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Boston Beer Company, Inc. Company Analysis (NYSE: SAM)

Yale School of Management

Strong positioning in key growth markets provides strong foundation for future growth

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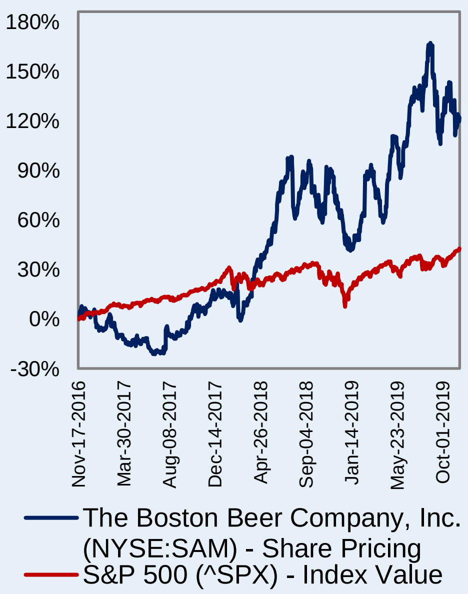
Key Facts

12-month price target	$453.10
Current Price	$366.38
Operating Margin	13.30%
Profit Margin	10.06%
Return on Assets	12.35%
Return on Equity	20.48%
Market Cap	$4.41 B
Enterprise Value	$4.38 B
Fiscal Year End	Dec



Recommendation: BUY

Investments in Truly brand are expected to drive revenue growth and market share in the fast-growing flavored malt beverages segment (11.6% Y/Y) as Truly has outperformed the market YTD by more than doubling revenue.

Boston Beer Company is well-positioned to leverage growth in the U.S. craft beer market (8% Y/Y) with an expected 2019 revenue growth of 23%.

Decrease in gross margin (3% Y/Y) is estimated to be short-term as it is driven by strong growth and associated capacity challenges in malt beverages segment.

Further increases in operating margin (1.7% Y/Y) are expected due to price increases (3% Q/Q) and efficiency gains, outweighing gross margin challenges.

Capital structure (no debt), comparatively low operating margins (13.3% vs 35.7% AB InBev) and positioning in key growth markets make Boston Beer Company a potential takeover target.

Please see the disclaimer at the back of this report for important information.

Summary

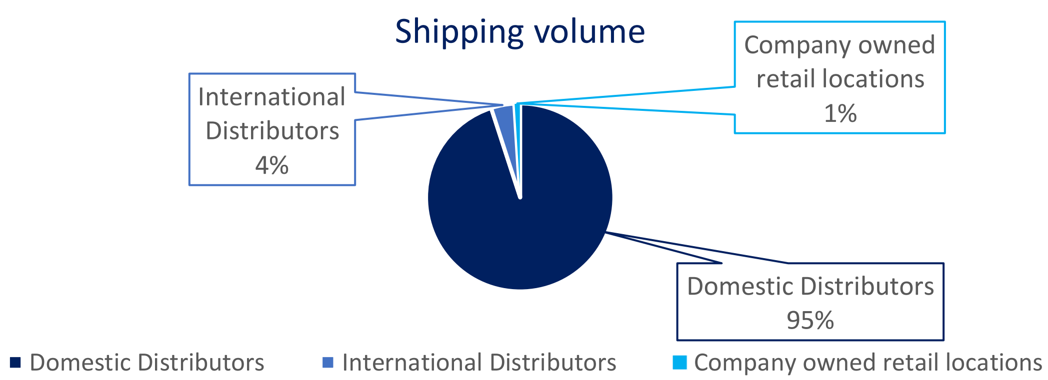
Boston Beer Co., Inc. is one of the largest craft brewers in the U.S. The company produces malt beverages and hard cider products at company-owned breweries and under contract arrangements at other brewery locations. The company's beer products are primarily positioned in the Premium segment within the beer industry, which includes craft beers, domestic specialty beers, and imported beers. The category is categorized primarily by premium price, quality, image and taste. The company is known for its Samuel Adams Boston Lager or Sam Adams Boston Lager beer brands under which it sells about 60 different types of beers. Alongside, the company sells 20 beers of various other brands as well as cider and flavored malt beverages which we estimate to make up around 35% of revenues with the most popular brands being Twisted and Truly. The company is regionally focused on the U.S., where it generates approximately 95% of its revenue. Other markets include Europe, Israel, Australia, New Zealand, the Caribbean, the Pacific Rim, Mexico, and Central and South America through a formidable network of wholesale distributors.

While not having engaged in large scale M&A activity in the last years, in July 2019, Boston Beer completed its by far largest merger to date with Dogfish Head, a Delaware-based craft brewery, increasing Boston Beer's revenues by roughly 6%. A key differentiator to other craft breweries is that Boston Beer has been able to secure widespread national distribution, allowing it to enjoy better operating leverage than smaller craft players, many of which are only able to economically distribute their beer within a certain region.

Boston Beer Company is well positioned to leverage growth in U.S. craft beer market

Geographically, the Boston Beer Company is primarily active on the American market, shipping 95% of its production to domestic distributors, 4% to international distributors and selling 1% at company retail locations.

Exhibit 1. Shipping Volume of Boston Beer Company

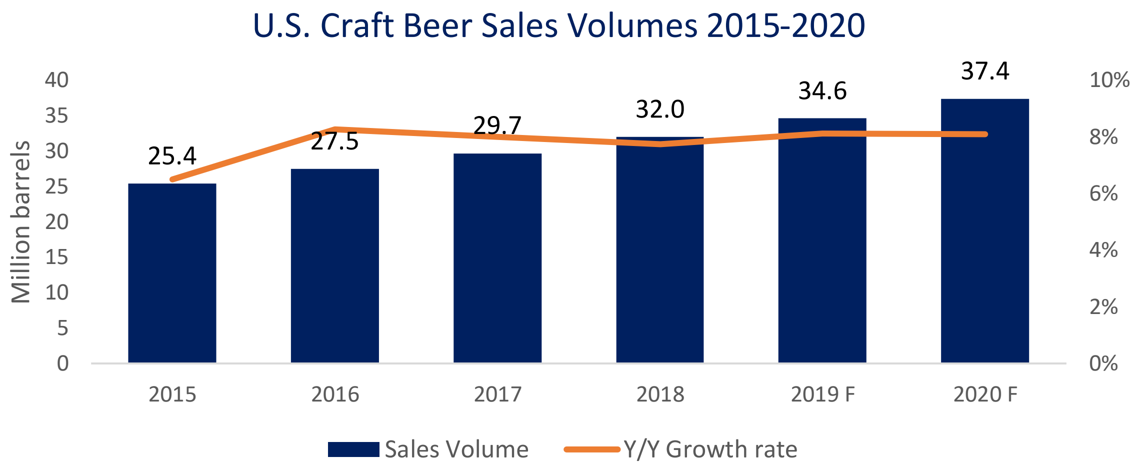


Source: Boston Beer Company 2018 Annual Report

Looking at the U.S. market in particular, we can see that within Boston Beer Company's target market the production volume has been growing consistently at rates of around 8% annually while beer consumption has been stagnant. We forecast this trend to continue over the next 5 years before diminishing towards nominal terminal growth of about 3%. Comparing this to the revenue growth rate of Boston Beer

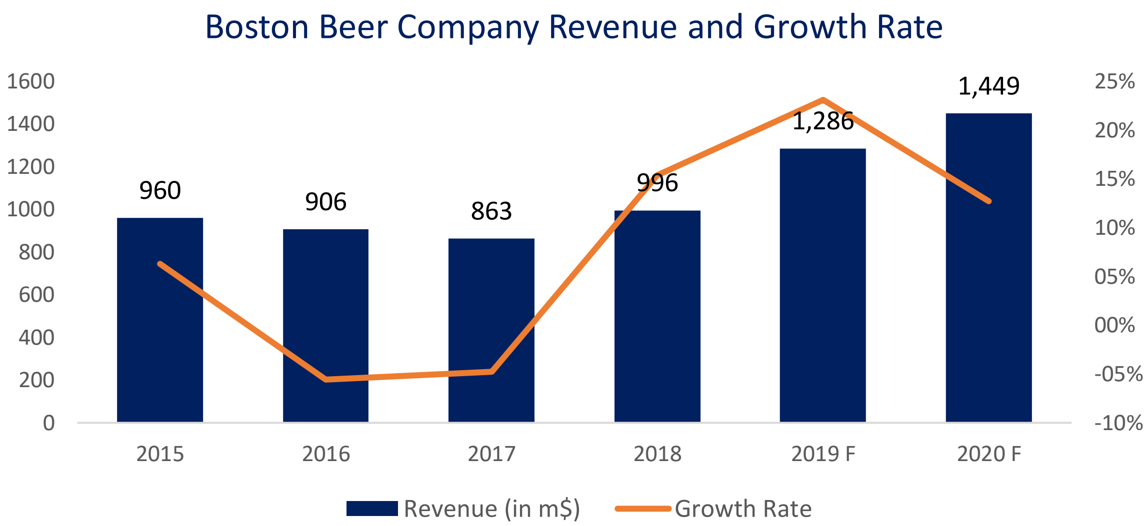
Company, we can see that in the years 2016 and 2017 Boston Beer was not able to transform growth into revenue (see Exhibit 2 and 3). In the last two years however, the company has greatly outperformed the market sales growth with growth rates of 15% and 23% YTD. While the YTD growth is partially driven by the acquisition of Dogfish Head, we estimate this impact to be around 5%. Overall, combining the forecast of continuous market growth in the craft brewery segment with the Boston Beer Company's increased ability to leverage such growth we estimate this to directly impact Boston Beer's EBIT by an additional 0.5% growth in 2020 diminishing linearly to 0 in 2025.

Exhibit 2. U.S. Craft Beer Sales Volumes 2015–2020



Source: Statista (2019)

Exhibit 3. Boston Beer Company Revenue and Growth Rate

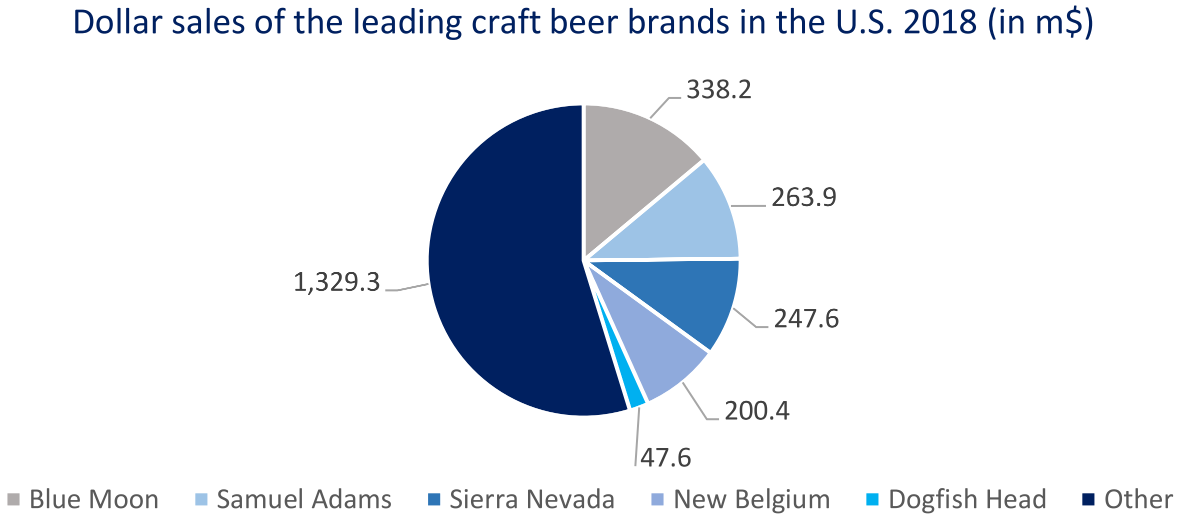


Source: Capital IQ (2019)

Taking a closer look at the market itself, it is heavily fragmented with currently 7346 registered craft breweries. Of those, the largest four brands make up about 43% of the market in revenue (see Exhibit 4). While Samuel Adams was the largest brand by revenue in the years 2012-2015, it has recently given up its top spot to Blue Moon and has consistently lost market share over the last three years. Further, Boston

Beer Company's brand Angry Orchard is the leading brand of hard cider in the U.S. with an estimated market share of above 50% share within the cider category.

Exhibit 4. Sales of the Leading Craft Beer Brands in the U.S 2018

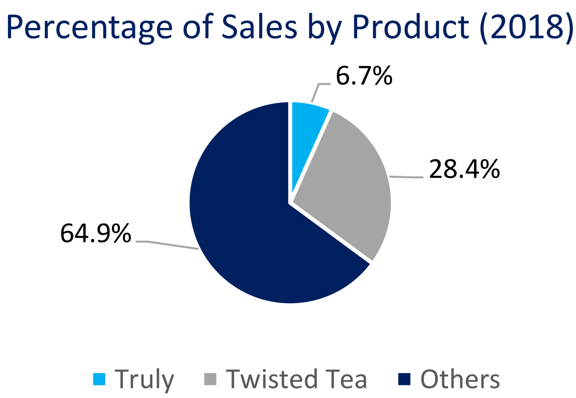


Source: Statista (2019)

Strong growth in Truly brand will drive company growth in malt beverages segment

Making up about 35% of sales, flavored malt beverages play a significant role in the Boston Beer Company's strategy, in particular due to their comparatively strong growth. With a growth rate of 178% in 2018 and triple digit growth in Q3, Truly is outperforming the market and is the second strongest brand in the segment regarding growth rate. Similarly, Twisted Tea grew by 21.8% in 2018 and is forecasted grew in double digits in Q3. This is quite significantly above the market growth rate of about 11.6%.

Exhibit 5. Boston Beer Company: Percentage of Sales by Product in 2018



Source: Statista, Boston Beer Company Annual Report 2018

In this fast-growing market segment compared to beer, the Boston Beer Company is exceptionally well positioned for future growth with two of the strongest brands in the market. This growth is supported by strong investments in the Truly brand such as the launch of new flavors, a new ad campaign and an NHL partnership.

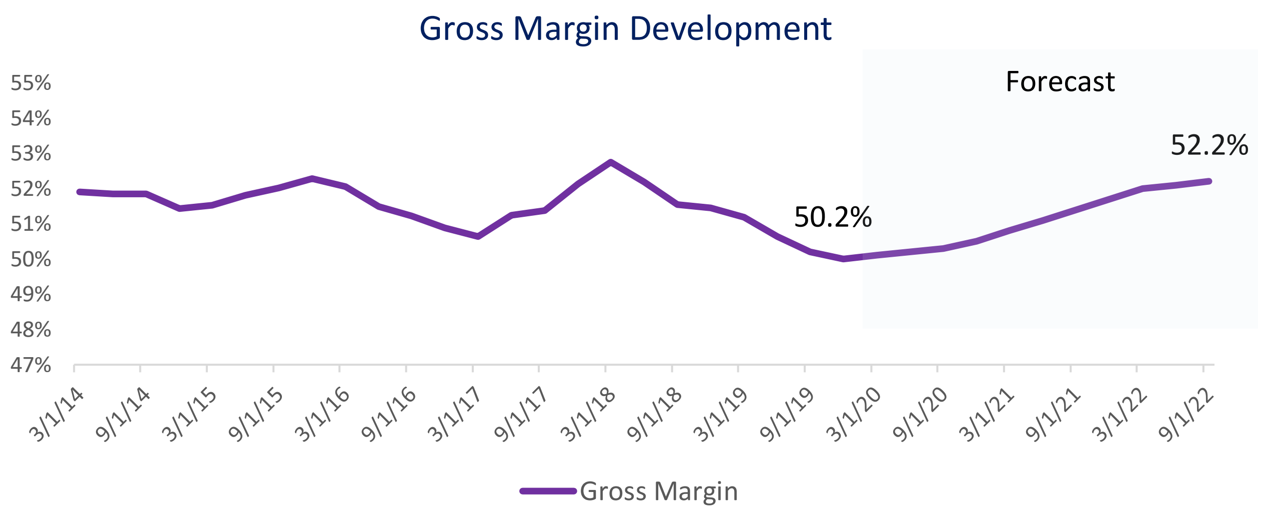
Just recently, the Boston Beer Company declared a multi-year partnership with the National Hockey League (NHL), making its Truly Hard Seltzer the official drink of the NHL. This five-year agreement marks the first national sports league partnership for Boston Beer and Truly Hard Seltzer, which is likely to begin soon after the start of the 2019-20 NHL regular season. Through this deal, Truly Hard Seltzer will receive exposure to NHL fans during the NHL regular season. During this period, the Truly Hard Seltzer brand will be showcased on a variety of NHL Media platforms, including NHL.com, NHL Social and NHL Network. We expect this to increase the demand for Truly, leading to additional increase in revenue over the five-year partnership and beyond. While we expect this to decrease margins in the short run due to the cost of the deal, we expect revenue increases to make up for this and account for this increase—together with the other brand value increasing factors—in our valuation by adjusting the forecasted EBIT growth.

Further, the company is launching new formulations for all Truly flavors as well as the Truly Hard Seltzer Lemonade and Watermelon Kiwi in 2020. With the NHL partnership, new flavors and new ad campaign, we expect the company to boost its already good position as a leader in the hard seltzer category while making Truly a core brand. We estimate this to have a significant positive impact on EBIT beyond what our model forecasts based on historical data as past investments in Selzer appear to pay off. We estimate this impact as an additional 0.5% growth in 2019 and 1.6% in 2020, diminishing linearly by 0.4% annually.

Decrease in gross margin is estimated to be short-term as driven by strong growth and associated capacity challenges in malt beverages segment

Boston Beer Company experienced a decrease in Gross Margin of 2.5% from Q1 2018 until Q3 2019 (see Exhibit 6). While this decrease in margin may seem quite substantial, it has been driven by an increase in COGS primarily within the flavored malt beverages due to elevated processing costs stemming from increased production at third-party breweries and higher temporary labor requirements at company-owned breweries. Negating this, Boston Beer actually reported pricing increases of 3% in Q3 which was primarily driven by an increase in sales of Truly.

Exhibit 6. Boston Beer Company Gross Margin Development

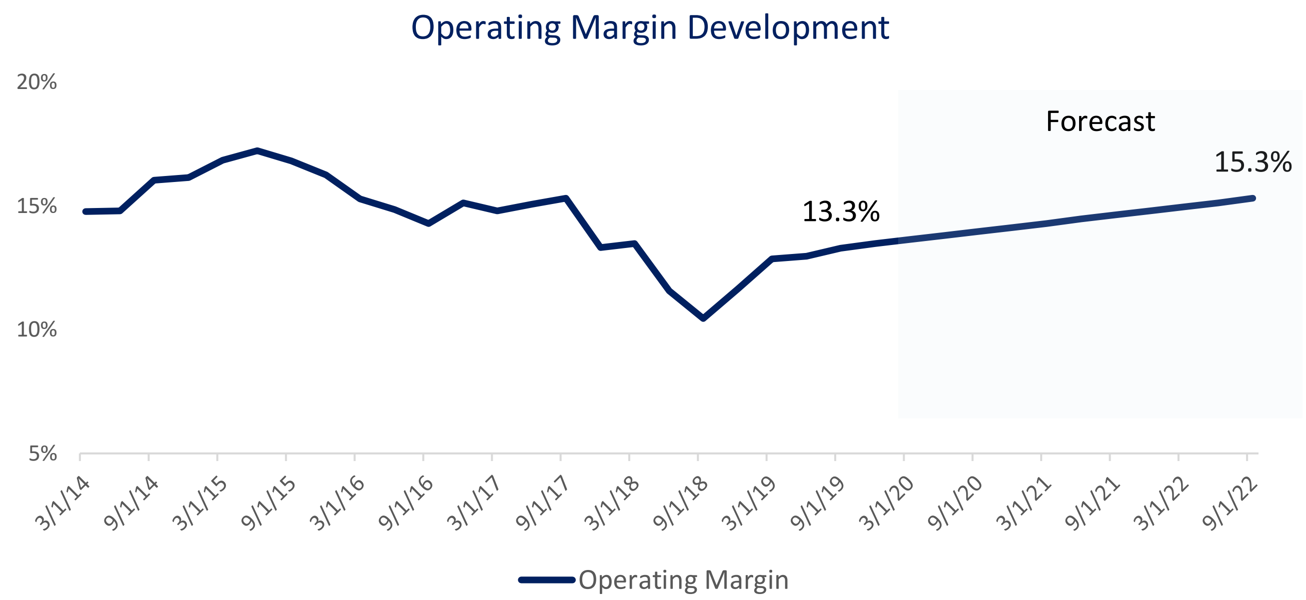


Source: Macrotrends (2019) with added forecast

While this may sound like bad news at first, we believe this to be a rather short-term trend as Boston Beer expands its capacity. This reduction has not hurt the company's operating margins (See Exhibit 7), which have been increasing since Q3 2018 from 10.45% to 13.3%.

Looking at a potential lever for the decrease, advertising, promotional and selling expenses rose nearly 10% to $96.6 million during Q3. Higher spending on media and production, and local marketing as well as the inclusion of Dogfish Head brand-related expenses, beginning July 3, led to the increase. This not only speaks for actual efficiency gains, but may also be the basis for increased growth in the near future.

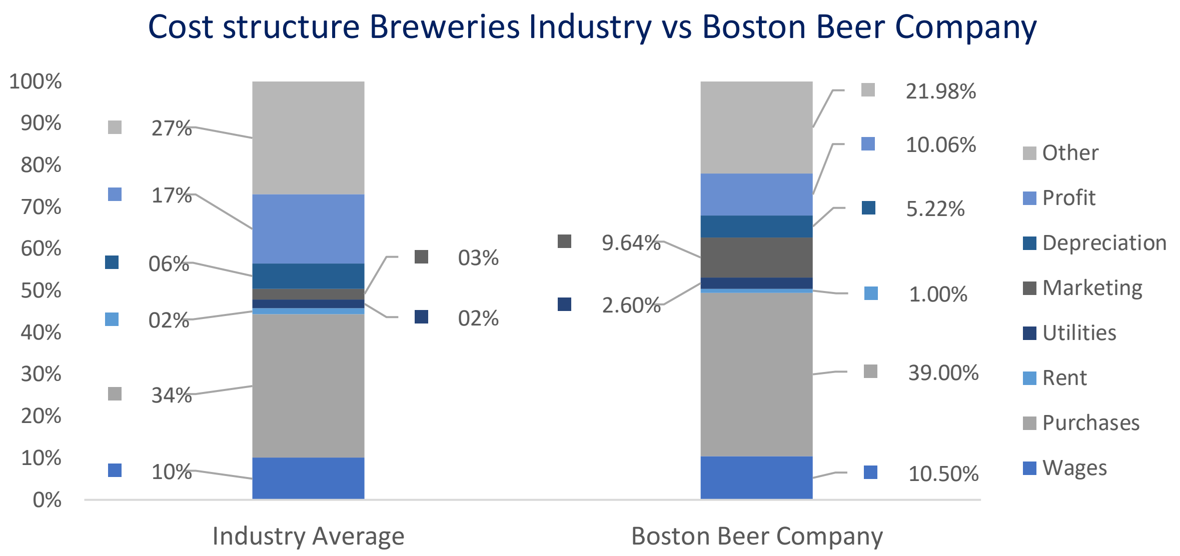
Exhibit 7. Boston Beer Company Operating Margin Development



Source: Macrotrends (2019) with added forecast

Further, looking at the underlying cost structure and comparing it to the industry average there are two main differences. Boston Brewing has significantly higher Marketing and Purchasing costs than the industry average as percentage of revenue. This is driven by particularly high COGS and higher marketing expenditure. This is to some extent explained by the fact that Boston Beer is primarily a craft brewer which has invested heavily in its nationwide distribution.

Exhibit 8. Cost Structure of Breweries Industry



Source: IBIS, Boston Beer Company Q2 Report

Overall, while Boston Beer Company may be perceived to have a cost structure disadvantage compared to its much larger competitors, we identified significant efficiency gains which we forecast to continue and believe that the decrease in gross margin is a short-term trend which will eventually turn around and reach pre-decrease levels. We expect the gross margin impact of 2% over the next 3 years together with the continued improvement of operating efficiency to impact EBIT growth beyond what historical data would predict by 0.4% annually from 2020 to 2024.

Key Risks

High reliance on intangibles
The success of the business relies strongly on intangibles such as reputation or brand image, or protection of intellectual property such as trademarks, patents, domain names or trade secrets. Failing to maintain these could result in significantly negative effects on revenue and profitability.

Brand loyalty in craft beer segment comparatively low
According to Nielsen, the typical craft buyer decides which beer to purchase while at the shelf 70% of the time. In line with this, craft beer companies will need to maintain innovation in their portfolios and be responsive to evolving consumer preferences. If Boston Beer's profitability weakened, its ability to invest in its brands and develop new products would be limited, and the firm could suffer market share losses in the craft beer segment.

Capacity constraints continue to negatively impact margins
Capacity constraints continue to weigh on profitability. Gross margins came in at 49.6% in the quarter, down 160 bps Y/Y.

Projections

The EBIT of Boston Beer Company is forecasted to grow by 53.9% from $ 116.5 million in CY 2018 to $ 179.4 million in CY 2019, and 9.4% from CY 2019 to CY 2020, reaching $196.2 million in CY 2020.

Free cashflows are forecasted to grow by 30.1% in 2019 driven by EBIT growth. Our model predicts free cashflows to grow by an average of 13.1% over the next 6 years, although the growth will slow down considerably after 2019.

These projections were calculated by running multiple linear regression considering the coefficients of *year-on-year quarterly changes in U.S. consumer spending*, *average U.S. summer temperatures and Boston Beer Company's M&A activity* on a time series forecasting model (See Appendix 1a for calculations and Appendix 1b for regression output).

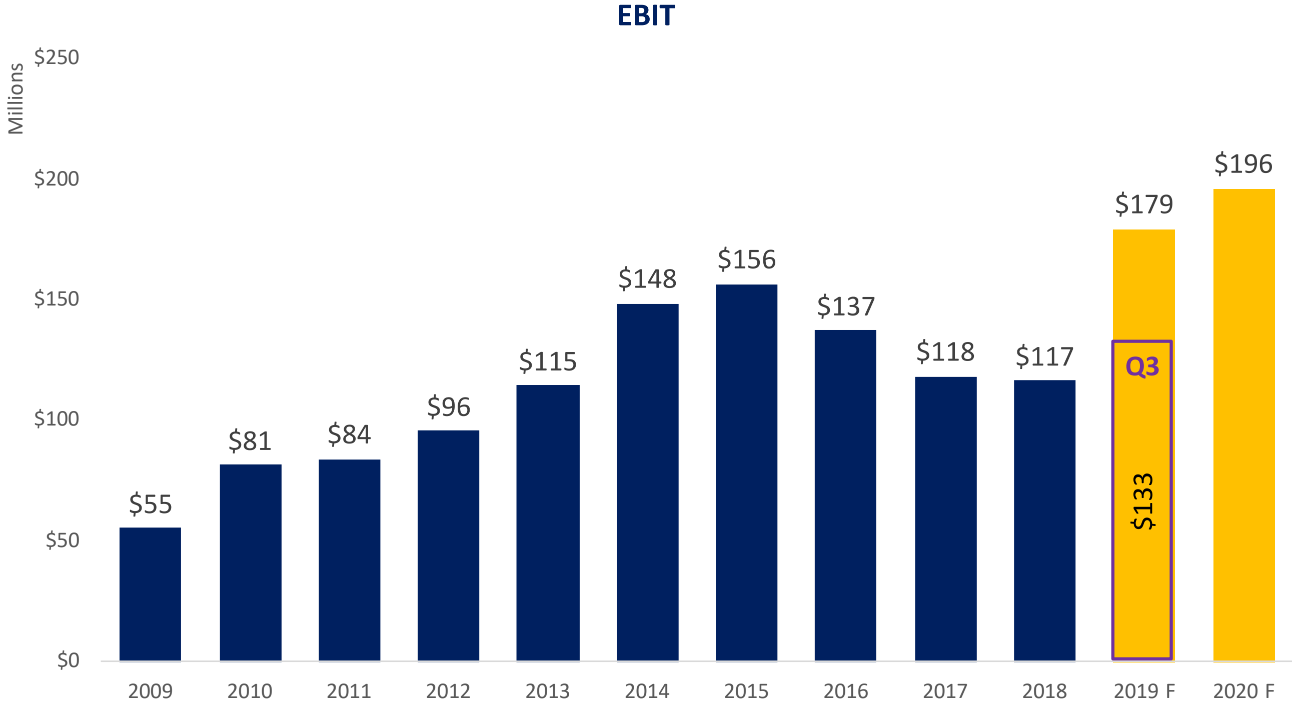
The model uses data from the 43 most recently reported financial quarters. For each forecasted quarter, the model uses each of the coefficients of the regression output and multiplies the coefficients of each variable by the value of each respective variable. The resulting values—including the intercept—are then summed to arrive at the forecast.

EBIT forecast

Beer consumption in the key markets is expected to decrease slightly, while increased consumer discretionary spending is driving consumer demand towards higher-priced craft beers. Boston Beer Company is strongly positioned in the U.S. craft beer market and has just completed a $300 million acquisition of Dogfish Head Brewery. This is reflected in nominal growth of 53.9% Y/Y 2018 to 2019 predicted by our model (see Exhibit 9) which accounts for this acquisition with a dummy variable adding approximately $16.3 million in EBIT.

Boston Beer's performance is also reflected by the fact that the company's EBIT from 2019 Q1 to 2019 Q3 is $133 million—higher than it was during either of the FY 2018 and FY 2017 (see Exhibit 9).

Exhibit 9. EBIT Forecast



Source: Data from Capital IQ (2019) with added forecast

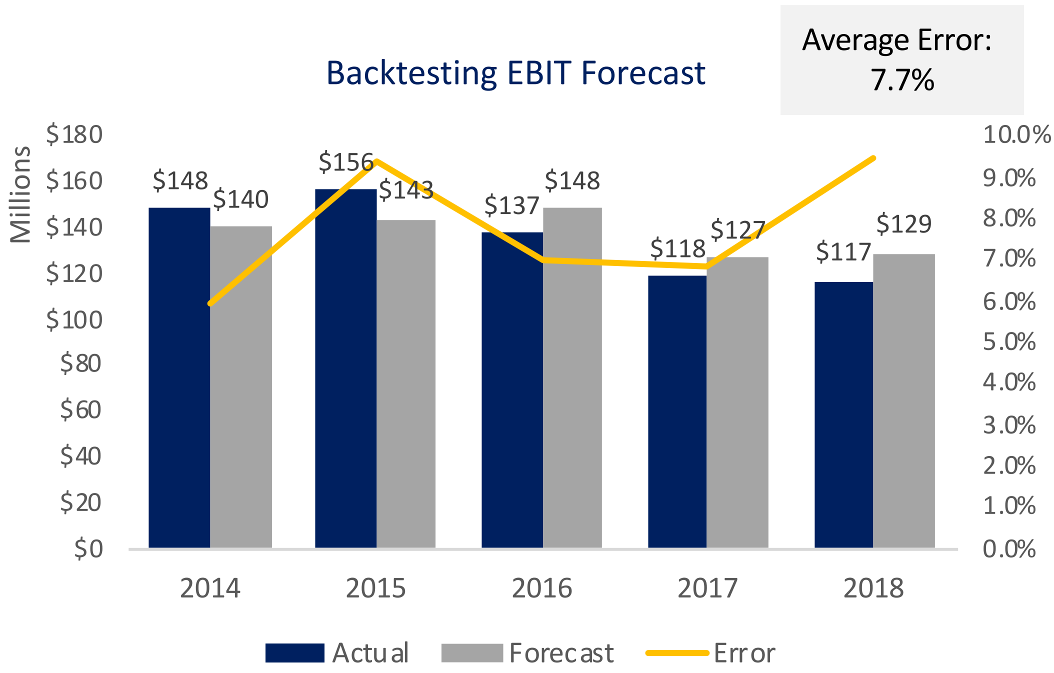
Backtesting the Model

Backtesting the time series model on EBIT forecast shows a strong fit with an average differential/error of 7.7% across 2014, 2015, 2016, 2017 and 2018 (See Exhibit 10).

In this backtesting, we applied the U.S. consumer spending growth figures from the U.S. Bureau of Economic Analysis and calculated the quarterly year-on-year changes, added the M&A activity dummy variables and average U.S. summer month temperatures, and ran a multiple linear regression on the time series forecasting model, **estimating what the model would have predicted for each of these years using data from the preceding 10 years and comparing it to the actual reported EBIT.**

For each forecasted quarter—as in the previously described EBIT forecast—the model uses each of the coefficients of the regression output and multiplies the coefficients of each variable by the value of each respective variable. The resulting values—including the intercept—are then summed to arrive at the forecast.

Exhibit 10. Back Testing the EBIT Forecast



Source: Data from Capital IQ (2019)

Our Adjustments

For our analysis, we considered three major adjustments to accurately reflect the value of the company for factors which are not included in the DCF which is based on historical data (see Exhibit 11). These factors, as discussed earlier in the report are: Considerable investment and strong growth of the Truly brand; the ability to leverage craft beer segment growth; and expected increases in operating and profit margin.

Exhibit 11. Growth rate adjustments for EBIT forecast per year

Growth Rate Adjustment for EBIT Forecast	2019	2020	2021	2022	2023	2024
Considerable investment and strong growth of Truly brand	0.5%	1.6%	1.2%	0.8%	0.4%	0%
Ability to leverage Craft Beer segment growth	0%	0.5%	0.4%	0.3%	0.2%	0.1%
Increases in operating and Gross Margin	0%	0.4%	0.4%	0.4%	0.4%	0.4%
Total Adjustment	**0.5%**	**2.5%**	**2%**	**1.5%**	**1%**	**0.5%**

DCF Company Valuation

The equity value of the company is valued at $5.2 billion—in contrast to the current sum of market capitalization of $4.41 billion—**based on a discounted cash flow (DCF)** model that calculates the present value of future cash flows for the next 6 years based on our model and the consecutive years based on terminal growth.

For the cash flows from year 1 to 6, the model bases its prediction on the most recently reported EBIT, Depreciation and Amortization, Capital Expenditure and Changes in NWC. Based on these numbers and the forecasts generated by the multiple linear regression on a time series forecasting model the expected growth rate is calculated.

These forecasts estimate a growth rate of 9.4% in 2020 which we believe will diminish linearly towards the terminal growth rate. These are then adjusted for as discussed in the previous adjustment paragraph. Depreciation and Amortization as well as Capital expenditure are expected to remain relatively constant. Changes in net working capital are predicted to move towards 0.

Exhibit 12. DCF: Boston Beer Company, Inc.

(Million USD) DCF: Boston Beer Company	Fiscal	2017	2018	2019E	2020E	2021E	2022E	2023E	2024E
EBIT		118.1	116.5	179.4	196.2	211.7	225.3	236.3	244.3
% growth			*-1.3%*	*53.9%*	*9.4%*	*7.9%*	*6.4%*	*4.9%*	*3.4%*
EBIT Post-Adjustment				179.9	200.7	215.6	228.4	238.5	245.5
Adjustment ($)				*0.58*	*4.48*	*3.92*	*3.18*	*2.25*	*1.18*
% growth				*54.4%*	*11.5%*	*7.4%*	*5.9%*	*4.4%*	*2.9%*
Taxes @	24%	28.5	28.1	43.4	48.4	52.0	55.1	57.5	59.2
Tax-affected EBIT		89.7	88.4	136.6	152.3	163.7	173.4	181.1	186.3
% growth			*-1.3%*	*54.4%*	*11.5%*	*7.4%*	*5.9%*	*4.4%*	*2.9%*
+ Depreciation and amortisation		51.3	52.0	98.4	103.3	108.5	113.9	119.6	125.6
- Capital expenditure		33.0	55.5	105.0	110.3	115.8	121.6	127.6	134.0
- Change in net working capital		-0.4	1.7	21.7	17.3	13.9	11.1	8.9	7.1
Free Cash Flow to Firm		**108.3**	**83.3**	**108.3**	**128.0**	**142.5**	**154.6**	**164.1**	**170.8**
% growth			*-23.1%*	*30.1%*	*18.2%*	*11.3%*	*8.5%*	*6.2%*	*4.1%*

Source: Data from Capital IQ (2019)

WACC and capital expenditures. In order to appropriately value the company, the weighted average cost of capital was used as the discount rate in the DCF valuation (see Exhibit 13). To arrive at the WACC, we used the 0.61 beta reported by both Capital IQ and Yahoo Finance.

Additionally, the return on 10-year U.S. treasury bonds is used as the risk-free rate. As market risk premium, we used the market risk premium provided by valuation expert Professor Damodaran of NYU's Stern School of Business. Finally, the company currently has no debt and has had little debt over the last 10 years.

Exhibit 13. Weighted Average Cost of Capital Calculation

WACC Calculation	
Cost of Equity	**5.46%**
Beta	0.61
Market Risk Premium	5.96%
Risk-Free Rate	1.83%
After-Tax Cost of Debt	**0.00%**
Cost of Debt	0.00%
Effective Tax Rate	24.10%
Target Capital Structure	
Debt / Value	0.00%
Equity / Value	100.00%
WACC	**5.46%**

Source: Data from Capital IQ and Yahoo Finance (2019)

Based on the resulting WACC of 5.46%, the DCF model arrives at a share price of $432.26 which is about 18% above the current market price of $366.38 (see Exhibit 14). We assume a terminal growth rate of 2.4% (U.S. GDP growth + inflation with downward adjustment to account for new entrants and potential economic downturn).

The valuation model works in the following way (see Exhibit 14): after calculating the net present values of stream and the net present values of terminal values, the model calculates total market value by share for each WACC and terminal growth rate = (NPV of Stream + NPV of Terminal Value – Net Debt) / Shares Outstanding.

Performing a sensitivity analysis on WACC and the terminal growth rate, the two most significant factors impacted in our DCF analysis, we expect the true value of the share price to lie between $389.30 and $473.16 (see Exhibit 14).

Exhibit 14. Net Present Value of Cash Flows plus Sensitivity Analysis (in million $)

		NPV of Cash Flows (2019–2024)				
WACC		**5.3%**	**5.4%**	**5.46%**	**5.6%**	**5.7%**
NPV of Stream		756	754	753	751	749
	Growth					
	1.90%	$4,119.29	$3,977.77	$ 3,890.63	$ 3,717.99	$ 3,598.50
	2.10%	$4,433.25	$4,273.53	$ 4,175.45	$ 3,981.77	$ 3,848.21
NPV of Terminal Value	2.30%	$4,789.08	$4,607.44	$ 4,496.27	$ 4,277.53	$ 4,127.29
	2.50%	$5,195.75	$4,987.42	$ 4,860.38	$ 4,611.44	$ 4,441.26
	2.70%	$5,664.97	$5,423.68	$ 5,277.16	$ 4,991.42	$ 4,797.08
Less Net Debt (current)		$ 46.53	$ 46.53	$ 46.53	$ 46.53	$ 46.53

	Total Market Value per Share				
Growth					
1.90%	$401.19	$389.28	$381.95	$367.39	$357.31
2.10%	$427.28	$413.85	$405.61	$389.30	$378.05
2.30%	$456.84	$441.59	$432.26	$413.87	$401.24
2.50%	$490.62	$473.16	$462.51	$441.62	$427.32
2.70%	$529.61	$509.40	$497.14	$473.18	$456.89

Shares outstanding (current)	12.04
12-month Price Target	**$432.26**

Source: Data from Capital IQ and Yahoo Finance (2019)

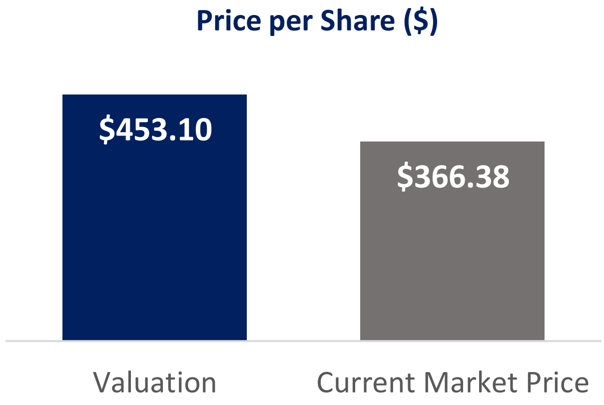
M&A Adjustment

Further, due to its debtless capital structure, comparatively low margins and its exposure to some of the key growth markets the major industry players have been investing in, we perceive Boston Beer Company to be a potential takeover target for larger companies in the market, such as AB InBev, who are looking to benefit from the consumer preference shift towards higher-priced craft beers and flavored malt beverages. Our final valuation will account for this by adding 4.8% to the DCF valuation based on the average M&A premiums to four-week stock price in the United States (24.1%) reported by Statista in 2018 and our estimated probability of acquisition in the near future of 20%.

Investment Outlook

Building upon the results of the DCF model and acquisition probability, we arrive at a buy recommendation based on a valuation per share of $453.10 compared to the current market price of $366.38 (23.7% above the current market price).

We expect this difference to be driven by three main factors: Strong positioning in key growth markets, secondly, considerable investment and triple digit growth in Truly brand and thirdly, increases in operating efficiency while increasing advertisement spend.



Appendix 1a: Time Series Forecasting Model

t	Shmaltz	Dogfish	Q1	Summer Q2	Summer Q3	Delta Consumer Expenditure	Consumer Expenditure	Temp	Year	Q	Quarter	EBIT	Forecast
1	0	0	1.00	0	0	-554.20	$31,379	36.90	2009	Q1	1	$3,345,000	
2	0	0	0.00	60.37	0	-733.10	$31,252	60.37		Q2	2	$21,412,000	
3	0	0	0.00	0	70.3	-277.90	$31,468	70.30		Q3	3	$17,180,000	
4	0	0	0.00	0	0	-29.20	$31,421	41.99		Q4	4	$13,383,000	
5	0	0	1.00	0	0	197.20	$31,576	35.35	2010	Q1	1	$10,304,000	
6	0	0	0.00	61.2	0	575.40	$31,827	61.20		Q2	2	$26,634,000	
7	0	0	0.00	0	71.75	582.40	$32,050	71.75		Q3	3	$25,364,000	
8	0	0	0.00	0	0	841.10	$32,262	43.64		Q4	4	$19,176,000	
9	0	0	1.00	0	0	822.90	$32,399	35.27	2011	Q1	1	$6,589,000	
10	0	0	0.00	60.3033333	0	643.50	$32,471	60.30		Q2	2	$24,423,000	
11	0	0	0.00	0	72.41	-51.90	$31,998	72.41		Q3	3	$26,413,000	
12	0	0	0.00	0	0	395.70	$32,658	44.75		Q4	4	$26,396,000	
13	0	0	1.00	0	0	820.70	$33,220	41.35	2012	Q1	1	$11,841,000	
14	0	0	0.00	62.89	0	497.80	$32,969	62.89		Q2	2	$23,445,000	
15	0	0	0.00	0	72.2933333	1024.50	$33,023	72.29		Q3	3	$33,310,000	
16	0	0	0.00	0	0	512.80	$33,171	44.61		Q4	4	$27,137,000	
17	0	0	1.00	0	0	122.70	$33,343	35.98	2013	Q1	1	$9,686,000	
18	0	0	0.00	60.3066667	0	397.90	$33,367	60.31		Q2	2	$32,048,000	
19	1	0	0.00	0	71.3866667	479.70	$33,502	71.39		Q3	3	$43,539,000	
20	1	0	0.00	0	0	620.50	$33,791	42.04		Q4	4	$29,387,000	
21	1	0	1.00	0	0	581.50	$33,924	34.40	2014	Q1	1	$13,391,000	
22	1	0	0.00	60.8466667	0	928.90	$34,296	60.85		Q2	2	$40,493,000	
23	1	0	0.00	0	70.58	1162.20	$34,665	70.58		Q3	3	$62,224,000	
24	1	0	0.00	0	0	1293.90	$35,085	44.33		Q4	4	$32,235,000	
25	1	0	1.00	0	0	1452.20	$35,376	37.15	2015	Q1	1	$22,138,000	
26	1	0	0.00	61.8166667	0	1362.50	$35,658	61.82		Q2	2	$46,819,000	
27	1	0	0.00	0	71.8033333	1265.20	$35,930	71.80		Q3	3	$61,098,000	
28	1	0	0.00	0	0	1005.80	$36,091	46.83		Q4	4	$26,376,000	
29	1	0	1.00	0	0	996.30	$36,373	39.73	2016	Q1	1	$11,237,000	
30	1	0	0.00	61.76	0	975.80	$36,634	61.76		Q2	2	$41,825,000	
31	1	0	0.00	0	71.9566667	937.50	$36,867	71.96		Q3	3	$50,309,000	
32	1	0	0.00	0	0	1005.20	$37,096	46.21		Q4	4	$34,053,000	
33	1	0	1.00	0	0	644.10	$37,017	40.30	2017	Q1	1	$4,028,000	
34	1	0	0.00	61.5766667	0	904.80	$37,539	61.58		Q2	2	$46,793,000	
35	1	0	0.00	0	71.3266667	891.60	$37,759	71.33		Q3	3	$51,496,000	
36	1	0	0.00	0	0	1093.20	$38,189	45.00		Q4	4	$15,809,000	
37	1	0	1.00	0	0	1032.00	$38,049	36.80	2018	Q1	1	$9,238,000	
38	1	0	0.00	62.0266667	0	1189.00	$38,728	62.03		Q2	2	$31,581,000	
39	1	0	0.00	0	72.1633333	1300.60	$39,059	72.16		Q3	3	$46,728,000	
40	1	0	0.00	0	0	1009.90	$39,199	43.08		Q4	4	$28,986,000	
41	1	0	1.00	0	0	1261.30	$39,310	34.88	2019	Q1	1	$29,443,000	
42	1	0	0.00	60.35	0	1022.50	$39,750	60.35		Q2	2	$39,675,000	
43	1	1	0.00	0	72.26	971.50	$40,031	72.26		Q3	3	$63,436,000	
44	1	1	0.00	0	0	1008.87	$40,208	44.33		Q4	4		$46,805,908
45	1	1	1.00	0	0	1075.62	$40,386	37.40	2020	Q1	1		$35,150,670
46	1	1	0.00	61.19208875	0	814.06	$40,564	61.19		Q2	2		$55,084,367
47	1	1	0.00	0	71.61527056	712.59	$40,743	71.62		Q3	3		$61,352,733
48	1	1	0.00	0	0	715.74	$40,924	44.34		Q4	4		$44,618,110

Source: Data from Capital IQ

Appendix 1b: Regression Output of The EBIT Forecast

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.90784877
R Square	0.824189388
Adjusted R Square	0.79488762
Standard Error	7169131.394
Observations	43

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	6	8.67396E+15	1.44566E+15	28.12763283	3.39911E-12
Residual	36	1.85027E+15	5.13964E+13		
Total	42	1.05242E+16			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	14446151	2845097.061	5.077559988	1.18512E-05	8676026.717	20216275.28	8676026.717	20216275.28
Shmaltz	8494016.648	3074800.67	2.762460907	0.008977948	2258031.854	14730001.44	2258031.854	14730001.44
Dogfish	16336022.99	7579543.594	2.155277925	0.037902223	963996.0986	31708049.88	963996.0986	31708049.88
Q1	-12153444.55	3140266.802	-3.870194895	0.000439545	-18522200.81	-5784688.284	-18522200.81	-5784688.284
Summer Q2	159047.1144	51204.76101	3.106100122	0.003686297	55199.04581	262895.1831	55199.04581	262895.1831
Summer Q3	234002.2442	44803.58657	5.222846252	7.59214E-06	143136.359	324868.1293	143136.359	324868.1293
Delta Consumer Expenditure	7463.517444	3035.601411	2.458661871	0.018887202	1307.032433	13620.00245	1307.032433	13620.00245

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