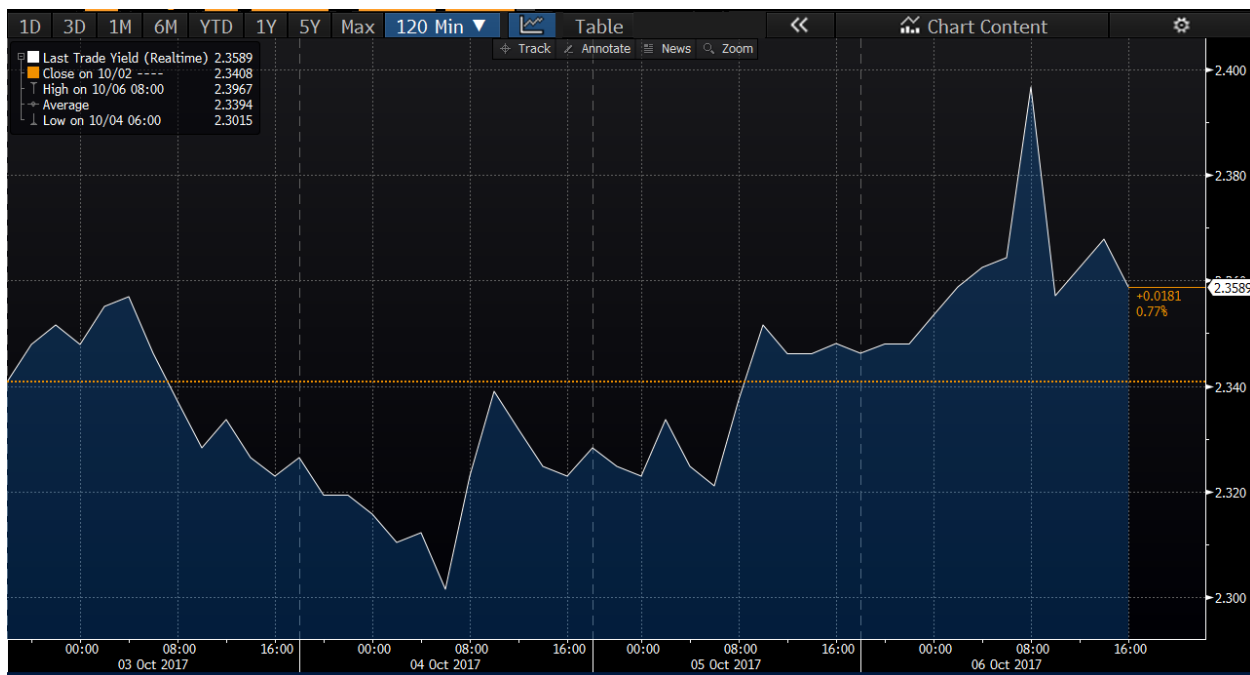
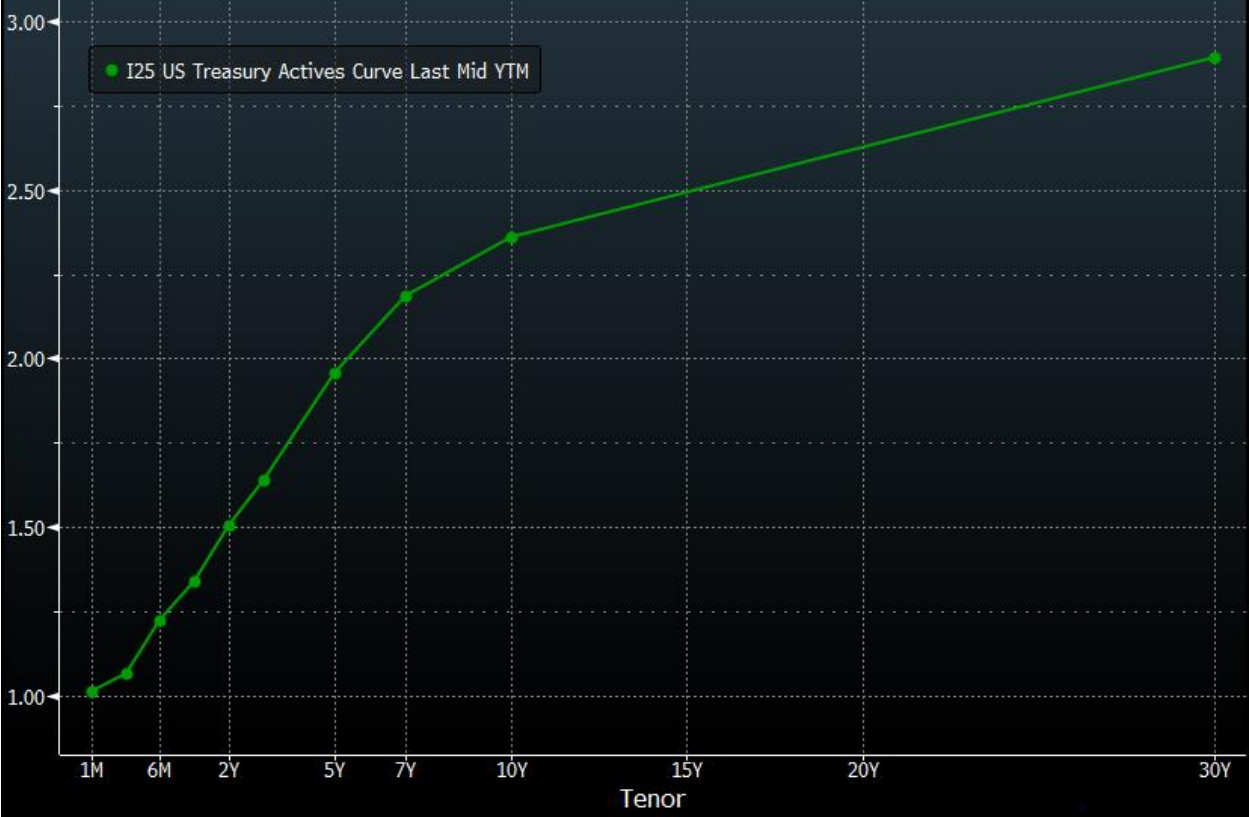


Bond Report 10/08/17

This week's bond trading saw pretty consistent sell off throughout the week. As bonds were sold off yields went higher, this continually happened, until the 2-year yield reached a post crisis high. The opening portion of the week was dominated by optimism returning to Japan with a business survey showing that the Japanese people were once again optimistic about the current place and future of their country's economy. The middle portion of the week was dominated by the debates over whether or not Yellen will maintain her chair or Powell will take it. This debate was fueled by the speech given by Janet Yellen that foreshadowed rate increases. Powell also made comments that seemed to be much more closely aligned with the president's sentiment making many believe that Powell may bring some efficiency to the seat. The end of the week received a hard push from wage growth, which is thought to have stemmed from job creation. The belief is that this wage growth will lead to inflationary conditions which again led to a sell off. It is worth noting that throughout the week these conditions were pushed by the ever looming threat of tax cuts which returned to the agenda once again. The closing for Friday's treasury bills were: 2-Year T-Bill = 1.511%, 10-Year T-Bill = 2.370%, and 30 T-Bill = 2.970%.



In the week to come we will experience a 4 day week since Columbus day (Monday) is a national holiday. Following Monday we have the 3 month, 6 month, 4 week, and 52 week auction which hold obvious implications in bond yields and prices. The Auctions will continue Wednesday with the 3-Yr Note Auction and the 10-Yr note Auctions. On Thursday the economic information to look for will be Jobless claims. Jobless claims will directly reflect how employment is working, which has an impact on wages, and will determine whether the expectation of inflation is warranted. The final economic factor to look for is on Friday the Consumer Price Index is released, this will give direct commentary on inflation and have a major impact on bond yields. Throughout the week bond analyst can expect to constants to impact bond prices. The first constant will be the outlook on the probability of tax reform. The second being Janet Yellen's comments effecting the probability of whether or not she maintains her seat.



October, 4, 2017

Callaway: ELY

John Graziano



Sector: Consumer Discretionary

Industry: Leisure Products

Current Price: \$14.51

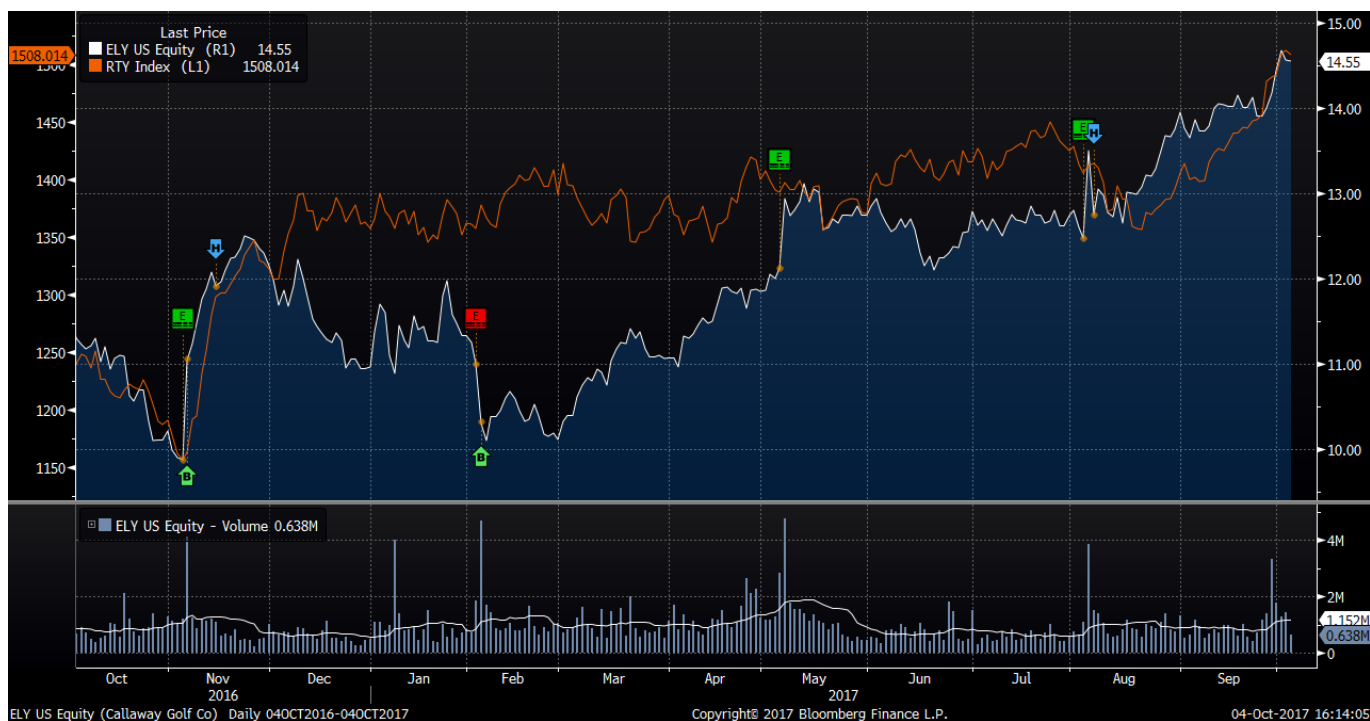
Target Price: \$16.65

Company Description:

Callaway Golf Company designs, develops, and markets golf clubs, balls, and golf accessories. The company manufactures titanium drivers, fairway woods, irons, wedges and putters. Callaway is a leader in advanced golf technology both domestically and internationally.

BUY

Current Price:	\$14.51
Target Price:	\$16.65
Market Cap:	1.37B
Average Volume:	1.137M
Beta:	1.12
ROIC:	11.1%
D/E Ratio:	0.01



Thesis:

Callaway Golf Company will continue to capitalize on taking market share across the club and ball segments, the growing golf industry, and successful M&A that the company has demonstrated in the recent future. Callaway will continue its reduction of cost and increase margins across the board. Callaway will do this while maintaining and expanding their exposure on tour with some of the best and brightest young stars in golf. This will drive up the stock price in both the short and long term.

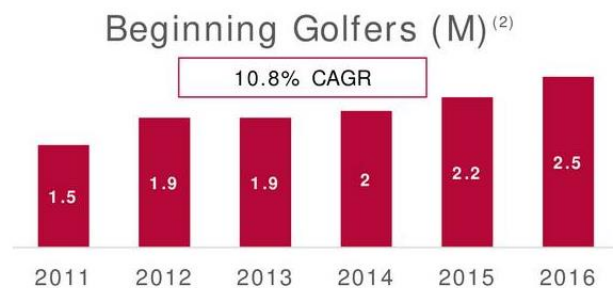
Catalysts:

- **Short Term(within the year):** Increased earnings vs favorable comps for Q3, EPIC line's success
- **Mid Term(1-2 years):** Aggressively taking market share across the business, Travis Matthew Acquisition
- **Long Term(3+):** Continuing good judgment in M&A, Golf's increasing popularity

Industry Performance and Outlook:

The golf industry has undergone pressure in recent years with the bankruptcy of a major retailer in GolfSmith however, this market correction and consolidation has left Callaway in a position of strength within the market. This has led to an increase in average selling prices within the retail portion industry, which will help increase overall margins and lead to less unplanned marketing needs. This correction was necessary within the golf industry as it weeded out some of the weaker industry competition. The European golf market overall has had a strong year, the European market accounts for 14% of Callaway's total sales. The United States golf market (51% of sales) is showing stability after the aforementioned market correction. Golf as a whole is becoming more popular with new participants coming to the market in record numbers with 2.5 million new entrants in

2016 in just the United States alone. Along with the new entrants, there will be an increase in retirees coming into the market due to the fact that members of Generation X (1961-81) will begin to exit the workforce. This will mean many of these individuals will either be golfing for the first time or golfing much more regularly, which would lead to an increase in demand for Callaway Products.



Name	Ticker	Mkt Cap	Debt/Equity:Y	ROIC	ROE	EBITDA to Net Sales
Median		1.36B	27.62%	21.46%	21.54%	16.64%
100) CALLAWAY GOLF COMPA	ELY US	1.38B	1.97%	34.69%	35.25%	17.48%
101) ACUSHNET HOLDINGS C	GOLF US	1.34B	53.28%	8.24%	7.83%	15.81%

Business Description:

Callaway Golf operates both domestically and internationally as a premier designer, developer and manufacturer of golf clubs, balls, and accessories. Callaway operates in five main areas around the world: United States (51%), Japan (20%), Europe (14%), Rest of Asia (8%), and Rest of World (7%). In Callaway's last quarterly earnings report, CEO Oliver "Chip" Brewer announced that Callaway has changed from two segments (clubs and balls) to three segments. These three segments are golf clubs, golf balls, and gear accessories and other.

Golf Clubs: The golf club segment is what makes up the majority of Callaway net sales at 64.5%. The golf club segment consists of Callaway Golf woods, hybrids, irons and wedges, Odyssey putters, packaged sets, and sales of pre-owned golf clubs.

Golf Balls: The golf ball segment makes up 16% of net Sales for Callaway and is one of the most promising areas within the company. This segment consists of Callaway Golf balls and Strata balls, which are designed, manufactured and sold by the company.

Gear, Accessories, and Other: This is the new segment for Callaway, after making the acquisitions of OGIO and Travis Matthew, along with a joint venture in Japan; they decided to make a new segment. This segment formally consists golf apparel and footwear, golf bags, golf gloves, travel gear, headwear and other golf-related accessories. This segment makes up 19.5% of Callaway's net sales. There is a lot of opportunity for growth in this segment with the acquisitions OGIO and Travis Matthew.



PGA Tour:

Any major golf brand needs PGA Tour exposure, what better promotes a brand than having the best players in the world use your product? Callaway has some of the most recognizable stars in golf with Phil Mickelson, Jim Furyk, and Tom Watson. Callaway also has some of the brightest young players in the game in Daniel Berger, Patrick Reed, and Callaway recently signed the number one amateur in the world, Maverick McNealy.



Acquisitions:

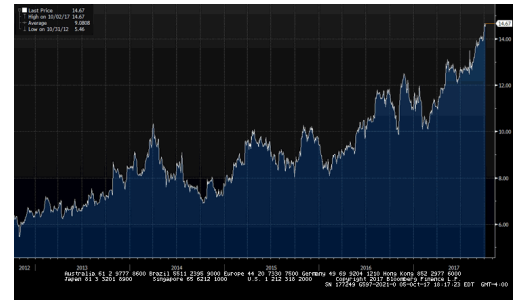
In 2017, Callaway has committed almost 200 million dollars to the acquisitions of OGIO and Travis Matthew out of California. These were all cash purchases, OGIO for \$75.5 million and Travis Matthew for \$125.5 million. The acquisition of OGIO gives Callaway another means of revenue within the golf bag portion of the industry. Where Callaway maintains a classic look and feel, OGIO can market to a younger demographic with fresher design. OGIO also makes various other bags including travel, athletic and schoolbags, this gives Callaway exposure to a less seasonal industry as well. Travis Matthew, the more recent acquisition, is a Southern California company that makes premier sportswear apparel and footwear. Callaway plans on letting Travis Matthew continue to run as it has been.



Travis Matthew is the more expensive of the acquisitions at \$125.5 million and more importantly 10.1x EBITDA which is expensive. The price is justified by the fact that there are significant brand synergies between the two companies, Travis Matthew expects low to mid double-digit growth, and will add 10-15 million in revenue and around \$0.04 to the bottom line for 2017. In the future Travis Matthew will enhance margins, EBITDA, and free cash flow. The development of these acquisitions, without debt, will lead to increase in value and therefor an increase in stock price.

Growth Opportunity:

In 2012, Callaway realized that a brand revamping was necessary and enacted a five-year plan to turn around what at the time was an underperforming company. The focus was on increasing margins and reducing cost. The restructure reduced the company by around 7 percent across the board and the stock was trading right around five dollars a share when the company initiated their plan. As you can see on the chart below, Callaway has turned around operating margin and COGS/Sales. As well as the chart to the right which shows the triple Callaway's stock price over the last five years (length of the initiative).



In Millions of USD except Per Share	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Current/LTM
12 Months Ending	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	06/30/2017
 Operating Margin	-13.94	-1.28	3.47	3.19	5.07	7.38
 Cost Of Goods Sold To Net Sales	70.25	62.65	59.65	57.62	55.81	54.63

In the golf industry, everything comes down to market share. Callaway is the number one dollar market share in total clubs, driver, fairway woods, hybrid and irons and number one unit share for putters. This is where Callaway has been very successful over both 2017 YTD and the last 5 years. There has been a 15% CAGR in United States market share over the last 5 years leading to a 26% market share in 2017 YTD. This shows not only is Callaway the category leader, but they're gaining

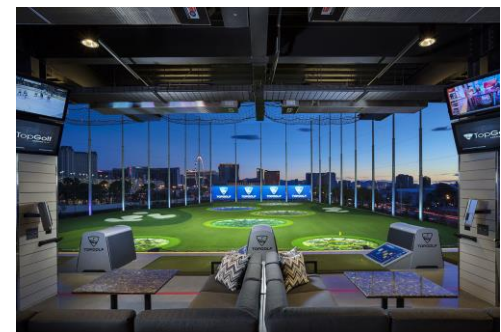


Segment Profitability⁽¹⁾



market share as well to further distance themselves from the rest of the industry. On the club side, growth is being led by the ultra-successful EPIC line of clubs. In Q1 there were issues of backlog due to the massive demand for the EPIC line and other products but those issues have been sorted out as of the Q2 earnings call in August. In the golf ball section Callaway has almost doubled market share over the last three and a half years. This is due to the successful launch of the Chrome Soft and Chrome Soft X golf balls in 2015 and 2017 respectively. Not only has the golf ball side of the business been taking market share, it has also greatly

increased profitability as part of a cost reduction strategy, cutting 25 percent plus of manufacturing cost. Along with the increase in market share Callaway will pivot to a growth strategy with increases in operating efficiencies through cost management initiatives and increase in productivity. Also, Callaway will continue to seek out high ROIC in both core and tangential business. One of these types of projects that proves Callaway's ability to pick good investments is their 15% stake in TopGolf, worth north \$400 million today on just a 54 million initial investment. TopGolf mixes the driving range with a nightclub/social feel and has been wildly successful so far.



Ownership Summary:

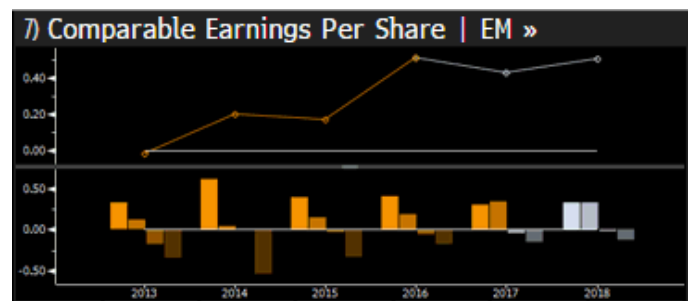
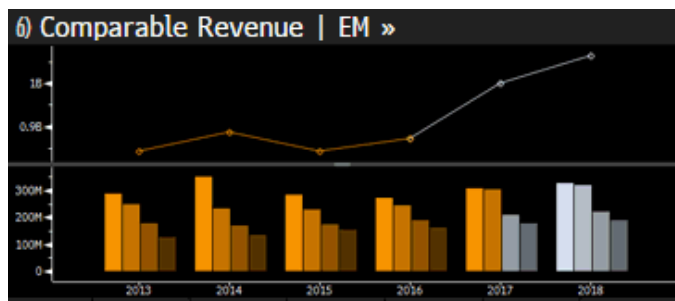
Currently 91% of Callaway is owned institutionally with 75.7% coming from advisors and 16.09% from hedge funds. Within that Blackrock is the largest owner at just over 12% of total shares of shares outstanding. While

this is over 10 percent, it looks as if Blackrock will remain passive. The 16% overall ownership by hedge funds with only 2% short interest overall shows that there is belief that Callaway will continue to grow in price.

Ownership Type	10/01/17	Curr!
11) Investment Advisor	75.73	75.74
12) Hedge Fund Manager	16.09	16.08
13) Pension Fund	3.18	3.18
14) Insurance Company	1.37	1.37
15) Individual	1.29	1.29
16) Sovereign Wealth Fund	1.28	1.28
17) Bank	0.57	0.57
18) Government	0.28	0.28
19) Brokerage	0.11	0.11
20) Endowment	0.08	0.08
21) Foundation	0.01	0.01

Earnings:

Callaway is a consumer discretionary, which means that there is significant emphasis on earnings reports and with that comes significant price moves. Q2 results were a massive beat for Callaway on both the top and bottom lines, with the stock price jumping 8% the following day. This beat was due to the massive success of the aforementioned EPIC line and impressive growth in the golf ball segment. This is including the lag in the iron business due to the timing of the launch of the EPIC irons. This push back of the full impact of the iron launch into Q3 will be one of the factors that help with the quarterly report. The second factor is there will be favorable comps because the second half of 2016 is when GolfSmith went bankrupt which caused major disruption across the golf industry. Below are charts showing the past and expected growth of revenue and EPS.

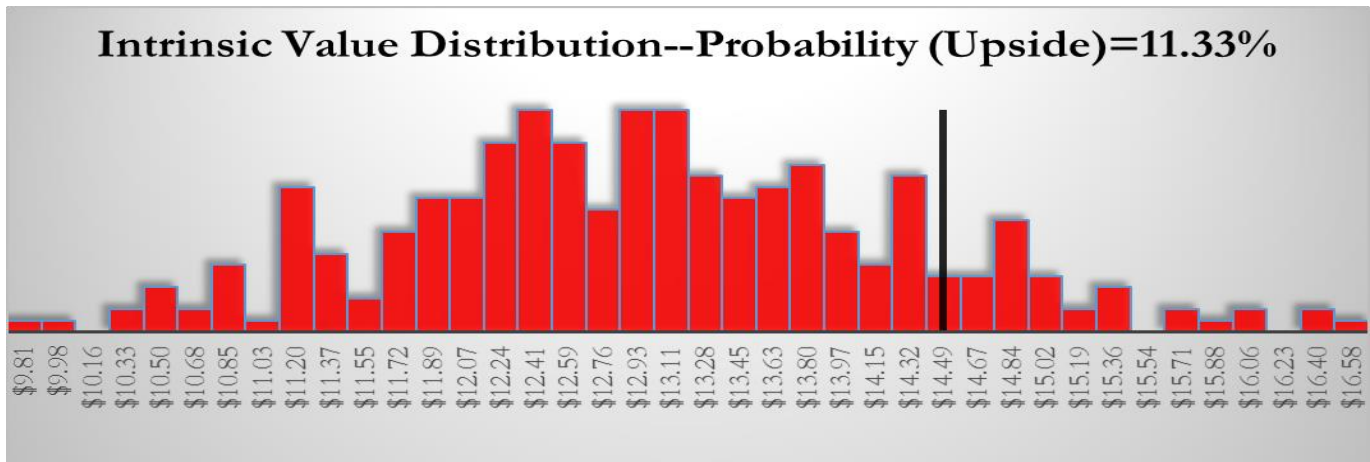


On top of the favorable outlook for the Q3 earnings report, during the Q2 earnings report the CEO adjusted 2017 guidance upward: revenue up 20 million, OPEX down 2 million, and COGS margin down 0.6%. Q3 earnings are expected to be announced on October 25.

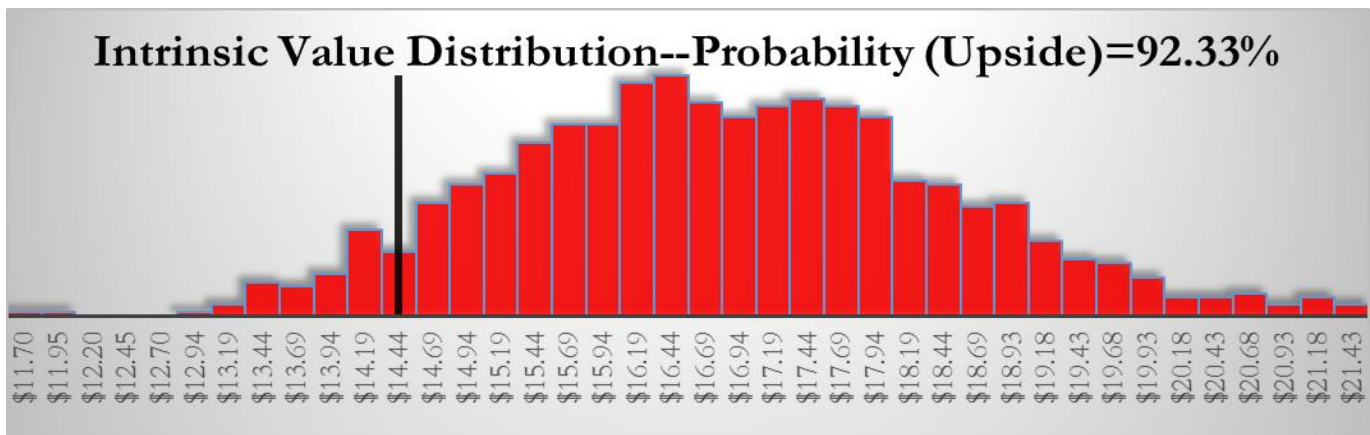
Conclusion:

In the end, there are three drivers of this stock price in the immediate future. First, Callaway is taking mass amounts of market share on a consistent basis. Second, the cost saving plans have worked and it is time to pivot from reconstruction to growth. Third, Q2 was a homerun and Q3 is set up for another big beat, which will drive price even higher. Then within the next year or two, the acquisitions that Callaway has made and will continue to make will start to impact the top and bottom line. On top of that, in the long term Callaway is the best option in an industry with 2.5 million new entrants a year growing at almost an 11 percent rate which could go up even further with the retirement of Generation X. This leads to three distinct possibilities.

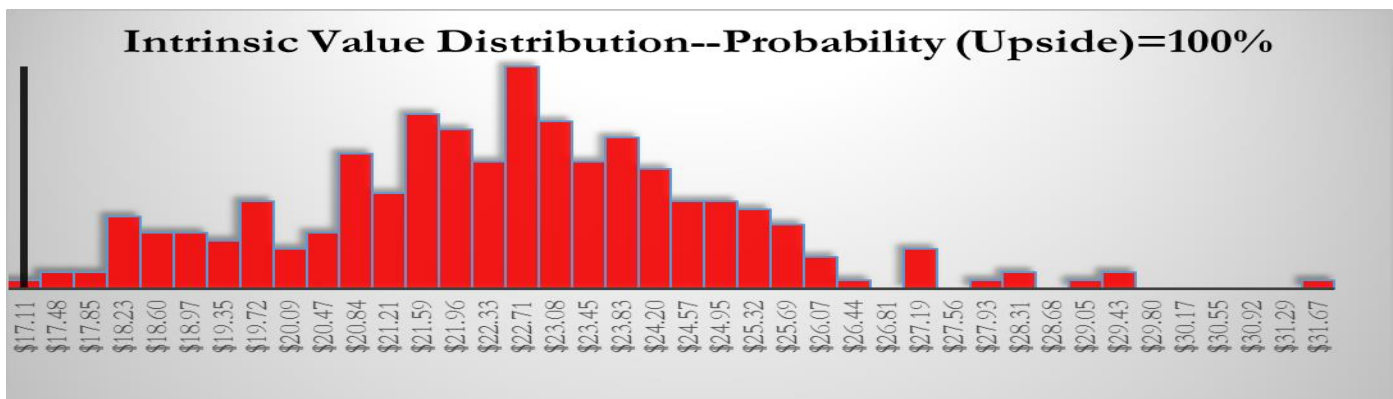
Bear Case: Considering everything, I mentioned there is the possibility that Callaway cannot continue the cost reduction it has been experiencing and would not see the market share gains in the following years. That worst-case scenario would play out as the following pricing distribution that leads to a 1-year price target of \$12.96 a share, a -12% return. There is about a 15% chance that this is the case.



Realistic Case: Based off of the more realistic results from the cost saving plans and grabbing market share as they have been the most realistic case would lead to a 1-year price target of \$16.65 which is a 15% return. There would be about a 70 percent chance of this case.



Bull Case: This case would rely on taking more market share than expected and along with that cutting even more cost than expected. In the late 1990s and early 2000s, Callaway operated around 17-25% EBIT. This case is aggressive and with a 15% chance of happening. The 1-year target price would be \$22.02 for a return of 51.5%



*Analyst estimates range from \$14-\$18 with a median at \$16

Callaway Golf Company (ELY)

CENTER FOR GLOBAL FINANCIAL STUDIES

NEUTRAL

Analysis by John Graziano

10/5/2017

Current Price:

\$14.56

Dividend Yield:

0.3%

Intrinsic Value

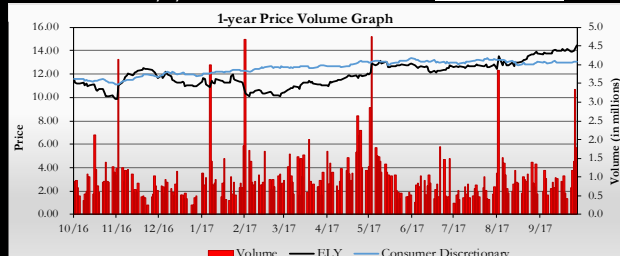
\$14.70

Target Price

\$16.56

Target 1 year Return: 14.05%

Probability of Price Increase: 92.6%



Description
Callaway Golf Company, together with its subsidiaries, designs, manufactures, and sells golf clubs, golf balls, golf bags, and other golf-related accessories in the United States and internationally.

General Information

Sector	Consumer Discretionary
Industry	Leisure Products
Last Guidance	November 3, 2015
Next earnings date	October 22, 2017
Estimated Country Risk Premium	6.72%
Effective Tax rate	25%
Effective Operating Tax rate	-8%

Market Data

Market Capitalization	\$1,374.05
Daily volume (mil)	1.43
Shares outstanding (mil)	94.37
Diluted shares outstanding (mil)	96.05
% shares held by institutions	91%
% shares held by investments Managers	70%
% shares held by hedge funds	15%
% shares held by insiders	1.20%
Short interest	1.98%
Days to cover short interest	2.07
52 week high	\$14.67
52-week low	\$9.77
Volatility	26.17%

Past Earning Surprises

Quarter ending	Revenue	EBITDA
6/30/2016	0.28%	-15.09%
9/30/2016	3.78%	-148.23%
12/31/2016	-9.06%	-220.05%
3/31/2017	6.38%	15.66%
6/30/2017	1.01%	2.57%
Mean	0.48%	-73.03%
Standard error	2.6%	47.0%

Peers

Acushnet Holdings Corp.
Nautilus, Inc.
Johnson Outdoors Inc.
Malibu Boats, Inc.
Brunswick Corporation
MCBC Holdings, Inc.
Escalade, Incorporated

Management

Management	Position	Total compensations growth
Brewer, Oliver	CEO, President & Director	2.38% per annum over 4y
Lynch, Brian	CFO, Senior VP, General Coun	13.63% per annum over 2y
Leposky, Mark	Senior Vice President of Glo	6.39% per annum over 3y
Howie, Neil	Managing Director of Europe,	8.95% per annum over 4y
Thomas, Jennifer	Chief Accounting Officer and	N/M
Burke, Patrick	Vice President of Finance &	N/M

Total return to shareholders

7.69% per annum over 4y
19.78% per annum over 2y
3.22% per annum over 3y
7.69% per annum over 4y
N/M
N/M

Profitability

Profitability	ELY (LTM)	ELY (5 years historical average)
Return on Capital (GAAP)	11.1%	5.35%
Operating Margin	6%	1.37%
Revenue/Capital (GAAP)	1.95	3.91
ROE (GAAP)	28.7%	5.6%
Net margin	18.1%	1.8%
Revenue/Book Value (GAAP)	1.59	3.12

Peers' Median (LTM)

35.59%
8.18%
4.35
37.1%
6.5%
5.71

Invested Funds

Invested Funds	ELY (LTM)	ELY (5 years historical average)
Cash/Capital	9.3%	10.3%
NWC/Capital	35.7%	41.1%
Operating Assets/Capital	50.2%	41.1%
Goodwill/Capital	4.8%	6.4%

Peers' Median (LTM)

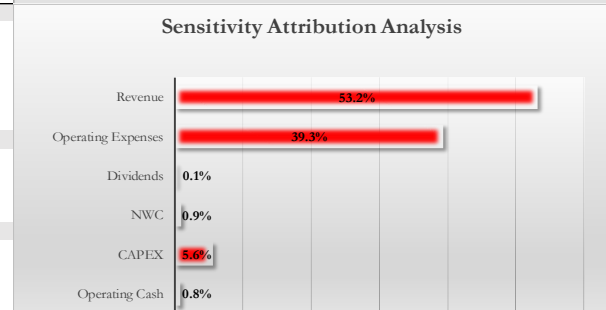
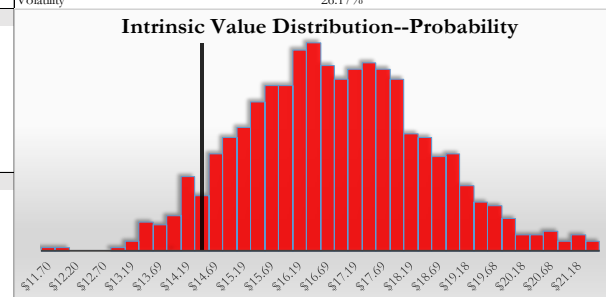
18.0%
19.0%
46.1%
16.9%

Capital Structure

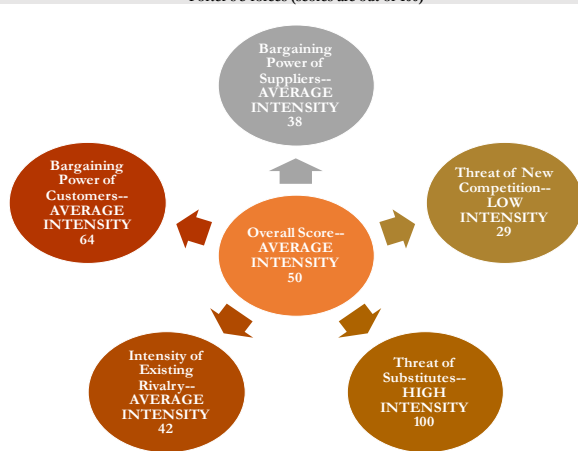
Capital Structure	ELY (LTM)	ELY (5 years historical average)
Total Debt/Market Capitalization	0.01	0.14
Cost of Existing Debt	4.0%	7.5%
CGFS Rating (F-score, Z-score, and default Probability)	BB	BBB
WACC	12.4%	12.7%

Peers' Median (LTM)

0.37
4.4%
AA
9.9%



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



Period	Revenue Growth Forecast	Valuation	Revenue to Capital Forecast
Base Year	14%	14.2%	1.44
6/30/2018	10%	6.1%	1.39
6/30/2019	8%	6.9%	1.39
6/30/2020	6%	7.6%	1.34
6/30/2021	6%	8.2%	1.29
6/30/2022	5%	8.8%	1.23
6/30/2023	5%	11.3%	1.17
6/30/2024	4%	11.8%	1.08
6/30/2025	4%	12.3%	1.00
6/30/2026	3%	12.9%	0.92
6/30/2027	3%	13.4%	0.85
Continuing Period	2%	15.2%	0.78
Period	Return on Capital Forecast	WACC Forecast	Price per share Forecast
Base Year	20.4%	12.4%	\$14.40
6/30/2018	8.5%	12.5%	\$16.10
6/30/2019	9.5%	12.6%	\$18.06
6/30/2020	10.1%	12.4%	\$20.16
6/30/2021	10.6%	12.3%	\$22.36
6/30/2022	10.9%	12.2%	\$24.79
6/30/2023	13.1%	12.1%	\$27.20
6/30/2024	12.7%	12.0%	\$29.71
6/30/2025	12.3%	12.0%	\$32.32
6/30/2026	11.8%	11.8%	\$34.99
6/30/2027	11.3%	11.8%	\$37.72
Continuing Period	11.9%	11.8%	

October 6, 2017

Company Name: GNRC

Michael Diotalevi

Sector: Technology

Industry: Back-Up Energy

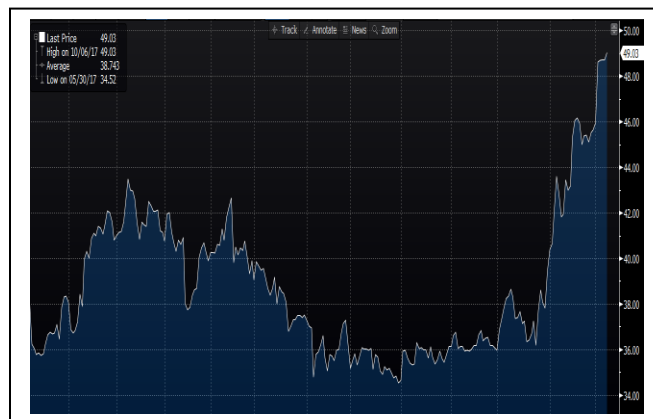
Current Price: 49.03 (8:00pm, 10/6/2017)

Target Price: \$62.41

Company Description: Generac is the industry leader in back-up power generation within the residential, commercial, and industrial market. Along with generation systems, Generac also offers a wide variety of “chore” related power equipment fit to meet consumer needs. With a well-developed global footprint and diversified portfolio of products Generac contains a very large market share.

BUY/HOLD/SELL: BUY

Current Price:	\$49.03
Target Price:	\$62.41
Market Cap:	3.03B
Beta:	1.09
ROIC:	8.70
ROE:	26.24%
ROA:	6.25%
Revenue Growth (YOY)	9.65%
EBITDA	271.36M



Thesis:

Generac Holdings is a company who has maintained stable, to increasing revenue and sales over the previous years. The probability of better future performance outweighs the probability of negative performance based on numerous catalysts. When considering an aging and underinvested national electric grid, it is valid to expect an increased reliance on backup power generation in the long term. Weather related incidents are a strong factor as well. Seasonal changes and the aftermath from weather related incidents are a long-term catalyst of demand for a product from a company that provides a market-leading product in emergency response and power generation. A 5%-6% organic growth is expected with a conservative 1% addition from seasonal factors and storms.

An industry specific shift in power generation from the traditional diesel powered generation, to natural gas generation systems can be expected to benefit Generac as they are the current leader in natural gas generation. Generac's technology will establish them to become the leader within the evolving industry. Generac is expected to expand its' commercial market share through numerous strategies which improve operations and Generac's global footprint. Increasing revenue and lower costs

Catalysts:

- Short Term:
 - Demand response in relation to weather related incidents, overall growing concern for backup power generation.
- Mid Term:
 - Housing authority contracts, incorporation into more retail distribution.
 - Market shift towards natural gas generation.
 - Increase in housing investment; new builds and purchases.
 - Expansion of non-power generation products, CHP acquisition: more cost efficient production and distribution method.
- Long Term:
 - Aging and underinvested grid, favorable demographics, and heightened power outages.

of operation will contribute to long term growth for Generac.

Earnings Performance:

Looking at Generac's performance the company has been showing significant growth caused by numerous catalysts. TTM revenue is currently at its' peak performance while operating income shows considerable improvement measuring back to 2015. EBITDA measures show significant improvement over the previous two years. Gross profit has remained constant following the previous year but still remains up in comparison to the measures of 2015.

Over the preceding years, operating income is showing a stable increase as Generac's internal operations become more efficient. Generac is in the process of implementing many initiatives in an attempt to lower their operating costs. This will be examined and further explained later on in the analysis. Two significant factors that have contributed to lower costs of operations are the acquisition of Pramac and Motortec. Interest expenses are continuing to fall as they are using internal funding for their operations. This suggests a healthy cash flow and pre-operation reserve of useful cash. In the years 2017 and 2018, Generac can expect a free cash flow of over \$800 million.

Increasing Profitability:

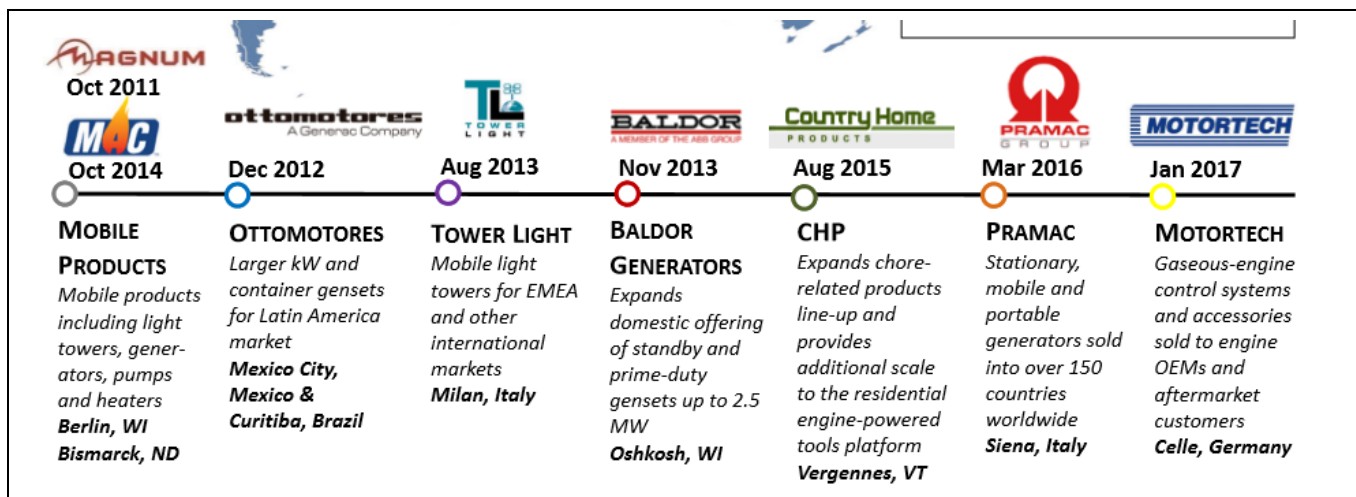
Generac is the industry leader in backup power generation systems while offering highly competitive products within the industries it holds market share. Offering a large variety of products, Generac has diversified into multiple industries each increasing market share. In regard to back-up generation Generac offers three individual residential-consumer power products (home generation systems), commercial and industrial stationary products (generators), commercial and industrial mobile products (portable generation and light staging), and engine powered tools (chore-related outdoor power equipment). Generac has made a number of acquisitions, which will positively contribute to their operations internally and externally. Acquisitions have been made on a national and international scale. Recently acquiring Pramac, Generac has expanded its distributional process internationally as it enters more foreign markets, increasing market share. Generac has been able to expand its international dealer network to over 6,000 dealer's worldwide, expanding Generac's global footprint.

Global expansion has had a significant effect on Generac's margins. Within the previous two years operations have become more efficient lowering Generac's cost, while revenues have shown a stable increase and are expected to increase forward looking. From their investor day, Arron Yokfield CFO mentions, "Every

1% of penetration that we add to our “grow and gain pillars”, currently we are at 4%, is a 2 billion dollar increase in opportunity. (Yokfield)”

Acquiring Motortech earlier in the year Generac is now entering a phase of realized returns as they significantly improve on the costs and efficiency associated with their operations. Motortech is an industry leader in the creation of backup generation parts and motors, and prior to being acquiring by Generac offered the industry’s most competitive products. Generac has been able to expand its’ market share within the demand response industry through this acquisition. The term demand response refers to a product that does not only operate when in a responsive state, but one that run when electricity usage is high or during peak demand to increase efficiency measures and lowering electricity related expenses. The acquisitions of Pramac and Motortech are expected to contribute ~ 5% growth which are unadjusted for the effects of increased weather factors. Improving global presence, market share, operations, distribution, and increasing research and development channels, Generac has made strategic plans to become a world-wide leader in each industry it performs business in.

The following chart shows all acquisitions performed by Generac:

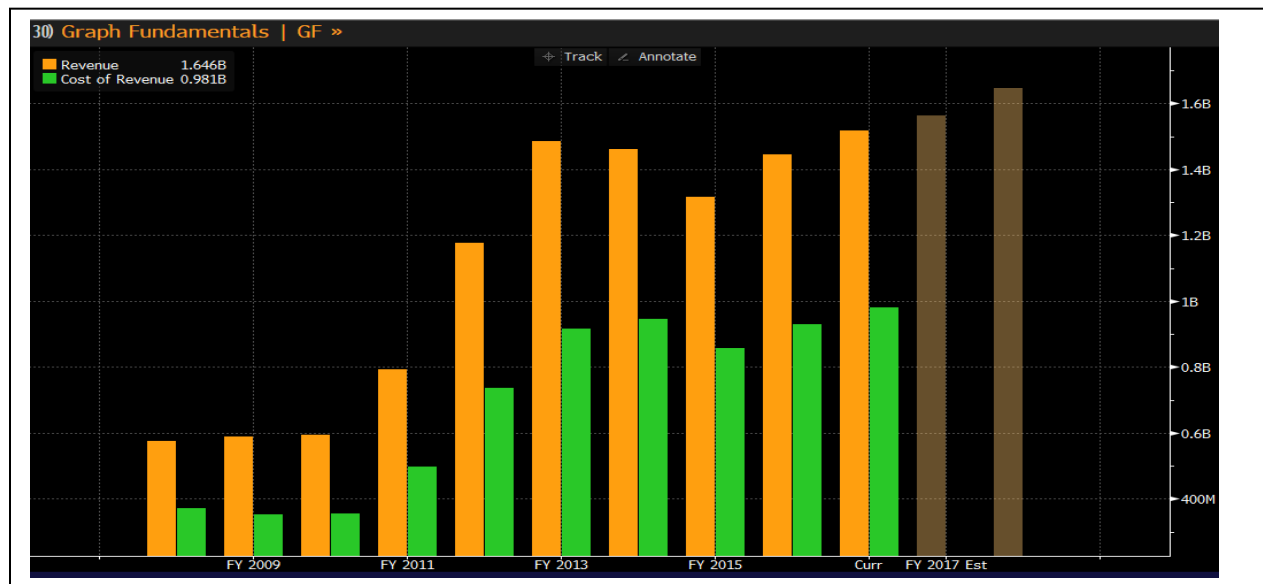


Improving operating efficiency Generac has been able to combat an increase in the costs of goods sold. Financially Generac has been able to reduce its’ debt by funding these activities through cash from operations. Capital expenditures were \$30.5 million and \$30.7 million for the years ending December 31, 2016 and 2015. High investment in research and development has allowed Generac to gain a technological insight of what it takes to offer a superior product. Leveraging “engineering facilities at many locations globally and employing over 300 personnel with a focus on new product development, existing product improvement, and cost containment (10-K)” Generac will soon take advantage of doing so. Generac’s competitive advantage will come from the numerous acquisitions it preformed within a five-year span. Specifically air-cooled engines and liquid-cooled engines are two items mentioned within Generac’s 10-k annual report.

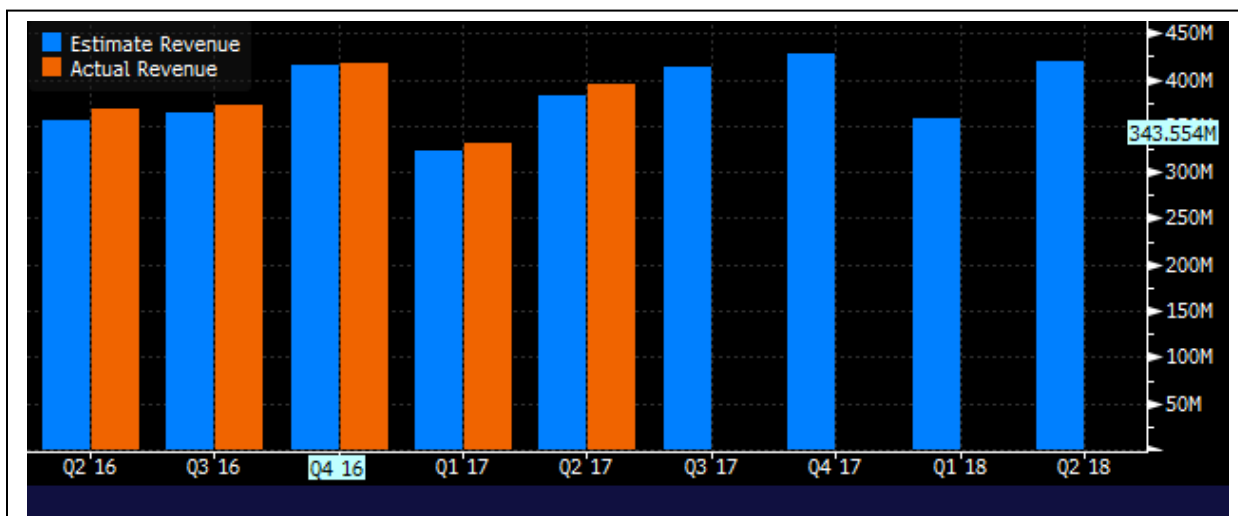
Comparing Generac to similar competitors Generac has outperformed the median average in each category.

Name	ROE:Y	ROA:Y	EBITA Mrgn:Y	GM:Y	PM:Y
Median	11.21%	6.35%	10.67%	26.94%	7.71%
100) GENERAC HOLDINGS INC	26.24%	6.25%	16.45%	35.59%	7.87%
101) ZHONGSHAN BROAD OCEA...	8.39%	4.61%	8.95%	23.13%	7.54%
102) ENERSYS	19.76%	9.28%	9.96%	27.49%	8.83%
103) JPMF GUANGDONG CO LT...	5.88%	2.48%	2.93%	9.47%	1.95%

The following chart represents Generac's revenues in comparison to costs associated with revenues:



- Generac is performing operations at a level that continues to improve profitability. Looking at expectations of revenue Generac is continuing to beat expectations of revenues predicted by analysts.



Macro Catalysts of Demand:

Generac is highly influenced by the changes in seasonality. The term influence correlates with increased demand as demand itself remains stable and increasing. This analysis is excluding catalyst of demand which will be future explained.

Generac is entering a phase where it will soon begin taking advantage of these seasonality factors as it completes preparation of anticipated growth. For Generac seasonality changes and events can positively influence Generac's cash flows and operating margins. As weather conditions become more unpredictable while bringing more catastrophic events, demand for back-up power generation is obvious and increasing within all aspects of daily life.

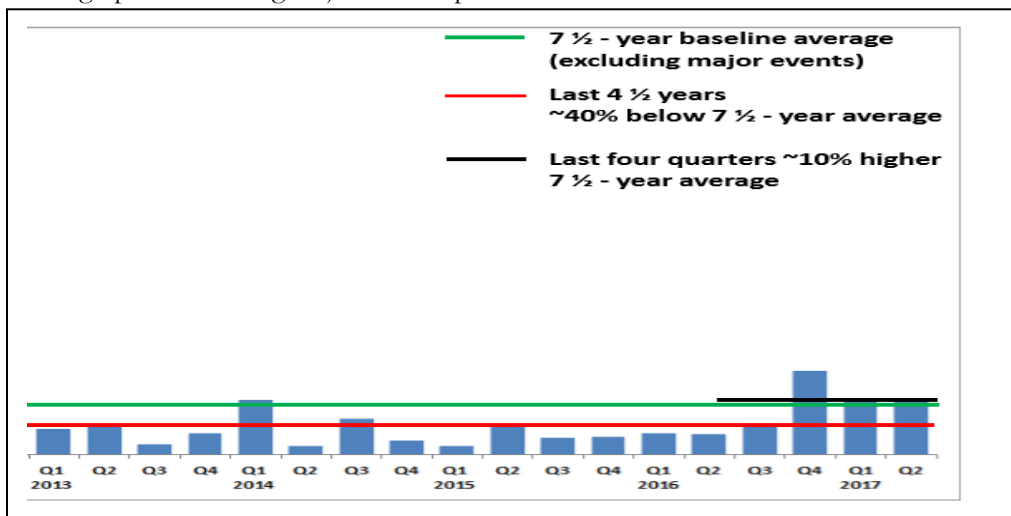
September 2017 has recently become the most active month to record for Atlantic hurricanes bearing two category five hurricanes, Irma and Maria, and a category 4 named Jose. As unpredictable as weather is, it is obvious to predict that there is a growing concern for disaster preparation and relief prior/post weather related events. This is why increased concern for disaster preparation and relief are catalyst in growth in demand for Generac products. Technologically speaking Generac is the industry leader in home generation systems as it brings the most dependable and proven successful product to market backed by years of research and development. Generac never settles on the standards of their products as they are constantly modifying every aspect of production to meet consumer expectations.

The three main residential products Generac offers are:

- Air-cooled home standby generators
- Liquid-Cooled home standby generators
- Portable and inverter generators

Offering a variety of products Generac currently is the leader of residential backup generation systems. Offering numerous products for each of the three previously mentioned sectors, Generac has the ability to customize each product to fit each consumer's needs.

- The following graph shows the reported number of weather related power outages in the U.S over the past four years.
- In 2016-2017 data suggests that outage rates become closer, if not beat their seven-year average. Note that the graph is excluding major catastrophic events.



Weather's financial effect on Generac:

Statistical analysis shows that prior to a catastrophic event caused by weather, demand for Generac's products never settles back to its previous amount. Simply stated, the more weather related incidents that affect our power grid and the demand for electricity, positively correlate to an increased demand for Generac's generation systems. Prior year's sales show how Generac has gained from a concern in power reliability over the previous years. It is important to realize the current outdated and structurally weaker national power grid when considering the demand for backup power generation.

Macro catalyst: Residential Housing

Optimistic opinions of the housing industry and commercial real-estate sector provide increased opportunity for Generac in the upcoming years. Data sourcing from the Federal Home Loan Mortgage Corp. (FHLMC) suggests, "New homes are expected to be a "primary driver of sales in 2018," as 1.33 million housing starts are predicted next year—up from 1.22 million in 2017, according to Freddie Mac's September Outlook report, which gauges future real estate activity. Total home sales are expected to increase about 2 percent from 2017 to 2018, according to the report." With an increased concern over volatility in power outages and an optimistic opinion of increasing demand in residential and commercial housing markets, Generac is entering a period where the markets it does business in are on the brink of growth and opportunity. Internally, Generac must use its' competitive advantages to take advantage of this expected growth, fueling growth as a company. Looking at *Total Net Sales* for the years 2016, 2015, and 2014 residential products (power generations systems) accounted for 53.5%, 52.2% and 49% increasing year over year.

The following chart is Bloomberg's economical expectation of future investment in the start-up of new homes:

Indicator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Housing Market										
Housing Starts (000s SAA...							1166	1211	1290	1330
New Home Sales (000s S...							566	618	658	692
Existing Home Sales (Mln...							5.4	5.6	5.6	5.7
Building Permits (000s S...							1168	1240	1323	1380

With the residential industry looking promising in the present and future, Generac is also directing its' interests toward the commercial housing industry. Recently Generac has contracted with the New York City Housing Authority to install natural gas powered generation systems. They won this bid over one of their major competitors, Caterpillar. Generac's success in winning this account can be credited to their ability of offering a superior product over their competition. Generac's ability to do so is credited to Generac's reputation in the market. Generac's CFO mentioned in their most recent earnings call that contracts such as this one are more likely to occur in the future. Looking at this as a mid-term catalyst, commercial contract can be expected to contribute to Generac's future growth and opportunity. Contracted growth opportunities are something likely for Generac as global concern for backup power generation increases, and Generac's reputation becomes more evident.

Internal anticipation of growth:

What is being done; and what will be the outcome.

Anticipating increased demand for Generac's products Generac has invested in multiple "self-funding" internal processes to make operations more efficient. The term "self-funding" is used as stated by Generac's CFO himself during their recent *Investor Day* held on September 7th, 2017. Generac operates on a "Powering Ahead" strategic plan readily preparing the company for upcoming market expectations.

Generac's strategic plan divided into four sections:

1. **Drive continued growth in the penetration rate of home standby generators.**
 - 1% increase in penetration equates to a \$2B sales opportunity.
2. **Expansion of C & I products to favorably position and continue gaining market share.**
 - 1% increase in market share equates to a \$35M sales opportunity.
3. **Capitalize on competitive advantages with gaseous-fueled products.**
 - \$5B Market global gas market opportunity – currently serve ~\$2B.
4. **Growing and improving profitability within the global business.**
 - Global footprint to serve \$13.5B Market outside of U.S and Canada.

How will Generac capitalize on its strategic plan?

Implementation of improved internal process and external modifications are what Generac is currently doing to attack its' profitable strategy. "*PowerPlay*" is one of these processes it has recently introduced. Generac recently created software and it is beginning to become standardized in all consumer and commercial products. The software is linked to an activation code for all products that must be registered with Generac prior to use. With this, Generac can monitor who, why, when, where, and who in the area *does not* use a generator. Using *PowerPlay* Generac has also developed a platform that allows a user-friendly interface for product owners. This has allowed Generac to modernize the dealer-customer relationship and improve customer relations through use of consumer friendly "app". *PowerPlay* is not only for consumer benefits. Using the software Generac has the ability to gain consumer data. With this data they can become more effective at closing opportunities and increasing sales. One example would be a reconstruction of a dealer's sales pitch, as that dealer can now implement data that pertains to a particular customer. That dealer might now state that for a specific customer's area you can see increased outages for a particular period or season. Information like this is a catalyst in driving more incentives to purchase a Generac system.

Generac has also created a system called "*Core*" which has allowed them to enhance the number of bids their sales representative and distributors close through a data-analytical interface. Prior to its implementation a Generac representative mentions in their investor relations presentation that the software has shown significant improvements on their bids to close rates. With an ability to funnel particular bids to particular dealers Generac uses, its' analytical data to provide more information to the market desired. Generac is better preparing their sales representatives, which is leading to a distinction from their competitors within the markets. Software such as "*PowerPlay*" or "*Core*" are now standardized in every product Generac offers, and in every industry it obtains market share.

Obtaining particular data is one strength, but knowing how to use it to its best advantages is far more superior.

Generac is constantly improving their "IC-University" which is a "hard core sale training" for all representatives. Russ Minick mentions in Generac's presentation that the technological investments and educational investments "have been profitable and self-funding. (RM)" Investments in research and development have made significant modifications to Generac's sales training. All Generac representatives must complete IC-University training prior to their first encounter with a customer. In doing so Generac has evolved a more efficient process in raising awareness on backup power

generation, while constantly modifying how they interact with customers to increase their market share within all industries of operations.

Market Expectations:

Ever since the beginning of “the backup” power generation the industry itself has been completely reliant on the use of diesel and gas to fuel generation systems. Generac has deviated from this original technique as it has invested significant research and development into a natural gas fueled power generation system. This significant investment in research and develop comes from the anticipation that the entire market will shift toward natural gas generation as well. Offering the market leading gas and diesel generation systems, Generac now offers the most efficient natural gas power generation system. Natural gas systems not only provided a more efficient generation process, but also a cleaner and more environmentally friendly aspect to power generation. Both aspects of increased efficiency and cleaner bi-products can benefit Generac within the residential, commercial/industrial, and power equipment industry. As the market itself shifts further towards natural gas generation, Generac has already stabilized a superior product within the market and is ready for change. As previously mentioned Generac has recently contracted with the New York City Housing Authority for installations of natural gas generators. More contracts for the future, such as the one mentioned, can be expected.

Conclusion:

In conclusion, Generac (GNRC) is a **BUY** as the current price does not represent the future growth expected and, undervalues profitability from operations expected in the future. Generac has the competitive advantage of a strong internal process and industry reputation as it concludes preparation of expected increases in demand and market shifts. In the present, Generac is simply waiting to take advantage of the future it has predicted for each market Generac shows presence. Technological preparation and veteran leadership is currently fueling growth and value creation and will continue to do so. Generac’s one year target price is \$62.41, a 27.29% return can be expected due to growth fueled by demand and more efficient operations.

Generac Holdings Inc. (GNRC)

CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Analysis by Michael Diotalevi

10/6/2017

Current Price:

\$49.03

Intrinsic Value

\$56.06

Divident Yield:

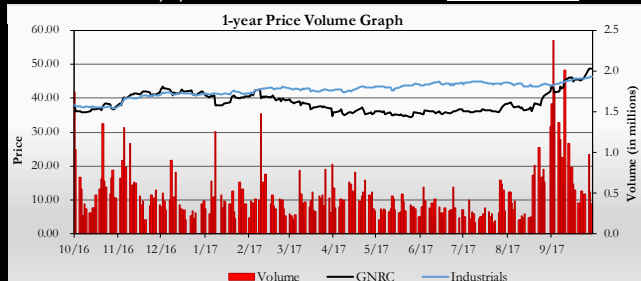
0.0%

Target Price

\$62.41

Target 1 year Return: 27.29%

Probability of Price Increase: 99.67%

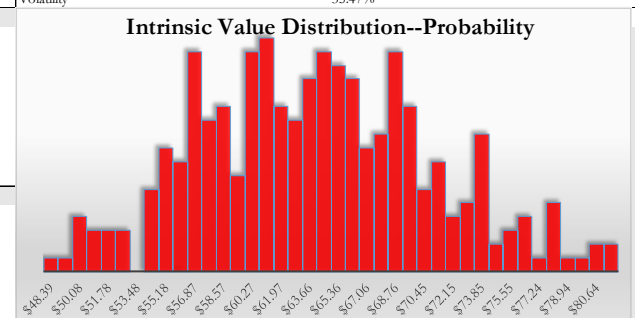


Description	
Generac Holdings Inc. designs, manufactures, and sells power generation equipment and other engine powered products for the residential, light commercial, and industrial markets worldwide.	
General Information	
Sector	Industrials
Industry	Electrical Equipment
Last Guidance	November 3, 2015
Next earnings date	October 26, 2017
Estimated Country Risk Premium	5.69%
Effective Tax rate	25%
Effective Operating Tax rate	19%

Market Data	
Market Capitalization	\$3,047.27
Daily volume (mil)	0.36
Shares outstanding (mil)	62.15
Diluted shares outstanding (mil)	63.57
% shares held by institutions	84%
% shares held by investments Managers	92%
% shares held by hedge funds	4%
% shares held by insiders	2.43%
Short interest	8.24%
Days to cover short interest	9.05
52 week high	\$49.11
52-week low	\$33.77
Volatility	35.47%

Past Earning Surprises	
Quarter ending	Revenue
6/30/2016	-0.26%
9/30/2016	0.38%
12/31/2016	-2.28%
3/31/2017	0.88%
6/30/2017	-1.77%
Mean	-0.61%
Standard error	0.6%

EBITDA	
6/30/2016	-1.72%
9/30/2016	-5.39%
12/31/2016	-4.44%
3/31/2017	-12.45%
6/30/2017	-1.25%
Mean	-5.05%
Standard error	2.0%

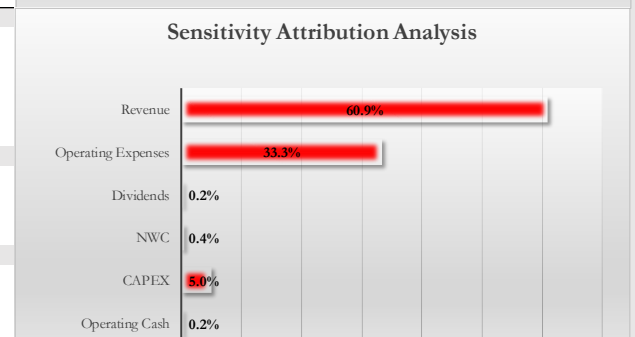


Management	
Jagdfeld, Aaron	Executive Chairman, Chief Ex
Ragen, York	Chief Financial Officer and
Minick, Russell	Chief Marketing Officer
Pascavis, Roger	Executive Vice President of
Forsythe, Patrick	Executive Vice President of
Kanuru, Raj	Senior Vice President, Gener

Peers	
Graco Inc.	
Actuant Corporation	
Nordson Corporation	
Briggs & Stratton Corporation	
EnPro Industries, Inc.	
Regal Beloit Corporation	
Terex Corporation	
Emerson Electric Co.	

Profitability	
GNRC (LTM)	
Return on Capital (GAAP)	13.1%
Operating Margin	12%
Revenue/Capital (GAAP)	1.07
ROE (GAAP)	24.5%
Net margin	7.0%
Revenue/Book Value (GAAP)	3.50

GNRC (5 years historical average)	
Return on Capital (GAAP)	15.71%
Operating Margin	15.92%
Revenue/Capital (GAAP)	0.99
ROE (GAAP)	21.2%
Net margin	7.9%
Revenue/Book Value (GAAP)	2.68



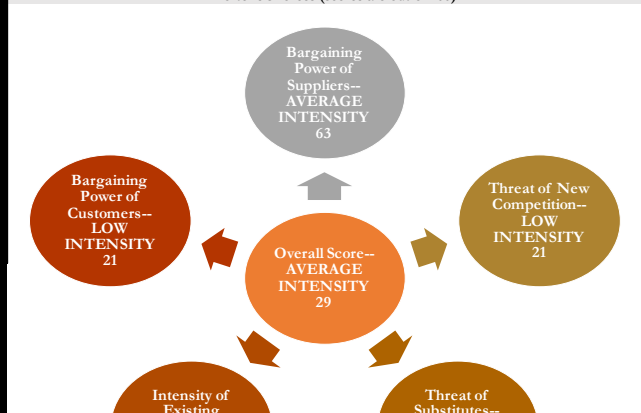
Invested Funds	
GNRC (LTM)	
Cash/Capital	4.5%
NWC/Capital	23.3%
Operating Assets/Capital	24.6%
Goodwill/Capital	47.7%

GNRC (5 years historical average)	
Cash/Capital	7.8%
NWC/Capital	18.8%
Operating Assets/Capital	30.0%
Goodwill/Capital	40.4%

Capital Structure	
GNRC (LTM)	
Total Debt/Market Capitalization	0.69
Cost of Existing Debt	4.1%
CGFS Rating (F-score, Z-score, and default Probability)	A
WACC	6.4%

GNRC (5 years historical average)	
Total Debt/Market Capitalization	0.69
Cost of Existing Debt	4.2%
CGFS Rating (F-score, Z-score, and default Probability)	BBB
WACC	8.1%

Peers' Median (LTM)	
Return on Capital (GAAP)	16.63%
Operating Margin	9.09%
Revenue/Capital (GAAP)	1.83
ROE (GAAP)	12.1%
Net margin	5.4%
Revenue/Book Value (GAAP)	2.24



Porter's 5 forces (scores are out of 100)	
Period	Revenue Growth Forecast
Base Year	11%
6/30/2018	8%
6/30/2019	7%
6/30/2020	6%
6/30/2021	5%
6/30/2022	5%
6/30/2023	4%
6/30/2024	4%
6/30/2025	3%
6/30/2026	3%
6/30/2027	2%
Continuing Period	2%

Valuation	
NOPAT Margin Forecast	Revenue to Capital Forecast
Base Year	0.86
6/30/2018	0.89
6/30/2019	0.86
6/30/2020	0.85
6/30/2021	0.83
6/30/2022	0.81
6/30/2023	0.78
6/30/2024	0.72
6/30/2025	0.66
6/30/2026	0.61
6/30/2027	0.57
Continuing Period	0.53

Return on Capital Forecast	
Period	
Base Year	14.4%
6/30/2018	3.8%
6/30/2019	4.6%
6/30/2020	4.9%
6/30/2021	5.2%
6/30/2022	5.3%
6/30/2023	10.7%

WACC Forecast	
Period	Price per share Forecast
Base Year	\$55.57
6/30/2018	\$62.26
6/30/2019	\$68.30
6/30/2020	\$74.52
6/30/2021	\$81.35
6/30/2022	\$87.71
6/30/2023	\$94.28

October, 6, 2017

Company Name: PPC

Analyst: TJ Curtin

Sector: Consumer Staples

Industry: Food Products

Current Price: \$28.74

Target Price: \$54.88

Company Description:

Pilgrim's Pride Corporation is one of the largest chicken producers in the world, with operations in the U.S., Mexico and Puerto Rico. The company is primarily engaged in the production, processing, marketing and distribution of fresh, frozen and value-added chicken products to retailers, distributors and foodservice operators. They offer a wide range of products to customers through strong national and international distribution channels. Pilgrim's fresh chicken products consist of: refrigerated (non-frozen) whole chickens, whole cut-up chickens and selected chicken parts that are either marinated or non-marinated. The Company's prepared chicken products include: fully cooked, ready-to-cook and individually frozen chicken parts, strips, nuggets and patties, some of which are either breaded or non-breaded and either marinated or non-marinated.

BUY:

Current Price: \$28.74
 Target Price: \$54.88
 Market Cap: 7.25B
 Volume: 1.61M
 S&P Debt Rating: A-
 Ke: 10%
 ROE: 24.7%
 WACC: 7.5%
 Total Asset Multiplier: 6.13
 Cash/Total Assets: 62.93%

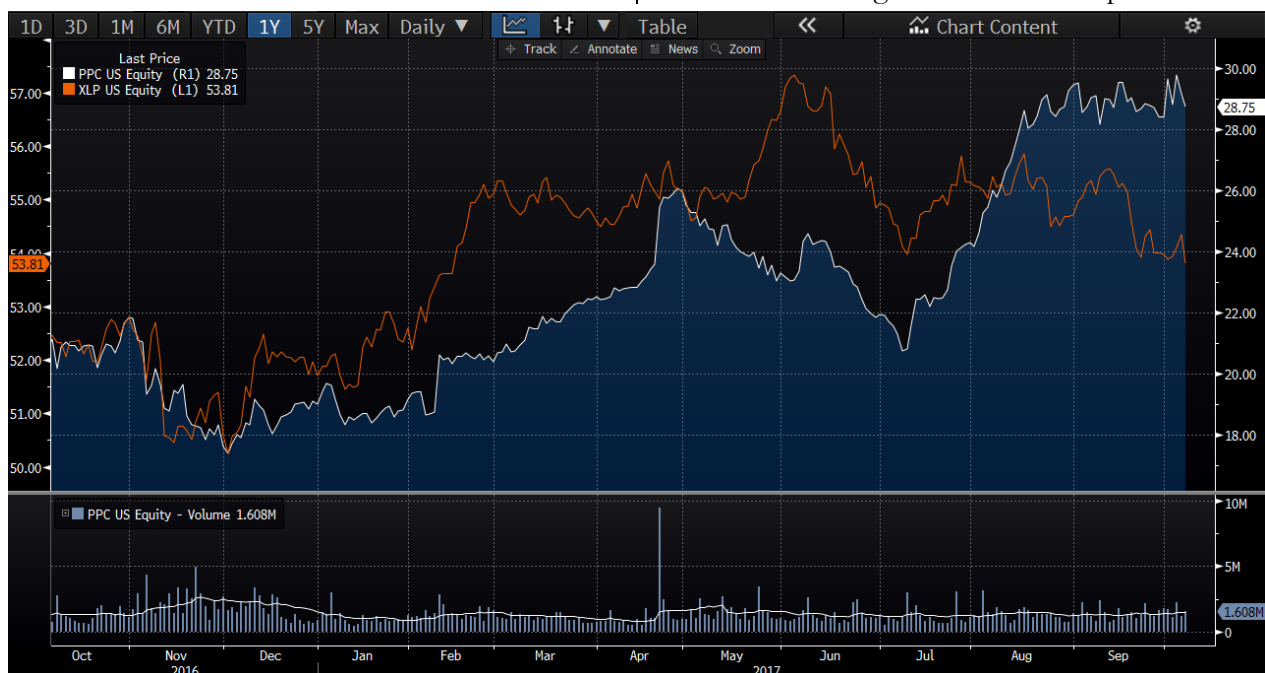
Catalysts:

Short Term(within the year):

- Low input prices due to a record excess supply of corn and soybean crops
- Shifting customer demand to healthier alternatives aligns with growing product segments that came along with GNP acquisition (2017) (producer of "Just Bare" line of natural products with no antibiotics)

Mid Term(1-2 years):

- Growing export platform
- Growing Mexican component with efficient processing facility aligns with growing Mexican demand for chicken
- Moy Park Acquisition will lead to stronger cash flow generation in Europe



	Long Term(3+): <ul style="list-style-type: none"> - Frugal innovation & lean/focused enterprise leads to better sustainability and profitability (Zero-Based Budgeting) - Relationship with Amazon to continue to grow, allowing company to capitalize on the future distribution channels where more and more shoppers are expected to get groceries online - Focus solely on chicken allows for company to excel past competition who focus on less profitable, desirable and shrinking meat distribution segments - Shift from Business-to-Business model to Business-to-Consumer & Shopping strategy

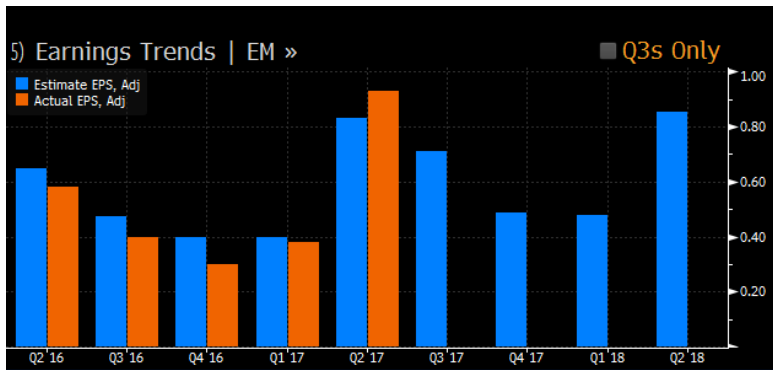
Thesis:

Pilgrim's Pride Corporation, an industry leader with regard to quality, safety and minimizing SG&A costs, filed Chapter 11 bankruptcy in 2011 after 4 quarters of consecutive losses attributed to: rising grain costs, a poultry surplus, high SG&A costs and operating inefficiencies and a large debt burden (\$1.9 Billion) as a result of an acquisition. In the years since the bankruptcy, the company has been purchased by JBS holdings, a meat producer and distributor who holds 78.5% of the company currently, which has helped the company to learn from its past mistakes, pay off a majority of the debt and propel itself on a path to becoming the industry leader for chicken products.

The current economic situation of the company is almost the exact opposite of what it was when it filed bankruptcy; input costs are low as the result of record surplus, SG&A costs now set the standard for the industry and the debt burden that caused the company to file for bankruptcy had been reduced from \$1.4 billion in 2011 down to \$.31 billion in 2013. With these metrics under control and lessons learned from the past, PPC is in a great strategic position to continue growing as it has over the past years. No customer represents more than 10% of PPC's business; an important statement that competitors cannot make whilst the bargaining power of buyers is a strong factor in this industry. The new relationship with parent company JBS has given a strong competitive advantage to PPC with regard to distribution and cutting down on administrative costs. Rather than again making the mistake of acquiring large, complicated purchases, the company has focused on smaller and more frequent acquisitions that are vertically integrated to help it achieve a geographically strategic stronghold with regard to production and distribution.

Based off of my research and analysis, I believe that PPC is currently undervalued by the market due to poor performance in 2016 as a result of labor contracts, derivative losses (compared to usual gains) and increased wages and benefits. The company has strong growth prospects for the coming years; this is a result of a complete overhaul of process, strategic positioning relative to competition, strategic partnerships & successful acquisitions over the past as well as recent acquisitions that are expected to generate an increase in cash flow moving forward.

Earnings Performance:



PPC has missed more earnings as of recent quarters than it has accurately forecasted, however growth verses competitors has been stronger each quarter of the recent year in the categories of earnings per share, revenue, net income, operating profit and EBITDA. The second quarter underestimate of earnings caused for an appreciation of the price of PPC's shares however other recent factors, such as the arrest of parent company JBS's CEO for alleged insider-trading has helped to temporarily devalue

Measure	Q3/17 Est	4wk Chg	YoY Gr	Growth vs Comps	Past Surprise
1) EPS, Adj+	0.710	-1.39%	77.5%	Stronger	Missed 6 of 8
2) EPS, GAAP	0.710	-1.39%	82.1%	Stronger	Missed 6 of 8
3) Revenue	2.313B	1.26%	13.8%	Stronger	Missed 7 of 8
4) Net Income, Adj+	186.667M	-1.75%	81.6%	Stronger	Missed 6 of 8
5) Operating Profit	322.000M	0.00%	--	--	--
6) EBITDA	352.333M	0.67%	67.2%	Stronger	Missed 5 of 8

the company. Recent earnings and settlement of debt have caused for the S&P credit rating of the company to improve from the triple B category into the A- category.

Business Strategy:

Since JBS purchased PPC, the company has increasingly been able to predict and adjust for expected market changes. Employing over 41,000 employees internationally in more than 80 countries, PPC aims to "become the best and most respected company in (the) industry by creating the opportunity of a better future for team members". This is being achieved through a 4 part strategy. The first focus is on safe people, products and healthy attitudes. This will be implemented through various training programs, a university that has been established for the Mexican component and through the daily performance monitoring of various production and distribution segments to determine how efficiencies may be increased or maintained. The second area of focus is having a unique portfolio of diverse, complimentary business models. This portfolio includes a range from live chicken, to fresh chicken, to cooked chicken and even processed chicken availability. These products range from economical options that are easy to prepare to higher-priced products that boast organic labeling and antibiotic-free growth environments. These products will be distributed through multiple international channels including popular companies such as Chick Fil A, Sysco, US Foods, Kroger, Costco, Public, HEBB and even online distributor Amazon in order to adjust to changing market trends. The third area of focus includes becoming a more valued partner with key customers in order to help the company and their partners grow their businesses. The USDA Organic Certification is one of these aspects and is a key customer due to the fact that they had the #1 CAGR for the past 5 years out of any certified product. The No-Antibiotic line that the company works to distribute had the #2 CAGR for the past 5 years, displaying important health trends to be aware of and comply with. Thirdly, products are offered to health-minded customers as having been fed

only vegetables and grains that are not genetically modified products (contain no GMOs). Lastly, the company focuses on ensuring that environmental impact reduction is an important part of their strategic initiatives. The final part of the company's strategy is the relentless pursuit of operational excellence. This includes running vertically integrated and state of the art production and distribution facilities through the use of "Zero-Based Budgeting". The ZBB technique specifies that all company budgets start at 0 dollars and every dollar that is added to the budget must be justified on a "need" basis. The three-year results of implementing this technique are \$400 million in cost efficiencies and 1800 fewer positions as a result of what the company refers to as "perfect staffing".

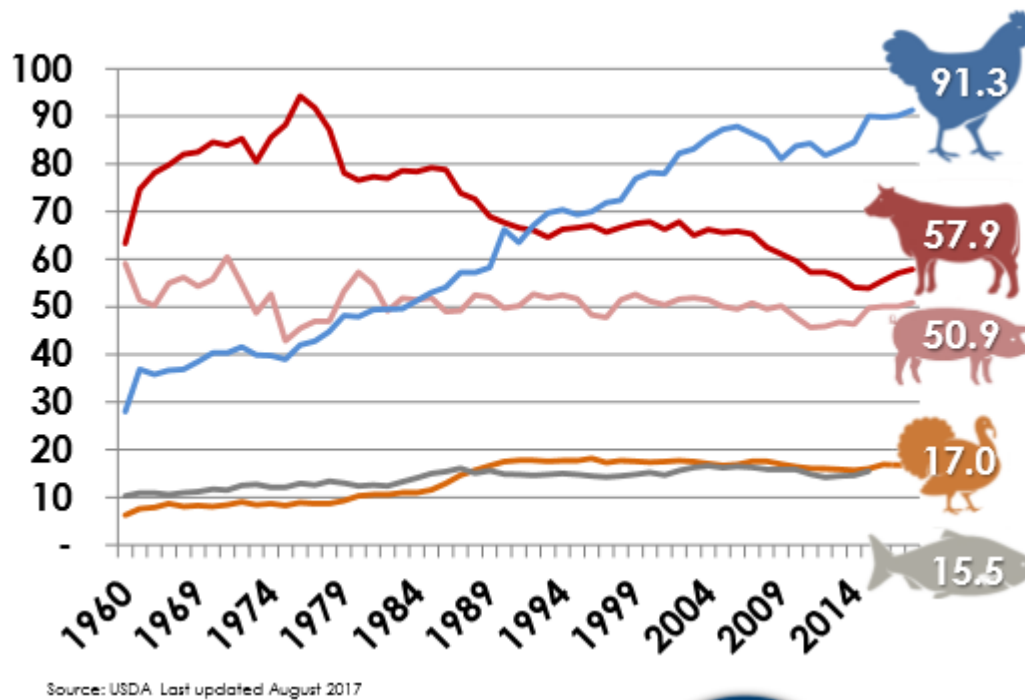
The above strategy is a multifaceted approach to achieving success that was based upon the lessons learned from the failures before 2011 that resulted in the need to file for bankruptcy. Currently, the company takes a strong preventative approach to managing risk through hedging volatile prices of input costs in financial markets through futures contracts, obtaining insurance relative to potential lawsuits with regard to products and facilities, and through the proper management of resources to keep costs and profits in control. A share repurchase program that was initiated in 2015 amounting to \$150 million in share repurchases is a testament to the faith that this company has in its future. This is further exacerbated by the February 2016 increase of another \$150 million in share repurchases, totaling \$300 million. The average price of the acquired stock was \$20.42, whilst the current price is \$28.75.

US:

On Jan 6, 2017, PPC acquired 100% membership interests of GNP from Maschhoff Family Foods LLC. This business is a vertically integrated poultry business based out of Minnesota and was acquired with the desire of enhancing the efficiencies of PPC and strengthening the strategic geographic position within the U.S. chicken market. It offers a production capability of 2.1 million birds per 5 day work-week with its 3 total plants. As a part of this acquisition, PPC also acquired the rights to the "Just Bare" line, which joins the no-antibiotics-ever segment and increases organic production capabilities. The cost of this purchase was \$350 million, which is favorable considering the fact that 2 years ago, a comparable Mexican acquisition with less production capacity was purchased for \$400 million and has since generated additional profits for the company and strengthened their strategic geographic position in Mexico. This shows the company's ability to integrate the purchase and use it efficiently.

Chicken is the most consumed protein in the U.S. and the second most consumed protein in the world falling just behind pork. Chicken production has an expected CAGR of 1.2% through 2025 and profits are higher for chicken as costs tend to be higher for other meats due to their production life cycles:

Product	Life Cycle
Cattle	28 - 39 months
Pork	11 - 12 months
Broiled Chicken	< 3 months



U.S. Per Capita Chicken Consumption is graphed above, showing its superiority to other meats with regard to consumer perceptions about health

Mexico:

Chicken is the largest per capita consumption over pork, beef and others because it is considered to be the healthiest and it is the most affordable. PPC holds 26% of the Mexican market share and aims to increase this through educating employees and retaining them for years on end. This is perpetuated by the Universidad Pilgrims with metrics shown below.



On June 29, 2015 PPC acquired a vertically integrated production facility from Tyson Mexico for \$400 million. 100% of Provemex Holdings LLC equity was obtained, including subsidiaries, with the goal of strengthening PPC's position in the Mexican chicken market. This facility produces 2.9 million birds per 5 day work week.

Europe:

In the UK, chicken is regarded as the healthiest type of meat and strong growth prospects in the coming years present a diversified international opportunity for PPC to expand its operations and achieve a competitive advantage.

In 2015, PPC Acquired a top 10 UK Food company with 48% prepared foods and 52% fresh and value added poultry. Moy Park is fully vertically integrated, is regarded as a highly innovative manufacturer and employs more than 12,000 workers. They have been a trusted long-term partner and are slightly more diverse than PPC in regard to products, however their vision and approach aligns with that of PPC.

Adapting to New Market Preferences:

PPC is taking action to change its previous model of supplying in a "business-to-business" format to supplying through a "business-to-consumer & shopping strategy". The company also recognizes the shift from economical, easy to prepare meals to more health conscious options that are free of antibiotics and considered organic and natural. Product and geographic diversity as well as daily reviews of performance metrics and market data allow PPC to analyze information at a superior level and employ takeaways to achieve a strong competitive advantage through a forward-looking approach. A newly established relationship with Amazon will help the company to distribute online as many as 70% of consumers are expected to buy groceries online by 2025.

Comparison to Competitors:

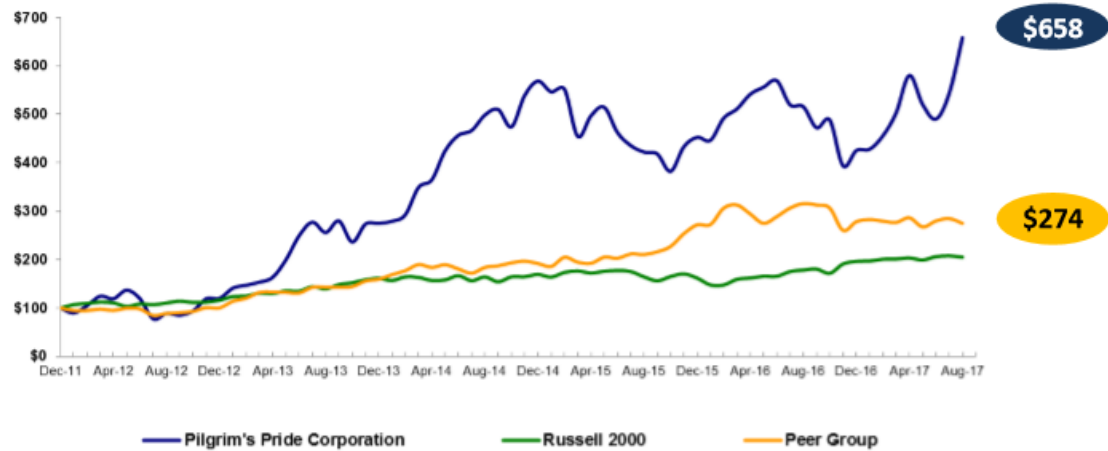
PPC has a leading market position in the growing chicken industry. It has a broad product portfolio with regard to chicken in that its size range is from small to large birds whilst it is sold live, fresh, cooked and processed to satisfy different market needs with an even distribution of these products. In a highly competitive, slow growth industry, low costs are crucial to a company's success. The enterprise is lean and focused compared to competition with benchmark-setting SG&A costs.

OUR VISION - MARKET VALUE



OUR VISION - TOTAL SHAREHOLDER RETURN

COMPARISON OF 68 MONTH CUMULATIVE TOTAL RETURN*
Among Pilgrim's Pride Corporation, the Russell 2000 Index,
and a Peer Group



Measure	Q3/17 Est	4wk Chg	YoY Gr	Growth vs Comps
11) EPS, Adj+	0.710	-1.39%	77.5%	Stronger
12) EPS, GAAP	0.710	-1.39%	82.1%	Stronger
13) Revenue	2.313B	1.26%	13.8%	Stronger
14) Net Income, Adj+	186.667M	-1.75%	81.6%	Stronger
15) Operating Profit	322.000M	0.00%	--	--
16) EBITDA	352.333M	0.67%	67.2%	Stronger

Conclusion:

In conclusion, low input prices and SG&A costs will help PPC excel above competition in the coming years. Their recent successes and investments in positive NPV projects and the massive turnaround that the company has made since filing for bankruptcy in 2011 are testaments to the future success that the company will have. With a low risk industry and an industry leading company as well as a conservative target price of more than double the current value, an investment in this company for the next year period is a no brainer.

Pilgrim's Pride Corporation (PPC)

CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Analysis by TJ Curtin

10/6/2017

Current Price:

\$28.74

Intrinsic Value

\$53.14

Divident Yield:

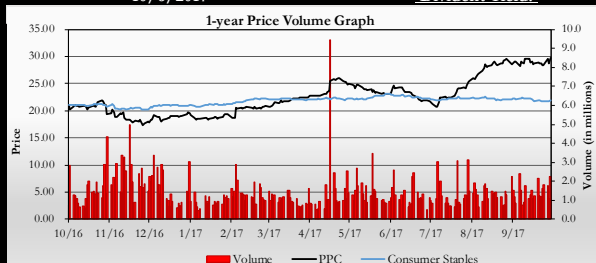
0.4%

Target Price

\$57.87

Target 1 year Return: 101.7%

Probability of Price Increase: 100%

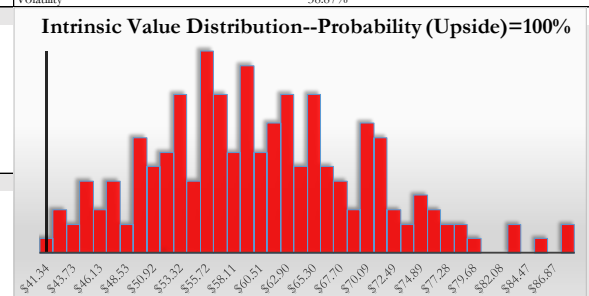


Description	Market Data
Pilgrim's Pride Corporation engages in the production, processing, marketing, and distribution of fresh, frozen, and value-added chicken products to retailers, distributors, and foodservice operators in the United States, Mexico, and Puerto Rico. It offers fresh chicken products comprising pre-marinated or non-marinated refrigerated (non-frozen) whole chickens, prepackaged case-ready chicken, whole cut-up chickens, and selected chicken parts.	Market Capitalization \$7,251.14
	Daily volume (mil) 0.93
	Shares outstanding (mil) 248.75
	Diluted shares outstanding (mil) 251.08
	% shares held by institutions 84%
	% shares held by investments Managers 20%
	% shares held by hedge funds 4%
	% shares held by insiders 0.24%
	Short interest 6.32%
	Days to cover short interest 11.42
	52 week high \$30.00
	52-week low \$17.15
	Volatility 38.87%

General Information	Peers
Sector Consumer Staples	Sanderson Farms, Inc.
Industry Food Products	Hormel Foods Corporation
Last Guidance November 3, 2015	The J. M. Smucker Company
Next earnings date October 27, 2017	Tyson Foods, Inc.
Estimated Country Risk Premium 5.76%	The Hain Celestial Group, Inc.
Effective Tax rate 25%	McCormick & Company, Incorporated
Effective Operating Tax rate 22%	Pinnacle Foods Inc.

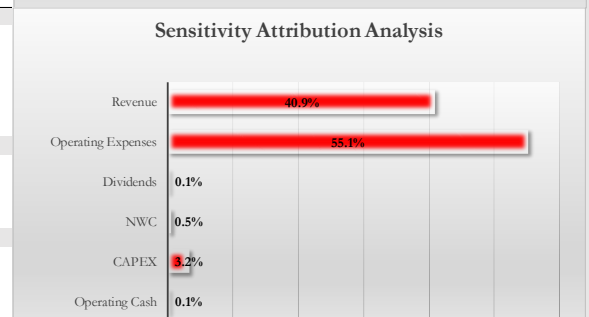
Quarter ending	Revenue	EBITDA
6/26/2016	-2.84%	-8.15%
9/25/2016	-8.97%	-7.14%
12/25/2016	-4.64%	-26.29%
3/26/2017	-3.63%	-6.14%
6/25/2017	-2.50%	13.79%
Mean	-4.52%	-6.78%
Standard error	1.2%	6.3%

Management	Position	Total compensations growth	Total return to shareholders
Lovette, William	President, CEO & Director	-1.29% per annum over 5y	9.02% per annum over 5y
Sandri, Fabio	Chief Financial Officer	30.21% per annum over 5y	9.02% per annum over 5y
Penn, Jayson	Executive Vice President of	N/M	N/M
Miner, James	Senior Vice President of Tec	N/M	N/M
de Noronha, Eduardo	Head of Human Resources & Pe	N/M	N/M
Waldhuser, Kendra	Head of Food Safety & Qualit	N/M	N/M



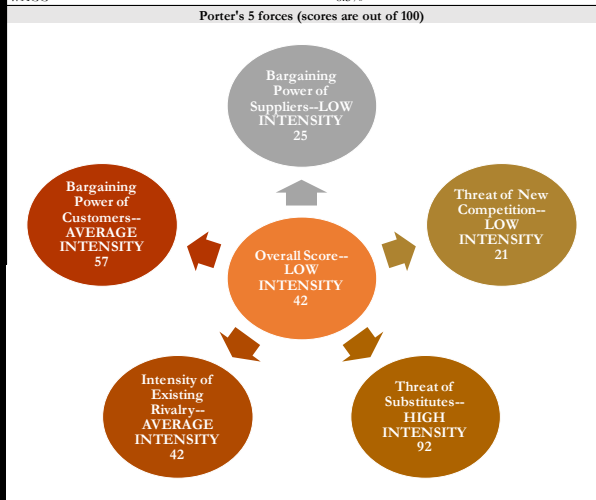
Profitability	PPC (LTM)	PPC (5 years historical average)	Peers' Median (LTM)
Return on Capital (GAAP)	34.1%	29.55%	20.15%
Operating Margin	7%	6.41%	9.37%
Revenue/Capital (GAAP)	4.59	4.61	2.15
ROE (GAAP)	55.4%	34.9%	15.9%
Net margin	6.1%	6.5%	7.1%
Revenue/Book Value (GAAP)	9.16	5.34	2.24

Invested Funds	PPC (LTM)	PPC (5 years historical average)	Peers' Median (LTM)
Cash/Capital	11.5%	12.8%	10.4%
NWC/Capital	20.4%	26.3%	11.9%
Operating Assets/Capital	61.5%	56.2%	47.3%
Goodwill/Capital	6.6%	0.0%	30.4%



Capital Structure	PPC (LTM)	PPC (5 years historical average)	Peers' Median (LTM)
Total Debt/Market Capitalization	0.54	0.49	0.39
Cost of Existing Debt	4.0%	8.2%	4.6%
CGFS Rating (F-score, Z-score, and default Probability)	BB	BB	BBB
WACC	6.5%	11.8%	8.7%

Period	Revenue Growth Forecast	Valuation	NOPAT Margin Forecast	Revenue to Capital Forecast
Base Year	2%	8.5%	3.70	
6/25/2018	6%	7.6%	2.85	
6/25/2019	14%	7.2%	2.49	
6/25/2020	12%	7.1%	2.27	
6/25/2021	11%	7.1%	2.11	
6/25/2022	10%	7.1%	1.99	
6/25/2023	8%	7.1%	1.89	
6/25/2024	7%	7.1%	1.81	
6/25/2025	6%	7.1%	1.74	
6/25/2026	5%	7.1%	1.67	
6/25/2027	3%	7.2%	1.62	
Continuing Period	2%	7.2%	1.56	



Period	Return on Capital Forecast	WACC Forecast	Price per share Forecast
Base Year	31.3%	6.5%	\$53.57
6/25/2018	21.6%	6.1%	\$58.23
6/25/2019	17.9%	6.0%	\$62.63
6/25/2020	16.2%	6.1%	\$67.02
6/25/2021	15.1%	6.2%	\$71.36
6/25/2022	14.2%	6.4%	\$75.61
6/25/2023	13.5%	6.5%	\$79.72
6/25/2024	12.9%	6.7%	\$83.63
6/25/2025	12.3%	6.9%	\$87.31
6/25/2026	11.8%	7.1%	\$90.72
6/25/2027	11.6%	7.3%	\$93.84
Continuing Period	11.2%	7.5%	

Period	Revenue Growth Forecast	Valuation	NOPAT Margin Forecast	Revenue to Capital Forecast
Base Year	2%	8.5%	3.70	
6/25/2018	6%	7.6%	2.85	
6/25/2019	14%	7.2%	2.49	
6/25/2020	12%	7.1%	2.27	
6/25/2021	11%	7.1%	2.11	
6/25/2022	10%	7.1%	1.99	
6/25/2023	8%	7.1%	1.89	
6/25/2024	7%	7.1%	1.81	
6/25/2025	6%	7.1%	1.74	
6/25/2026	5%	7.1%	1.67	
6/25/2027	3%	7.2%	1.62	
Continuing Period	2%	7.2%	1.56	

Axcelis Technologies: ACLS

Nicholas Matzelevich

Sector: Technology

Industry: Semiconductor Equipment & Materials

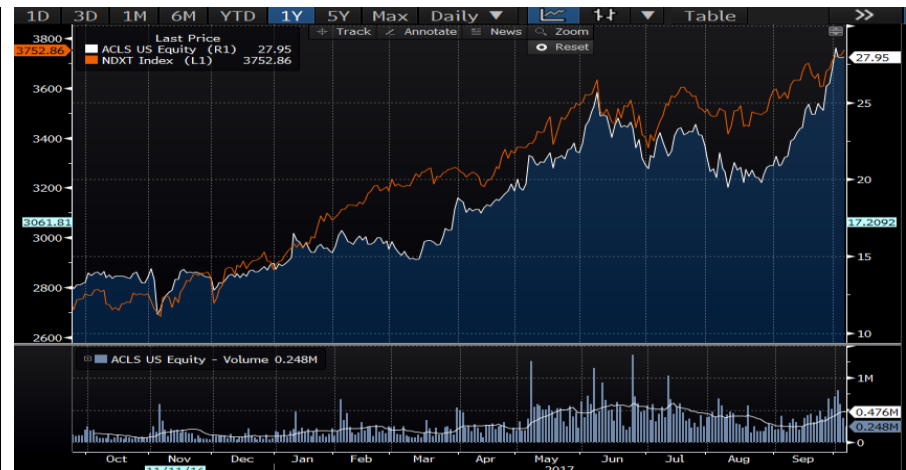
Current Price: \$27.95

Target Price: \$29.29

Company Description: Axcelis Technologies is a designer, manufacturer, and distributor of ion implantation and processing equipment used in the manufacturing of semiconductor chips. Axcelis primarily operates in the United States, but also conducts business in Europe and Asia.

BUY

Current Price: \$27.95
 Target Price: \$33.99
 Market Cap: 871.14M
 PE: 30.66
 ROIC: 15.97%
 EBITDA Margin: 13.68%



Thesis: Axcelis Technologies is a leader in the semiconductor materials market. Based upon their increased revenues, gross margin improvement program, and aggressive strategy to grow market share, Axcelis' stock is poised for significant growth in the coming months.

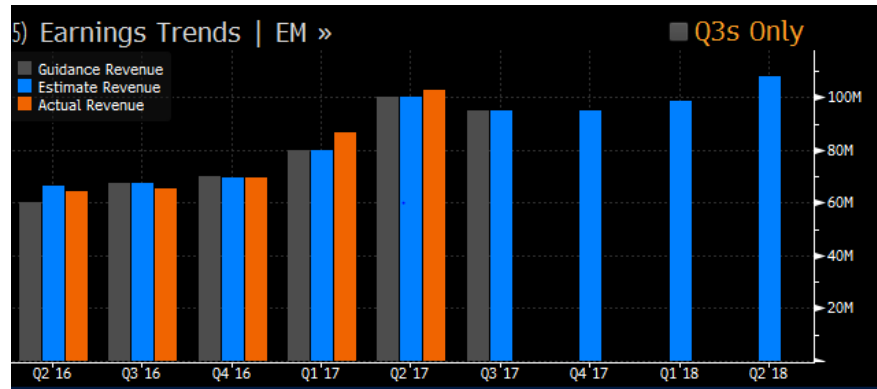
Catalysts: Forward looking projections that call for positive/negative outlook that will strengthen your thesis. Example:

- Short Term(within the year): Multiple orders for leading chip manufacturers in China and Asia Pacific Region.
- Mid Term(1-2 years): Continued implementation of Axcelis' margin increase strategy.
- Long Term(3+): Continued usage of microchips in various electronics.

Earnings Performance:

As seen in the chart above, Axcelis has made 5 out of their past 8 revenue projections. All of the missed revenues occurred in the last three quarters of 2016. This is due primarily to lower purchasing from the company's clients. This is reinforced through the Net Income Margins of

2.89%, 4.56%, and 3.28% respectively. While Axcelis may not have performed well in for most of 2016 in terms of meeting their earnings projections, since then, the company has been able to exceed their revenue projections in each quarter. This is shown in the 2017 Q1 projected of \$80.15M and actual of 86.93M in revenue and 2017 Q2 projected \$99.975M and actual \$102.79M in revenue. Through Q1 of 2018, Axcelis is projected to generate around \$95M in each quarter, with Q2 of 2018 being projected to generate \$108M in revenue. Overall, these projections are a marked improvement, about a \$10M increase in revenue, from the previous year.



Business Description:

Axcelis Technologies, Inc. designs, manufactures, and services ion implantation and processing equipment, which is used in the manufacturing of semiconductor chips. Based in Beverly, MA, their main family of products is branded under Purion. Within the past year, Axcelis has released three new product lines under Purion, the “H”, “XE”, and “M”. The “H” product line is used primarily for high current implants. The “XE” line is the market leader for high energy ion implanters, and is considered the best that money can buy. Conversely, the “M” is used for medium current systems and is a lower cost option for Axcelis’ clients. The entire Purion family of products is the major revenue driver for Axcelis, making up 93.2% of their revenue for 2016.

Axcelis operates in three markets throughout the world: the United States, Asia Pacific, and Europe. Most of the company’s revenue is generated domestically, about 65% of total revenue. Asia Pacific constitutes 21.4% of revenue, and Europe 13.6%. Although Axcelis reaches the international markets, they have a limited customer base. In 2016, their top ten customers accounted for 70.2% of revenue, with one client bringing in 17% of revenue alone.

As with most technology companies, Axcelis experiences high research and development costs due to the constant updating and improvement of technologies. It then follows that for Axcelis to remain competitive in the industry, they must be continuously developing new systems in addition to enhancing their existing products. As a result, research and development costs totaled \$34.4M in 2016, or 12.9% of revenue.

In addition to developing new products, Axcelis also manufactures their ion implants in house at their plant in Beverly, MA. Axcelis views this in-house production as vital to maintaining their expertise in the industry, as well as maintaining their intellectual property.












Industry Overview and Outlook:

Axcelis operates in a very niche industry due to the fact that their products are inputs of the larger semiconductor chip industry. As of now, there are approximately 6 other companies that can be considered direct competitors of Axcelis based on market capitalization and line of products. However, as Axcelis points out in their own 10K, many of the larger semiconductor companies manufacture their own inputs to their semiconductors, rather than buy from suppliers like Axcelis.

Within the industry, there are two types of customers. First, there are integrated electronics manufacturers, who make semiconductor chips for their own electronic devices, such as smartphones and computers. A good example of an integrated electronics manufacturer is Samsung. Second, foundries manufacture semiconductor chips in order to sell them to other companies who use them as inputs in their own electronic devices. Some integrated electronics manufacturers will also function as foundries, such as Samsung. Some foundries will also have partnerships or joint ventures with electronic manufacturers where they will only sell to a select group of electronic manufacturers in order to share technology development and capital investment.

Both integrated electronics manufacturers and foundries affect the highly cyclical semiconductor chip market through the timing of their purchases and technology requirements. This leads to chip production capacities initially exceeding and then lagging behind the global demand for semiconductor chips. As a result, Axcelis' industry tends to mirror the overall semiconductor chip industry cycle. This highly cyclical market often leads to difficulty forecasting chip demand and production and as a result, the industry experiences excess chip inventories and softening chip prices. Currently, the semiconductor chip cycle is experiencing a boom in production, as evidenced from the multiple orders from semiconductor producers Axcelis and its competitors have received in the last couple months. This trend is expected to continue at least through the end of this year, based on the multiple orders Axcelis has received from companies in Asia Pacific.

Revenue Growth:

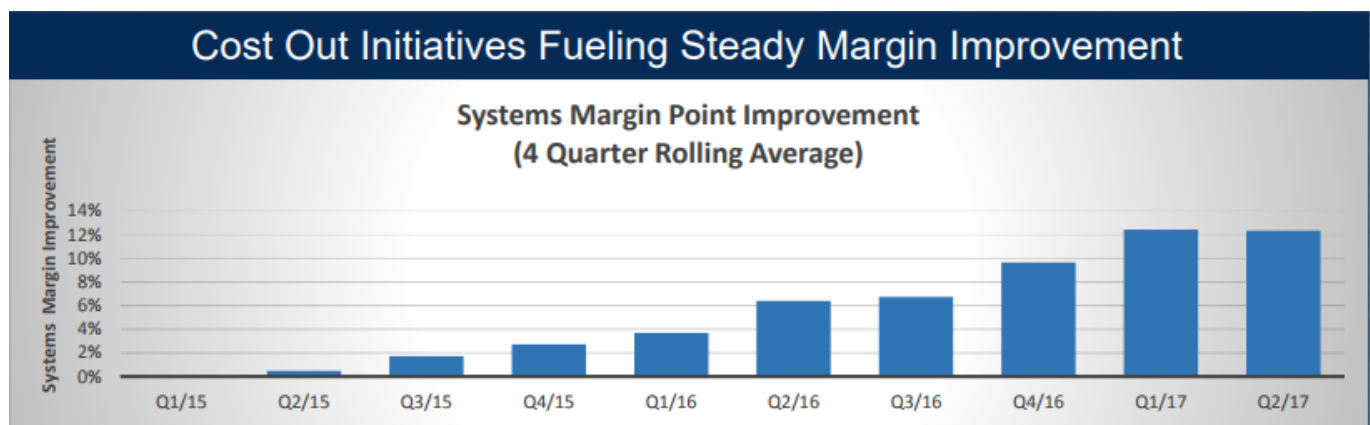
In Millions of USD	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017 Est	Q4 2017 Est
3 Months Ending	06/30/2016	09/30/2016	12/31/2016	03/31/2017	06/30/2017	09/30/2017	12/31/2017
 Market Capitalization	313.5	389.7	429.5	563.9	653.2		
 - Cash & Equivalents	61.0	65.6	70.8	69.4	108.6		
 + Preferred & Other	0.0	0.0	0.0	0.0	0.0		
 + Total Debt	0.0	0.0	0.0	0.0	0.0		
 Enterprise Value	252.5	324.1	358.7	494.5	544.7		
 Revenue, Adj	64.5	65.7	69.4	86.9	102.8	95.1	95.2
 Growth %, YoY	-17.8	-17.2	-1.6	28.7	59.5	44.9	37.3
 Gross Profit, Adj	25.1	24.1	26.9	34.7	39.1	36.3	36.9
 Margin %	39.0	36.7	38.9	40.0	38.0	38.2	38.8
 EBITDA, Adj	5.8	4.6	6.8	11.9	13.8		
 Margin %	9.0	7.0	9.9	13.7	13.4		

As shown in the chart above, Axcelis did not have a profitable 2016. However, this can be attributed to the semiconductor market being in a recession. Axcelis saw a steep decline in orders from their customers, most likely due to the fact that the customers' chip inventories were full. However, as seen in the first two









quarters of 2016, Axcelis' revenue has grown by 28.7% and 59.5%. This is in part attributed to the boom in the semiconductor industry, but the majority of it can be attributed to the release of the three new product lines under Purion. While the new product lines were released in 2016, during the decline in revenue, this is not seen as a failure of the product lines, but a result of the industry cycle.

Now that the industry is in a boom, the full effect of the product line is shown in the growth in revenue and the in placement of numerous orders since the end of Q3 2016. Beginning in Q4 2016, Axcelis has received multiple orders for their various Purion products to their customers in the Asia Pacific region, with the most recent order announcement being announced as late as September 27, 2017. This is promising news for Axcelis, as it shows there is a demand for their products and the industry is in a boom. Furthermore, it is reflected in the Q3 and Q4 revenue forecasts, which are \$95.1M and \$95.2M respectively. While these forecasts may be a decrease from the Q2 earnings of \$102.8M, it is still a marked improvement from the revenue earnings during the same quarters last year. Furthermore, with the entire technology sector in a bullish position and the increasing dependability of electronics (and thereby semiconductors) in everyday life, there is no reason to predict a loss in revenue for Axcelis.

Gross Margin Improvement Initiative:



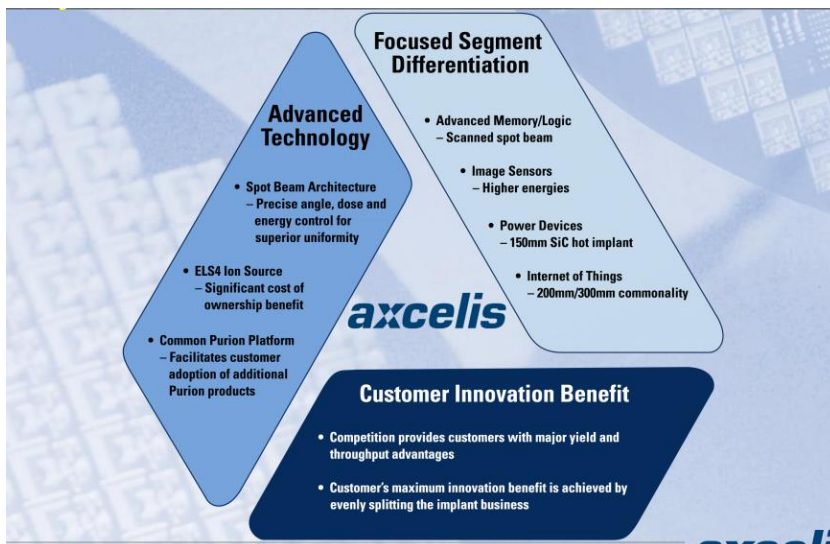
Currently, Axcelis is in the stages of improving their gross margin in order to be more profitable. As shown in the chart above, the company has been improving their systems margin since Q1 2015 by about 12% as of Q2 2017 using cost out initiatives. Ideally, Axcelis is trying to increase their gross margin to be above 40%. This will enable the company to reinvest the extra money into research and development, allowing them to pull ahead in the industry. Broken down on a quarterly basis, the gross margins are as follows:

In Millions of USD except Per Share		Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017 [▲]
3 Months Ending		03/31/2016	06/30/2016	09/30/2016	12/31/2016	03/31/2017	06/30/2017
Returns							
	Return on Common Equity	8.07	6.35	4.07	5.71	9.04	13.74
	Return on Assets	5.18	3.97	2.69	3.77	6.03	9.04
	Return on Capital	9.84	9.03	6.69	8.34	11.47	15.29
	Return on Invested Capital	10.46	8.80	6.37	8.29	11.70	15.97
Margins							
	Gross Margin	34.68	38.99	36.72	38.85	39.95	38.00
	EBITDA Margin	5.06	8.96	7.26	9.99	13.68	13.41
	Operating Margin	3.70	7.19	5.53	8.46	12.33	12.19
	Incremental Operating Margin	-16.42	-18.21	-29.71	—	42.42	20.60

While Axcelis' gross margin has retained a slow growth since Q1 2016, their EBITDA margin has dramatically increased, adding reinforcement that their margin improvement program is working and should continue to work. Fueled by their increase in revenue and the increase in various margins, Axcelis is looking towards outpacing the technology sector growth.

Growing Market Share Through Purion:

Axcelis is poised to become a market share leader in the semiconductor equipment industry through continuing revenue growth and increasing gross margin. The Purion family of products has been able to make this a possibility, as shown in the chart below:



As previously discussed, Axcelis has received an increasing amount of orders for their various Purion products. Furthermore, the new Purion platforms allows for increased integration with existing Purion products. This will cause Axcelis to retain their existing customers and any new customers they acquire. This acquisition and successive ability to retain customers will take away business opportunities from Axcelis' competitors, thus giving them an increased market share.

Conclusion:

Axcelis' ion implant technology is a leader in the semiconductor equipment industry, as shown by their increase in orders since Q4 2016 for their Purion family of products. This increase is due in part to the boom in the semiconductor industry, but more attributable to the recent release of their three new products. Resulting from this increase in orders is a marked improvement in Axcelis' revenues for Q1 & Q2 2017 from one year ago. When coupled with their successful gross margin improvement program and their aggressive strategy to increase market share through product integration, Axcelis' stock is poised for significant growth in the coming months, making it a must buy for the Bjorkland Fund.

Axcelis Technologies, Inc. (ACLS)

CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Analysis by Nick Matzelevich
10/6/2017

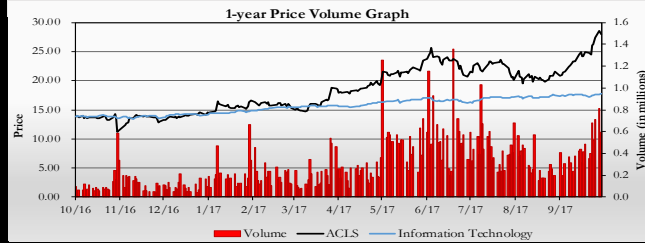
Current Price:
Divident Yield:

\$27.95
0.0%

Intrinsic Value
Target Price

\$33.16
\$39.03

Target 1 year Return: 39.65%
Probability of Price Increase: 99.5%



Description
Axcelis Technologies, Inc. designs, manufactures, and services ion implantation and other processing equipment used in the fabrication of semiconductor chips in the United States, Europe, and the Asia Pacific.

General Information
Sector: Information Technology
Industry: Semiconductors and Semiconductor Equipment
Last Guidance: November 3, 2015
Next earnings date: November 3, 2017
Estimated Country Risk Premium: 6.26%
Effective Tax rate: 24%
Effective Operating Tax rate: 24%

Market Data
Market Capitalization: \$872.71
Daily volume (mil): 0.25
Shares outstanding (mil): 31.22
Diluted shares outstanding (mil): 32.03
% shares held by institutions: 84%
% shares held by investments Managers: 56%
% shares held by hedge funds: 17%
% shares held by insiders: 1.32%
Short interest: 2.86%
Days to cover short interest: 2.27
52 week high: \$29.40
52-week low: \$11.05
Volatility: 43.10%

Quarter ending	Revenue	EBITDA
6/30/2016	-2.35%	N/A
9/30/2016	-3.74%	N/A
12/31/2016	-1.26%	N/A
3/31/2017	7.41%	N/A
6/30/2017	2.38%	N/A
Mean	0.49%	#DIV/0!
Standard error	2.0%	#DIV/0!

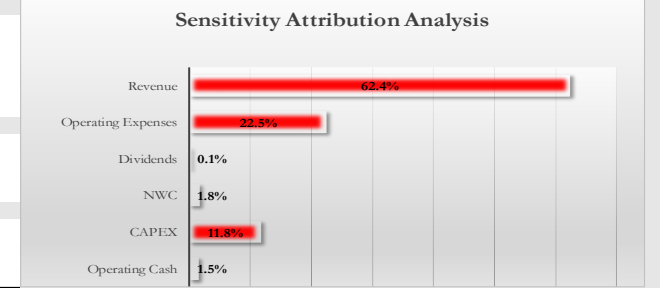
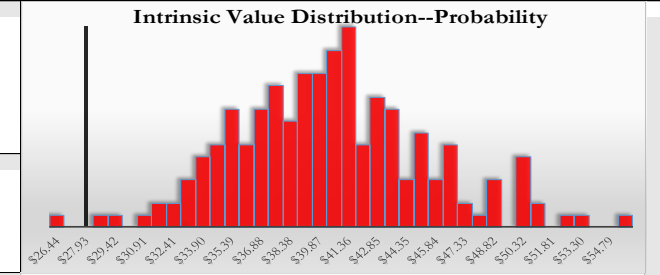
Past Earning Surprises	Peers
	Nanometrics Incorporated
	Cohu, Inc.
	Veeco Instruments Inc.
	Advanced Energy Industries, Inc.
	Xcerra Corporation
	FormFactor, Inc.
	Applied Materials, Inc.
	Photronics, Inc.

Management	Position	Total compensations growth	Total return to shareholders
Puma, Mary	Chief Executive Officer, Pre	13.22% per annum over 5y	4.04% per annum over 5y
Brewer, Kevin	Chief Financial Officer and	7.52% per annum over 5y	4.04% per annum over 5y
Fallon, Lynnette	Executive Vice President of	2.38% per annum over 5y	4.04% per annum over 5y
Biniz, William	Executive Vice President of	4.11% per annum over 5y	4.04% per annum over 5y
Aldeborgh, John	Executive Vice President of	-15.26% per annum over 3y	7.74% per annum over 3y
Lawson, Douglas	Executive Vice President of	N/M	N/M

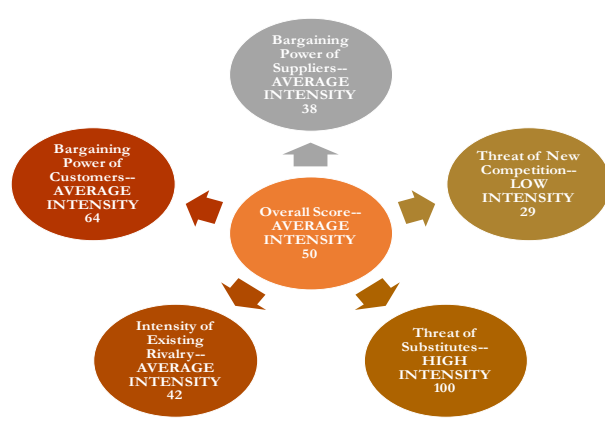
Profitability	ACLS (LTM)	ACLS (5 years historical average)	Peers' Median (LTM)
Return on Capital (GAAP)	14.0%	-4.25%	21.39%
Operating Margin	8%	-0.66%	8.59%
Revenue/Capital (GAAP)	1.82	6.43	2.49
ROE (GAAP)	14.7%	7.4%	17.3%
Net margin	9.1%	4.5%	11.7%
Revenue/Book Value (GAAP)	1.61	1.64	1.48

Invested Funds	ACLS (LTM)	ACLS (5 years historical average)	Peers' Median (LTM)
Cash/Capital	37.9%	24.2%	38.0%
NWC/Capital	41.5%	54.1%	19.9%
Operating Assets/Capital	20.6%	21.7%	25.2%
Goodwill/Capital	0.0%	0.0%	16.9%

Capital Structure	ACLS (LTM)	ACLS (5 years historical average)	Peers' Median (LTM)
Total Debt/Market Capitalization	0.17	0.08	0.15
Cost of Existing Debt	10.8%	5.6%	4.5%
CGFS Rating (F-score, Z-score, and default Probability)	CCC	BB	A
WACC	13.5%	11.7%	10.2%



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



Period	Revenue Growth Forecast	Valuation	Revenue to Capital Forecast
Base Year	15%	NOPAT Margin Forecast	0.77
6/30/2018	21%		0.79
6/30/2019	19%		0.82
6/30/2020	18%		0.80
6/30/2021	16%		0.77
6/30/2022	14%		0.73
6/30/2023	13%		0.68
6/30/2024	11%		0.64
6/30/2025	9%		0.59
6/30/2026	7%		0.54
6/30/2027	6%		0.50
Continuing Period	4%		0.46
Period	Return on Capital Forecast	WACC Forecast	Price per share Forecast
Base Year	10.5%		\$32.63
6/30/2018	12.5%		\$37.79
6/30/2019	13.7%		\$44.29
6/30/2020	13.8%		\$51.47
6/30/2021	14.2%		\$62.07
6/30/2022	14.1%		\$70.80
6/30/2023	13.8%		\$80.26
6/30/2024	13.2%		\$90.37
6/30/2025	12.6%		\$101.03
6/30/2026	11.9%		\$112.15
6/30/2027	11.1%		\$123.61
Continuing Period	10.4%		

Company Description: TopBuild is a leading installer and distributor of insulation products in the United States. It branches off into three companies: TruTeam (installation), Service Partners (distribution) and TopBuild Home Services(construction analysis). The company has over 240 locations nationwide, being the largest network in the U.S, and it impressively serving 95% of all housing starts in the country. Through a vertically integrated business model, TopBuild is able to provide customers with a full rounded experience, as its service includes the purchasing of materials, project design, building science consulting, distribution and installation.

BUY

Current Price: \$64.90

Target Price: \$71.97

Market Cap: 2.33B

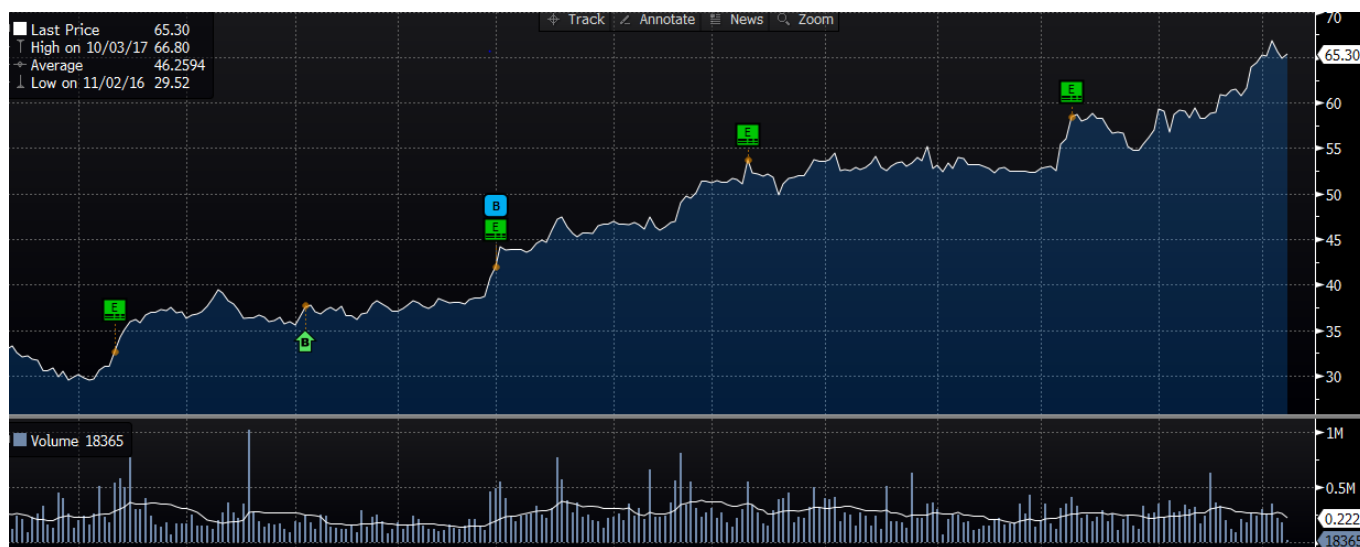
Beta: 1.34

EBITDA Margin: 8.9%

EBITDA Growth: 39.71%

ROIC: 6.17%

D/E Ratio: 0.1838

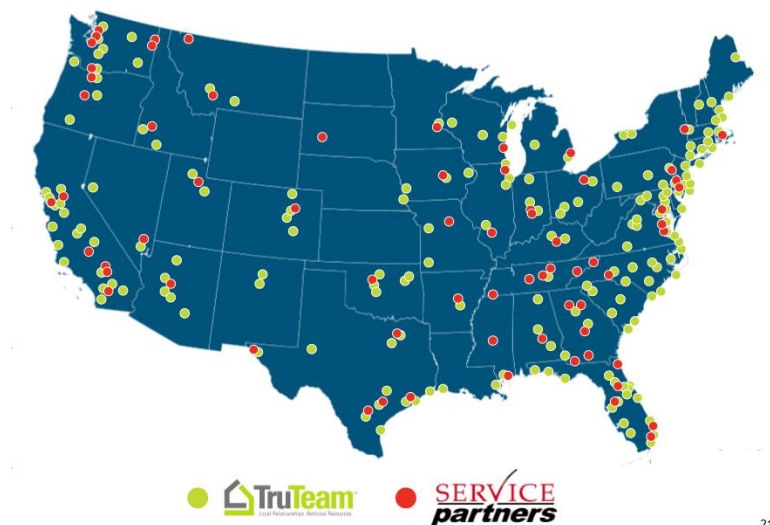


Thesis: TopBuild will capitalize on favorable macro economic conditions forecasted for the next few years, along with a plan in place to reduce its cost and maintain the growth pattern it undertook in recent years. The company has seen its revenue grow at a rate of 7.81% over the past 3 years and it is expected to increase such growth to at least 9%. In addition, Top Build's aim to diversify its product mix and invest in the commercial segment will allow the company to reduce its risk associated

Catalysts:

- Short Term(within the year): Organic growth through investments in commercial segment and in spray foam usage and M&A growth through incremental revenue from acquisitions.
- Mid Term(1-2 years): Cost reduction trough branch rationalization and M&A cost synergies.
- Long Term(3+): Revenue growth through impact of housing start increase.

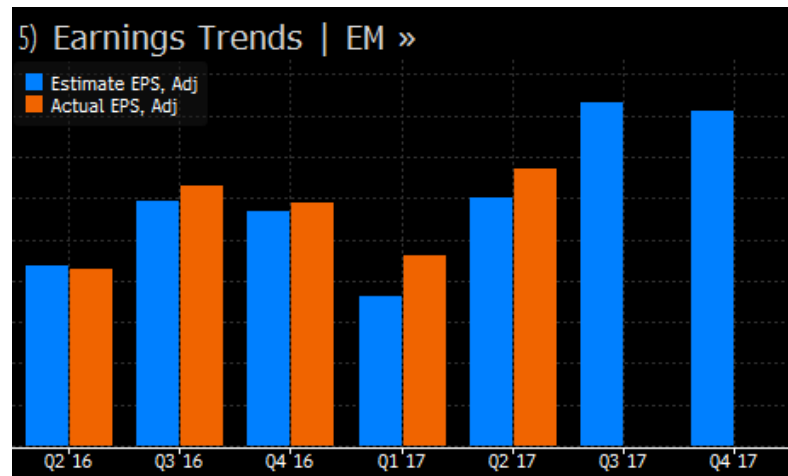
with the housing market volatility and to increase operations on a more profitable segment. The company has also taken initiatives aiming for cost reduction such as increasing its buying power through the acquisition of competitors, investments in smart technology to improve processes' efficiency and branch rationalization. TopBuild is highly dependent on macroeconomic factors, such as new housing starts, age of housing stocks and household formation. This dependency, for instance, will result in a significant driver for the success of the company, as forecasts are in favor to allow growth and expansion for TopBuild. The combinations of the catalysts mentioned above makes of this stock a great investment opportunity, as I believe that a substantial growth can be expected out of this promising company on a short term basis.



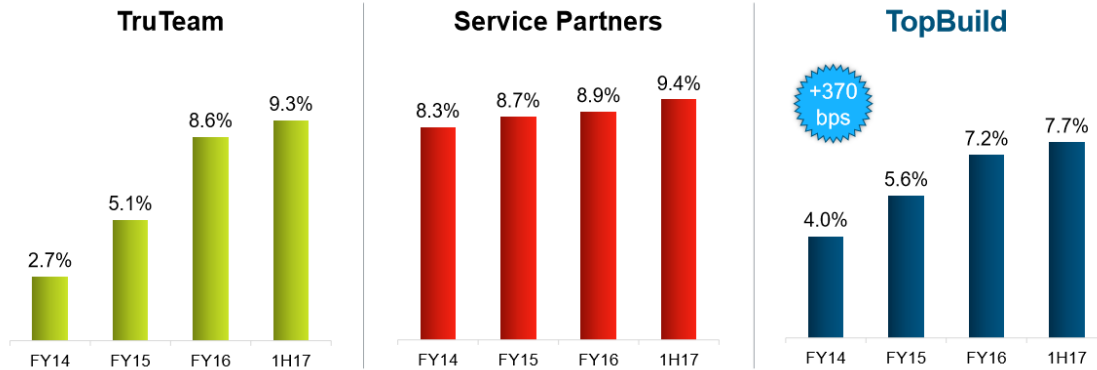
21

Company Performance: TopBuild beat EBITDA estimates on 7 out of the last 8 quarters, proving its strong momentum and its growth potential. Over the past year, the company experienced an EBITDA growth of 21.9%, along with a 9.5% revenue growth and a 32% EPS, Adj growth. In addition, profits increased, as operating margins enlarged in every segment of the company, proving the effectiveness of cost reduction measures adopted by the company. With TopBuild being extremely sensible to cost reductions, such results are very promising as it is assumed that the stock will be impacted positively by any additional improvement in profitability.

Analyzing all segment of the company, it can be seen that value is being generated everywhere, as all segments have been performing great. In particular, TruTeam has shown the highest growth in the past years, especially if taken into account only the commercial area. The commercial area has grown on a 3 year CAGR of 16% and it is forecasted to follow the trend for several more years. Assuming that the amount of housing starts reach the 50 year historical average by 2021, the company is expected to grow around 18% on the residential segment and 12% on the commercial segment, not considering any possible additional growth from mergers and acquisitions.



HISTORICAL ADJUSTED OPERATING MARGINS



Business Overview:

TopBuild originated in 2015 off a spin-off from Masco Corporation and it is currently the leading purchaser, installer and distributor of insulation products in the U.S. The company operates under three segments: TruTeam (installer of residential and commercial insulation, Service Partners (distributor) and



TopBuild Home Services, Inc (provider of energy efficient advisory services). TopBuild enjoys unrivaled national scale, as its 240+ locations allow the company to serve all states in the country and 95% of all housing starts. In addition, through a vertically integrated business model, TopBuild outstands in the market as it provides customers with a full service from beginning to end of the project, therefore dealing with the purchase, design, distribution and installation of the product. Due to its dependency on housing construction, the company has worked on diversifying its product mix, therefore investing on the distribution and consulting sector and increasing its share of commercial revenue within TruTeam. The company displays strong financial foundations, with a substantial amount of cash on hands and a balanced capital structure, giving them the liquidity necessary to finance their cash cycle and to look for opportunities for acquisitions.

Growth Strategy: TopBuild is set with a plan to take advantage of the favorable macroeconomic forecast and take off, aiming to solidify even more its position as best-in-class. Leveraging its national scale, TopBuild is seeking to expand even more, increasing its national presence and optimizing its footprint. For instance, the company announced a plan to increase metal building insulation business, currently happening in 21 locations nationwide, by opening 3 new MBI plants per year under Service Partners. In addition, riding on the forecasted increase in housing starts, the company plan on capturing more residential market share by investing in spray foam



insulation, which makes of 25% of the insulation market. Although usually not a top seller for the company, spray foam has been targeted as a catalyst for growth by the company as, despite its significantly higher cost, it is trending up among the insulation market due to its long-term cost savings on heating and cooling costs. With the immersion in spray foam sales, the company also hopes to increase its TopBuild Home Services business, as both run correlated due to its energy-efficiency ties. TopBuild Home Services, for instance, has also been experiencing substantial growth due to more stringent building codes in several states, and it is forecasted to grow at an even higher rate as homebuilders emphasize more and more on the construction of high performance homes that are energy efficient, durable and safe.

Along with the residential segment expansion, TopBuild is also aiming to increase its participation on the commercial side. Counting on an addressable market of 4.8B between light and heavy commercial projects, the company sees it as a huge opportunity since it would allow them to diversify its customer base and increase sales without any substantial investment, as the skills are transferrable from the residential area and as all current plants can be used for the purpose. In addition, commercial projects function on a completely different operating cycle than residential projects, therefore diversifying the company's portfolio and decreasing risks associated with the cyclical nature of the housing market. The commercial segment expressed a 16% CAGR over the past 3 years, a higher growth than any other operation of the company, thus backing up the company's choice to invest in this segment.

On another note, TopBuild also identified as the right path to short term growth for its distribution brand Service Partners the targeting of small service contractors. Small service contractors make up for most of the construction market as, apart from a handful of big players, the market is fragmented into small competitors. Targeting this specific customer base would allow the company to operate on a higher margin, as material purchases would consist on a lower investment and less usage of inventory space while the revenue from its distribution would remain constant.

In addition to the ambitious organic growth plan, TopBuild plans on topping it with strategic acquisitions that will strengthen its market position. Key factors for TopBuild M&A department have been a 3-year IRR of at least 12%, significant cost synergies, increased material purchasing power, and an attractive EBITDA Multiple on the range of 4.5x – 6x. Previous M&A have allowed the company to increase its penetration on key markets and expand its geographic reach. Moreover, capital allocated into M&A's throughout the past year has resulted in an incremental annual revenue of approximately \$83 million, which is expected to be repeated over the next years. Therefore, TopBuild's M&A team is currently on a lookout for new opportunities to expand, as historical results leave the company nothing but optimistic on the success of such transactions.

Cost Reduction: Aiming for a better operating margin, TopBuild's management keeps in mind that cost reduction is necessary, specially on an industry characterized by high costs such as construction. The company has announced several moves that will have an impact in the cost structure of the company. Through its focus on finding M&A opportunities, TopBuild looks to create cost synergies that will benefit the company. The acquisitions will increase the company's market share and therefore increase its buying power, which as a consequence will serve to reach better deals with suppliers. The company has also been investing in smart technology, on an attempt to discover and improve any potential operational inefficiency. The software tracks several measures such as employee hours, timeliness of delivery, miles traveled and so forth.

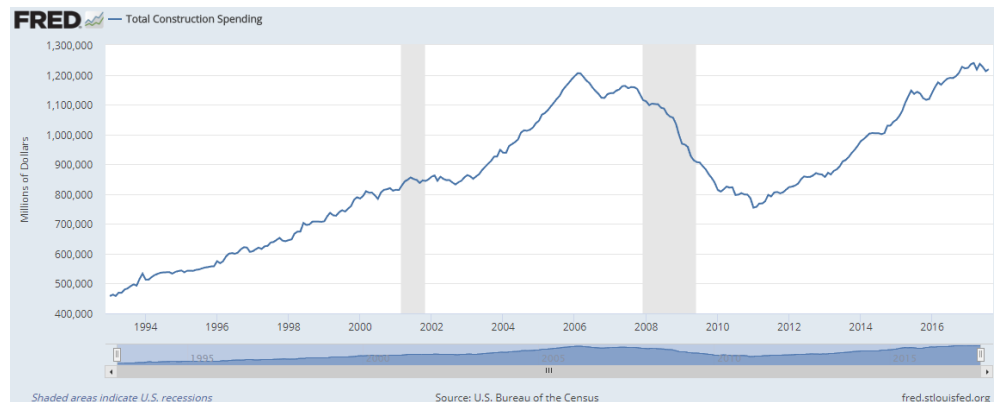
Through accurate data computation and meticulous analysis, TopBuild has a better picture of the operations of its business and thus have a better idea on what costs could possibly be decreased.

Another measure envisioned by TopBuild to reduce expenses in its operations is the construction of new warehouses in the short term. Through the addition of new locations on satellite spots, Top Build will be able to leverage even more its national scale and achieve economies of scale, as branch rationalization will aid in cost reduction. As it can be seen in the table below, costs have been reducing over the past 4 years and this decreasing trend is forecasted to continue. BLD's sensitivity to operational cost is substantial and a minimal cost reduction will result in a significant increase in their stock price.

- Cost of Revenue	78.1%	78.2%	77.0%	76.2%
+ Cost of Goods & Services	78.1%	78.2%	77.0%	76.2%
Gross Profit	21.9%	21.8%	23.0%	23.8%
+ Other Operating Income	0.0%	0.0%	0.0%	0.0%
- Operating Expenses	19.1%	16.7%	15.6%	15.6%
+ Selling, General & Admin	19.2%	17.0%	16.0%	15.9%
+ Research & Development	0.0%	0.0%	0.0%	
+ Other Operating Expense	-0.1%	-0.2%	-0.3%	-0.3%
Operating Income (Loss)	2.8%	5.1%	7.3%	8.2%

Industry Outlook:

TopBuild is heavily tied to the construction market, which could be somewhat of a risk given the uncertainty of future economic conditions. However, forecasts have been extremely favorable on TopBuild's end, and its management is confident that a bright future is just around



the corner. The construction industry has been on a rise in the last few years, with construction spending up by 2.5% from a year ago. On a similar trend, housing starts have also been experiencing significant growth over the past 8 years, after the market crash of 2009. In 2016, housing starts rose to about 1.2M, still significantly below the 50 year average of 1.5M, which is an encouraging fact as there is a strong belief that the industry is moving towards that mark. As a consequence, housing starts are forecasted to grow about 5% in 2018. Still analyzing macro economic trends, another encouraging statistic is the increase in the median age of housing stock in the United States. From 2005 to 2015, the median age of owner-occupied housing grew from 31 to 37 years, which increases substantially the likelihood of rebuilding/remodeling of houses, another circumstance that will benefit TopBuild. Lastly, household formation has been steadily increasing as well. Not only houses are being built, but they are also being occupied at a constant rate, contributing to this market rise of the construction sector.

When it comes to market competition, TopBuild finds himself at the top of the market as the leading installer and distribution in the insulation business. Although not the most profitable in the category, its sales are almost double the ones of its main competitors, therefore proving the established position of the company in the market. On a market characterized by few big players and several small factories, the risk of losing market share is small and, given that there are no competitors in the entire marketing offering a service as integrated as TopBuild's service, the tendency is that costumers still opt for TopBuild due to the easiness of having to deal with one single intermediary from beginning to end of the process.

	Name (BICS Best Fit)	Mkt Cap	Net Sales T12M	OPM:Q↑	GM:Q
	Median	1.28B	1.16B	5.88%	14.89%
100)	TOPBUILD CORP	2.31B	1.81B	8.88%	24.58%
101)	LANGFANG DEVELOPMENT...	698.85M	--	-35.52%	-1.18%
102)	SUZHOU KELIDA BUILDIN...	536.01M	262.10M	-0.50%	11.71%
103)	ZHEJIANG YASHA DECORA...	1.87B	1.31B	5.34%	13.43%
104)	FUKUDA CORP	506.15M	1.57B	5.50%	11.71%
105)	SHENZHEN HONGTAO DEC...	1.15B	458.97M	6.27%	18.58%
106)	INSTALLED BUILDING PR...	2.08B	997.23M	8.39%	30.10%
107)	JANGHO GROUP CO LTD-A	1.81B	2.25B	8.51%	16.35%
108)	SUNDART HOLDINGS	1.28B	426.84M	--	--

Ownership Summary: TopBuild is owned in its majority by Investment Advisors, computing a total of 85.53% of all shares. Following, shares are primarily owned by hedge funds, with a percentage of 7.53%. The concentration of ownership around investment advisors can be seen as a good thing, as institutions aid on marketing the stock and push the company to increase its earnings. Moreover, as it can be inferred

by the table above, the majority of the top holders of the shares have been increasing its ownership within the company, therefore expressing their belief on a continuous growth of the company. Under the \$200M share repurchase program announced at the beginning of the year, TopBuild has repurchased 858,393 shares at an average price of \$45.77. In addition, the company reached an agreement with Merrill Lynch to repurchase \$100M of the company's common stock under an accelerated repurchase program. On July 5th, the transaction was completed and the company received close to 1.5M shares at an approximate value of \$80M.

Top Ownership Type (%)				
54) Ownership Type	10/01/17	Curr	Change	
41) Investment Advisor	85.53	85.53	0.00	↕
42) Hedge Fund Manager	7.53	7.53	0.00	↕
43) Pension Fund	2.77	2.77	0.00	↕
44) Bank	1.10	1.10	0.00	↕
45) Individual	0.86	0.86	0.00	↕
46) Insurance Company	0.77	0.77	0.00	↕
47) Sovereign Wealth Fund	0.65	0.65	0.00	↕
48) Endowment	0.28	0.28	0.00	↕
49) Government	0.26	0.26	0.00	↕

The remaining 20\$ from the agreement are to be settled shortly. The substantial process of stock repurchasing represents a strategic move from TopBuild, as they believe their stock is undervalued and therefore are repurchasing on hopes for a substantial increase in the near future. In addition, such move is the company's way of rewarding their shareholders without any payout of actual dividends.

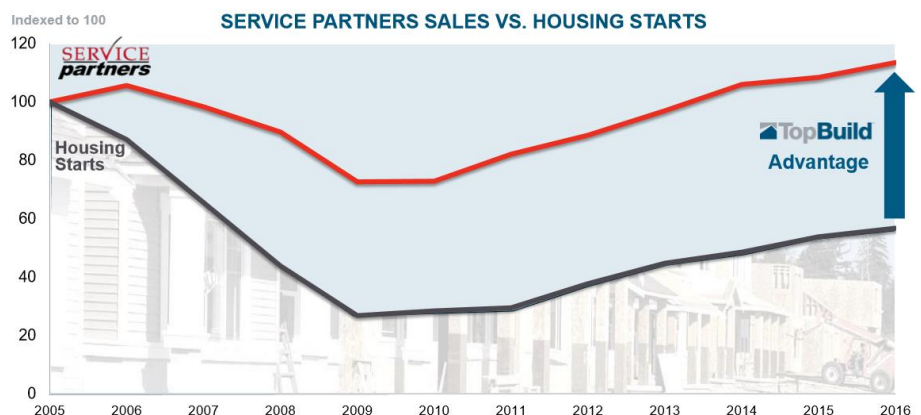
1. +BLACKROCK		ULT-AGG	5,394,941	15.18	-125,247
2. +VANGUARD GROUP		ULT-AGG	3,283,942	9.24	-3,105
3. +FMR LLC		ULT-AGG	2,869,266	8.07	193,582
4. +DIMENSIONAL FUND ADVIS...	DIMENSIONAL FUND A...	13F	2,360,626	6.64	164,591
5. WELLINGTON MANAGEMENT ...	WELLINGTON MANAGE...	13F	2,231,937	6.28	-115,190
6. +CAPITAL GROUP COMPANIE...	CAPITAL WORLD INVE...	13F	1,745,000	4.91	0
7. +STATE STREET CORP		ULT-AGG	1,128,570	3.18	104,562
8. +GOLDMAN SACHS GROUP INC		ULT-AGG	1,109,337	3.12	120,981
9. DZ BANK AG	DZ BANK AG DEUTSC...	13F	1,022,932	2.88	1,022,932
10. +BNY MELLON		ULT-AGG	552,248	1.55	5,550

Hedge against Downside:

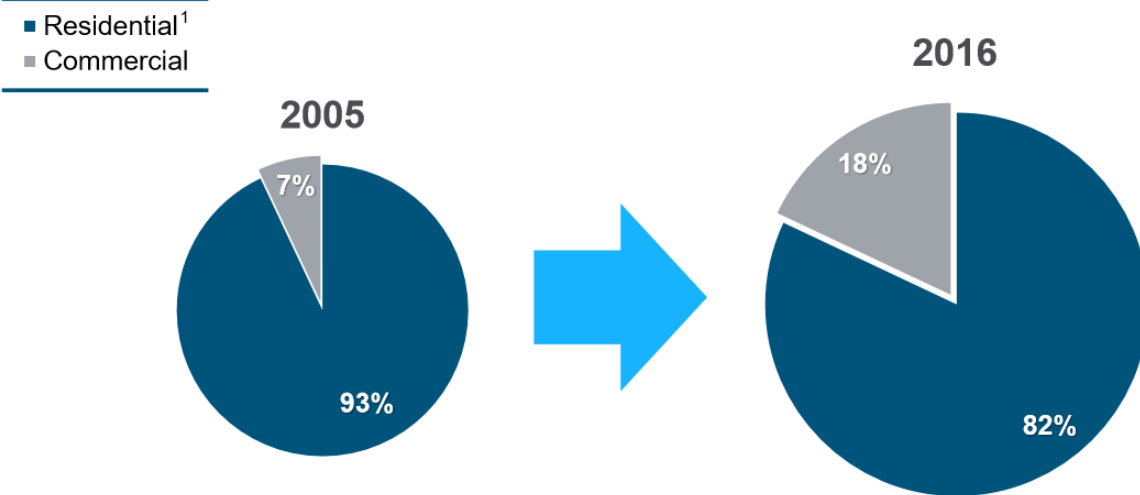
Considering the high correlation with the housing market, TopBuild has been taking several measures to hedge this risk and therefore minimize a possible downside on the stock price. In order to do so, the company invested in product diversification, having its branch Service Partners distributing alternative products such as rain gutters, fireplaces, radiant barriers and other accessories, therefore

decreasing the dependency on housing starts. As another initiative to minimize risk, TopBuild has been increasing its market share in the commercial business, on both TruTeam and Service Partners branches. The commercial segment is independent of housing starts and its demand is always high due to the continuous development of new businesses. In addition, commercial and residential segments operate in different cycles. Through increase in revenue share on the commercial size, TopBuild is decreasing its cyclicity and guaranteeing a more distributed cash flow throughout the year.

Service Partners: Hedge Against Housing Starts Volatility



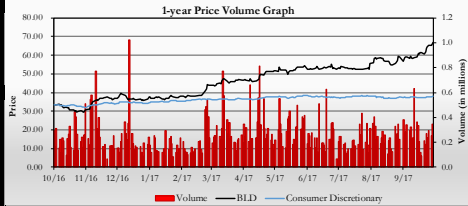
Commercial: Hedge Against Housing Starts Volatility



Conclusion:

As the macro factors influencing TopBuild's business are all in favor of a substantial growth and as the company proved on recent years to be a solid presence in the insulation market, I strongly believe that we will see a jump on their stock price. The company is run by an ambitious management that has put in place a strong growth strategy, attacking the market from a variety of different areas. I do believe that the company is currently fairly valued, by I also believe that their growth potential is underestimated and that their commitment to success will surprise the market, achieving double digit returns even sooner than expected.

TopBuild Corp. (BLD)
CENTER FOR GLOBAL FINANCIAL STUDIES
NEUTRAL
Analysis by Tommaso
10/6/2017

Current Price:
Divident Yield:
\$64.90
0.0%
Intrinsic Value
Target Price:
\$62.97
\$70.66
Target 1 year Return: 8.87%
Probability of Price Increase: 81%


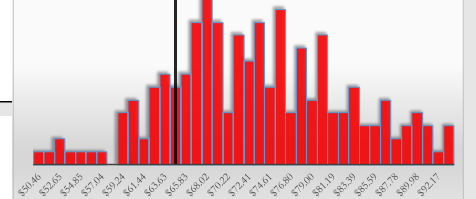
Description	
TopBuild Corp. engages in the installation, distribution, and sale of insulation and other building products to the United States construction industry.	
General Information	
Sector	Consumer Discretionary
Industry	Household Durables
Last Guidance	November 3, 2015
Next earnings date	November 3, 2017
Estimated Country Risk Premium	5.69%
Effective Tax rate	27%
Effective Operating Tax rate	34%

Market Data	
Market Capitalization	\$2,306.70
Daily volume (mil)	0.18
Shares outstanding (mil)	35.54
Diluted shares outstanding (mil)	37.60
% shares held by institutions	101%
% shares held by investments Managers	83%
% shares held by hedge funds	6%
% shares held by insiders	0.89%
Short interest	2.73%
Days to cover short interest	3.96
52 week high	\$67.27
52-week low	\$28.81
Volatility	0.00%

Past Earning Surprises	
Quarter ending	Revenue
6/30/2016	-5.93%
9/30/2016	-3.02%
12/31/2016	-1.70%
3/31/2017	-1.79%
6/30/2017	-1.67%
Mean	-2.82%
Standard error	0.8%

EBITDA	
6/30/2016	-11.56%
9/30/2016	-2.96%
12/31/2016	-3.64%
3/31/2017	4.92%
6/30/2017	2.60%
Mean	-2.13%
Standard error	2.9%

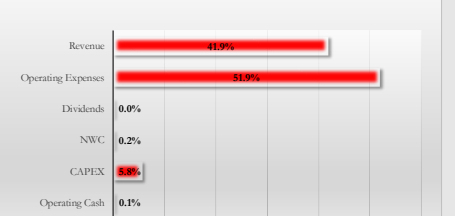
Peers	
Armstrong World Industries, Inc.	
Installed Building Products, Inc.	
Owens Corning	

Intrinsic Value Distribution--Probability (Upside)=81%


Management	
Position	
Volas, Gerald	Chief Executive Officer and President and Chief Operatin
Buck, Robert	Chief Financial Officer and Vice President and Controll
Peterson, John	Chief Information Officer
Jouchimczyk, Paul	Vice President of Investor R
Manning, Brad	
Zane, Tabitha	

Total compensations growth	
1888%	per annum over 4y
16.36%	per annum over 4y
19.12%	per annum over 4y
N/M	
N/M	
N/M	

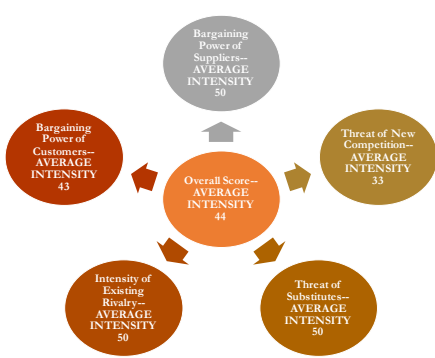
Total return to shareholders	
N/M	
N/M	
N/M	
0%	per annum over 0y
N/M	
N/M	

Sensitivity Attribution Analysis


Profitability	
BLD (LTM)	
Return on Capital (GAAP)	10.5%
Operating Margin	6%
Revenue/Capital (GAAP)	1.78
ROE (GAAP)	7.0%
Net margin	3.7%
Revenue/Book Value (GAAP)	1.86
Invested Funds	
BLD (LTM)	
Cash/Capital	7.8%
NWC/Capital	9.2%
Operating Assets/Capital	-7.1%
Goodwill/Capital	90.0%
Capital Structure	
BLD (LTM)	
Total Debt/Market Capitalization	0.21
Cost of Existing Debt	4.0%
CGFS Rating (P-score, Z-score, and default Probability)	AAA
WACC	8.6%

BLD (5 years historical average)	
6.51%	
4.50%	
1.45	
7.9%	
4.2%	
1.90	
BLD (5 years historical average)	
5.2%	
5.1%	
9.7%	
99.1%	
BLD (5 years historical average)	
0.08	
4.0%	
BB	
8.9%	

Peers' Median (LTM)	
21.15%	
9.09%	
2.33	
33.5%	
8.0%	
4.19	
Peers' Median (LTM)	
8.9%	
13.5%	
60.8%	
16.8%	
Peers' Median (LTM)	
0.60	
4.1%	
C	
8.2%	

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


Revenue Growth Forecast	
Period	
Base Year	7%
6/30/2018	7%
6/30/2019	8%
6/30/2020	7%
6/30/2021	6%
6/30/2022	6%
6/30/2023	5%
6/30/2024	5%
6/30/2025	4%
6/30/2026	3%
6/30/2027	3%
Continuing Period	2%
Return on Capital Forecast	
Period	
Base Year	7.1%
6/30/2018	0.3%
6/30/2019	1.9%
6/30/2020	2.5%
6/30/2021	3.0%
6/30/2022	3.4%
6/30/2023	3.7%
6/30/2024	9.5%
6/30/2025	8.8%
6/30/2026	8.3%
6/30/2027	7.7%
Continuing Period	7.2%

Valuation	
NOPAT Margin Forecast	
6.4%	
0.3%	
1.7%	
2.2%	
2.6%	
2.9%	
3.2%	
8.3%	
8.3%	
8.3%	
8.2%	
8.2%	
0.88	
WACC Forecast	
8.6%	
8.3%	
8.2%	
8.1%	
8.2%	
8.3%	
8.4%	
8.5%	
8.5%	
8.4%	
8.5%	

Revenue to Capital Forecast	
1.10	
1.11	
1.15	
1.17	
1.17	
1.17	
1.16	
1.14	
1.07	
1.00	
0.93	
0.88	
Price per share Forecast	
\$62.54	
\$69.95	
\$77.59	
\$85.23	
\$92.96	
\$100.78	
\$108.68	
\$116.64	
\$124.75	
\$132.85	
\$141.08	

October 1, 2017

Sturm, Ruger & Company Inc: RGR
Nico Dumas

Sector: Consumer Discretionary
Industry: Leisure Products

Connecticut-based Sturm, Ruger & Company Inc. is a US small cap company that designs, manufactures, sells, and exports firearms. The company is one of the nation's largest producers of pistols, revolvers, rifles, and shotguns. Ruger has a wide selection of merchandise, encompassing 400 variations of over 30 product lines. The company is known for their rugged, reliable firearms sold to the commercial sporting market. Ruger also makes metal castings and other molding components for a wide variety of markets including sporting goods and military use.

BUY

Current Price:	\$53.80
Target Price:	\$63.25
Market Cap:	913.6M
Volume:	538,524
EBITDA Margin:	25.56%
WACC:	5.8%
ROE:	30.3%
ROA:	23.3%
P/E:	13.2%

Catalysts:

- **Short Term(within the year):** Increased tension within the country and a rising defense budget (639 billion, 8.31% increase from Obama's budget)
- **Mid Term(1-2 years):** Trump continuing to deregulate international gun sales (seeking alpha predicted possible 20% increase in sales)
- **Long Term(3+):** Future gun control laws

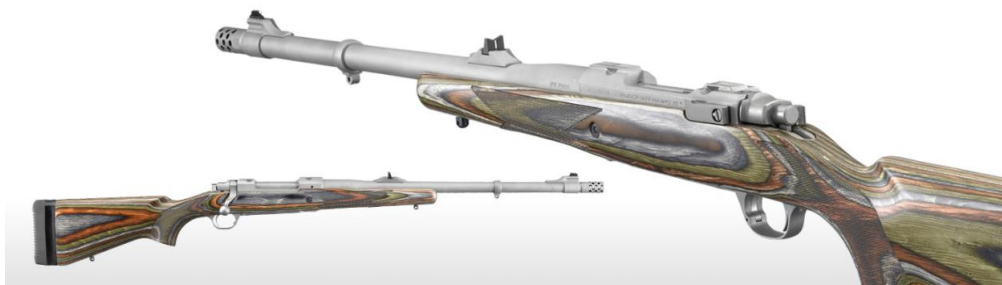


Thesis:

Sturm, Ruger & Company Inc., America's largest firearm manufacturer, is a small cap company established in 1949 with high potential upside. Donald Trump plans on raising the country's defense budget from \$590 billion to \$637 billion in 2018, which will call for an increase in firearm production throughout the United States. It just so happens that Sturm, Ruger & Company's total revenue consists of 94% firearms. Exports sales only represent about 3% of these sales, mostly all product content being domestic. Firearm sales to the general public will continue to grow as tension increases in the country with Trump as president. After the LA shooting this past week, the company's stock price rose by 3.6%. As much as it hurts to say, tragedies like this will continue to happen and people will continue to buy firearms for self-defense purposes. Product development is important in this industry; just below 30% of Ruger's firearm sales coming from new products. Spending on research and development has stayed consistent at approximately 10 million per year for the company as they try to cultivate the market with the latest and highest quality firearms.

Business Overview:

Sturm, Ruger & Company Inc. is the leading firearm manufacturer in the United States of America. This small cap company is supplied with fabricated steel, walnut, birch, maple, and laminated lumber from third party companies. Although some of these materials are limited in supply causing purchasing price to vary, Ruger has suitable quantities of these raw materials in inventory in order to continue to hold out and buy when these material costs are low. Ruger's firearms are generally sold to federally licensed, independent wholesale distributors. These distributors then sell the product to independent retail firearms dealers who are in direct



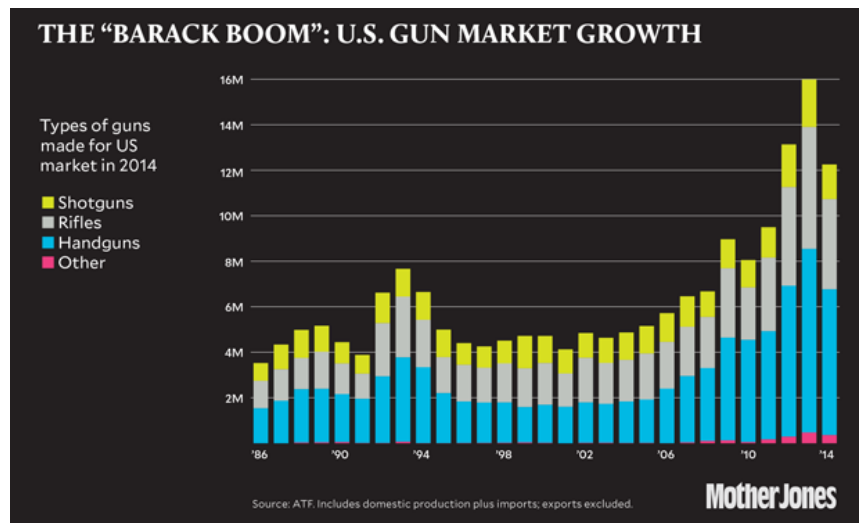
contact with the market. These end users include customers who use the firearm for commercial sporting purposes, self-defense, gun collections, and law enforcement and other government

organizations. A few different factors that affect Ruger's profitability include gun control laws, government spending, and the deregulation of international sales. In the second quarter, the company's dividend payout ratio increased from 35% to approximately 83%. This showed me that they are well in the mature stage of their business cycle, paying out dividends at 83% of net income. I do not believe that this devalues the company; the upside is still present based on government policies and regulations. Currently, nearly 97% of Ruger's gun sales are domestic. The biggest catalyst that will effect Ruger's profitability is Trump's deregulation of gun sales overseas. Regulations involving the exports of firearms may be altered without congressional approval; many sources have been proclaiming that changes could be made this fall. Implementation would take several months, but Ruger's stock price would strive if this came to life. The company currently employs 2,110 full-time workers,

25% of which have been with the company for over 10 years. Ruger uses temporary employment concepts in order to supplement its workforce.

Government Regulations:

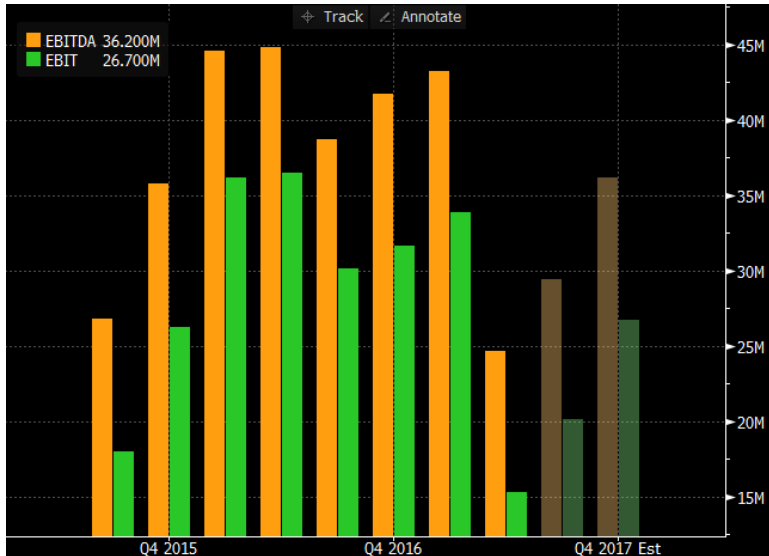
Stocks involving the manufacturing and sale of firearms are highly volatile when the government begins to discuss gun laws and regulations. When Obama was in office, gun violence was a discussion brought back to the table often. Barack consistently made efforts to strengthen background checks, limit magazine sizes, and to restart federal gun research. He persisted that acts of terrorism are a direct result of allowing citizens with mental health problems to purchase firearms. As tension increased people began to worry that they would not be able to buy guns in the near future, which caused the gun market to flourish. I believe that with Donald Trump in office, tensions are at a completely new level. Although the president has been known to be in support of gun deregulation, no one can say with certainty that he will stay true to his word. In my opinion, any announcements at all will increase Ruger's stock price. If Trump begins to see acts of terrorism as a result of gun control laws, he will announce this to the general public which will again increase Ruger's sales volume. If this does happen, I suggest we buy and collect short-term profits because the stock price will only soar for a short period of time. If Trump stays true to his stance on firearms, then deregulation will continue and long-term growth is inevitable; Ruger being the largest firearm manufacturer in the United States. International sales take time due to the need for the U.S. State Department and Commerce Department's approval and licensing of the transactions. If the selling of firearms overseas is made less tedious, Ruger will see substantial sales growth. When Hilary Clinton was running for presidency in 2016, Ruger's annual revenue increased almost as high as it was when Obama was in office. Hilary was completely against gun laws and the gun market reacted accordingly. Annual revenue increased for Sturm, Ruger & Company to almost \$665 million, becoming their second most profitable year in business. This goes to show how the government has a direct influence on the gun market.



Low Valuation:

Sturm, Ruger & Company Inc. is a very cheap stock in the market. On June 12th of 2017, Sturm, Ruger & Company's stock price was at a 52-week high of \$68.80 per share. The company then went on to discover a pistol that discharged unintentionally if the safety was utilized incorrectly. Ruger was forced to issue a recall on this type of pistol and record a \$2.5 million expense in the second quarter. Subsequently, the stock price continued to fall over the following three months down to a 52 week low of \$44.80 per. I believe some of this decline in stock price was due to customer uncertainty; Ruger is and always will be the leading manufacturer of

firearms in the United States and the quality of their pistols should not be in question. Even if this company doesn't turn profits immediately, in the long run this stock will gain value. If you look at the forecast of Ruger's EBITDA below it shows how it is expected to rise over the next couple of quarters. I believe that the stock price might also be considerably low simply because Ruger had a bad quarter due to the summer slowdown of sales. Their revenue dropped 21% between the 1st and 2nd quarters and their stock price is reflective of this. After Ruger's 2nd quarter earnings release, the stock fell from nearly \$68 to their 52-week low of \$44.80 as I mentioned above. If you look at the cyclical patterns over the last couple of years, EBITDA generally increased from



quarter 3 to quarter 4 and then to the first quarter of the succeeding year. If we are going to buy this stock, we need to buy it now. If this trend continues, sales in the final two quarters of 2017 will come in higher than the preceding quarter and the stock price will continue to rise over \$60 per share. Another argument I would like to point out that suggests Ruger's cheap value is a recent announcement that the company bought back \$11.3 million worth of shares in the third quarter at a price of \$46.33 per share. In the price chart on the first page, anyone can see the huge spike in trade volume towards the end of September. This was due to Ruger's repurchasing of shares; the company realized how cheap their stock was priced and took advantage of the opportunity. Ruger had a great year in 2016, stock prices hovering in the high \$60s and \$70s per share, and this could easily reoccur in 2018. People are overlooking the fact that they are a well-established company, unpredictable years like 2016 will continue to occur.

Company Performance:

Name (BICS Best Fit)	Ticker	Mkt Cap	OPM LF	NI Mrgn Adj LF	EBITDA Mgn 3Yr Avg	ROIC/WACC Ratio	WACC
Median		1.27B	6.43%	5.30%	19.20%	1.56	6.85%
(100) STURM RUGER & CO INC	RGR US	937.49M	11.60%	7.74%	22.13%	4.94	5.79%
(101) AMERICAN OUTDOOR B...	AOBC US	869.96M	-2.48%	-1.97%	25.96%	4.16	4.15%
(102) AXON ENTERPRISE INC	AAXN US	1.26B	1.03%	2.86%	19.20%	2.32	12.81%
(103) MSA SAFETY INC	MSA US	2.91B	5.94%	11.72%	16.10%	0.80	12.17%
(104) VISTA OUTDOOR INC	VSTO US	1.28B	6.92%	2.39%	14.43%	-1.93	5.29%
(105) ORBITAL ATK INC	OA US	7.75B	12.20%	8.14%	--	0.39	7.91%

If you look at the relative valuations above, it shows how Sturm, Ruger & Company Inc. is a best-in-class company compared to its competition. Their operating margin is almost double the median, which shows how efficient they have become in manufacturing their products. American Outdoor Brands, being their top competition, has an operating margin in the negative. Ruger's net income margin is also well above the median, retaining almost 8% of revenue. This number was closer to 13.2% in 2016, but has slowly decreased

due to revenue declining at a faster rate than the cost of revenue. However, net income margin should increase as fall sales continue to rise due to fall hunting seasons and the cyclical pattern of earnings increasing throughout the 3rd, 4th, and 1st quarters. Ruger's EBITDA margin, taking it as a 3 year average, is also above the median even though it is behind American Outdoor Brands by 3-almost 4%. One of the most important ratio's on the chart above is the ROIC/WACC Ratio, which Ruger stands tall at 4.94%. This shows that the company has value. Ruger is generating almost 5% more in profits than it costs to keep the company running. Ruger's last twelve months ROIC, depicted on the right, more than doubles it's competitors. This is due to their lack of debt and low cost of borrowing. The only debt Ruger takes on is leasing four of it's facilities, all leases involve contracts of under three years. These leases come to a total of \$461,000 accompanied by purchasing agreements totaling about \$13.5 million, mostly concerning raw materials for production. Ruger has a total debt to market cap ratio of 0%, a z score credit rating of AAA, and an f score credit rating of BBB as of 7/1/2017. This company has a very low default risk; bankruptcy not being an option in the foreseeable future. If the deregulation of firearms overseas continues, Ruger could easily take on debt to finance expansion of their company. Currently, only 3% of their sales come from international exports. When Trump starts to ease overseas distribution, Ruger will want to enter the new market. If they decide to expand and start manufacturing internationally, Ruger's international presence would cause revenue to increase substantially.

ROIC (NOPAT/IC)		
	History	LTM
RGR	65.2%	47.8%
Competitors	35.1%	21.9%
Target	47.8%	

Ownership and Management:

STURM RUGER & CO INC					CUSIP
1 Current 2 Historical 3 Matrix 4 Ownership Summary 5 Insider Transactions 6 Options 7 Debt					86415910
Compare Current Stats Against 10/02/16					
Ownership Type	10/02/16	Curr I	Change		
11) Investment Advisor	82.93	87.62	+4.69	<input checked="" type="checkbox"/>	
12) Individual	2.85	2.88	+0.03	<input type="checkbox"/>	
13) Hedge Fund Manager	8.41	2.82	-5.59	<input type="checkbox"/>	
14) Sovereign Wealth Fund		1.99		<input type="checkbox"/>	
15) Bank	1.20	1.55	+0.35	<input type="checkbox"/>	
16) Pension Fund	1.71	1.08	-0.63	<input type="checkbox"/>	
17) Insurance Company	0.83	0.66	-0.17	<input type="checkbox"/>	
18) Brokerage	0.33	0.59	+0.26	<input type="checkbox"/>	
19) Government	1.30	0.27	-1.03	<input type="checkbox"/>	
20) Unclassified	0.00	0.24	+0.24	<input type="checkbox"/>	
21) Holding Company	0.32	0.21	-0.11	<input type="checkbox"/>	

Sturm, Ruger & Company Inc. currently has 17.7 million shares outstanding. Investment Advisors currently have the largest holding on the company, their top shareholders being Blackrock and Vanguard. Since 2016 Hedge Funds have passed on 5.59% ownership, collecting their profits and moving on to the next company. Abdiel Capital Advisors was the largest Hedge Fund that sold their shares, which accounted for almost 2% of RGR, due to a switch in sectors. They wanted to focus more on industrials and technology, rather than keep their consumer discretionary holdings. This caused individual investors to take over the second leading ownership position in the company. Since August of this year, Hedge Fund Managers haven't made any share transactions which might show that they see potential in the short term as well. I believe that when this third quarter earnings report comes out, it is going to show sales growth and we will see an upward sloping share price. Moving on to RGR's management, Ruger's President, CEO, and COO is a man named Christopher

John Killoy. He has been with the company since 2003, starting out as the Executive Director of Sales and Marketing. He took over his current position as CEO in May succeeding the previous CEO who decided to retire after 11 years as head of the company. The stock price dropped after Killoy was announced CEO, and I believe that this was because people did not want to put trust into someone new. He has been with the company for almost 15 years, and knows how to steer it in the correct direction. Ruger is a well-established company with a clean balance sheet. Killoy, having experience in marketing and sales, may look to start marketing Ruger's products better. The company needs to boost sales volume, and they have the right man as CEO to get this done.

Industry Outlook:

Dow's highest closing record was just recorded on October 5th. The economy is booming right now and we have been in a bullish market for the past 8 years. The unemployment rate is low and people are spending money. With a bullish market and low unemployment rate comes an increase in the consumer discretionary sector. People will continue to buy leisure products if the economy stays trending upward. Concerning the consumer discretionary sector, as you can tell from the following charts, prices along with market cap are both rising. Profitability in this sector is inevitable as the S&P continues to reach new heights. The YOY growth rate of the S&P 500 Consumer Discretionary Index is currently 12.82% and I believe this number could easily rise to 15-20 percent by this time in 2018. We need to purchase more stocks in the consumer discretionary sector, especially with baby boomers beginning to retire. These retirees will start to purchase more leisure products now that they are out of the workforce. Many of these baby boomers will have available time to hunt as well, which is where Ruger could benefit. Gun sales are constant during the last few months of each year due to fall hunting. Most big game seasons take place during the fall due to the lack of parasites on animals' bodies. The cold weather kills off all of the insects and makes it safe to consume wildlife animals. Consumers will continue to purchase firearms for sport purposes out of pure enjoyment. I, being a hunter, find it extremely relaxing to go out on a brisk fall morning and sit in a tree stand. It is rejuvenating to be alone in the forest listening to nature. Hunters are very passionate about the sport; they don't fluctuate in and out of the market. This causes the demand for new rifles to always be present.



Conclusion:

I propose that we should place a buy limit at \$52.50 per share, seeing how the market just reacted to the LA shooting. RGR's stock price increased 3.6% over the matter of a day so it should fluctuate back down to around \$52. The third quarter earnings release does not come out until early November, and this is where I really see the stock starting to gain momentum. The company had a bad second quarter because of a recall combined with the slow summer sales season. When investors see sales increase in the third quarter earnings report, this stock will get right back on track. The increase in the defense budget will also trickle down into Ruger's pockets, being the largest firearm manufacturer in the United States. Trump will continue to discuss the deregulation of international firearm sales, which should increase RGR's value substantially. Gun control laws will definitely continue to be discussed in the future, which always correlates with RGR's stock price. This is a clear buy, seeing how well established the company is and the potential entrance into foreign markets. Buying this company at its current price would be the right decision, but I believe we could get it even cheaper at around \$52.50 per share.

**Sturm, Ruger & Company,
Inc. (RGR)**

CENTER FOR GLOBAL FINANCIAL STUDIES

NEUTRAL

Analysis by Nico Dumas
10/6/2017

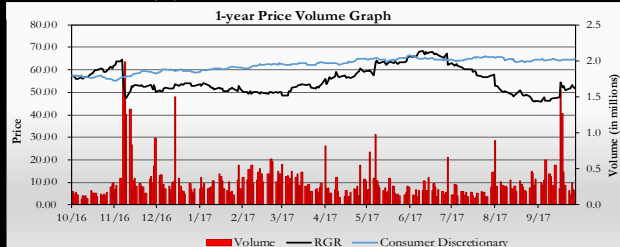
Current Price:
Dividend Yield:

\$54.65
2.8%

Intrinsic Value:
Target Price

\$60.26
\$61.31

Target 1 year Return: 14.99%
Probability of Price Increase: 79.33%

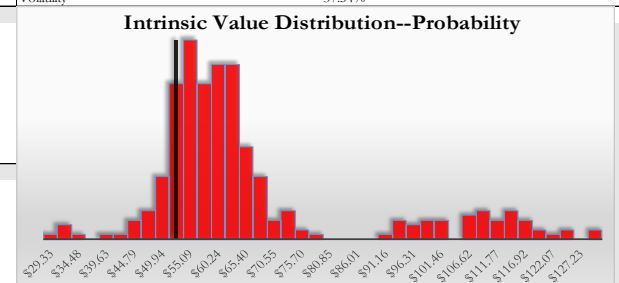


Description	
Sturm, Ruger & Company, Inc. designs, manufactures, and sells firearms under the Ruger trademark in the United States.	
General Information	
Sector	Consumer Discretionary
Industry	Leisure Products
Last Guidance	November 3, 2015
Next earnings date	November 1, 2017
Estimated Country Risk Premium	5.69%
Effective Tax rate	24%
Effective Operating Tax rate	31%

Market Data	
Market Capitalization	\$965.77
Daily volume (mil)	0.54
Shares outstanding (mil)	17.67
Diluted shares outstanding (mil)	18.53
% shares held by institutions	84%
% shares held by investments Managers	75%
% shares held by hedge funds	3%
% shares held by insiders	2.77%
Short interest	22.37%
Days to cover short interest	12.88
52 week high	\$68.80
52-week low	\$44.80
Volatility	37.54%

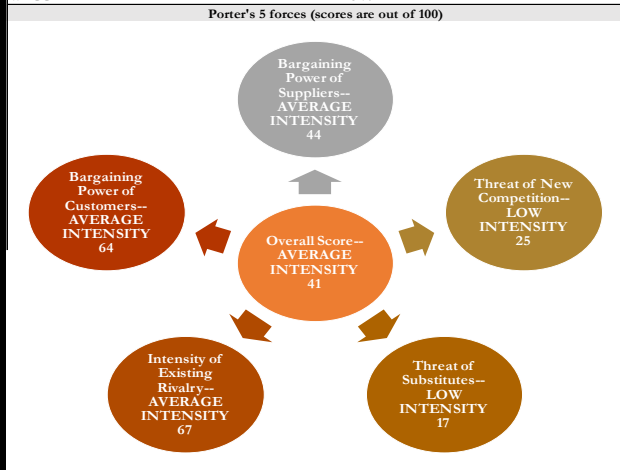
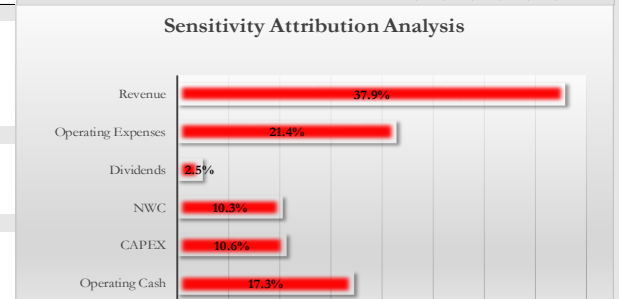
Past Earning Surprises		
Quarter ending	Revenue	EBITDA
7/2/2016	N/A	N/A
10/1/2016	N/A	N/A
12/31/2016	5.10%	N/A
4/1/2017	2.80%	11.91%
7/1/2017	-17.38%	-39.35%
Mean	-3.16%	-13.72%
Standard error	7.1%	25.6%

Peers	
American Outdoor Brands Corporation Vista Outdoor Inc.	
Total compensations growth	
-1.28% per annum over 5y	8.87% per annum over 5y
-1.95% per annum over 5y	8.87% per annum over 5y
-1.82% per annum over 5y	8.87% per annum over 5y
-1.39% per annum over 5y	8.87% per annum over 5y
N/M	N/M
N/M	N/M



Management	
Killoy, Christopher	President, CEO & Director
Dineen, Thomas	CFO, Senior VP of Finance &
Sullivan, Thomas	Senior Vice President of Ope
Lang, Mark	Group Vice President
Colbert, Sarah	Vice President of Administra
Reid, Kevin	VP, General Counsel & Corpor
Profitability	
Return on Capital (GAAP)	47.8%
Operating Margin	14%
Revenue/Capital (GAAP)	3.48
ROE (GAAP)	27.5%
Net margin	11.7%
Revenue/Book Value (GAAP)	2.34
Invested Funds	
Cash/Capital	19.3%
NWC/Capital	23.7%
Operating Assets/Capital	57.0%
Goodwill/Capital	0.0%
Capital Structure	
Total Debt/Market Capitalization	0.00
Cost of Existing Debt	4.0%
CGFS Rating (F-score, Z-score, and default Probability)	AAA
WACC	5.7%

RGR (LTM)	
65.15%	21.85%
15.08%	7.78%
4.32	2.81
38.4%	9.0%
13.2%	7.3%
2.92	1.25
RGR (5 years historical average)	
31.7%	11.8%
14.0%	37.0%
56.8%	30.8%
0.0%	20.3%
RGR (5 years historical average)	
0.00	1.38
4.0%	7.8%
BB	BB
9.7%	10.3%



Porter's 5 forces (scores are out of 100)	
Bargaining Power of Suppliers-- AVERAGE INTENSITY 44	
Bargaining Power of Customers-- AVERAGE INTENSITY 64	
Threat of New Competition-- LOW INTENSITY 25	
Intensity of Existing Rivalry-- AVERAGE INTENSITY 67	
Threat of Substitutes-- LOW INTENSITY 17	
Overall Score-- AVERAGE INTENSITY 41	
Valuation	
Period	Revenue Growth Forecast
Base Year	1%
7/1/2018	-15%
7/1/2019	-13%
7/1/2020	15%
7/1/2021	-6%
7/1/2022	-5%
7/1/2023	-4%
7/1/2024	15%
7/1/2025	-2%
7/1/2026	0%
7/1/2027	1%
Continuing Period	2%
Period	Return on Capital Forecast
Base Year	23.4%
7/1/2018	32.6%
7/1/2019	22.3%
7/1/2020	23.2%
7/1/2021	17.3%
7/1/2022	14.3%
7/1/2023	12.3%
7/1/2024	13.2%
7/1/2025	11.3%
7/1/2026	10.2%
7/1/2027	9.5%
Continuing Period	8.9%
NOPAT Margin Forecast	
Base Year	11.3%
7/1/2018	15.8%
7/1/2019	15.9%
7/1/2020	17.3%
7/1/2021	16.5%
7/1/2022	16.6%
7/1/2023	16.8%
7/1/2024	17.5%
7/1/2025	17.0%
7/1/2026	17.0%
7/1/2027	17.1%
Continuing Period	17.1%
WACC Forecast	
Base Year	5.7%
7/1/2018	5.7%
7/1/2019	5.7%
7/1/2020	5.7%
7/1/2021	10.1%
7/1/2022	10.1%
7/1/2023	9.7%
7/1/2024	9.9%
7/1/2025	9.9%
7/1/2026	9.9%
7/1/2027	9.9%
Continuing Period	9.9%
Revenue to Capital Forecast	
Base Year	2.08
7/1/2018	2.06
7/1/2019	1.40
7/1/2020	1.34
7/1/2021	1.04
7/1/2022	0.86
7/1/2023	0.73
7/1/2024	0.75
7/1/2025	0.66
7/1/2026	0.60
7/1/2027	0.55
Continuing Period	0.52
Price per share Forecast	
Base Year	\$54.13
7/1/2018	\$56.39
7/1/2019	\$58.90
7/1/2020	\$61.17
7/1/2021	\$65.69
7/1/2022	\$70.29
7/1/2023	\$74.78
7/1/2024	\$79.33
7/1/2025	\$84.13
7/1/2026	\$89.04
7/1/2027	\$94.06
Continuing Period	\$94.06

Company Description: Grubhub Inc. is the leading online/mobile platform for restaurant takeout ordering and delivery in the United States, serving across 1,200 cities for over 55,000 restaurants. Dedicated to improving the takeout experience for both diners and restaurants, Grubhub delivers a fast and easy ordering process for all parties involved. By providing customers with a direct-line of communication into the kitchen, Grubhub eliminates the inefficiencies and frustrations of the takeout ordering process. Grubhub operates under one business segment and owns Seamless, AllMenus, and MenuPages in their brand portfolio.

BUY

Current Price:	\$53.67
Target Price:	\$61.34
Market Cap:	4.64B
Beta:	1.05
52 Week Range:	\$32.43-\$57.61
Average Volume:	1.67M
D/E Ratio:	0.00
EBITDA Margin:	23.09%
ROE:	6.10%
ROIC:	7.75%
12M Total Return:	27.28%

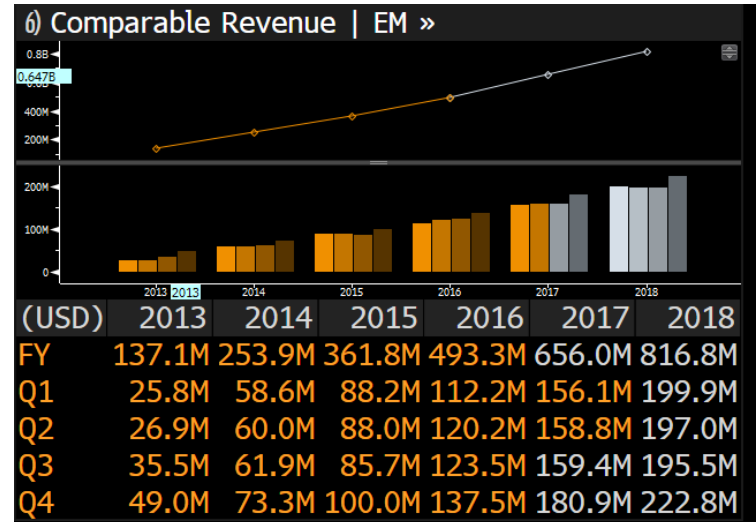
Catalysts:

- **Short-Term** (within the year): Quarterly earnings report est. release on October 25, 2017. Strategic Partnerships with Yelp and Groupon.
- **Mid-Term** (1-2 years): Forecasted growth outlook within the Information Technology sector and economic optimism under Trump administration.
- **Long-Term** (3+years): Continual growth of the \$80bn+ U.S. online takeout/delivery market as the population increasingly becomes more reliant on technology.



Thesis:

Grubhub Inc. is the leading force in the United States online takeout/delivery market and will continue to drive growth within the \$80bn+ online takeout industry. In addition to holding a portfolio of strong subsidiaries, Grubhub has recently partnered with both Yelp and Groupon, expanding their customer base and potential for increasing revenues. Grubhub consistently beats earnings estimates and continues to grow organically as Active Diners and Daily Average Grubs (DAGs) have increased 25% and 16% respectively year-over-year. Grubhub's continued success and ability to attract restaurants and diners through marketing, expansion, and innovation will create internal value and appreciate the company's stock price.



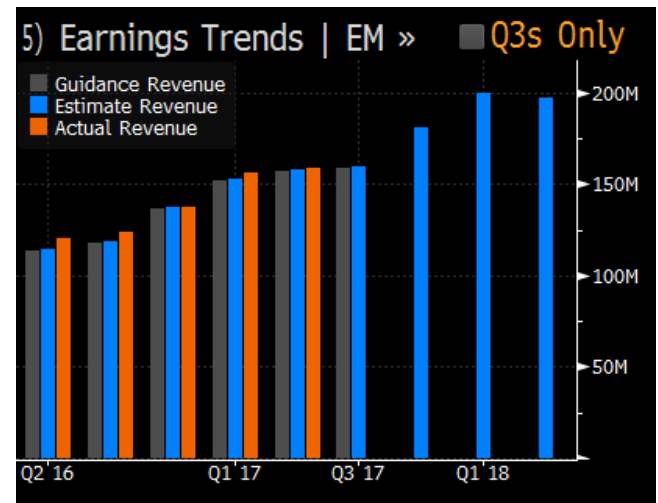
Business Overview:

Grubhub Inc. provides an online/mobile platform for diners to place orders for pick-up and delivery with their favorite restaurants in over 1,200 cities across the United States. They are the largest provider of online takeout ordering in the United States, as they own several other major platforms within the industry and continue to expand. Grubhub's services consist of a two-sided platform benefiting both restaurants and customers with takeout ordering. Grubhub allows restaurants to focus more on meal preparation and quality, and less on receiving actual orders. In addition, Grubhub advertises for restaurants, reducing the inefficiencies of menu and ad distribution which significantly saves costs and time. Grubhub provides a low-risk, high-return business opportunity for restaurants as they only collect payment on orders they generate. Revenues are primarily generated as orders are placed on the Grubhub platform and are collected for delivery services as well. Restaurants typically pay a percentage of the transaction based on the commission for the level of service they choose on the platform. When restaurants pay commissions above the base rate, they receive additional exposure and advertisement on Grubhub. Grubhub collects the total payment and remits net proceeds less commission back to the restaurant on at least a monthly basis. Consistency and convenience creates value for diners as orders are prepared correctly with the elimination of phone calls and paper menus. The Grubhub and Seamless network allows diners access through iPhones, Androids, iPads, Apple Watches, and Apple TV. Diners can enter their delivery address or use geo-location which presents local restaurants providing takeout. Customers can refine searches by restaurant, cuisine type, rating, etc. and can select options or provide specific instructions on a dish-by-dish basis. In addition to the traditional ordering system, Grubhub also provides an express, pre-order, and pickup features, diversifying their brand even more from its competition. The express service saves the history of previous orders, allowing diners to conveniently choose meals for future orders. Pre-order allows diners to place orders up to five days in advance and pickup eliminates delivery and service fees, saving money for the customer. Grubhub's success is heavily reliant on Gross Food Sales (GFS), technological innovation and the ability to grow its restaurant/customer base in multiple markets across the United States.



Quarter 2 Earnings Performance:

In Q2 2017, Grubhub reported revenue of \$158.8mn showing a 32% year-over-year increase from \$120.2mn in Q2 2016. Net income for the quarter increased 15% year-over-year to \$15mn and adjusted EBITDA increased 12% to \$42.2mn. EPS in Q2 was \$0.26 and Gross Food Sales increase 20% to \$880mn. This increase in Sales was driven by an increase in Grubhub delivered orders and restaurants paying higher rates for greater exposure on the Grubhub platform. Grubhub continued to grow organically as it increased its Active Dinners by 25% to 9.18mn from 7.35mn in Q2 2016. Daily Average Grubs (DAGs) also increased 16% in Q2 to 313,900. Orders per diner decreased 7.5% in Q2 due to growth in tier 2 and 3 cities, which generally carry lower order frequency. The tier 2 and 3 restaurant network grew over 40% and average order sizes grew roughly 3.7%. Q2 chain restaurant signings included Qdoba, Del Taco, Moe's, Jack in the Box, Wawa, BJ's and several others. In addition to its organic growth, Grubhub announced a deal in June to acquire the online platform Foodler, headquartered in Boston, MA. This acquisition will help Grubhub expand more into the New England markets as it has a very loyal customer base.



Growth Strategy & Risks:

Grubhub intends to grow their “two-sided” network by adding independent and chain restaurants in existing and new geographic markets by providing them the opportunity to generate more orders and deliveries. As the number of Active Dinners continue to increase, Grubhub plans to increase marketing and technology expenditures to remain the top competitor in the online takeout industry. Marketing expenditures are being used mainly for television and social media advertisements with Facebook, YouTube, etc. Grubhub will continually invest in its mobile products and websites to deliver new products and better leverage the amount of order data that the company collects. Grubhub has invested in technology integrations with companies such as Oracle, NCR, and Breadcrumb and Toast, as well as internally to improve their platform and maintain their competitive advantage in the market. Strategic Acquisitions will remain a part of Grubhub’s growth strategy as well to decrease competition and increase its market share. Current Grubhub subsidiaries include Seamless, MeunPages, AllMenus, OrderUp, Restaurants on the Run, DiningIn, Delivered Dish, and LABite with the expected addition of Eat24 and Foodler in Q3 2017. Revenue is forecasted to increase to 656.0mn and 816.8mn in 2017 and 2018, respectively.

The largest risk and competition to Grubhub are diners who choose to order takeout the traditional way, instead of using online/mobile platforms. The largest hurdle in attracting new diners is the initial order away from the traditional process. This risk is likely to diminish as societal trends continually show an increased reliance on technology in the daily lives of the average consumer. Successful integration of newly acquired platforms to the Grubhub network and seasonal trends are challenges as well. In metropolitan markets, Grubhub experiences relative increases in diner activity from September to April, and a relative decrease during the summer months. Grubhub also benefits when colleges and universities are in session, and when weather is inclement. Lastly, Grubhub bears the risks of low barriers to entry into the online takeout market.

Industry Analysis:

The overall forecast for the Information Technology sector on the Russell 2000 index continues to look promising as it has outperformed the RTY Index by 6.23% YTD and has beaten it by 45.09% over the last five years. The Russell 2000 IT segment has returned 18.75% YTD as R&D continues to pour into technological innovation, driving growth for the industry as a whole. High levels of product elasticity and substitutes spur competition within the index putting upward pressure on the profit margins of companies who can successfully adapt. Grubhub is performing near the top of the IT sector with high profitability margins. Compared to its' industry peers, Grubhub has high EBITDA, Operating and Net Profit Margins of 23.09%, 16.24%, and 10.54% respectively. These margins are well above the industry average, making Grubhub a significant force in the market. In a more narrowed aspect, the online payment sub-segment is currently estimated at volume of \$28tn and is forecasted to almost double by 2026. Online payments are generating \$84bn in fees and have a projected 10 year CAGR of 9.2% to \$202bn by 2026. The sub-segment includes 10 different market, one of which is food ordering/delivery. The online food ordering/delivery market remains competitive and is expected to grow at a 12.8% CAGR over the next 10 years. This is a positive growth environment for Grubhub who will continue to be the leading provider in industry. Another driver of the industry is the economic optimism under the Trump Administration. Markets continue to act bullish despite geopolitical concerns and a projected increasing rate environment. Trump's pro-growth strategy, tax-cuts, and deregulation should have a positive influence on e-commerce, as companies will have an easier time gaining access to new markets and expanding their business. This should directly impact Grubhub as they are currently awaiting the regulatory process of acquiring Yelp's Eat24 business into the Grubhub platform.

Name (BICS Best Fit)	Sales Growth (%)	EBITDA Growth (%)	EBITDA Margin	Operating Income Margin	Net Profit	Net Income Growth (%)
Median	19.80%	34.31%	19.06%	9.78%	3.98%	45.46%
100) GRUBHUB INC	37.75%	34.74%	23.09%	16.24%	10.54%	43.61%
101) BOINGO WIRELESS INC	19.80%	99.32%	23.23%	-11.40%	-12.75%	11.32%
102) SHUTTERFLY INC	4.39%	9.02%	14.16%	4.64%	1.70%	-21.76%
103) ZILLOW GROUP INC - A	30.29%	716.67%	10.80%	-0.12%	-1.76%	80.70%
104) TRUECAR INC	16.09%	96.38%	-0.41%	-7.98%	-9.00%	47.32%
105) TRIPADVISOR INC	4.50%	10.34%	16.70%	9.78%	6.30%	-26.95%
106) MATCH GROUP INC	13.43%	32.76%	30.48%	27.16%	16.20%	70.13%
107) WEB.COM GROUP INC	23.36%	34.31%	21.77%	11.68%	3.98%	73.20%
108) GODADDY INC - CLASS A	16.17%	25.05%	12.35%	3.92%	2.43%	--
109) BANKRATE INC	23.83%	-10.17%	19.06%	10.05%	4.66%	50.69%

Partnerships and Acquisitions:

In August 2017, Grubhub announced a long-term partnership with Yelp consisting of two primary components, causing a jump in its stock price and trade volumes in early August. Grubhub will become the preferred partner for online takeout ordering from restaurants on Yelp's platform, and will directly purchase

Yelp's Eat24 business for \$287.5mn in cash. This acquisition is projected to be completed in Q3 2017 and is forecasted to drive millions of new orders a year for Grubhub. Yelp has significantly grown its network of restaurants since pushing into online food takeout market, creating a valuable opportunity for Grubhub to expand its own platform and attract new diners, thus increasing DAGs as well. Diners will benefit from this partnership too, as there will be a higher selection of low-cost dining options on the Grubhub platform. New restaurants on the platform will see an increase in new customers as well, due to increased advertising through Grubhub's network, creating a win-win scenario for all parties involved. If the regulations with the acquisition go through, Grubhub will gain an additional 15,000 restaurants in major cities such as Los Angeles and San Francisco. This will be a key driver in DAGs as historical data shows restaurant density increases Active Diners.

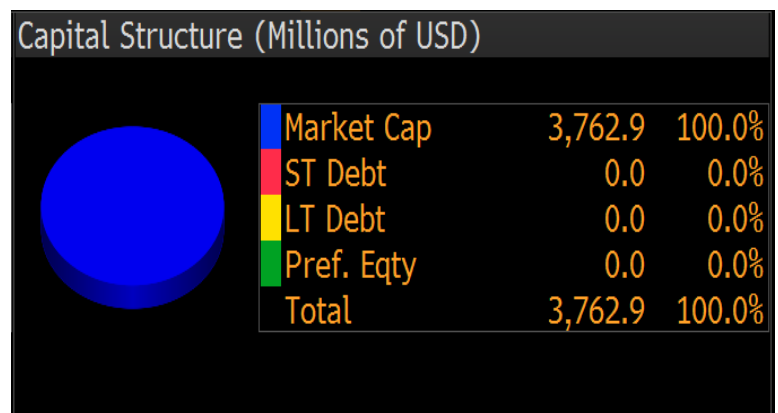


In a similar deal, Grubhub announced that they will be acquiring assets from Groupon's OrderUp business and will become their exclusive partner for online takeout ordering. Although smaller than the deal with Yelp, OrderUp is expected to boost Grubhub's exposure in Tier 2 and 3 markets that will likely complement their current footprint. Profits will be driven from increased ordering in State Colleges and markets such as Nashville, Baltimore, Indianapolis, and Cincinnati. The acquisition of Groupon's OrderUp platform has expanded Grubhub over an additional 27 markets and will drive over 6,000 DAGs in their respective markets.

In addition, Grubhub has also announced the acquisition of Boston-based Foodler this past June and is expected to close out the deal in Q3 2017. Foodler brings a valuable customer-base as it was the first online food ordering platform in Boston and still has a loyal, frequent using customer base since its inception. Although the deal adds smaller volumes to Grubhub's network than the other contracts for Q3, it allows the unique opportunity to expand more in Boston and potentially the entire New England region.

Capital Structure & Expenditures:

Grubhub runs its operations with a WACC of 9.8% that consists of 100% equity. Although Grubhub's books state a D/E ratio of 0.0, Grubhub's 10k shows the usage of debt for leasing office facilities in its financial notes. In 2017, lease expenses were \$5.3mn with a total of \$41.8mn due by 2021. Beyond office facility leasing, Grubhub purchases all property, equipment, and software with cash and does not have any material long-term purchase obligations outstanding.



Recent expenditure within Grubhub's organization has focused on the improvement of marketing tactics and technology. Marketing and technology expenses in Q2 totaled \$34.8mn and \$14.1, respectively. This increase

of 37% and 33% shows Grubhub's commitment to improve its organization along with the growing online takeout industry. Depreciation expense and amortization increased 17% to \$10.4mn year-over-year creating more tax savings and freed up cash.

Conclusion:

Growth forecasts within the Information Technology industry provide a positive outlook for Grubhub Inc., the leading provider in online food ordering. With the online food industry continually becoming more popular, Grubhub holds a strong position to attract new active diners due to their current market exposure and large network of popular restaurants. Continual organic growth combined with the partnerships of Yelp and Groupon will drive increases in GFS and DAGs, leading to value creation within the company. Earnings should come in higher for the remainder of the year and beginning of 2018 as seasonality effects benefit from the winter months. I think Grubhub will appreciate marginally through year-end with high growth potential in the coming 1-2 years.

GrubHub Inc. (GRUB)

CENTER FOR GLOBAL FINANCIAL STUDIES

NEUTRAL

Analysis by RYAN ROSMARIN
10/5/2017

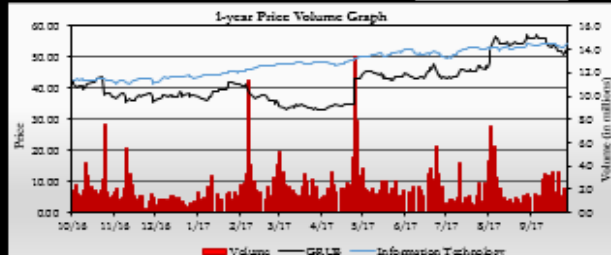
Current Price:
Dividend Yield:

\$53.67
0.0%

Intrinsic Value
Target Price:

\$54.68
\$61.34

Target 1 year Return: 14.28%
Probability of Price Increase: 91%

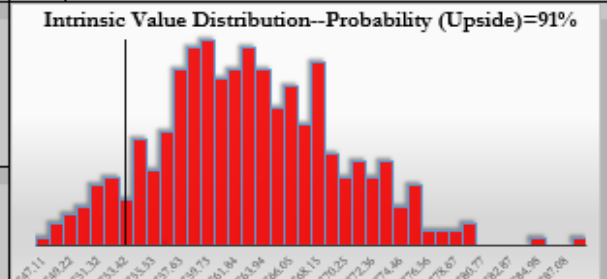


Description	
GrubHub Inc., together with its subsidiaries, provides an online and mobile platform for restaurant pick-up and delivery orders in the United States.	
General Information	
Sector	Information Technology
Industry	Internet Software and Services
Last Guidance	November 3, 2015
Next earnings date	October 23, 2017
Estimated Country Risk Premium	5.69%
Effective Tax rate	20%
Effective Operating Tax rate	25%

Market Data	
Market Capitalization	\$4,636.70
Daily volume (mil)	1.67
Shares outstanding (mil)	86.39
Diluted shares outstanding (mil)	86.98
% shares held by institutions	84%
% shares held by investment managers	80%
% shares held by hedge funds	39%
% shares held by insiders	0.67%
Short interest	22.32%
Days to cover short interest	10.61
52-week high	\$57.61
52-week low	\$32.43
Volatility	0.00%

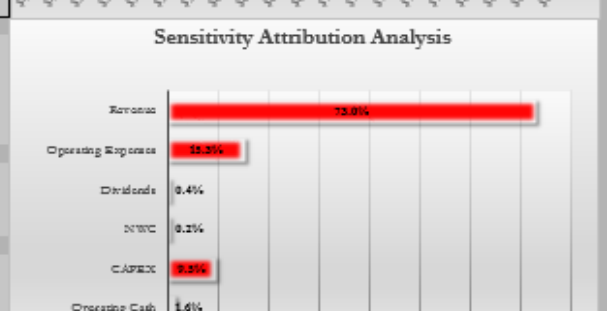
Quarter ending	Part Earning Surprises
6/30/2016	Revenue 4.05%
9/30/2016	Revenue 2.03%
12/31/2016	Revenue -1.18%
3/31/2017	Revenue 0.34%
6/30/2017	Revenue -1.05%
Mean	0.84%
Standard error	1.0%

EBITDA	Peers
Yelp Inc.	
Zillow Group, Inc.	
Shutterstock, Inc.	
LogMeIn, Inc.	
Corr.com, Inc.	
Bankrate, Inc.	
Pandora Media, Inc.	
Shopify Inc.	



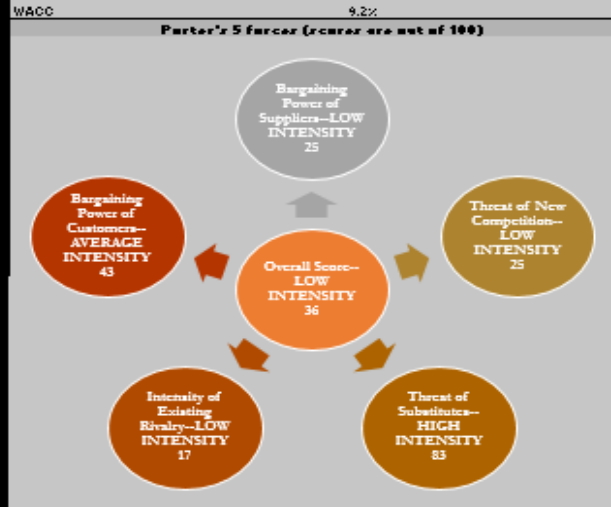
Management	Partitions
Maloney, Matthew	Founder, Chief Executive Officer
DeWitt, Adam	Chief Financial Officer and
Chia, Stanley	Chief Operating Officer
Drucker, Marq	Senior Vice President, General
Cappala, Barbara	Chief Marketing Officer
Zaragoza, David	Director of Corporate Finance

Total compensation growth	Total return to shareholders
11.34% per annum over 3y	NM
-5.13% per annum over 3y	NM
-84.25% per annum over 1y	55.45% per annum over 1y
22.57% per annum over 3y	NM
-87.2% per annum over 1y	55.45% per annum over 1y
NM	NM



Profitability	GRUB (LTM)
Return on Capital (GAAP)	14.1%
Operating Margin	16%
Revenue/Operating (GAAP)	0.89
ROE (GAAP)	6.1%
Net margin	10.3%
Revenue/Book Value (GAAP)	0.59
Invested Funds	GRUB (LTM)
Cost of Capital	36.3%
NWC/Capital	-4.4%
Operating Assets/Capital	25.6%
Goodwill/Capital	42.5%
Capital Structure	GRUB (LTM)
Total Debt/Market Capitalization	0.00
Cost of Existing Debt	4.0%
CGFS Rating (F+care, Z+care, and default Probability)	BBB
WACC	9.2%

GRUB (5 years historical as Peers' Median (LTM))	GRUB (5 years historical as Peers' Median (LTM))
15.07%	81.18%
19.11%	3.82%
0.79	21.23
4.9%	6.0%
9.6%	10.4%
0.51	0.58
GRUB (5 years historical as Peers' Median (LTM))	GRUB (5 years historical as Peers' Median (LTM))
31.6%	55.2%
-9.6%	-29.5%
23.7%	39.1%
54.5%	35.2%
GRUB (5 years historical as Peers' Median (LTM))	GRUB (5 years historical as Peers' Median (LTM))
0.00	0.16
4.0%	5.0%
BB	BB
9.7%	10.2%



Period	Revenue Growth Forecast
Base Year	38%
6/30/2018	18%
6/30/2019	16%
6/30/2020	15%
6/30/2021	13%
6/30/2022	12%
6/30/2023	11%
6/30/2024	9%
6/30/2025	8%
6/30/2026	6%
6/30/2027	5%
Continuing Period	4%
Period	Return on Capital Forecast
Base Year	10.0%
6/30/2018	5.1%
6/30/2019	6.6%
6/30/2020	7.8%
6/30/2021	8.7%
6/30/2022	9.3%
6/30/2023	13.8%
6/30/2024	12.8%
6/30/2025	11.9%
6/30/2026	11.1%
6/30/2027	10.3%
Continuing Period	9.5%

Valuation	Revenue to Capital Forecast
NOPAT Margin Forecast	0.43
	0.46
	0.47
	0.48
	0.47
	0.46
	0.45
	0.41
	0.38
	0.35
	0.32
	0.29
WACC Forecast	Price per share Forecast
	\$53.87
	\$59.87
	\$66.48
	\$73.56
	\$81.11
	\$89.12
	\$97.59
	\$106.49
	\$116.79
	\$126.45
	\$136.44

Company Description: Hexcel can be described as a company that has been thriving in the sense of they reached a new mark of two billion sales toward the end of 2016. Hexcel is a company that prides themselves in having the ability to be advanced when it comes to technology. They are the leading manufacturer of composite materials. These materials can be used in airplanes, fighter jets, and wind turbines. Since Hexcel has such a strong outlook on their technology advancement, it gives them a great opportunity to specialize in the production of light weight carbon fiber, which essentially separates them apart from the rest of their competitors. Hexcel essentially develops, manufacturers, lightweight materials that are used in two segments of composite materials and engineered products. Hexcel's products can be found in military aircraft, space equipment, wind turbines, and everyday products.

BUY

Current Price: \$58.23
 Target Price: \$63.13
 Market Cap: 2B
 Beta: 1.60
 Gross Profit Margin: 28.2%
 EBITA Margin: 22.6%
 ROE: 19.9%
 S&P Rating: BBB



Thesis: Hexcel is a company that has many factors causing them to grow. Their ability to try and find a way to continue to increase their growth is a strong indicator that they will continue to make money in the long run. Hexcel is coming off of one of their best years in the sense of earning over two billion dollars, and still have room to grow with the ten million dollar research center they just opened up in the United Kingdom. There are a ton of projects coming on in 2018 that will cause the value of Hexcel to increase, supporting the fact that they are a strong buy.

Catalysts: Forward looking projections that call for positive/negative outlook that will strengthen your thesis. Example:

- Short Term (within the year): Fossil fuel for projects is something that needs to be closely monitored in the sense the more expensive the price is, the company will stick to using older aircrafts rather than newer ones.
- Mid Term (1-2 years): Hexcel has many projects coming in 2018 that will add more value to the company.
- Long Term (3+): Trump's infrastructure

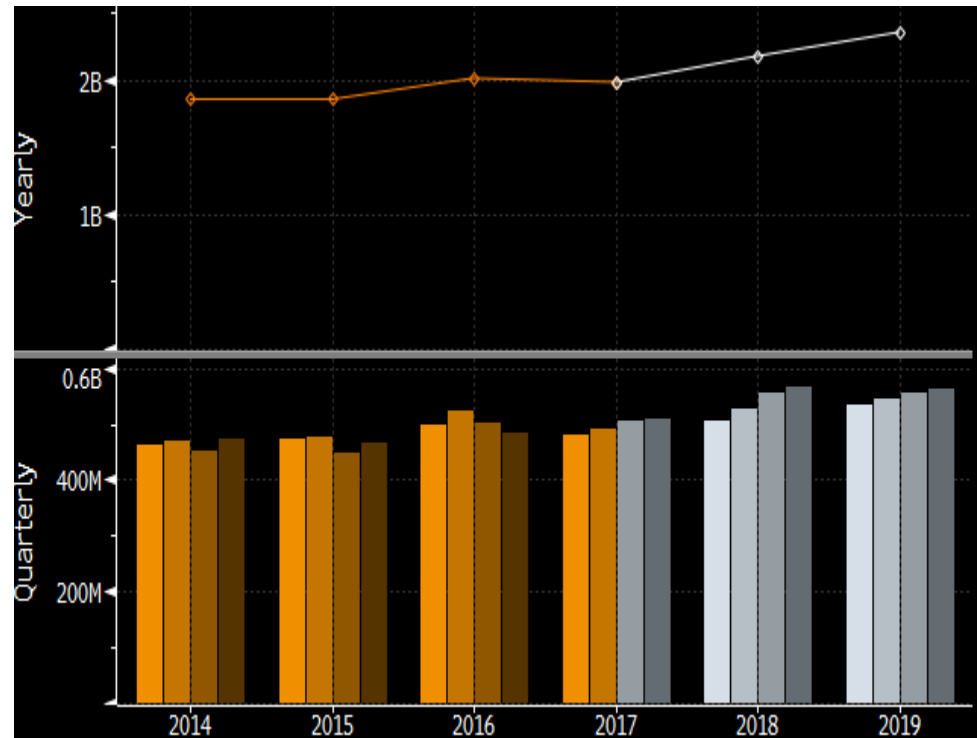
plan, and if his one trillion dollar spending plan will pass. More money going into that market will benefit Hexcel.

Earnings Performance:

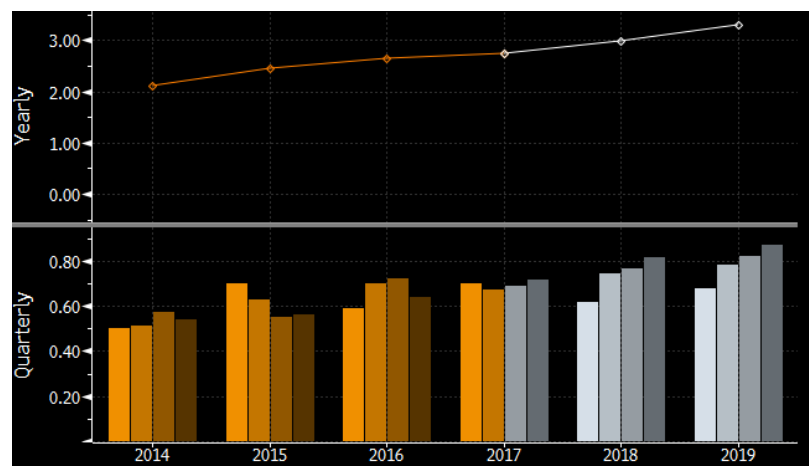
Hexcel is company that is strongly based on the fact of the amount of revenue they bring in. After running all of the analysis, the company is sensitive to revenue by 61.2%.

As indicated by the graph, Hexcel has had the ability to continue their revenue stream for some time now. Hexcel hit their peak of revenue in the year of 2016 reaching two billion in sales. Continuing from the year 2017 to 2019 there seems to be a continued positive stream of revenue for Hexcel. The projected

increase of revenue can be credited to the extra types of project the company has coming on in 2018. There are many types of fighter jets that the company is trying to bring on.



A lot of the projected revenue has to do with what President Trump is going to do when it comes to his infrastructure plan. He is planning to release a one trillion dollar plan that will extremely help in this market. President Trump is extremely determined to try and strengthen the military, and since Hexcel does a lot of work with military aircraft, that would be beneficial for the company.

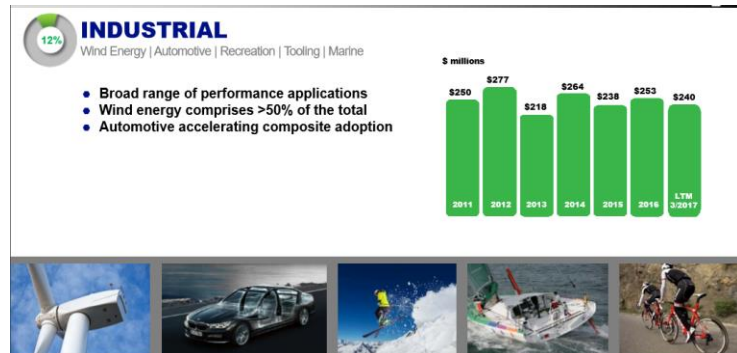


Earnings per share is another strong indicator of not only how well the company has done, but how it will continue to do. At the end year of 2016 the earnings per share hit 2.65 and is project to hit 3.30 by the year 2019. There is a huge opportunity for this company to grow, and it mainly has to do with the types of aircrafts they will be developing within the next couple of years.

Industrial Overview:

Hexcel is in an extremely good position due to the fact of the industry it is currently sitting in. Due to the fact that President Donald Trump is concerned with the military and defense of the country is a huge upside of the company.

Due to the fact that Hexcel is primarily in self-defense it would be huge for the company for President Trump to release the details for his infrastructure plan of one trillion dollars in spending. If his proposal would to approve, a ton of money would be dumped into the Industry that would allow Hexcel to not only expand, but to try and work on new products that would be able to separate themselves from their competitors.



Hexcel is primarily known for being involved in military and defense, and can also be found in aerospace products as well. Hexcel has a lot of products that is used in everyday use.

Hexcel began to try and branch out in the sense that they decided to create products that are able to use in wind turbines. This is extremely crucial for the company in the sense that they are finding alternate ways to increase their revenue, since 61.2% of their earning is all based on revenue due to my analysis. Since Hexcel is so sensitive to revenue having a lower operating costs, will cause the company to have an immediate increase.

Slow Growth, but Promising Future:

Throughout some time now Hexcel has reached a 52 week high at \$58.86 The company has seen a slowdown in production due to the fact that the helicopter projects the company has been working on, has not seen as much of a return as they would like. The company has not lost any money over this time period however, the company leveled out and hasn't seem to make strides in the last couple of months.

With that being said, Hexcel is taking on a new project. That project is projected to create a lot of growth for the company. The new project that the company is taking on is predicted to meet the goal of 6-9% growth for the year. The company is trying take on a project called "777X". The company is expecting that this project will increase its content per aircraft by 33%. This is a great alternate for the company to find another way to create revenue for themselves.

After the "777X" project, Hexcel is trying to work on a project with Boeing. Boeing is one of their main partners and they are working on the Boeing 797 that is expected to be a large opportunity in the mid 2020's. Hexcel is a company that looks like it doesn't have a

Increasing Content on New Aircraft			
	Composite Weight Share	Content (\$Mln p/Aircraft)	First Delivery
Boeing aircraft			
737 (legacy)	<5%	\$0.30	
737MAX	10%	\$0.40 +33%	2017
777	10%	\$1.00	
777X	20%+	??	2020
Airbus aircraft			
A320 (legacy)	10%	\$0.30	
A320neo	15%	\$0.45 +50%	2015
A330	10%	\$0.90	
A330neo	15%	\$1.05 +17%	2017

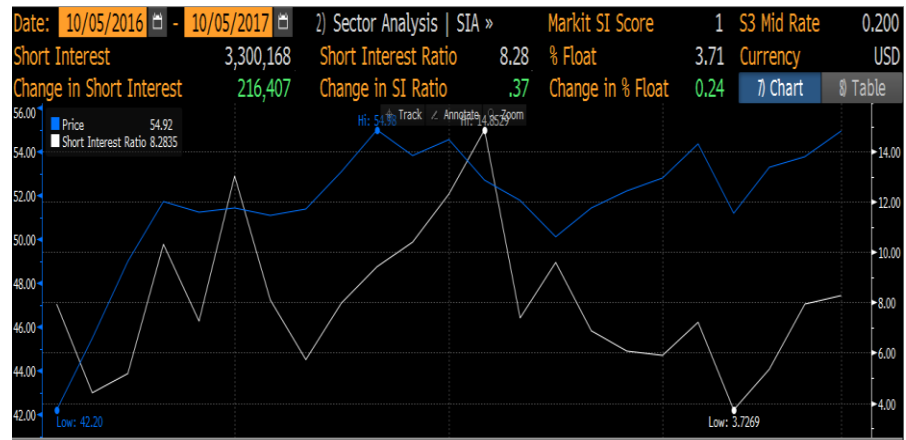
Source: Bloomberg Intelligence, Hexcel Dec. 2016 presentation

Bloomberg

lot of true revenue coming in as of right now, but with a ton of great projects that are going to come in the later years.

Price to Short Ratio:

Hexcel is a stock that has hit a low point at \$42.20 and a high of \$58.86. During that time period the highest the short ratio hit was around 14.85%. During that time period as the stock continues to climb up and reach the 52 week high, the short percentage is at 3.7%. This is extremely telling in the fact that many analyst are not shorting the stock due the fact that they believe there is potential growth in this company.



The reason analysts don't see a real need to be able to short the stock has to do with the fact that their equity is lower than the rest of the competitors. Hexcel is seeing a cost equity at 10.1% while their competitors are looking at a 10.5%. Therefore the company is creating more value than their competitors.

	Ke (Kd+Country Risk)	
	History	LTM
HXL	10.1%	10.1%
Competitors	11.5%	10.5%
Target	10.1%	

Fourth Quarter Impact:

Hexcel is a company that has continued to see great growth in the past couple of years. The percentage growth of revenue from the fiscal year of 2013 was 6.3% and climbed all the way to 7.7% in 2016. There is even more room for growth in the sense the company is predicting another 6-9% of growth in the next year for the company.

Revenue, Adj	1,678.2	1,855.5	1,861.2	2,004.3	1,954.1
Growth %, YoY	6.3	10.6	0.3	7.7	1.0
Gross Profit, Adj	454.0	508.8	532.8	564.6	545.3
Margin %	27.1	27.4	28.6	28.2	27.9
EBITDA, Adj	331.1	383.0	409.3	453.4	441.7
Margin %	19.7	20.6	22.0	22.6	22.6
Net Income, Adj	188.5	213.3	225.9	243.2	238.2
Margin %	11.2	11.5	12.1	12.1	12.2

Hexcel has had a strong gross profit margin over the years that has continued to see a continued climb from 27.1% to 28.2%. This is extremely telling in the value of the company due to the fact there is a comfortable amount of money left over after accounting for costs of goods sold.

Growth Strategy:

When it comes to the growth strategy of Hexcel, they have many areas that they are trying to expand and find new ways to gain profits. For starters, Hexcel has found many ways to try and expand their manufacturing plants in a way to decrease costs and improve revenue. They just recently opened a new ten million dollar facility that is solely related for analytical labs and mixer rooms. This clearly illustrates the growth for the company and how they are expanding overseas to try and find different areas of revenue.



Not only is Hexcel trying to expand overseas and trying to establish new manufacturing points, they are also investing in a lot of different areas to try and increase revenue. The types of companies that they were trying to pin point were emerging small industries that would cut costs for their company. One investment the company took on was Oxford Performance Materials. This is extremely important for the company in the sense that it is a leader in high-performance for manufacturing and aerospace. The unique factor about this company is that they are the leading manufacturer for mission critical parts to aerospace and defense companies. It will not only cut costs for Hexcel, but it will be able to create a lot of revenue for the company.

Another investment in the company made in may had to do with a company called Luminati. The deciding factor when it comes to Luminati is a company that is developing next-generation solar electric material using the Hexcel materials. This is huge for the company in the sense that that it is another way for Hexcel to generate revenue.

Conclusion:

Hexcel is a company that has continued to be on the rise for the past couple of years. They are an innovative company that has the ability to continue to put out new technology and products that keeps them ahead of their competitors.

Hexcel is looking at a positive year in the sense that their earnings are expected to climb up to 9%. They are on the brink of taking on a couple of new projects, with fighter jets for the military that will increase the value of their company. They are also branching out into the wind turbine company to try and expand their product and begin to enter into new markets, where they will hopefully be able to see a return.

Due to the fact that Hexcel has a strong growth strategy is even more of an incentive to buy it. Hexcel is investing in many companies that are only benefiting them and cutting their costs down at the same time. That is a huge upside for Hexcel and will cause them to see the returns they projected for 2018. Hexcel is a clear buy, and would absolutely benefit our portfolio.

Hexcel Corporation (HXL)

CENTER FOR GLOBAL FINANCIAL STUDIES

NEUTRAL

Analysis by Timothy Cousin
10/5/2017

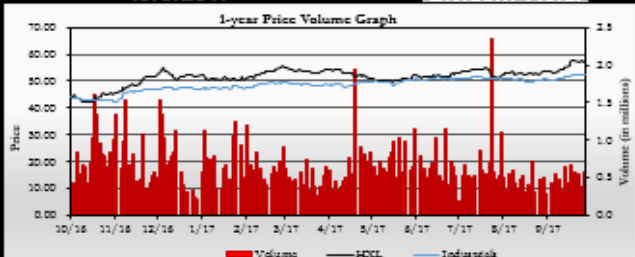
Current Price:
Dividend Yield:

\$58.23
0.8%

Intrinsic Value
Target Price:

\$62.22
\$63.13

Target 1 year Return: 9.18%
Probability of Price Increase: 87.5%



Description	
Hexcel Corporation, together with its subsidiaries, develops, manufactures, and markets structural materials for use in commercial aerospace, space and defense, and industrial markets.	
General Information	
Sector	Industrials
Industry	Aerospace and Defense
Last Guidance	November 3, 2015
Next earnings date	October 19, 2017
Estimated Country Risk Premium	6.09%
Effective Tax rate	22%
Effective Operating Tax rate	25%

Market Data	
Market Capitalization	\$5,227.81
Daily volume (mil)	0.50
Shares outstanding (mil)	89.78
Diluted shares outstanding (mil)	93.05
% Shares held by institutions	99%
% Shares held by investment Managers	84%
% Shares held by hedge funds	6%
% Shares held by insiders	0.83%
Short interest	3.63%
Days to cover short interest	6.47
52 week high	\$58.55
52 week low	\$41.03
Volatility	21.87%

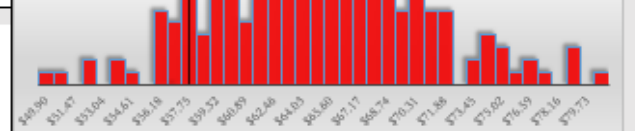
Quarter ending	
6/30/2016	1.81%
9/30/2016	-0.84%
12/31/2016	-5.06%
3/31/2017	-10.10%
6/30/2017	-9.20%
Mean	-4.68%
Standard error	2.3%

Part Earning Surprises	
Revenue	1.81%
EBITDA	3.87%
	-3.51%
	-4.84%
	-18.45%
	-8.47%
	-6.28%
	3.4%



Management	
Stange, Nick	President, Chief Executive Officer
Hennemuth, Robert	Executive Vice President of
Morlat, Thierry	President of Aerospace, Euro
Winterlich, Patrick	Executive VP & CFO
Hendrick, Kimberly	Senior VP, Corporate Control
Mackenzie, Paul	Senior VP & CTO

Peers	
Enterline Technology Corporation	
Maag Inc.	
TransDigm Group Incorporated	
Triumph Group, Inc.	
Rockwell Collins, Inc.	
AAR Corp.	
Northrop Grumman Corporation	
HEICO Corporation	



Profitability	
Return on Capital (GAAP)	14.1%
Operating Margin	14%
Revenue/Capital (GAAP)	1.03
ROE (GAAP)	20.4%
Net margin	13.0%
Revenue/Book Value (GAAP)	1.57

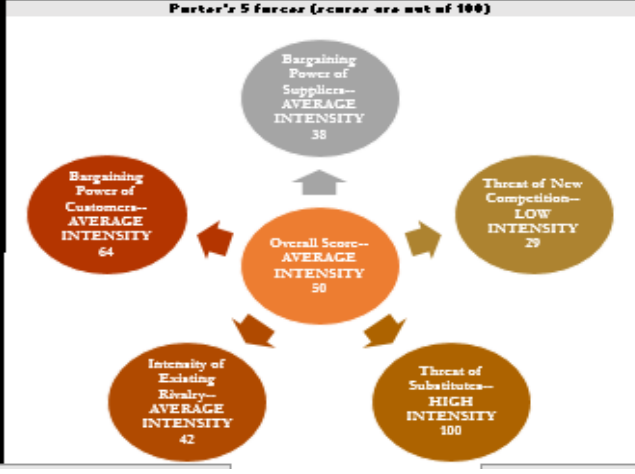
HXL (LTM)	
Return on Capital	17.31%
Operating Margin	12.82%
Revenue/Capital	1.35
ROE	20.5%
Net margin	11.3%
Revenue/Book Value	1.81

HXL (5 years historical average)	
Return on Capital	14.2%
Operating Margin	19.1%
Revenue/Capital	74.7%
ROE	43.9%
Net margin	8.0%
Revenue/Book Value	2.14

Invested Funds	
Cost of Capital	2.1%
WACC/Capital	15.6%
Operating Assets/Capital	82.3%
Goodwill/Capital	0.0%

HXL (LTM)	
Cost of Capital	0.25
WACC/Capital	4.0%
Operating Assets/Capital	BBB
Goodwill/Capital	8.1%

HXL (5 years historical average)	
Cost of Capital	0.53
WACC/Capital	4.4%
Operating Assets/Capital	A
Goodwill/Capital	8.7%



Period	
Base Year	1%
6/30/2018	2%
6/30/2019	6%
6/30/2020	8%
6/30/2021	7%
6/30/2022	6%
6/30/2023	6%
6/30/2024	5%
6/30/2025	4%
6/30/2026	3%
6/30/2027	3%
Continuing Period	2%

Revenue Growth Forecast	
Base Year	14.8%
6/30/2018	14.5%
6/30/2019	15.5%
6/30/2020	15.8%
6/30/2021	16.1%
6/30/2022	16.4%
6/30/2023	16.7%
6/30/2024	17.1%
6/30/2025	17.4%
6/30/2026	17.7%
6/30/2027	18.0%
Continuing Period	18.3%

Period	
Base Year	12.3%
6/30/2018	11.3%
6/30/2019	11.2%
6/30/2020	11.1%
6/30/2021	10.9%
6/30/2022	10.8%
6/30/2023	10.2%
6/30/2024	9.9%
6/30/2025	9.6%
6/30/2026	9.2%
6/30/2027	8.9%

Return on Capital Forecast	
Base Year	8.1%
6/30/2018	7.9%
6/30/2019	7.9%
6/30/2020	7.9%
6/30/2021	7.9%
6/30/2022	8.0%
6/30/2023	8.2%
6/30/2024	8.2%
6/30/2025	8.3%
6/30/2026	8.5%
6/30/2027	8.7%

Valuation	
MOPAT Margin Forecast	Revenue to Capital Forecast
Base Year	0.84
6/30/2018	0.78
6/30/2019	0.73
6/30/2020	0.70
6/30/2021	0.67
6/30/2022	0.64
6/30/2023	0.61
6/30/2024	0.58
6/30/2025	0.55
6/30/2026	0.52
6/30/2027	0.49
Continuing Period	0.46

Company Description: Ligand Pharmaceuticals is a biopharmaceutical company focused on developing or acquiring technologies to discover and develop new medicines that help pharmaceutical companies. With a very unique business model, their goal is to provide investors an opportunity to participate in the biotech industry, with diversification across the healthcare sector and a lower-risk business style. Ligand focuses on drug discovery, early-stage drug development, product reformulation, and partnering. Currently, we have partnerships with some of the top pharmaceutical companies, leveraging what they do best, which is late-stage drug development, regulatory management and commercialization.

BUY

Current Price:

\$138.63

Target Price:

\$168.00

Market Cap:

\$2.9B

Beta:

1.01

P/E:

367.00

Gross Margin:

95.61%







Thesis: Ligand Pharmaceuticals is a differentiator within the healthcare market keeping their costs low and their royalties high. By licensing their technologies and drug development expertise they reap the benefits of their partners while they stick to their specialties. While they recently reported recorded revenue performance for their three staple drugs, they also have had a large number of drugs pass through the FDA process.

Catalysts: Forward looking projections that call for positive/negative outlook that will strengthen your thesis. Example:






- Short Term (within the year): Partnership with Melinta Therapeutics just got FDA approval of new drug Baxdela to treat skin infections.
- Mid Term(1-2 years): Currently have 6 drugs pass phase I within the FDA clinical process.
- Long Term (3+): With a large and diverse portfolio Ligand currently has 155 products pumping through the FDA process, as well as international market gains.

Earnings Performance:

Ligand has been excelling in totaling revenues for the six months ended June 30, 2016 totaling \$57.3 million, compared to \$49.2 million in the same period for 2016. Royalties, which make up 54.5% of their total revenue, were up 38.4 million compared to \$24.1 million in the same period. This increase off 59% was due to higher royalties from their three key products; Promacta, Kyprolis and EVOMELA. Ligand lagged in material sales of \$6.7 million, compared to the previous periods with \$9.2 million. The main driver for this decrease was a timing issue with their product Captisol. Licensing fees, milestone payments and other revenues were at \$12.2 million, which was down \$3.6 million from the previous quarter. This decrease was also due to timing of milestones and licensing fees earned. These decreases were mainly because of poor sales within the first quarter, which has a negative correlation to Ligands business structure. Although they offer a low risk alternative to the pharmaceutical industry, they only do as well as their partnering companies. The three top companies for Ligand posted poor results, which lead to a lagged first quarter.

In Millions of USD except Per Share	FY 2014		FY 2015		FY 2016	
12 Months Ending	12/31/2014		12/31/2015		12/31/2016	
 Revenue	64.5	100.0%	71.9	100.0%	109.0	100.0%
 Royalty Revenue	30.0	46.5%	38.2	53.1%	59.4	54.5%
 Collaborative Research and Dev...	6.1	9.4%	6.1	8.4%	27.0	24.8%
 Material sales	28.5	44.1%	27.7	38.5%	22.5	20.6%

In the second quarter of 2017, Ligand posted great numbers with total revenues at \$28 million, compared to quarter two in 2016 which resulted in \$19.5 million. The partnering companies for Ligand made a huge gain in their sales which lead to a royalty income of 14.2 million, up from the same period last year which resulted in 9.8 million. This increase of 46% was due to the total sales of these drugs broke record numbers, and because of the cost structure of these royalties, the more sales the partnered company does the higher royalty Ligand gets paid. Material sales were \$5.6 million compared to the same period which was \$3.9 million. The main driver for this growth was the timing of Captisol purchases for use in clinical trials and commercial products. Licensing fees, milestones, and other revenues posted \$8.2 million, compared to \$5.9 million in the same period for 2016.

In Millions of USD except Per Share	FY 2014	FY 2015	FY 2016	Current/LTM	FY 2017 Est
12 Months Ending	12/31/2014	12/31/2015	12/31/2016	06/30/2017	12/31/2017
 Revenue	64.5	71.9	109.0	117.1	134.5
 Gross Margin	85.84	91.93	94.89	95.61	
 Gross Profit	55.4	66.1	103.4	111.9	128.9
 Operating Margin	30.41	38.00	40.27	41.05	50.04
 EBITDA	22.3	30.0	55.2	59.5	85.3

Ligand has been increasing in their growth for the three years shown, with strong projects heading into the next two quarters of 2017. Ligand has done a great job of acquiring companies to add on top of their diverse portfolio of technologies to continue to be innovative and gain more partnerships. If quarter three and four do relatively well for Ligand, they can easily beat their estimates for their fiscal year, but it all depends on the sales of their key products.

Business Overview:

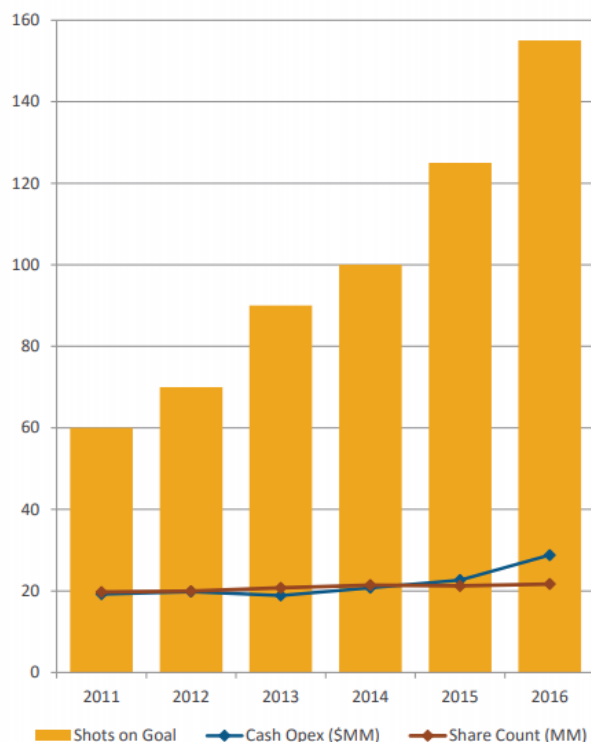
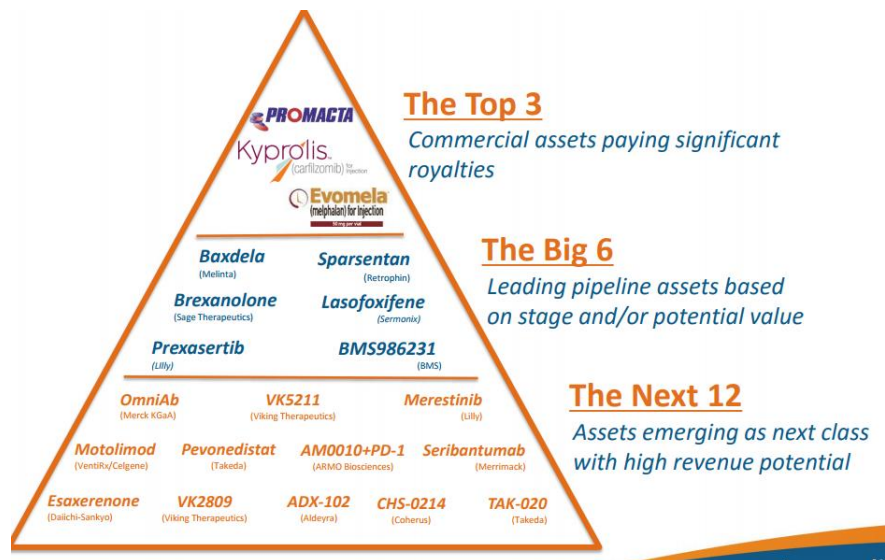
Ligand pharmaceuticals has a very unique structure compared to the rest of the pharmaceutical industry because they focus on what they do best which is drug discovery, early-stage drug development, product reformulation, and partnering. Their main revenue stream comes from partnering with major pharmaceutical company and diversifying their portfolio of partnership across a wide variety within the pharmaceutical industry. Their current portfolio consists of partnerships with big pharma (14), specialty pharma (12), generics (8), and biotech companies (49). Through these partnerships, Ligand licenses their technologies and expertise in drug development to reap the benefits of the sales of the drugs they help develop through royalties. The royalties vary based on drug, and the sales of these drugs, therefore the more drugs the partnering companies sell, the more revenue the company takes in. This provides a distinctive structure to the pharmaceutical industry because they provide low cost substitute to the volatile and high debt industry. Where most big pharma companies spill a ton of costs into research and development of these drugs, Ligand takes a low risk approach by partnering with these companies and reaping the benefits when the partners perform well.

Currently the average royalty Ligand makes on each drug that is marketed is approximately 4.5% when the partners produce the worst sales. The structure to the royalty breakdown is steadily increasing as the sales of these products go up. Along with the licensing fees, Ligand structures these partnerships to have milestone payments that occur when drugs make it through each phase of the FDA trail process. This structure takes out some of the risk associated with drug development, due to the long drawn out process with the FDA and the low rate of success each drug has. So, as each drug passes through the FDA phases Ligand gets paid a milestone payment which in turn makes the upside potential for Ligand to increase their revenue. Within the FDA development process, the overall success rate for a drug to pass all approval processes is 8%, which is an extremely low probability to capitalize on the sales of a product. The final revenue driver for Ligand is the sale of the flagship product Captisol. Captisol is Ligand's patented protected, uniquely modified cyclodextrin, with a chemical structure that was rationally designed to enable creation of new products by significantly improving solubility, stability, bioavailability, and dosing of active pharmaceutical ingredients. This is a highly used product within the development and the commercialization of different drugs. It currently has an excellent safety record and delivery method is extremely efficient relative to not using this chemical structure.

Company Portfolio:

Ligand currently has 14 commercialized products that generates revenue from. Although they have 14 products, their three high growth products, which make up a majority of their business are, Promacta, Kyprolis, and EVOMELA. With many drugs being poured through the FDA pipeline Ligand has a strong chance of high growth within the future. Their current business model is stated as a

“high shots-on-goal” business model, which has increase from 60 to 155 within the past five years. Their ideology behind this model is that due to the low success rate within the FDA, the more drugs they have, the higher probability that a few of these drugs will pass the screening process. With this business model the company creates strong financial leverage using this model because they only aid the pharmaceutical companies in developing these drugs, so they aren’t sinking a large amount of capital in research and development.



8

Within Ligand's current portfolio, they have 155 fully funded drugs that are within the FDA process or in the pre-clinical phase. Besides their 14 commercialized drugs, they have three drugs in the regulatory submission phase, seven drugs within phase three, twenty-one within phase two, twenty-seven in phase one, and forty-nine in the preclinical phase.

Ownership Summary:

The majority of the holders within Ligand are Investment advisors, more specifically, Blackrock and Vanguard group. Blackrock is a standout owner holding about 12% of the overall shares. Ligand has about 21.1 million shares outstanding and has a very low insider holding at 2.59%. Investment managers have also been adding this company to their portfolios within the month, while hedge funds are selling their positions.

Compare Current Stats Against		09/01/17	
Ownership Type	08/27/17	Curr ↓	Change
11) Investment Advisor	81.82	81.97	+0.15
12) Hedge Fund Manager	9.55	9.47	-0.08
13) Pension Fund	2.64	2.62	-0.02
14) Bank	2.38	2.36	-0.02
15) Individual	2.27	2.25	-0.02
16) Sovereign Wealth Fund	0.70	0.70	0.00
17) Government	0.24	0.23	-0.01
18) Brokerage	0.13	0.13	0.00
19) Insurance Company	0.06	0.07	+0.01
20) Venture Capital	0.06	0.06	0.00
21) Unclassified	0.06	0.06	0.00

Industry Outlook:

As the baby boomer generation continues to age, more problems will arise within their health. With that being said, when people have health problems doctors tend to prescribe medicine to treat the disease or one can increase their longevity. Currently 90% of those aged 65 and older take at least one drug per week, and within that same age group about 40% takes at least five different drugs per week. As this generation gets older and we have more advancement within the pharmaceutical sector there will be more drugs to prescribe to a more diverse crowd. Currently the baby boomer generation makes up 20% of the American population. Sick people do not care how the economy is doing and millions of drugs are prescribed each day therefore, the pharmaceutical sector offers a potential upside even in downward economies. On average, the biotech industry is expected to grow at an annual rate of about 16%.

Currently there is an active price war with pharmaceuticals in which many companies have given in and reduced their price, while some companies have given a more value based pricing. The big pharma companies who have decreased their price hope to target a larger volume in sales, which would make up for the value based pricing technique that has been used for so many years. Along with these costs the healthcare industry will continue to converge with technology, increasing overall drug development and cheaper options to create these drugs. Another driver for the pharmaceutical industry would be specialized marketing in the most recent year. In 2015, 45 novel drugs were being marketed, but in 2016 it took a large drop and went down to 22 drugs, which means these companies are taking a narrow approach to concentrate these cost and create revenues more efficiently.

Conclusion:

With solid margins and a very unique business structure, Ligand is a differentiator within the healthcare sector. With leading industry technology and partnering with some of the best big pharma companies, I believe that this company has a very high potential to grow. I currently have faith that Ligand is fairly priced, but with a merger of Crystal Bioscience, their antibody technologies will only get better and more companies are going to be working with them in the future. Their partnering companies have also been performing exceeding well, especially in sales which has a direct correlation with Ligands revenue.

Ligand Pharmaceuticals Incorporated (LGND)

CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Analysis by Hunter Sanna

Current Price:

\$138.43

Intrinsic Value:

\$151.22

Target 1 year Return: 21.18%
Probability of Price Increase: 9

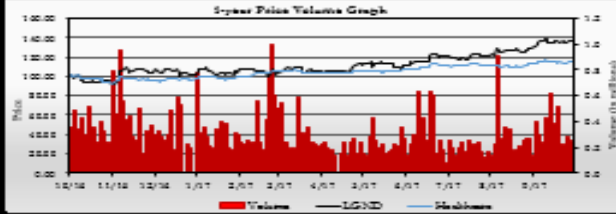
10/6/2017

Dividend Yield:

0.0%

Target Price:

\$166.00



Description
Ligand Pharmaceuticals Incorporated, a biopharmaceutical company, focuses on developing and acquiring technologies that help pharmaceutical companies to discover and develop medicines worldwide.

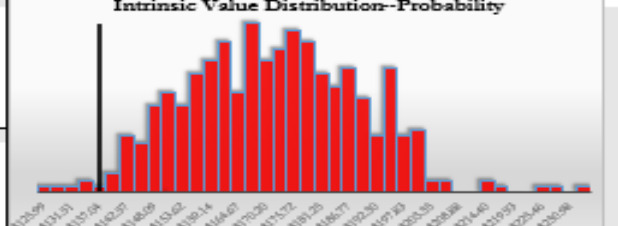
General Information

Symbol	LGND
Industry	Pharmaceuticals
Last Dividend	November 3, 2015
Next earnings date	November 3, 2017
Estimated Country Risk Premium	5.63X
Effective Tax rate	24X
Effective Operating Tax rate	48X

Market Data	Market Data
Market Capitalization	\$2,318.65
Daily volume (mil)	8.14
Shares outstanding (mil)	21.85
Diluted shares outstanding (mil)	22.81
X shares held by institutions	125X
X shares held by institutional Managers	185X
X shares held by hedge funds	155X
X shares held by insiders	2.55X
Short interest	18.78X
Days to cover short interest	15.25
52-week high	\$158.45
52-week low	\$87.58
Volatility	41.12X

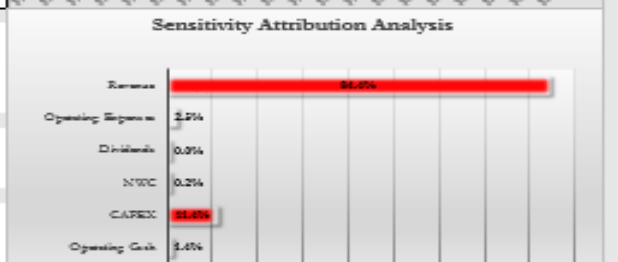
Quarter ending	Revenue	EBITDA
6/30/2016	\$3.84X	\$3.54X
3/30/2016	\$4.36X	\$4.45X
12/31/2015	\$7.32X	\$5.83X
9/30/2015	\$7.55X	\$6.85X
6/30/2014	\$11.33X	\$10.6
Mean	2.65X	\$3.26X
Standard error	4.4X	2.3X

Position	Position
Higgins, John	Chief Executive Officer and President and Chief Operating Officer
Perkins, Matthew	Chief Financial Officer, President, General Counsel
Kerns, Charles	Vice President of Human Resources
Worfield, Graham, Rogers	Vice President of Biologics
Murphy, Keith	Vice President of Biologics



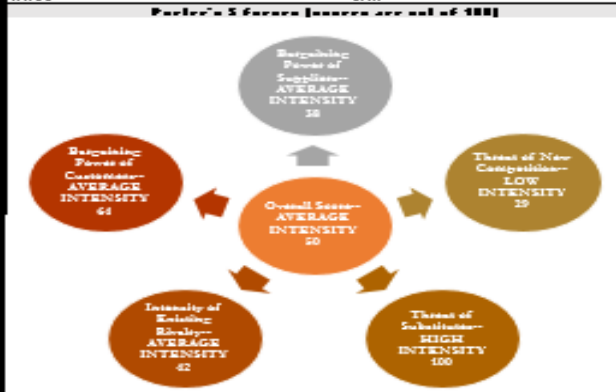
Management	Position
Higgins, John	Chief Executive Officer and President and Chief Operating Officer
Perkins, Matthew	Chief Financial Officer, President, General Counsel
Kerns, Charles	Vice President of Human Resources
Worfield, Graham, Rogers	Vice President of Biologics
Murphy, Keith	Vice President of Biologics

Total compensation per year	Total return to shareholders
20.8X per annum more 5q	17.75X per annum more 5q
15.83X per annum more 5q	17.75X per annum more 5q
23.7X per annum more 5q	15.28X per annum more 5q
23.11X per annum more 5q	17.75X per annum more 5q
N/A	N/A
N/A	N/A



Financial Ratios	LGND [LYH]	LGND [5 years historical]	Peer's Median [LYH]
Return on Capital [GAP]	18.3X	33.42X	11.75X
Operating Margin	33X	27.33X	11.83X
Revenue/Capital [GAP]	1.26	1.18	1.33
ROE [GAP]	2.4X	49.1X	1.1X
Net margin	7.7X	23.3X	18.3X
Revenue/Book Value [GAP]	1.32	1.85	1.78
Capital Structure	LGND [LYH]	LGND [5 years historical]	Peer's Median [LYH]
Total Debt/Market Capitalization	1.35	1.47	1.54
Cost of Existing Debt	5.5X	5.3X	8.8X
CCPS Rating [Revenue, Revenue, and default Probability]	BBB	BBB	B
WACC	5.1X	11.8X	11.4X

Period	Revenue Growth Forecast	WACC Forecast	Revenue to Capital Forecast
Base Year	33X	34.3X	0.21
6/30/2018	28X	33.3X	0.22
6/30/2019	19X	38.4X	0.21
6/30/2020	17X	37.5X	0.21
6/30/2021	16X	36.8X	0.21
6/30/2022	14X	36.2X	0.28
6/30/2023	12X	35.8X	0.13
6/30/2024	11X	35.4X	0.18
6/30/2025	9X	34.3X	0.17
6/30/2026	7X	34.3X	0.16
6/30/2027	5X	33.3X	0.15
Continuing Period	4X	33.4X	0.14



Period	Return on Capital Forecast	WACC Forecast	Revenue to Capital Forecast
Base Year	7.1X	5.1X	\$149.42
6/30/2018	17.5X	5.4X	\$155.38
6/30/2019	16.7X	5.7X	\$183.37
6/30/2020	16.4X	6.8X	\$288.88
6/30/2021	15.3X	6.7X	\$215.81
6/30/2022	15.3X	6.8X	\$237.54
6/30/2023	14.6X	7.8X	\$256.16
6/30/2024	15.8X	7.6X	\$282.18
6/30/2025	15.8X	7.3X	\$382.52
6/30/2026	12.1X	8.1X	\$324.36
6/30/2027	11.2X	8.3X	\$347.36
Continuing Period	18.4X	8.5X	

Period	Revenue Growth Forecast	WACC Forecast	Revenue to Capital Forecast
Base Year	33X	34.3X	0.21
6/30/2018	28X	33.3X	0.22
6/30/2019	19X	38.4X	0.21
6/30/2020	17X	37.5X	0.21
6/30/2021	16X	36.8X	0.21
6/30/2022	14X	36.2X	0.28
6/30/2023	12X	35.8X	0.13
6/30/2024	11X	35.4X	0.18
6/30/2025	9X	34.3X	0.17
6/30/2026	7X	34.3X	0.16
6/30/2027	5X	33.3X	0.15
Continuing Period	4X	33.4X	0.14