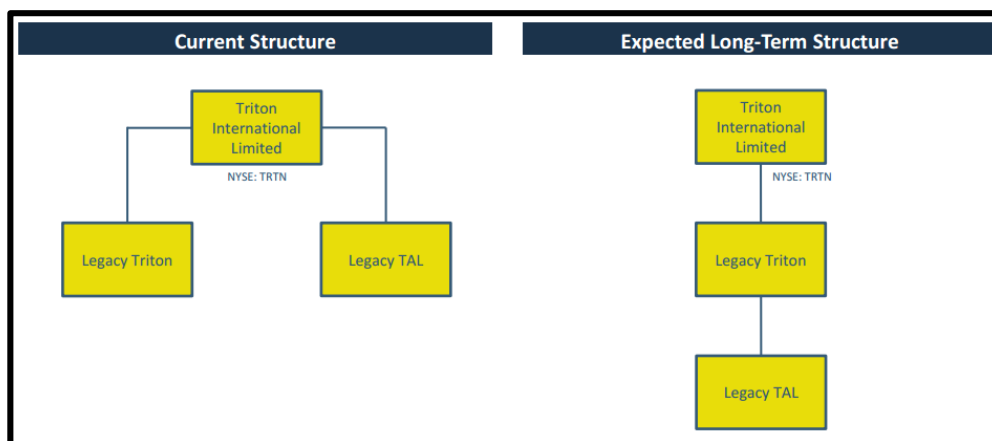
## Merger of Triton Container Int'l LTD & TAL Int'l Group:

On July 12<sup>th</sup>, 2016 TCIL and TAL combined under a newly formed company called Triton International Limited in an all-stock merger. For accounting purposes, TCIL acquired TAL. When the two companies combined, former Triton Container shareholders owned about 55 percent of outstanding equity and TAL shareholders owned about 45 percent of outstanding equity. Triton expects to be fully done with the transition by the second quarter of 2017, and reactions from key partners have been favorable, as their capabilities stand out from their peers. Triton's largest customers have already experienced more favorable contracts since the merger, and suppliers have expressed a high level of interest in securing business, which will improve the balance of relationship. After the merger Triton has become a truly global company, as they are now able to offer the broadest market coverage with 340 locations in 85 countries. The purchase price allocation had been developed based on the estimates of fair value of the TAL assets acquired and liabilities assumed, with an expected total of \$40 million saved annually in SG&A synergies.

## Company Structure:

As of December 31, 2016, Triton has 3.265 billion dollars of total debt with fixed interest rates with a rated average of interest rate of 4.4 percent with a weighted average of 4.5 years remaining. Triton also has 3.150 billion dollars of total debt with rates based on LIBOR with a weighted average interest rate of 2.54 percent with a weighted average 2.9 years remaining. Triton has a debt to equity ratio of 3.83, and are subject to certain covenants under debt agreements respective to TCIL and TAL. TCIL facilities needs certain funded debt ratio, fixed charge coverage ratio, and a consolidated tangible net worth. TAL needs to maintain a minimum EBIT/Cash Interest Expense, a minimum tangible net worth, and a maximum Indebtedness/TNW. Over the past year, investment advisors have held the majority of Triton, but the percent of ownership has increased from 39 percent in August of 2016 to 57 percent in April of 2017. Private equities hold the next largest amount of Triton, but their ownership has decreased from 56 percent to 21 percent in the same time frame. Triton has gauged interest from hedge fund managers since the merger, increasing their ownership to 3.5 percent. Both TCIL and TAL are subsidiaries of Triton International, and both were roughly equal in the hierarchy, but the

intent is to have a top-down structure where TAL is expected to take more of a back seat. For this to happen however, lenders to TAL need to alter the covenants to their loan agreements. Even with the amount of debt that Triton International has, the S&P confirmed that they have a stable rating of BB+.



## Financials:

Earnings had been red for 2016, but Triton expects that performance will increase steadily. Earnings were hit by the Hanjin bankruptcy, falling utilization, and decreasing average rental rates. They have announced that the next few quarters may be confusing to follow but it is attributable to restructuring expenses that happened in the third and fourth quarters of 2016. These preliminary purchase accounting will negatively impact earnings up until the third quarter of 2017, where they start to get “increasingly” positive, but will have no impact on financing entities or on the cash flow. Several factors contributed to the slow financial growth in the fourth quarter of 2016 including a \$3 million dollar check every month from Hanjin, an increase in repair expenses due to the need to sell containers off faster than expected, and that many of their leases picked up in Q4 had been booked at a lower price prior to the increase in lease rates. For the year ending 2016, Triton lost \$13.5 million in net income, a decrease of \$124.6 million dollars from the year prior. There were many factors that impacted Triton’s earnings, and when GAAP rules are taken out of consideration for the merger and Hanjin, pre-tax income comes out to \$113.4 million. Due to the merger much of the financials are confusing and distorted. Over the past year, the most interesting aspect of the balance sheet is that long term debt doubled to almost \$6.5 billion dollars. However, the debt to equity ratio didn’t change substantially, mainly due to the issuance of 37.2 million shares of stock. The main driver for outstanding performance for Triton will be accelerated over the next 4-8 quarters. Analysts expect Triton to experience 33.5 percent increase in revenue and almost a 200 percent increase in EBIT, mainly due to the merger.

	Year Ended December 31, 2016
(\$ in millions)	
<u>Consolidated Results</u>	
Pre-tax loss attributable to shareholders	(13.6)
Transaction costs	66.9
Unrealized (gain) on swaps	(4.4)
Write-off of deferred financing fees	0.1
<b>Adjusted pre-tax income</b>	<b>49.1</b>
<u>Merger Impacts</u>	
TAL pre-tax income from Jan 1 to July 12	18.1
Purchase accounting	16.5
<b>Adjusted pre-tax income excluding merger impacts</b>	<b>83.7</b>
<u>Hanjin Impact</u>	29.7
<b>Adjusted pre-tax income with merger adjustments and excluding Hanjin (1)</b>	<b>113.4</b>

## Conclusion:

The past few years have been hard on Triton International and the container leasing industry, but there are many factors that can have them both trending upward for years to come. From the second quarter and beyond, it is expected that financial performance will improve, excluding the merger impacts. Although the size and pace of recovery past 2017 will depend on various macro-economic factors, unusual items on financial statements will be resolved and lease re-pricing. The merger was a hefty order, but it was able to create the largest and most trusted container leasing company in the world. Now that both TAL and TCIL merged their resources, they can reach a more global customer base. Because of the merger, the expected savings on synergies will be at least \$40 million per year. Utilization and demand balance should improve as well, giving a significant lift to Triton’s operations. One of the biggest factors that will affect the stock price will be the price of containers as there is not expected to be any significant production of new dry containers, which would generate more income for Triton. In summary, Triton has significant advantages over any of its competitors in terms of cost and customer preference, and is starting out strong in 2017. The merger with TAL will mud the waters for maybe a few more quarters, then significant improvement can be expected compared to the industry.

# Triton International Limited

(TRTN)

Analysis by

4/30/2017

## CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Current Price:

\$30.61

Dividend Yield:

3.4%

Intrinsic Value

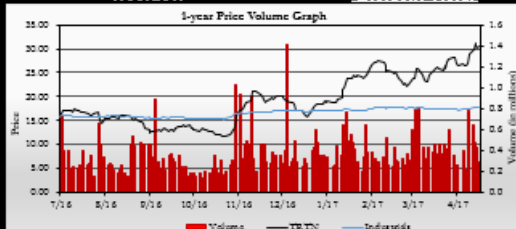
\$64.62

Target Price

\$75.74

Target 1 year Return: 150.83%

Probability of Price Increase: 100%



**Description**  
Triton International Limited engages in the acquisition, leasing, re-leasing, and sale of various intermodal containers and charter shipping lines, and freight forwarding companies and manufacturers.

### General Information

Sector: Industrial  
Industry: Trading Companies and Distributors  
Last Guidance: November 2, 2015  
Next earnings date: May 11, 2017  
Estimated Country Risk Premium: 4.95%  
Effective Tax rate: 12%  
Effective Operating Tax rate: -73%

Market Data	
Market Capitalization	\$2,280.38
Daily volume (mil)	0.22
Shares outstanding (mil)	74.50
Diluted shares outstanding (mil)	56.03
% shares held by institutions	74%
% shares held by investment managers	26%
% shares held by hedge funds	3%
% shares held by insiders	1.57%
Short interest	1.48%
Days to cover short interest	2.88
52-week high	\$31.97
52-week low	\$11.50
Levered Beta	1.00
Volatility	0.00%

### Quarter ending

12/31/2015

3/31/2016

6/30/2016

9/30/2016

12/31/2016

Mean

Standard error

### Part Earnings Surprise

Revenue

N/A

N/A

-31.33%

-20.51%

-1.68%

-17.84%

8.7%

### EBITDA

N/A

N/A

-30.38%

-9.49%

6.92%

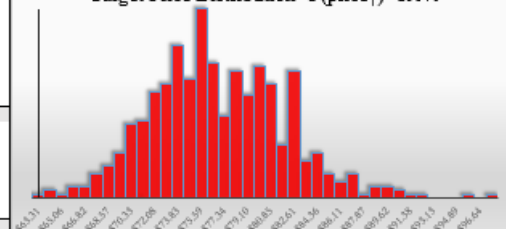
-10.98%

10.8%

### Peers

Textainer Group Holdings Limited  
OAI International, Inc.

### Target Price Distribution--P(price)=100%



### Profitability

ROIC

19.3%

NOPAT Margin

11%

Revenue/Invested Capital

0.17

ROE

56.9%

Adjusted net margin

9%

Revenue/Adjusted Book Value

0.63

### TRTN (LTM)

19.3%

11%

0.17

56.9%

9%

0.63

### Invested Funds

TRTN (LTM)

1.4%

0.6%

5.4%

95.8%

### Capital Structure

TRTN (LTM)

5.4%

4.56%

2.13%

AA

Unlevered Beta (LTM)

1.00

WACC

9.01%

### TRTN (4 years historical avg Industry (LTM))

472.26%

22.99%

17.7%

1.30

29.73%

16.0%

1.86

### TRTN (4 years historical avg Industry (LTM))

1.5%

0.9%

3.1%

101.1%

### TRTN (4 years historical avg Industry (LTM))

0.0%

9.73%

2.63%

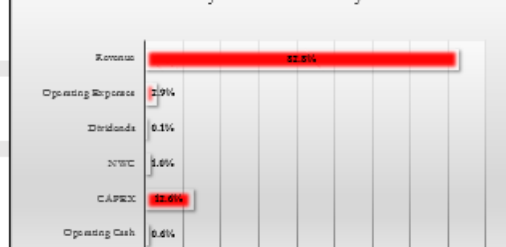
A

1.00

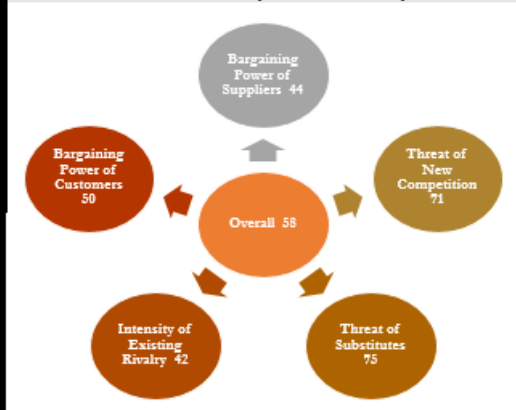
9.01%

8.75%

### Sensitivity Attribution Analysis



### Porter's 5 Forces (scores are out of 100)



Period	Revenue growth
Base Year	14.0%
12/31/2017	37.2%
12/31/2018	5.0%
12/31/2019	4.8%
12/31/2020	4.5%
12/31/2021	4.3%
12/31/2022	4.1%
12/31/2023	4.1%
12/31/2024	4.1%
12/31/2025	4.1%
12/31/2026	4.1%
Continuing Period	4.1%

Valuation	ROIC/WACC
NOPAT margin	110.9%
	2.14
	0.44
	2.23
	2.19
	2.19
	2.19
	2.20
	2.24
	2.28
	2.33
	2.40
	2.47

Period	Invested Capital
Base Year	\$0.00
12/31/2017	\$27.69
12/31/2018	\$4,264.33
12/31/2019	\$4,732.65
12/31/2020	\$4,652.38
12/31/2021	\$8,193.85
12/31/2022	\$1,693.84
12/31/2023	\$1,802.20
12/31/2024	\$1,889.55
12/31/2025	\$1,968.34
12/31/2026	\$2,035.53
Continuing Period	

Net Clear	Price per share
\$6,498.70	\$53.68
-\$633.00	\$88.34
\$1,649.42	\$51.69
\$4,115.30	\$11.59
\$6,790.89	-\$32.26
\$9,688.98	-\$80.13
\$12,822.78	-\$132.32
\$16,213.64	-\$189.11
\$19,871.86	-\$250.75
\$23,809.09	-\$317.54
\$28,040.03	-\$389.76



April 29, 2017

## TerraForm Global Inc.

Andrew Cote

Sector: Utilities

Industry: Diversified Utilities

Current Price: \$ 4.75

Target Price: \$ 7.50

### Company Description:

Terraform Global owns and operates renewable solar and wind powerplants in many countries including Brazil, Uruguay, India, China, Malaysia, Thailand, and South Africa. Terraform currently has a net capacity of 916.4 megawatts and continues to grow its portfolio of powerplants.

### Buy

EBITDA Margin 2016(Expected)	71%
Avg Volume	1,135,544
Market Cap	\$820 M
EPS	- \$1.7



### Thesis:

Terraform Global is in an industry that is experiencing a secular shift which they are well positioned to take advantage of. Terraform has been able to grow rapidly through building new power plants and acquisitions of existing ones but these projects have been financed mostly by debt which has quickly deteriorated their financial health and ability to continue to grow. Once TerraForm is acquired by Brookfield Asset Management, the partnership should provide enough liquidity for TerraForm to continue growing its operations while repaying principal on its debt which will reduce the overall financial risk of the company and will be reflected in the share price.

### Catalysts:

1. Completion of acquisition by Brookfield Asset Management and/or completion of SunEdison bankruptcy case (1-6 months)
2. Additional policies and regulations increasing the rate at which regions invest in and use energy from renewable sources (1+ years)
3. Accelerating principal repayment of debt Shift towards optimal capital structure (6 months +)

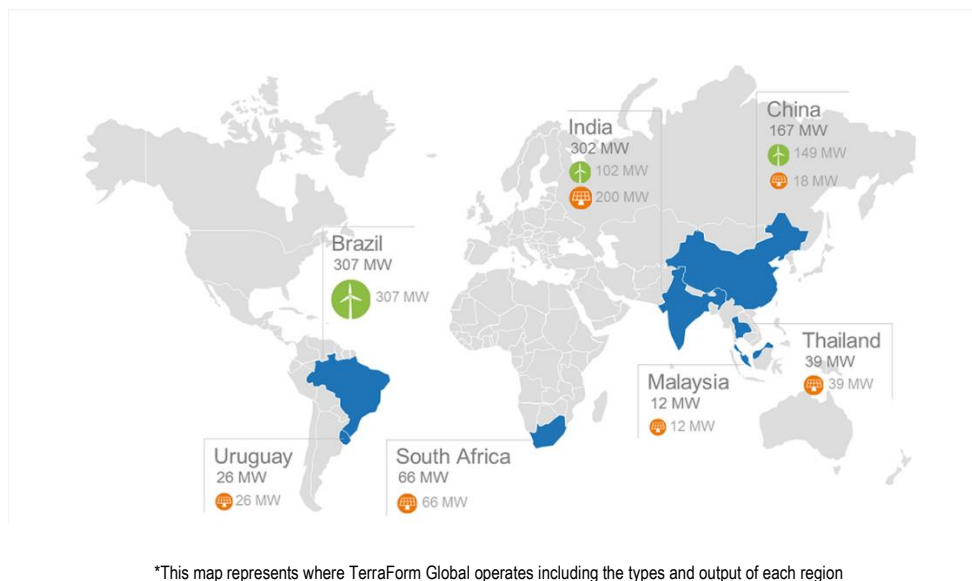
## Macroeconomic / Industry Trends

### ***The growing use of renewable energy across the world:***

There is, without a doubt, a secular change in the way we produce and consume energy especially in the form of electricity. Consumers comprised of countries, communities, and households increasingly demand that the energy they use is from a sustainable or renewable sources. Governments across the world continue to support renewable energy policies. These policies are meant to [“remove barriers, attract investment, drive deployment, foster innovation, and encourage flexibility in energy infrastructure”](#). In Asia and the Pacific, India has been very active in expanding its policies to promote renewable power through metering policies and the use of tendering and many Pacific Islands have targets and/or are currently 100% renewable. The EU calls for 27% of total power from renewable sources by 2030 with acceleration seen in France and Eastern Europe. The Latin America and Caribbean regions are at the forefront of renewable energy use and are attractive areas for energy projects because of the low bid prices.

### ***Cheaper to build and maintain (relative to history):***

As a greater number of governments and companies invest in the research and development of renewable energy technology, the cost to develop massive projects and to maintain them will undoubtedly go down which we have already seen over the past few years. This is the effect of necessity and innovation which has made renewable energy projects more realistic as an investment for utility companies and REIT's.



As the global renewable energy infrastructure grows, especially on an industrial level, supply growth will very likely outpace demand growth, due to federal subsidies in addition to the overall secular shift towards renewable energy, and the cost per unit (\$/Megawatt or megawatt hour) will be lower (economies of scale). Utility firms are already beginning to offer options to have part or all the electricity provided to their homes/buildings be from renewable sources which means they most likely see a positive future for the industry.

The manufacturers of batteries that have greater efficiency, like General Electric and Tesla, have also helped solve the expensive problem of storing the energy and continued innovation will certainly be a tailwind for the industry.

### ***Growth in demand for electricity if global economic activity increases.***

It is my observation that as the world emerges from a prolonged period of low growth and into increased economic activity the demand for energy will increase and therefore greater demand for renewable sources. It is reasonable to assume, because of the growth momentum that renewables have had, the increase in capacity will mostly come from renewable sources.

## Recent Developments

March 07, 2017: TerraForm Global, Inc. has entered into merger agreement with Brookfield Asset Management. Brookfield to acquire TerraForm Global for \$787 million in cash and will take on \$455 million in debt which represents an enterprise value of \$1.3 billion. This merger is expected to be complete in the second half of 2017 and is subject to approval by the majority of Class A shareholders, regulatory approvals, and resolution of certain litigation.

TerraForm has entered into a settlement agreement with previous owner, SunEdison, regarding the Chapter 11 bankruptcy of SunEdison. Brookfield, together with its institutional partners, will purchase all outstanding Class A shares of the Company, following the exchange of SunEdison's Class B shares and TerraForm Global, LLC Class B units.

This acquisition is likely to open up many doors for TerraForm Global in the form of new project opportunities in other countries, accelerated project completion, administrative support, and principal debt repayment.

## Operating and Investing Activity

TerraForm owns and operates solar and wind powerplants in the following regions with their contribution to overall revenues.

Since 2012, they have been able to maintain EBITDA Margins between 59 and 66% but have yet to be profitable on a net basis due to their large interest expense. The largest operating expense for Terraform and this industry is the cost of maintaining their plants and equipment.

	2012	2013	2014	2015
<b>Revenues</b>				
Brazil				15%
China		4%		14%
India	100%	92%	6%	27%
Malaysia		4%	50%	7%
South Africa			23%	35%
Thailand			18%	2%
<b>Total Revenues</b>	<b>1.5</b>	<b>22.2</b>	<b>39.4</b>	<b>124.1</b>

Column1	2012	2013	2014	2015	2016E
<b>Total Revenue</b>	<b>1.5</b>	<b>22.2</b>	<b>39.4</b>	<b>124.1</b>	<b>217.62</b>
<i>Growth Over Prior Year</i>		1,337.6%	77.7%	214.6%	75.34%
<b>Gross Profit</b>	<b>1.5</b>	<b>20.5</b>	<b>35.2</b>	<b>107.8</b>	<b>-</b>
<i>Margin %</i>	96.2%	92.5%	89.2%	86.8%	77.20%
<b>EBITDA</b>	<b>1.0</b>	<b>14.7</b>	<b>23.0</b>	<b>76.4</b>	<b>155.79</b>
<i>Margin %</i>	62.2%	66.2%	58.3%	61.5%	71.59%
<b>EBIT</b>	<b>0.6</b>	<b>9.9</b>	<b>15.8</b>	<b>46.7</b>	<b>79.28</b>
<i>Margin %</i>	35.9%	44.6%	40.1%	37.6%	36.43%
<b>Earnings from Cont. Ops.</b>	<b>(0.4)</b>	<b>(2.3)</b>	<b>(5.0)</b>	<b>(371.0)</b>	<b>-</b>
<i>Margin %</i>	(27.0%)	(10.3%)	(12.8%)	(298.9%)	-
<b>Net Income</b>	<b>(0.4)</b>	<b>(2.3)</b>	<b>(5.0)</b>	<b>(252.0)</b>	<b>(37.28)</b>
<i>Margin %</i>	(27.0%)	(10.3%)	(12.8%)	(203.0%)	(17.13%)

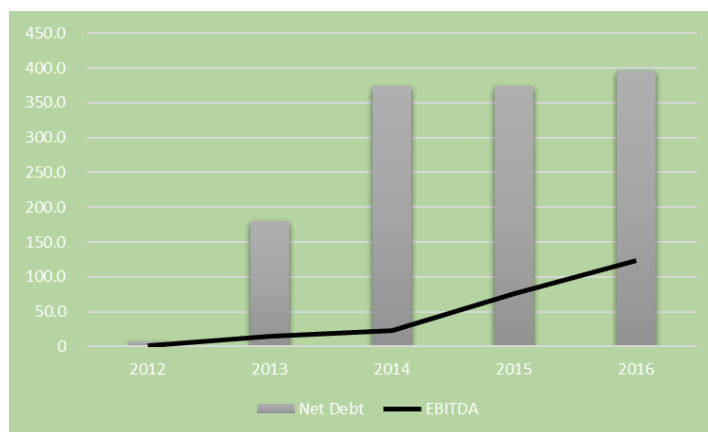
Terraform has typically invested in building new powerplants to grow its business and has put in \$407+ million into the development of these plants since 2013 but has recently engaged in acquisitions that have totaled \$845 million in the past 2 years. Most of their investing activities have been financed by debt which is why their Interest Expense is so large.

## Financial Health

TerraForm is still in the beginning stage of its growth and does not pull in enough from operations to fund its investments which means they are mostly funded by debt. Since 2013, Terraform has issued \$1.8 billion in debt to fund acquisitions and new projects but in 2015, after the company went public, they repaid over \$1 billion of principal. Managing the debt burden is a short-term goal of management which will reduce their default risk and make their marginal cost of borrowing lower.

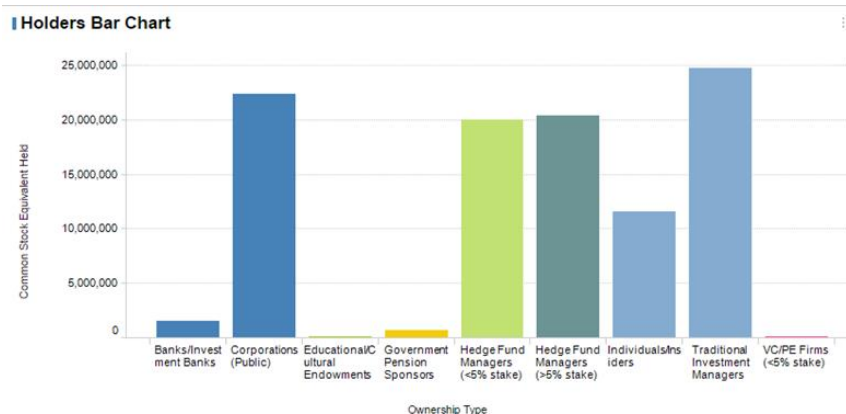
In 2014, all their long-term debt was variable rate which, in this rising interest rate environment will reduce margins. Since going public, TerraForm has renegotiated their obligations to contain fixed payments which will help Terraforms' already high cost of debt. Their largest debt obligation has a 9.8% coupon on principal about \$750 million with many smaller obligations with coupons ranging from 4.5% -12%. In the coming years, it is expected that debt repayments and consolidation will provide consistency in their borrowing costs. Also, all of the debt is due in 2022 and later.

If you look on the balance sheet you will notice that even though TerraForm has a large amount of debt they are also holding onto cash which is why it is relevant to consider their net debt which has been between \$350 - \$400 million for the past 3 years. When you compare their EBITDA to their net debt you will notice that TerraForms operations are increasingly being able to sustain their investing activity and based on current trends EBITDA growth should continue to outpace the growth of net obligations.



Although it is still early, going public and having access to capital markets will act as a tailwind for the company to reach net profitability faster than expected.

## Ownership Summary



\*Chart from Capital IQ

## Valuation and Price Target

Brookfield Asset Management is expected to purchase at \$5.10 per share and the acquisition is likely to go through despite the conflicts with SunEdison. \$5.10 per share represents a 7% premium to where it currently trades but as time goes on and TerraForm's financial position improves the offering price per share could increase further.

Using our proforma to value Terraform is not the best route because of the major changes to its operating and capital structure which is expected to continue and the fact that they are not profitable makes it difficult to measure cash flows. We used a dividend growth model to value TerraForm and calculated a price per share of \$ 15.57 using the following Inputs:

Sustainable Growth		
ROE	11%	*Average Utility ROE
rr	0.72	*Latest Dividend payout
g	0.0792	

Div Growth Model		
Div	0.3	
WACC	10%	
\$/Share	\$15.57	

This valuation is on the high end and will most likely happen if Terraform can execute their long term strategy of owning and operating powerplants and returning profits to shareholders as dividends. Since this valuation is extremely forward looking and is based a lot on speculation I believe a 1 year price target of about \$7.50/share is accurate.





**Company Description:** Simon Property Group, Inc. (SPG) is a real estate investment trust (REIT) specializing in the ownership, development, and management of large retail plazas including malls, outlet locations, community centers, and mills. Their clientele primarily include Class-A and high end anchor stores as their main source of revenue comes from rental fees and lease payments. The company is headquartered in Indianapolis, Indiana.

## BUY

Current Price: \$165.23

Target Price: \$206.00

Market Cap: \$59.4B

Moody's Credit Profile: A2, Stable

Comp. NOI Growth: 3.8%

FFO Y/Y Growth: 4.2%

- FFO/Revenue: 73.2%

Debt/Mkt. Cap: 32.5%

Tenant Occupancy: 95.6%

Lease Margins (psf) Growth: 13%

Dividend Yield: 4.24%



## Catalysts:

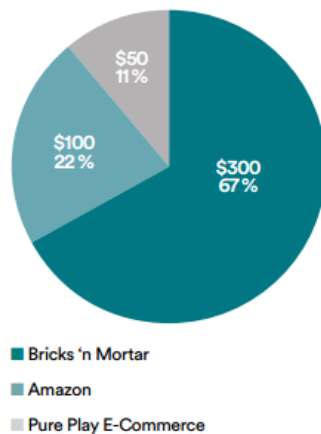
- New expansionary development programs set to finish by year's end both domestically and internationally
- Guidance estimates of 6% FFO growth; industry leading, bullish outlook adds to heavy liquid cash-flows
- Optimistic and contrarian governance concerning the future of the retail industry

**Thesis:** Market appreciations have become a stranger to most companies specializing in brick-and-mortar retailers because of the growing popularity of e-commerce. Companies, like Amazon, have been able to capitalize on the convenience of shopping from the couch and waiting for the product to show up on the doorstep. However, even Amazon is beginning to shift towards a strategy that Simon Property Group has already been utilizing: omnichannel retail. This method of shopping gives the consumer more of a choice between the internet and brick-and-mortar, thus allowing companies to tailor to the wide spectrum of consumer preferences. SPG's main leg on Amazon is that their utilization of omnichannel retail is much more developed, and their financials prove this. Beyond steady FFO and NOI growth, SPG's \$7B in liquidity has allowed them to tailor their own business to capitalize on contrarian strategies, acquire industry stragglers, and become the largest brick-and-mortar firm in an evolving industry.

## Industry Misconceptions:

Throughout the retail industry, there is a stigma surrounding the threat of online shopping towards brick-and-mortar stores due to its exponential growth within the last decade. Stores that focus more on the online aspect of their business tend to throw the physical experience of the establishment on the back burner. Many retailers are not able to provide the same expectations culminated from online shopping (in terms of value and convenience) in their own physical stores, thus leading to major headwinds on the revenue-growth front.

E-COMMERCE SALES  
(\$ IN BILLIONS)



To add to this, damaged retailers that have turned their focus to online sales attempt to generate growth through the cost structure of the website, which is minimal compared to their existing operating costs. While it may be saving capital outlay, there are still underlying costs associated with the decision to compete online. For example, incentives such as free-shipping and heavy discounts destroy margins. As costs may be getting slashed, revenue is exceedingly dropping as well, and therefore not creating the spread needed to create serious value. Large anchor stores like Macy's and JCPenny's have been facing this conundrum as well as the operators of many other REITs.

*Source: SeekingAlpha*

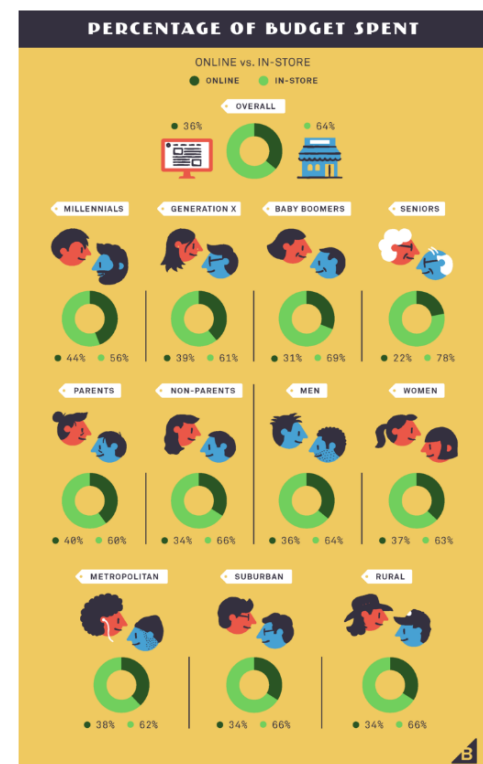
However, the beauty in this case is that online sales still make up a small portion of the entire industry's sales figures. In exhibit one, brick-and-mortars still hold 67% of the entire revenue structure, with Amazon following at 22%, and general e-commerce at 11%. That's not to say that e-commerce will stop growing, but the common misconception tends to justify an Amazon-ruled industry when it's truly a fallacy. Still, as revenues will inevitably grow, could online retailers eventually plateau into a growth ceiling?

## The Prius of Retail: An Industry Hybrid

Due to the dynamic of industry, retail property managers must evolve with the preferences of the consumer. With that being said, adopting an omnichannel system allows consumers to either shop online or go into the store and select their own merchandise, a sort of "retail hybrid."

The comparison between Simon and Amazon comes into play when considering the necessary components of the omnichannel system. The system itself favors a company with boots on the ground. That is, if a company like SPG already has an established brick-and-mortar presence through their tenants, their collaboration with an online platform becomes more effective. Logically, a consumer would see an item in the store and realize they could purchase the same merchandise online at a later time. This aspect of the strategy fills the digital void that exists strictly

*Source: BigCommerce*



with online shopping because of the actual physical interaction.

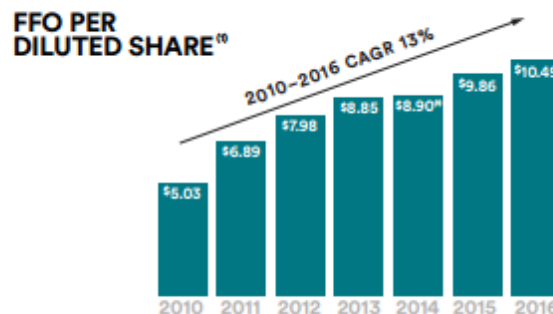
It's clear that e-commerce companies are aware of this evolving aspect of the industry, especially Amazon. Bill Stoller, a contributor to Seeking Alpha, quoted contrarian George Kesarios, indicating that the online powerhouse plans on opening an additional five bookstores. Guidance suggests that we should expect more, plus specialty stores selling furniture, home appliances, and more. This is a clear indication of the fruitful future of a balanced, omnichannel system.

So it's difficult to prove that the market may be heading towards a kwazi-electronic/physical preference, but it's not out of left field given the evolution of malls themselves. SPG's strategic position addressing the omnichannel structure as well as revolutionizing the mall experience has strengthened their competitive advantage.

## Cash-Flow Meets Innovation:

Beyond offering consumers a multi-platform shopping experience, SPG utilizes much of their capital to enhance the overall mall experience. Their innovative initiatives hit the market at perfect timing since many large retailers and box stores are closing (although, out of their entire portfolio of over 400 department stores, only one is empty). SPG has capitalized on many failed retail locations by implementing a recreational aspect to their properties including restaurants, hotels, and residential units.

The transition from a sole retail destination into one that encompasses entertainment creates further opportunities for the surviving retailers. In theory, if consumers view the malls as destinations for social gatherings, they would spend more time there which would allow increased exposure to the tenants.



*Source: Seeking Alpha*

Since 2012, SPG added 275 restaurants, 10 hotels, and 3000 residential units and realized their pockets were getting deeper. FFO growth, since 2010, grew 13% with a 16.5% CAGR increase in dividends per share, which is impressive for an incredibly capital intensive business. As SPG continues to deploy capital in order to generate higher returns based on operations, their shareholders still benefit.

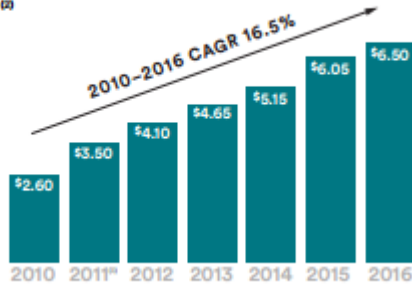
## Further Investments:

In order to stay competitive beyond their own capital investments, shareholders are never left out of their strategy. During Q1 in 2017, they dedicated \$2B from their liquid \$7B to share repurchases and enhanced the value of their current outstanding shares. From there, the dividend growth Y/Y reached 9.4% as they pointed towards a prosperous 2017.

*“Finally, we are reaffirming our 2017 guidance in the range of \$11.45 - \$11.55 per share, which is approximately 6% growth compared to our comparable FFO per share growth, which we believe will lead our retail real estate industry peers.” – David E. Simon, Chairman and CEO*

Additional capex deployed to redevelop and develop properties was facilitated on a global level. In the United States, 25 projects dedicated to revitalizing properties and modernizing their amenities are expected to finish within twelve months. Internationally, two new properties were just opened in Seoul, South Korea and Provence, France. Not only will these investments provide additional opportunities to maximize

#### DIVIDENDS PER SHARE<sup>(a)</sup>



capitalization, but also provides insulation against exchange-related headwinds. Since their profitability is based on the health discretionary spending habits, the strong dollar has weakened foreign travel demand to domestic outlet stores. Thanks to the international investments, gains in foreign exchange arbitrage could be another source of cash-flows for SPG.

*Source: Seeking Alpha*

**Valuation:** Since SPG is considered a REIT, the valuation is dependent on the worth of the company's assets after deducting liabilities and equity commitments.

The value of the assets are based a forward looking NOI figure compounded with a capitalization rate. The rate itself indicates the level of return expected from the utilization of their assets. In doing so, the forward looking NOI figure is discounted by the capitalization rate to get the present value of the assets.

In this scenario, the base rate used was simply a rational estimate between the rate of economic productivity growth and historic growth levels within the company's portfolio. Settling at 2% for their various segments of NOI generation (new developments, international developments, and other investments), I was able to estimate the present value of their assets well above \$68B, already indicating they are undervalued considering their market cap of \$59B.

After deducting various liabilities and equity commitments, I was able to get an intrinsic value of roughly \$189 per share. With the current share price equaling \$165.23, Simon Property Group, Inc. is undervalued at this time.

**Conclusion:** SPG is on the right track of value generation in an extremely competitive industry. Their ability to remain evolving with market trends and implement innovative initiatives to bolster traffic through the malls is proving effective and lucrative. Their capital deployment to redevelop properties will enhance their capitalization rate, and therefore profitability as long as they keep evolving. Although the industry is somewhat choppy at the moment, they are still positively surprising earnings. Out of the last 44 quarterly earnings statements, or 11 years, they have missed only twice with one being in the midst of the recession. Due to their valuation, financial predictability, superior capital deployment strategies, and promising guidance with impressive FFO and dividend growth, I recommend a BUY on Simon Property Group.

**Equity REIT - Sample Net Asset Value Model**

		<b>Assumed</b>	<b>12-Month</b>	<b>Current</b>
		<b>Cap Rate:</b>	<b>Forward NOI:</b>	<b>Value:</b>
<b>Capitalized Income:</b>				
<b>NOI Contribution from:</b>				
Development/Expansion/Acquisitions		2.0%	\$ 34,819	\$ 1,740,934
International		2.0%	\$ 105,203	\$ 5,260,169
Investments		2.0%	\$ 60,585	\$ 3,029,247
Existing		2.0%	\$ 1,371,602	\$ 68,580,089
		<b>Balance Sheet</b>	<b>% of BS</b>	<b>Current</b>
		<b>Value:</b>	<b>Value:</b>	<b>Value:</b>
<b>Balance Sheet Assets:</b>				
<b>Non-Operating Real Estate Assets:</b>				
<b>Other Balance Sheet Assets:</b>				
Cash & Cash-Equivalents:		513,400	100.0%	513,400
Investments in Equity Interests:		2,374,693	100.0%	2,374,693
Tenant Receivables, Accrued Revenue (net)		621,600	100.0%	621,600
International Investment, at Equity		1,821,994	100.0%	1,821,994
Deferred Costs/Other		1,384,667	100.0%	1,384,667
<b>Total Asset Value:</b>				<b>\$ 85,326,793</b>
<b>Liabilities:</b>				
Mortgages/Unsecured		\$ 23,149,053	100.0%	\$ 23,149,053
Accounts Payable:		1,081,185	100.0%	1,081,185
Other		459,926	100.0%	459,926
Cash Distributions/Losses in Partnerships, at equity		1,360,077	100.0%	1,360,077
<b>Total Liabilities Value:</b>				<b>26,050,241</b>
<b>Other Claims on Equity:</b>				
Noncontrolling Interests (Excl. OP):		-	100.0%	-
Preferred Stock:		166,847	100.0%	166,847
<b>Total Other Claims on Equity Value:</b>				<b>166,847</b>
<b>Net Asset Value:</b>				<b>\$ 59,109,705</b>
Diluted Shares:				312,033.0
OP Units & Restricted Shares:				-
<b>Total Diluted Shares &amp; Units Outstanding:</b>				<b>312,033.0</b>
<b>Net Asset Value Per Share:</b>				<b>\$ 189.43</b>
<b>Current Stock Price:</b>				<b>\$ 165.26</b>
<b>Premium / (Discount) to NAV Per Share:</b>				<b>(12.8%)</b>