



The Boston Beer Company Investment Thesis



Recommendation: SELL

We rate Boston Beer stock a sell. Whilst the company has achieved impressive growth over the last 12 months, the market has overly priced the potential for future growth.

• Revenue CAGR 2020-2024: 26%

Revenue is set to rise substantially for Boston Beer over the next two years as they release innovative products and utilise the growing hard seltzer market. We then expect growth to slow down and decline as competition intensifies.

• Expensive P/E Relative to Peers

Boston Beer is trading at a P/E multiple of 69.04x which is much higher than its competitors. Its P/E multiple has more than doubled over the last few months as the market prices in future growth too optimistically.

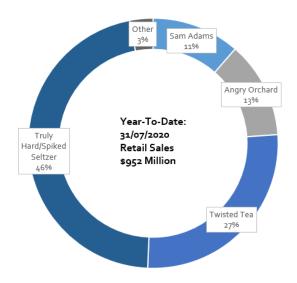
• Failure to Keep Up With Competition

The size and financial power of the largest competitors such as AB InBev, Molson Coors, Heineken and Constellation Brands makes it difficult for Boston Beer to keep up. These companies acquire smaller craft brewers and the increased leverage that the combined operations have in the distribution and sales and marketing expenses result in Boston Beers cost rising and makes it difficult to maintain market share.

Company Overview

Exhibit 1: Boston Beer's Product Sales Mix





| Exhibit 2: Boston Beer's Brand Portfolio | | | | | | | |
|--|----------|--|--|--|--|--|--|
| Brand | Category | | | | | | |
| Sam Adams | Beer | | | | | | |
| Angry Orchard | Cider | | | | | | |
| Twisted Tea | RTD | | | | | | |
| Truly Hard/Spiked Seltzer | RTD | | | | | | |

Boston Beer has developed a "Beyond Beer" strategy, developing products in high growth areas due to a decline in the core portfolio products.

Boston Beer's portfolio comprises of its Samuel Adams beer which they brew in over 60 styles including the flagship Boston Lager and seasonal brews. The Twisted Tea Brewing Company is the segment that specialises in hard iced tea. The Angry Orchard Cider Company enables Boston Beer to compete in the hard cider business where they produce seasonal and speciality ciders. Truly Spiked & Sparkling concentrates on sparkling water and the firm has extended the brand and now produces hard seltzers. Other segments of the business include Marathon Brewing, Tura which produces high alcohol Kombucha and Wild Leaf which is premium craft hard tea.

The company's portfolio has changed with more focus on its Truly RTD hard seltzer and they are lining up an entry into the non-alcoholic market reflecting a change in consumer trends. With craft beer falling out of favour, increased competition from new entries in the craft beer and hard cider niches and the mega merger of Anheuser-Bush InBev and SAB Miller capturing 50% of market share

of US beer sales it has been the surging demand from its Truly hard seltzer and Twisted Tea franchises that has enabled the business to offset these losses. Company estimates that the hard seltzer category grew 250% in 2019¹.

¹ (Boston Beer Annual Report 2019)

Innovation

2011: 10.6% Developed and launched three new ciders 2013: 27.4% Launched Samuel Adams Boston Lager and Samuel Adams Seasonal Beers

2015: 6.3% Decline in core shipments of 3%.

2017: -4.8% Shipment decline of 6.2 percent in 2017, driven by shrinking. sales of its Samuel Adams and Angry Orchard brands.

2019: 25.5% Merged with Dogfish Brewery

Boston Beer's Innovation and Sales YoY Growth Timeline

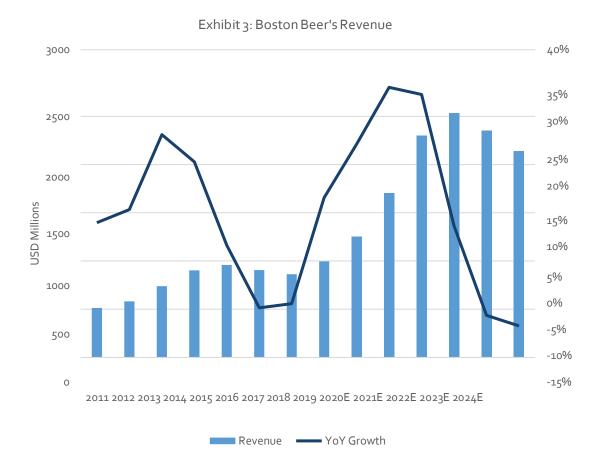
2012: 13.1% Released 11 IPA products, specialty draft beers and completed its national rollout for Twisted Tea and Angry Orchard

2014: 22.2% Slowdown in product launches.

2016: -5.6% Decline in demand for its products and declining craft beer growth rates. 2018: 15.4% Launched 3 new lifestyle brands

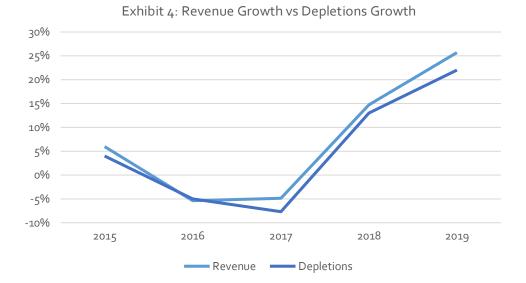
We see that in the year after the company innovates particularly in hard teas, ciders and seltzers there is growth. Hence Capex is indicative of growth such that the company increases capex, experience growth for a few years until new entrants enter the market and their market share falls. We see this particularly in 2015 where momentum of growth slows leading to negative growth for the two consecutive years as a result of losing market share in the beer industry. This innovation cycle is an important consideration when estimating future growth for Boston Beer.

Projections



Source: Bloomberg, self-explanatory

We applied a multi-factor approach to Boston Beer's revenue projections: accuracy of management guidance and Boston Beer's innovation timeline which incorporates competitive forces. Boston Beer's management provides guidance for investors based on depletions growth. Depletions growth is the rate at which products, already shipped from Boston Beer, leaves the distributor's warehouse en route to end users which is a proxy for sales growth.



Source: Boston Beer Annual Reports, Bloomberg, self-elaborate

| Exhibit 5: Management Guidance Depletion Growth | | | | | | | | | |
|---|------|------|-------|--------|--------|--------|---------|--|--|
| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020E | 2021E | | |
| Outlook | 5% | -4% | -7% | 12-15% | 19-22% | 37-42% | 35%-45% | | |
| Actual/Estimated | 4% | -5% | -7.7% | 13.0% | 22% | 36.4% | 35% | | |

Source: Boston Beer Annual Reports, self-elaborate

As shown above management have been very accurate in their guidance on depletion growth and this has been a strong indicator for demand and for revenue. Hence, our 2020 and 2021 projections are based off managements outlook for the future giving us growth rates of 36.4% for 2020 and 35% for 2021.

Current Performance and Covid impact

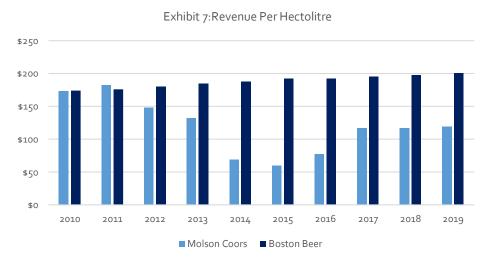
| Exhibit 6: Boston Beer's 2020 Revenue | | | | | | | | | |
|---------------------------------------|-----|------|--|--|--|--|--|--|--|
| Quarterly Revenue QoQ Growth % | | | | | | | | | |
| Q1 | 331 | 10% | | | | | | | |
| Q ₂ | 452 | 37% | | | | | | | |
| Ο3 | 493 | 9% | | | | | | | |
| Q4E | 429 | -13% | | | | | | | |

Source: Bloomberg, self-explanatory

The Samuel Adams, Angry Orchard and Dogfish Head brands have been most negatively impacted by COVID-19 and the related on-premise closures. Beer sales were most adversely impacted by the pandemic. Boston Beer recorded a \$3.4 million reduction in net revenue for estimated keg returns from distributors and retailers. Volume of their on-premise is down by 50% over 2020 year-to-date. This has been offset by the strong growth in their off-premise channels, innovation and the extraordinary growth of Truly, their hard seltzer brand. Boston Beer has grown 34.5% comparing Q1-Q3 2019 to Q1-Q3 2020. We believe Boston Beer is on track to achieve a growth rate of 36.4% provided that its experience a QoQ decline of 13% in Q4. Historically Boston Beer achieves QoQ Q4 growth is -18% due to seasonality effects, however, we believe that due to innovation it will be 5% higher than historical average.

Boston Beer's Positioning in a Declining US Craft Beer and Cider Market

The Boston Beer Company brews more than 60 styles of Samuel Adams beer, focusing on the premium end.



Source: Bloomberg, self-explanatory

This strategy where products are intended for the "High End category" are determined by higher price, quality, image, and taste as compared with regular domestic beers. Comparing its revenue per hectolitre to other multinationals in the beer category, it sells at a premium.

| Exhibit 8: US Beer Market Share | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | |
| AB InBev NV | 47.5% | 47.1% | 46.2% | 45.2% | 44.5% | 43.7% | 43.1% | 42.9% | 42.2% | |
| Molson Coors Brewing Co | 29.8% | 29.1% | 28.6% | 27.8% | 26.9% | 26.4% | 26.2% | 25.6% | 25.2% | |
| Heineken | 4.0% | 4.1% | 4.1% | 4.2% | 4.3% | 4.3% | 4.4% | 4.3% | 4.3% | |
| Blue Ribbon | 2.9% | 2.9% | 2.9% | 2.8% | 2.8% | 2.7% | 2.7% | 2.7% | 2.6% | |
| Boston Beer | 1.0% | 1.1% | 1.2% | 1.2% | 1.3% | 1.1% | 1.0% | 0.9% | 0.9% | |
| Constellation Brands | 5.1% | 5.4% | 5.8% | 6.3% | 7.0% | 7.8% | 8.3% | 8.8% | 9.6% | |
| Diageo | 0.6% | 0.6% | 0.6% | 0.6% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | |
| Yuengling Brewery | 1.0% | 1.1% | 1.1% | 1.2% | 1.1% | 1.2% | 1.1% | 1.1% | 1.1% | |
| Other | 8.0% | 8.7% | 9.6% | 10.7% | 11.6% | 12.2% | 12.7% | 13.2% | 13.7% | |

Source: Euromonitor

The number of breweries in the US has increased from approximately 1,500 in 2009 to over 8,000 in 2019. Most of these new breweries are craft breweries. The rise of craft breweries along with the growth of imported beers has resulted in a significant decline in the volume of the two largest breweries who now comprise of approximately 70% of all US beer production as evident in Exhibit 8. The rise of these breweries intensified competition in the US beer market and as a result challenged Boston Beer's ability to capture adequate market share. In 2016 and 2017, Boston Beer experienced a decline in the demand for its products, as craft beer growth rates slowed, and the hard cider category declined resulting in sales YoY growth of -5.6% and -4.8% respectively. Although Boston Beer reversed its sales decline, they were unable to regain market share due to the larger firms engaging in acquisitions of each other and of small regional breweries. There have been numerous announcements of acquisitions of or investments in craft brewers by larger breweries, private equity and other investors. To combat its declining market share, Boston Beer Company and Dogfish Head Brewery merged in 2019 creating a powerful American owned platform for craft beer and beyond. The new entity holds a balanced portfolio of leading beer and beyond beer brands at high end price points. The deal enabled Boston Beer to benefit from large cost savings and gave Boston Beer a new route to target younger drinkers. We predict the merger to result in revenue synergies thereby regaining market share in US beer market, however, growth is set to decline within this industry. Beer is to record a negative total volume CAGR of 2% to fall to 21.6 billion litres in 2024².

Boston Beer develops hard cider through their Angry Orchard brand family and since 2013, Angry Orchard has been the largest selling cider in the US. accounts for more than 50 percent of the market's dollar share. However, dollar sales for the brand took a step back, declining 10.2 percent for

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₂ (Euromonitor, 2020)

a total of \$220.1 million in sales for the 52 weeks ending Dec. 29, 2019³. Cider is projected to record a negative 4% total volume CAGR falling to 184 million litres in 2024.⁴

Boston Beer's Positioning in a Growing RTD Market

| Exhibit 9: US RTD Market Share | | | | | | | | | | |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| Mike's Hard Beverage | 21.9% | 24.3% | 21.9% | 19.5% | 20.9% | 22.2% | 23.4% | 26.2% | 29.4% | 37.8% |
| Boston Beer | 5.5% | 6.8% | 7.8% | 7.8% | 8.6% | 10.2% | 11.8% | 13.9% | 17.0% | 20.2% |
| Diageo North America | 26.1% | 24.2% | 19.2% | 14.0% | 12.9% | 13.5% | 13.0% | 13.3% | 12.8% | 10.4% |
| Anheuser-Busch InBev | 7.2% | 6.3% | 13.1% | 25.6% | 27.1% | 20.2% | 17.8% | 16.4% | 13.2% | 9.1% |
| North American Breweries | 5.0% | 5.3% | 5.4% | 4.9% | 5.6% | 5.8% | 5.9% | 6.2% | 5.6% | 4.4% |
| Phusion Projects | 8.4% | 7.3% | 6.5% | 5.5% | 5.1% | 5.0% | 5.2% | 5.1% | 4.1% | 3.0% |
| MillerCoors | 7.9% | 6.0% | 5.1% | 3.9% | 3.4% | 2.6% | 1.8% | 2.3% | 1.8% | 1.2% |
| Others | 18.0% | 19.8% | 21.0% | 18.8% | 16.4% | 20.5% | 21.1% | 16.6% | 16.1% | 13.9% |

Source: Euromonitor

The RTD market is a growing area within the alcoholic beverage industry. Due to its convenience and attraction to consumers who are looking for refreshing and flavourful alternatives the RTD market has experienced explosive growth. The category has grown at a rate of 80% from April 2019 to April 2020 according to Nielson ⁵ and this growth was ameliorated by the pandemic through the off-trade and the e-commerce channel as consumers were unable to visit bars and restaurants. The low-alcohol, low sugar and low-calorie options are attractive factors for health-conscious consumers. Boston Beer has currently captured 20.2% of its market share for mainly two brands; Twisted Tea and Truly Hard Seltzer. It is important to look at the change of players' markets share in 2016 following the emergence of the hard seltzer market in the US which enabled Mike's Hard Beverage and Boston Beer to capture significant market share within the industry.

^{3 (}Beverage Industry March 2020)

^{4 (}Euromonitor, 2020)

⁵ (Forbes, 2020)



Source: t4

The hard seltzer has seen substantial growth of 122.2% CAGR since 2016, as a result of increasing consumer demand for the product.

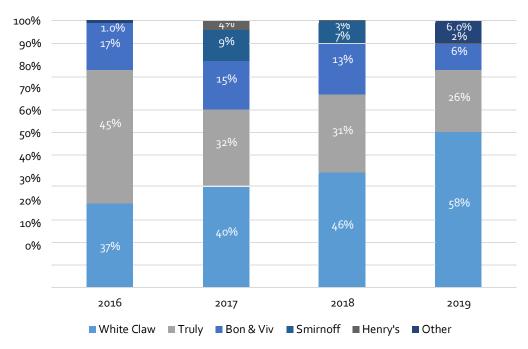


Exhibit 11: US Hard Seltzer Market Share

Source: Euromonitor

Boston Beer gained 45% market share with their Truly hard seltzer brand in 2016 but has since fallen to 26% in 2019 because of White Claw's growing market share and other players entering the hard seltzer market. Boston Beer continues to expand the Truly brand having introduced Truly lemonade this year and plans to introduce varieties over the next year, including iced tea, a version that has higher

alcohol by volume, and other flavours and sizes⁶. The rapid growth of Boston Beer's Truly Hard Seltzer may soon be tamed for two reasons: its battle for market share with White Claw and competition from large brewers. Firstly, analysing its ability to regain some of its lost market share from White Claw.

| Exhibit 12: Monster vs Red Bull's US Market Share | | | | | | | | | | | |
|---|---|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| | 2012 2013 2014 2015 2016 2017 2018 2019 | | | | | | | | | | |
| Monster | 41.7% | 44.6% | 43.7% | 52.1% | 53.1% | 53.4% | 52.9% | 49.6% | | | |
| Red Bull | 28.0% | 27.1% | 27.4% | 27.5% | 27.4% | 26.7% | 26.2% | 26.1% | | | |
| Difference | 13.7% | 17.5% | 16.3% | 24.6% | 25.7% | 26.7% | 26.7% | 23.5% | | | |

Source: Euromonitor, self-elaborate

| Exhibit 13: White Claw vs Truly's US Market Share | | | | | | | | | |
|---|------|------|------|------|--|--|--|--|--|
| | 2016 | 2017 | 2018 | 2019 | | | | | |
| White Claw | 37% | 40% | 46% | 58% | | | | | |
| Truly | 45% | 32% | 31% | 26% | | | | | |
| Difference | -8% | 8% | 15% | 32% | | | | | |

Source: Euromonitor, self-elaborate

Looking at the US energy market, it is evident that Monster won the market share battle with Red Bull with the market share difference rising most years. We believe this is a similar story for the case of White Claw and Truly as White Claw will be the clear winner of the market share battle as a result of their social media marketing and branding.

Another concern for Boston Beer's market share is the large multinationals entering the market. Constellation Brands launched Corona Hard Seltzer in early 2020 and has already become number 4 in the US hard seltzer category. AB InBev is planning to launch Michelob Ultra Organic Seltzer in 2021 whilst Molson Cooers has launched Vizzy and Coors Seltzer. Coca-Cola will launch Topo ChicoHard Seltzer in 2021. To bring the hard seltzer to market at an accelerated pace and at scale, Coca Cola has partnered with Molson Coors to make the most of the latter's experience in the hard seltzer and wider alcoholic beverage category⁷. The big players are able to capture market share quickly due to large marketing spends and their ability to create strategic alliances.

⁶ (Duprey, 2020)

^{7 (}Molson Coors and Coca-Cola team up to launch hard seltzer in the US, 2020)

| Exhibit 14: RTD Coffee Market | | | | | | | | | |
|--------------------------------------|-------|-------|-------|-------|-------|--|--|--|--|
| | 2015 | 2016 | 2017 | 2018 | 2019 | | | | |
| North American Coffee Partnership | 72.4% | 74.2% | 70.5% | 66.0% | 62.8% | | | | |
| Monster Beverage | 13.4% | 13.0% | 10.2% | 13.0% | 13.7% | | | | |
| WhiteWave Foods | 7.6% | 6.9% | 6.8% | 7.1% | 7.7% | | | | |
| Coca Cola | 0.5% | 0.2% | 5.4% | 5.2% | 4.9% | | | | |
| Others | 6.1% | 5.7% | 7.1% | 8.7% | 10.9% | | | | |

Source: Euromonitor, self-elaborate

Looking at the RTD Coffee market, Coca Cola used its alliance with Dunkin Donuts in 2017 to enter into this area, allowing the company to capture 5.4% and will continuing to take more market share through its \$5.1 billion acquisition with Costa Coffee. Given that Coca Cola captured c.5% of the market share in the RTD Coffee market one year following their strategic alliance, we estimate that given 3 of the large players coming into the hard seltzer market in 2021 and other smaller players will capture c.15% as a result thereby diluting Boston Beer's market share.

Other Innovation

Management have made it clear that they will continue to invest heavily to increase their capacity as appropriate to meet business needs and also to take advantage of the fast growing Hard Seltzer category where the firm derives most of its growth from. Major innovations for the next year include Truly Iced Tea Hard Seltzer and the firm targets entry into the non-alcoholic beer market with its Samuel Adams Just the Haze beer. They also plan on utilising Dogfish Head part of the business to deliver scratch made canned cocktails and Angry Orchard to produce a Hard Fruit Cider.

Boston Beer's Innovation Cycle Repeating Itself

2020E: 36.4%

Boosted growth as a result of developing their Truly hard seltzer brand. 2022E: 10% Sales growth momentum slows as the bigger players capture c.15% of market share in hard seltzer market. 2024E: -9.0%
Falling sales
attributable to low
growth in cider and
beer accompanied
by falling market
share in hard seltzer
market.

Boston Beer's Projected Innovation and Sales YoY Growth Timeline

2021E: 35%

Rolling out new products such as Truly Iced Tea Hard Seltzer and a nonalcoholic beer. 2023E: -7.0%

Bigger players continuing to steal market share through large marketing spends with White Claw continuing to outpace Truly.

We estimate a similar innovation cycle to 2013 to 2017 where Boston Beer achieved double-digit YoY sales growth through releasing innovative products in a growing US craft beer market, however, fail to keep up with competitive forces resulting in losing market share. Complimented by earnings management guidance, we have estimated double-digit growth for 2020 and 2021 as Boston Beer ramp up their CapEx spend to compete in the hard seltzer. Similar to 2015, in 2022 we estimate 2022 sales growth momentum to slow down to a more sustained growth rate of 10%. As competition intensifies, similar to 2016 and 2017, Boston Beer is estimated to experience single-digit negative growth.

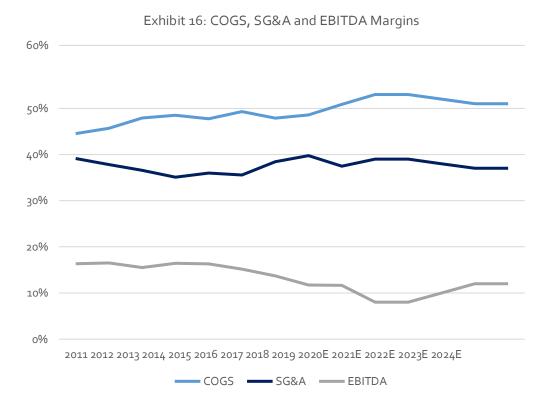
| | Exhib | it 15: Foreca | sting Table | | | |
|--------------------|---------|---------------|-------------|------------------|---------|---------|
| | 2019 | 2020E | 2021E | 2022E | 2023E | 2024E |
| Sam Adams | | | | | | |
| Revenue | 229.97 | 194.28 | 253.08 | 291.04 | 273.02 | 257.02 |
| % of total revenue | 18.4% | 11.4% | 11.0% | 11.5% | 11.6% | 12.0% |
| | | | | | | |
| Angry Orchard | | | | | | |
| Revenue | 218.72 | 213.03 | 264.58 | 265.73 | 229.48 | 182.05 |
| % of total revenue | 17.5% | 12.5% | 11.5% | 10.5% | 9.8% | 8.5% |
| | | | | | | |
| Twisted Tea | | | | | | |
| Revenue | 378.70 | 456.73 | 552.17 | 622.57 | 602.53 | 556.87 |
| % of total revenue | 30.3% | 26.8% | 24.0% | 24.6% | 25.6% | 26.0% |
| | | | | | | |
| Truly Hard | | | | | | |
| Revenue | 366.2 | 789.1 | 1,108.9 | 1,138.8 | 988.5 | 878.1 |
| % of total revenue | 29.3% | 46.3% | 48.2% | 45.0% | 42.0% | 41.0% |
| | | | | | | |
| Other | | | | | | |
| Revenue | 56.24 | 51.13 | 121.94 | 202.46 | 258.90 | 257.02 |
| % revenue | 4.5% | 3.0% | 5.3% | 8.0% | 11.0% | 12.0% |
| | | | | | | |
| Total | | | | | | |
| % growth | 1,249.8 | 1,704.2 | 2,300.7 | 2 , 530.8 | 2,353.6 | 2,141.8 |
| | | 36.4% | 35.0% | 10.0% | -7.0% | -9.0% |

Source: Bloomberg, self-elaborate

Assumptions

- We applied the following assumptions based on our previous analysis:
- We expect Boston Beer's core products in its Sam Adams brand to decline but expect to achieve slight growth for the non-alcoholic beer they are planning on developing.
- We forecast slow growth from Angry Orchard as a result of a declining US cider market, although we expect incremental revenue from their Hard Cider product Boston Beer plan to release.
- We expect growth within the Twisted Tea brand as a result of Boston Beer developing their iced tea seltzer but thereby declining as a result of competitive forces.
- We forecast their Truly Hard Seltzer brand to experience significant growth in 2020 and 2021 and then declining in 2023 as a result of competitive forces.
- We expect their other brands to grow significantly as a result of their Dogfish Head acquisition and new innovations such as canned cocktails.

EBITDA



Source: Bloomberg, self-elaborate

| Exhibit 17 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020E | 2021E | 2022E | 2023E | 2024E |
|-------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| Revenue | 903.0 | 959.9 | 906.4 | 863.0 | 995.6 | 1249.8 | 1704.2 | 2300.7 | 2530.8 | 2353.6 | 2141.8 |
| COGS | 438.0 | 458.3 | 446.8 | 413.1 | 483.4 | 635.7 | 903.2 | 1219.4 | 1316.0 | 1200.3 | 1092.3 |
| COGS Margin | 48.5% | 47.7% | 49.3% | 47.9% | 48.6% | 50.9% | 53.0% | 53.0% | 52.0% | 51.0% | 51.0% |
| SG&A | 316.7 | 345.2 | 322.2 | 331.8 | 395.7 | 468.3 | 664.6 | 897.3 | 961.7 | 870.8 | 792.5 |
| SG&A Margin | 35.1% | 36.0% | 35.6% | 38.4% | 39.7% | 37.5% | 39.0% | 39.0% | 38.0% | 37.0% | 37.0% |
| EBITDA | 148.3 | 156.4 | 137.4 | 118.1 | 116.5 | 145.8 | 136.3 | 184.1 | 253.1 | 282.4 | 257.0 |
| EBITDA | | | | | | | | | | | |
| Margin | 16.4% | 16.3% | 15.2% | 13.7% | 11.7% | 11.7% | 8.0% | 8.0% | 10.0% | 12.0% | 12.0% |

Source: Bloomberg, self-elaborate

COGS

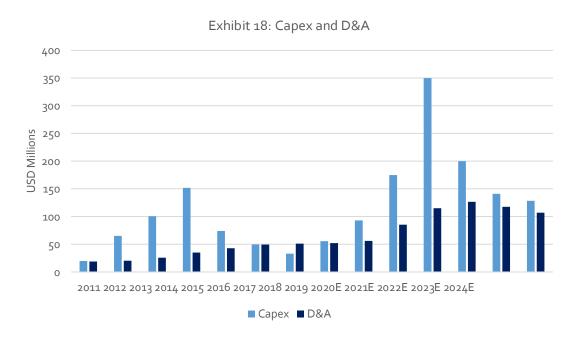
The direct financial impact of COVID-19 has been reflected in their cost of goods sold costing Boston Beer \$7.4 million in 2020 resulting in estimated COGS margins rising from 50.9% in 2019 to 53.0% in 2020. The shift from kegs to cans and bottles due to at home consumption demand raised expenses for Boston Beer as they are produced by 3rd party contract brewers. We estimate these dampened margins to continue into 2021 with margins gradually returning to 2019 levels in 2023.

SG&A

Boston Beer have significantly ramped up their investment in advertising, promotional and selling expenses in 2020 and continuing to do so to gain market share in the hard seltzer market thereby dampening their bottom-line growth. We estimate that this will continue in 2021 as they are investing heavily in projects such as their "Live Truly" advertising campaign for their hard seltzer brand⁸ and then plateauing to historical margin levels.

Financing and Investing Operations

Capex and D&A



Source: Bloomberg, self-elaborate

| Exhibit 19 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020E | 2021E | 2022E | 2023E | 2024E |
|----------------|--------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| Revenue | 903.0 | 959.9 | 906.4 | 863.0 | 995.6 | 1249.8 | 1704.2 | 2300.7 | 2530.8 | 2353.6 | 2141.8 |
| Revenue Growth | 22% | 6% | -6% | -5% | 15% | 26% | 36% | 35% | 10% | -7% | -9% |
| Capex | 151.78 | 74.19 | 49.91 | 32.99 | 55.46 | 93.23 | 175.00 | 350.00 | 200.00 | 141.22 | 128.51 |
| D&A | 35.14 | 42.89 | 49.56 | 51.26 | 51.97 | 56.27 | 85.21 | 115.04 | 126.54 | 117.68 | 107.09 |
| Capex/Revenue | 17% | 8% | 6% | 4% | 6% | 7% | 10% | 15% | 8% | 6% | 6% |
| D&A/Revenue | 4% | 4% | 5% | 6% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |

Source: Bloomberg, self-elaborate

^{8 (}Boston Beer Reports Third Quarter 2020 Results)

Capex is crucial to Boston Beer's growth strategy. Whilst, their Capex as a proportion of their sales is not constant, we forecasted their Capex based on their innovation cycle. We can see when their sales YoY growth rises, they increase their Capex as a proportion of their total sales to try and keep up with competitors. Management has estimated Capex to be between \$160 million and \$190 million for 2020 thereby we assume Capex to be \$175 million. Boston Beer has predicted to ramp up capex to be between \$300 and \$400 million in an attempt to compete against new rivals entering the hard seltzer market. As evident from previous innovation cycles, as sales growth momentum slows down, their capex as a proportion of their total sales falls therefore we estimate capex to be 8% of revenue in 2022, similar to 2015 with capex then falling to 6% of revenue in 2023 and 2024 as revenue growth declines. D&A as a proportion of revenue has been consistent with a historical average of 5% therefore we forecast D&A to be 5% of revenue.

Debt

Boston Beer utilizes a zero long-term debt strategy, using internal financing, along with equity financing to sustain company operations. Hence, the firm has no solvency issues and can easily meet short-term obligations. We thereby estimate that Boston Beer will not take on any debt in the future.

Valuation

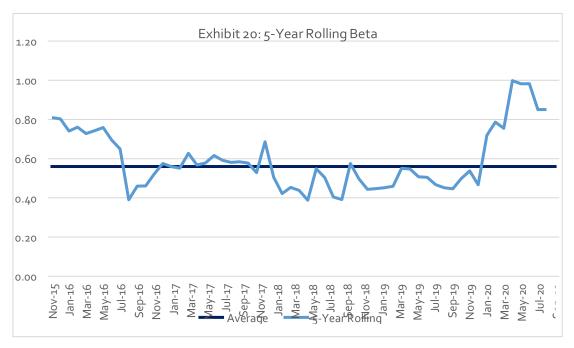
Methodology

For our valuation we constructed a discounted cash flow (DCF) model where we estimated our Free Cash Flow growth over the next 5 years whilst calculating the perpetual growth for the industry.

Assumptions

1. Discount Rate

For Boston Beer's discount rate, we calculated the industry's weighted average cost of capital (WACC). The cost of equity of the industry was determined from the Capital Asset Pricing Model, $r_e = r_r + \beta(r_m - r_f)$. The risk-free rate (r_f) was determined by using a 10 year US Government Note which is currently 0.80%. Boston Beer's beta was determined by regressing its monthly excess returns with monthly Russell 3000 excess returns. We used 10 years of monthly returns to get a 5-year rolling beta. Boston Beer's 5-year beta is currently 0.85 which is due to its stock market performance in 2020 which we believe is not reflective of their beta going forward therefore we used the 5-year median beta of 0.56.



Source: Bloomberg, self-elaborate

| Exhibit 21: CAPM r _e calculation | |
|--|-------|
| В | 0.56 |
| R_{f} | 0.8% |
| Risk Premium (R _{m-} R _f) | 5.6% |
| R _e /WACC | 3.94% |

Since the company is 100% equity-financed, its cost of equity equals its WACC of 3.94%.

2. Perpetual Growth Rate

We assume that the industry will grow at the terminal growth rate of 2.5%. We believe the company will grow in-line with future economic growth rates of 2.5%.

3. Changes in NWC

NWC = Accounts receivable + Inventory – Accounts payable. Exhibit 11 displays the industry's NWC ratios which have been constant over time:

| Exhibit 22: NWC Ratios | | |
|------------------------|----|--|
| Trade Receivables Days | 13 | |
| Trade Payables Days | 32 | |
| Inventory Days | 50 | |

Discounted Cash Flow Model

Exhibit 23: Boston Beer's DCF

| | Entry | 2020 | 2021 | 2022 | 2023 | 2024 | Exit | Sum |
|----------------|-------------|----------|----------|----------------------|----------|----------|------------------------|-----------|
| EBIT | | 51,127 | 69,021 | 126,539 | 164,753 | 149,926 | | |
| Less: Taxes | | 11,964 | 16,151 | 29,610 | 38,552 | 35,083 | | |
| Plus D&A | | 85,211 | 115,035 | 126,539 | 117,681 | 107,090 | | |
| Less: Capex | | 175,000 | 350,000 | 200,000 | 141,217 | 128,508 | | |
| Less: Δ NWC | | 29,380 | 36,835 | 12,960 | -12,013 | -12,872 | | |
| Unlevered FO | F | -80,006 | -218,929 | 10,508 | 114,678 | 106,297 | | |
| (Entry)/Exit | (9,305,063) | | | | | | 7,591,374 | |
| CF | | -80,006 | -218,929 | 10,508 | 114,678 | 106,297 | 7,59 ¹ ,374 | |
| WACC | | (1.039)¹ | (1.039)2 | (1.039) ³ | (1.039)4 | (1.039)5 | (1.039)5 | |
| PV of CF | | -76,976 | -202,665 | 9,359 | 98,272 | 87,641 | 6,259,019 | 6,173,325 |

| ^A Market Value | | ^B Perpetual Growth | 1 |
|---------------------------|-----------|-------------------------------|---------|
| Market Cap | 9,462,193 | CF ₅ (1+g) 1, | 519,146 |
| Plus: Debt | 0 | / (wacc-g) 3. | 9%-2.5% |
| Less: Cash | 157,130 | 7 | 591,371 |
| Enterprise Value | 9,305,063 | | |

| Intrinsic Value | |
|------------------|-----------|
| Enterprise Value | 6,173,325 |
| Plus: Cash | 157,130 |
| Less: Debt | 0 |
| Equity Value | 6,330,455 |

Analysis

\$1,200
\$1,000 952.41

\$800
\$600
\$400
\$200

Current Target

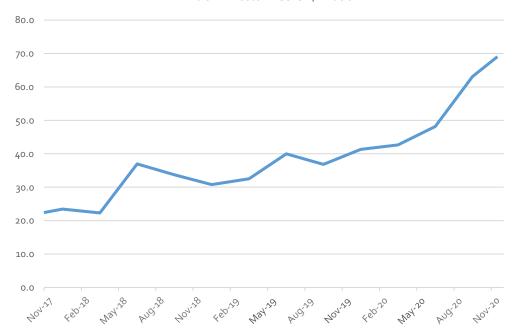
Source: Bloomberg, self-elaborate

| Exhibit 25 | Current | Target | | | |
|--------------------|-----------|-----------|--|--|--|
| Equity Value | 9,462,193 | 6,330,455 | | | |
| Shares Outstanding | 9,935 | 9,935 | | | |
| Share Price | 952.41 | 637.19 | | | |
| Upside Potential | -33.1% | | | | |

Source: Bloomberg, self-elaborate

The market value for Boston is currently \$9.5 billion in comparison to its intrinsic value of \$6.3 billion indicating the company is significantly overvalued by 33.1%.

Exhibit 26: Boston Beer's P/E Ratio



Source: Bloomberg

| Exhibit 27: Price Earnings | | | | | | | | | | |
|----------------------------|-------|--|--|--|--|--|--|--|--|--|
| Boston Beer | 69.04 | | | | | | | | | |
| Constellation Brands | 22.12 | | | | | | | | | |
| AB Inv | 52.24 | | | | | | | | | |
| Brown Forman | 42.3 | | | | | | | | | |
| Molson Coors | 10.31 | | | | | | | | | |
| WVVI | 15.66 | | | | | | | | | |
| Ambev | 21 | | | | | | | | | |

Source: Bloomberg

Looking at Boston Beer's historical P/E ratio, it has risen significantly over 2020 as investors price in future growth. Boston Beer is significantly overvalued in comparison to its peers. Shares of Boston Beer has soared almost 200% in 2020 as a result of its growth prospects in the hard seltzer market.

Recommendation

Overall, we rate Boston Beer a sell. Whilst the company has positive short-term prospects, their previous inability to maintain market share in growing areas they delve into, it is assumed that their current growth will be unsustainable due to competitive forces. Their free cash flow is estimated to be negative for 2020 and 2021 because of the large capital spending required to compete against new entrants into the market. Boston Beer's overinflated current stock price makes it very difficult for an investor to currently invest as future growth has been priced in too ambitiously thereby we recommend a sell on Boston Beer.

Appendix

Exhibit 28: Income Statement

| (In US\$ Millions) | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020E | 2021E | 2022E | 2023E | 2024E |
|-----------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Revenue | 580.2 | 739.1 | 903.0 | 959.9 | 906.4 | 863.0 | 995.6 | 1249.8 | 1704.2 | 2300.7 | 2530.8 | 2353.6 | 2141.8 |
| Revenue Growth | | 27% | 22% | 6% | -6% | -5% | 15% | 26% | 36% | 35% | 10% | -7% | -9% |
| | | | | | | | | | | | | | |
| Cost of Goods Sold | 265.0 | 354.1 | 438.0 | 458.3 | 446.8 | 413.1 | 483.4 | 635.7 | 903.2 | 1219.4 | 1316.0 | 1200.3 | 1092.3 |
| Margin (%) | 46% | 48% | 49% | 48% | 49% | 48% | 49% | 51% | 53% | 53% | 52% | 51% | 51% |
| Operating Expenses | 219.5 | 270.3 | 316.7 | 345.2 | 322.2 | 331.8 | 395.7 | 468.3 | 664.6 | 897.3 | 961.7 | 870.8 | 792.5 |
| Margin (%) | 38% | 37% | 35% | 36% | 36% | 38% | 40% | 37% | 39% | 39% | 38% | 37% | 37% |
| | | | | | | | | | | | | | |
| EBITDA | 95.73 | 114.66 | 148.34 | 156.43 | 137.42 | 118.13 | 116.53 | 145.82 | 136.34 | 184.06 | 253.08 | 282.43 | 257.02 |
| Margin(%) | 16% | 16% | 16% | 16% | 15% | 14% | 12% | 12% | 8% | 8% | 10% | 12% | 12% |
| D&A | 20.2 | 25.9 | 35.1 | 42.9 | 49.6 | 51.3 | 52.0 | 56.3 | 85.2 | 115.0 | 126.5 | 117.7 | 107.1 |
| EBIT | 75.5 | 88.8 | 113.2 | 113.5 | 87.9 | 66.9 | 64.6 | 89.6 | 51.1 | 69.0 | 126.5 | 164.8 | 149.9 |
| Margin(%) | 13% | 12% | 13% | 12% | 10% | 8% | 6% | 7% | 3% | 3% | 5% | 7% | 7% |

Exhibit 29:Balance Sheet

| (In US\$ Millions) | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020E | 2021E | 2022E | 2023E | 2024E |
|------------------------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| Assets | | | | | | | | | | | | | |
| Total Cash & ST Investments | 74.5 | 49.5 | 76.4 | 94.2 | 91.0 | 65.6 | 108.4 | 36.7 | 136.3 | 184.1 | 202.5 | 188.3 | 171.3 |
| Total Receivables | 31.5 | 42.0 | 36.9 | 39.0 | 36.7 | 33.7 | 34.1 | 44.5 | 60.7 | 81.9 | 90.1 | 83.8 | 76.3 |
| Inventory | 44.4 | 56.4 | 51.3 | 56.5 | 52.5 | 50.7 | 70.2 | 87.1 | 123.7 | 167.0 | 180.3 | 164.4 | 149.6 |
| Other Current Assets | 12.0 | 16.4 | 42.9 | 34.0 | 13.7 | 18.3 | 18.9 | 21.5 | 25.0 | 34.1 | 46.0 | 50.6 | 47.1 |
| Total Current Assets | 162.3 | 164.3 | 207.5 | 223.6 | 193.9 | 168.3 | 231.6 | 189.8 | 345.8 | 467.1 | 518.9 | 487.2 | 444.3 |
| | | | | | | | | | | | | | |
| Net Property, Plant & Equipment | 189.9 | 266.6 | 381.6 | 409.9 | 408.4 | 384.3 | 389.8 | 594.8 | 818.0 | 1104.3 | 1214.8 | 1082.7 | 985.2 |
| Other Long Term Assets | 7.2 | 13.2 | 16.1 | 11.9 | 13.6 | 17.0 | 18.5 | 240.6 | 34.1 | 46.0 | 50.6 | 47.1 | 42.8 |
| Total Assets | 359.5 | 444.1 | 605.2 | 645.4 | 615.9 | 569.6 | 639.9 | 1025.2 | 1197.9 | 1617.5 | 1784.3 | 1616.9 | 1472.4 |
| | | | | | | | | | | | | | |
| Liabilities | | | | | | | | | | | | | |
| Accounts Payable | 28.3 | 34.4 | 35.6 | 42.7 | 40.6 | 38.1 | 47.1 | 55.7 | 79.2 | 106.9 | 115.4 | 105.2 | 95.8 |
| Other Payables & Accruals | 55.7 | 60.8 | 68.5 | 64.4 | 55.6 | 58.1 | 68.8 | 91.6 | 119.3 | 161.0 | 177.2 | 164.8 | 149.9 |
| ST and LT Debt | 0.6 | 0.6 | 0.6 | 0.5 | 0.0 | 0.0 | 0.0 | 61.7 | 63.7 | 65.7 | 67.7 | 69.7 | 71.7 |
| Other LT Liabilities | 24.9 | 37.0 | 58.3 | 72.5 | 67.8 | 44.3 | 59.0 | 81.8 | 110.8 | 149.5 | 164.5 | 153.0 | 139.2 |
| Total Liabilities | 109.6 | 132.9 | 163.0 | 180.2 | 164.0 | 140.6 | 174.9 | 290.8 | 373.0 | 483.2 | 524.7 | 492.7 | 456.6 |

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