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Elevator Pitch: The combination of SHAK's small share float and unreasonable expectations for growth have caused an overvaluation. July lock up expiration will increase the supply of shares, but not price.

Shake Shack IPO'd at $21 a share and quickly surged to $45.90 at the close of the day following their IPO date. Shake Shack has increased more than 200% to $72.54 per share since its IPO. This is very similar to other fast food restaurant companies that had successful IPOs, but unsuccessful aftermaths. Some of these companies are Noodles, Potbelly, and Habit Restaurants. The large appreciation in price is due to the imbalance of the supply of shares available for trading and the high demand for these shares. There are currently 36.5 million shares outstanding, but only 5.93 million available for trading. **The lock up expiration for Shake Shack is 7/29/15.** (1) **I expect lots of insider sales to occur once the lock up period expires due to this company's excessive valuation. This increase in supply should lead to a significant depreciation in price.**

Business Description

Shake Shack is a roadside burger stand that sells premium burgers, hot dogs, crinkle-cut fries, shakes, frozen custard, beer and wine. Shake Shack was established in 2001 as a hot dog stand in Madison Square Park. It was founded by Danny Meyer who is also the chairman of the board for Shake Shack. Shake Shack had 66 shacks as of April 1, 2015. 34 of these are domestic operated, five are domestic licensed and 27 are internationally licensed. The 15 stands located in NY make up their largest portion. They also have operations located internationally in countries such as Kuwait, Lebanon, Russia, and United Arab Emirates. As of December 2014, there were 10 stands located in the United Arab Emirates. This makes up 16% (10/66) of Shake Shack's total stands making this their second largest location after New York. Their most recent shack openings are at the Bridgewater Commons in NJ (May 1st) and their first one in Austin Texas (May 5th).

Thesis

I enjoy eating Shake Shack's burgers a lot and I think they taste very good, but based on fundamental and relative valuation, this company is highly overvalued. This is most likely due to the popularity this company has with its shacks located very close to Wall St. In fact, there is a Shake Shack located right across the street from Goldman Sach's headquarters. With lock up periods set to expire on July 29, 2015, shares may continue to trade at their current high valuation for a little longer, but I predict insiders will be selling due to these high valuations once the lock up expires.

Analyst price targets for this company were in the mid 30's during February and the company is now trading at around $72.54 a share. If this company doesn't experience a sharp pullback by the lock up expiration, I believe it will pull back within the next year or two due to the likely chance of a pullback in the economy. This time frame should also give buyers enough time to realize the irrationality of buying this company at these high prices, which is what I highlight in the upcoming paragraphs.

<u>Valuation</u>

<u>Relative Valuation:</u>

After the tech bubble burst in 2000, Scott McNealy, the CEO of Sun Microsystems said:

"Two years ago we were selling at 10 times revenues when we were at $64. At 10 times revenues, to give you a 10-year payback, I have to pay 100% of revenues for 10 straight years in dividends. That assumes I can get that by my shareholders. That assumes I have zero cost of goods sold, which is very hard for a computer company. That assumes zero expenses, which is really hard with 39,000 employees. That assumes I pay no taxes, which is very hard. And that assumes you pay no taxes on your dividends, which is kind of illegal. And that assumes with zero R&D for the next 10 years, I can maintain the current revenue run rate. Now, have done that, would any of you like to buy my stock at $64? Do you realize how ridiculous those basic assumptions are? You don't need any transparency. You don't need any footnotes. What were you thinking?"

Price to TTM Sales: 20

Price to TTM Earnings: Negative (1Q 2015 GAAP earnings include one-time expenses related to the company's IPO)

Price to TTM Earnings using SHAK's 2015 Q1 Non GAAP measure: 1,121 (2015 Q1 NON US GAAP net income was $1.31 million)

Enterprise Value to TTM EBIT: 335 (Debt was assumed to be 0)

Price to 2014 Operating Cash Flow: 185 (Operating cash flow wasn't released for Q1 yet)

TTM Price to Free Cash Flow: Negative

Price to Book: 24

Price for Each Shack: $38.5 million ($2.62 billion/68 total shacks)

Right now, Shake Shack currently sells at an astronomical valuation. It has a price to sales ratio of 20, or double the price to sales ratio that Scott McNealy's Sun Microsystems had during the dot com bubble. Meanwhile, Shake Shack has expenses for their cost of materials, salaries, operating leases, maintenance and other general expenses that all combine to give Shake Shack a negative profit margin over the past 12 months and a 2014 profit margin of 1.79%. In addition, Shake Shack hasn't earned positive free cash flow yet because of their high capital expenditures. Operating cash flow for 2014 was $13.5 million and capital expenditures were $28.5 million. This results in negative free cash flow of $15 million. Even if we didn't consider capital expenditures - which we certainly know are real expenses to maintain a restaurant - and only considered their operating cash flow, the price/operating cash flow multiple for 2014 is 185 ($2.6 bill/$14 mill).

According to their press release for Q1 earnings, total revenue is expected to be between $161 million and $165 million. Using the mid-point of this projection ($163 million), this will result in a one year growth rate from 2014 revenue ($119 million) of about 37%. A very high growth rate, but this would still value Shake Shack at a price to sales ratio of 16. Even doubling 2014 revenue (100% growth rate) to $238 million would result in a high price to sales multiple of 11. Overall, the market is assuming Shake Shack is going to slow down expansion (2015 outlook was at least 10 new domestic shacks and 5 international licenses shacks) to realize earnings attributable to shareholders, cut costs and increase profit margins, or grow revenue at rates greater than 100% so their low margins result in higher net income. I don't believe any of this will happen over the next year or two.

Bullish analysts might trumpet their large growth in sales from $57 million in 2012 to $119 million in 2014, but this increase hasn't translated into an in increase in net income. Net income actually decreased by 50% over this period from $4 million in 2012 to $2 million in 2014. The reason for this decrease is the increasing cost of expansion. Not only have capital expenditures increased from $11 million in 2012 to $29 million in 2014, but total operating expenses increased from $11 million in 2012 to $30 million in 2014. Total expenses during Q1 2014 were $23 million and are $48.7 million as of Q1 2015. This translates into a 129% increase from Q1 2014 to Q1 2015. Bullish analysts might compare Shake Shack with Chipotle, but this neglects Chipotle's 2014 operating and net income margins which are 18% and 11% respectively, while Shake Shack's margins are only 2.65% and 1.8%. Chipotle also sells at a reasonable 4.7 times market cap to sales, compared to Shake Shack's multiple of 20.

The burger industry is a very competitive industry too. Besides McDonald, Wendy's, and Burger King, there are many other burger joints such as BurgerFi, 5 Guys, Smashburger, and Habit Burger. There are very few entry barriers to start a burger restaurant which shows in the low margins in most of its competitors. Net income margins during 2014 for Wendy's are 6% and for Habit Burger it's -.02%. McDonald's is one of the few with a notable competitive advantage – they have 16% TTM NI margin – and this comes from economies of scale, which Shake Shack isn't close to obtaining because they only have 68 shacks. These 68 shacks are spread out all over the world also as opposed to being very close together. This will prevent it from developing the economies of scale needed to justify its current market cap. It is also the opposite of the economies of scale advantage that Wal-Mart achieved over K Mart. Wal-Mart focused on local markets and didn't spread out across the country too quickly. Expanding too quickly in areas far apart from each other is an impediment to growth, not a tail wind.

Intrinsic Valuation/Discounted Cash Flow Model:

What assumptions does Shake Shack need to achieve to justify these valuation levels? If I assume Shake Shack will sell at a premium P/E multiple of 30, they will need to earn net income of $86.6 million to justify this valuation ($2.6 billion/30). As mentioned earlier, the highest net income ever recorded for SHAK was $5 million in 2013. Chipotle has been one of the most successful restaurant growth stories over the past 10 years, so I will use their growth rate as a model. Chipotle grew their net income of $38 million in 2005 to $445 million in 2014. This is a growth rate of 31.4%. If Shake Shack achieves the record high net income of $5 million that they earned in 2013 and grows it at a rate of 31.4% over the next 10 years, they will earn net income of $76.72 million in 2025. At the current $2.6 billion market cap, this is a P/E multiple of 34 ($2.6 billion/$76.72 million) and still a high multiple in my opinion.

My Intrinsic Valuation Assumptions:

Morningstar assigns a five year revenue growth rate of 7.1% for the industry. Shake Shack has a three year average net income margin of 5.2%. I will assume Shake Shack keeps this net income margin and grows revenues at a little less than three times the industry average. This results in a five year revenue growth rate of 20%. I will assign a multiple of 30 to net income in the terminal year, and grow net income at the current 10 year Treasury rate of 2% to get terminal value net income. To be on the conservative side of my valuation, I will assume a dollar today is worth the same as a dollar tomorrow. Therefore, I won't use a discount rate even though all future cash flows need to be discounted back to the present. My main reason for not using a discount rate is to further highlight the high valuation that the market is giving Shake Shack.

	0	1	2	3	4	5	TV
(In millions	2014	2015	2016	2017	2018	2019	2020
Revenue	$119	$143	$171	$206	$247	$296	$302
Net Income	$2	$7.4	$9	$10.7	$13	$15.4	$15.7

Sum of net income: $55.5

NI in 2020: $15.7m

P/E multiple: 30

Terminal Value: $471m

Total TV + NI: $526.5m

Shares Outstanding: 36.25 mill

Price per share: $14.52

Asset Valuation:

As of April 1st, Shake Shack had $150 million worth of assets on its balance sheet, $41.8 million in total liabilities, and $109 million in shareholder's equity. With Shake Shack's current market cap of $2.6 billion, it means a buyer is paying a multiple of 17 ($2.6 bill/$150 mill) for the assets, and a multiple of 24 ($2.6 bill/$109 mill) for the equity. These are absurdly high multiples, especially since the earnings from the assets are low also.

Even if the assets are assumed to be undervalued by 100%, and we double the value of the assets, the value is $300 million ($150 million x 2) or a price to assets multiple of 8.66. In comparison, multiples for the assets of some of its competitors and other highly valued companies are:

Market Cap/Assets for Shake Shack: 17

Market Cap/ Total Assets for Competitors:

Chipotle: 7.3 ($19.7 billion/$2.7 billion)

Habitat Restaurants: 5.74 ($941.6 million/$164 million)

McDonalds: 2.93 ($94 billion/$32 billion

Panera: 3.76 ($4.9 billion/$1.3 billion)

Wendy's: 1 ($4.1 billion/$4.1 billion)

Jack in the Box: 2.62 ($3.3 billion/$1.26 billion)

Market Cap/Assets for other High Valuation Companies:

Allibaba: 5.03 ($217.4 billion/$43.2 billion) CNY:USD exchange rate is .16

Facebook: 5.4 ($227.1 billion/$42 billion)

GoPro: 7.4 ($6.9 billion/$931 million)

Linked In (Pre 20% plunge): 5.94 ($32.7 billion/$5.5 billion

Zillow: 8.61 ($5.7 billion/$650 million) Pre acquisition of Trulia

Twitter: 4.35 ($24.4 billion/$5.6 million

Shake Shack sells at a price to asset multiple of more than double average of the overvalued companies that I selected. Twitter, Facebook, and LinkedIn were recognized as overvalued by Prem Watsa in his 2014 shareholder letter. David Einhorn has shed some light on the over valuation of these companies also.

What other analysts are saying:

Morgan Stanley and JP Morgan Chase, the company's two lead underwriters didn't even put buy ratings on this company due to its high valuation. (2) And this was back in February when they had a price target of $38 a share, or 46% lower than today's price. Morgan Stanley's John Glass and team wrote, "Trading at 89x our '16 EBITDA and 8x sales, shares clearly reflect the market's bullish sentiment toward this brand's virtually open-ended growth prospects and substantial margin opportunities". Again, this was back in February when this company was trading in the mid $30's.

JP Morgan's Jon Ivankoe and his team noted, "The limited supply and very high demand for [Shake Shack shares] has driven share price up 98% since the January 30 IPO price of $21, and in our opinion has overshoot reasonably expected risk-adjusted returns at this point…."

Josh Brown tweeted on April 27th, "$SHAK, which was "overvalued" upon it's debut at $40, is now trading above $70."

Goldman's price target as of February 2014 was $36 per share, or about half of the current price.

Jim Cramer acknowledges the overvaluation and the lock up expirations (3:50) in this video: http://www.cnbc.com/id/102688709

Catalysts to my short thesis

The expiration of the lock up period will result in insiders most likely selling their shares due to the large run up in price. Some of the notable holders of Shake Shack stock as of December 31, 2014 are:

5% Stockholders:	Total Common Stock Beneficially Owned:
Green Equity Investors	25.4%
Daniel Meyer	20.4%
SEG Partners	12%
ACG Shack	6%
Jeff Flug	5.1%

Jonathan D. Sokoloff 25.4%

All directors and Executive Officers as a group (nine persons) own 54.7% of the total common stock. (3)

Actual earnings miss analyst estimates for the second quarter. According to Fidelity, Shake Shack reports on 8/10/15 and there are 8 analysts that have a consensus estimate for EPS of $0.03. Analysts were expecting a 3 cent loss for the 1st quarter but Shake Shack reported adjusted earnings of 4 cents a share. The adjustment was mostly due to $12.8 million in non-recurring expenses related to its IPO. Even with the addition of these one-time IPO expenses, adjusted pro forma net income was $1.3 million for the quarter or $5.2 million for the year assuming net income stays consistent throughout the year. Net income of $5.2 million still isn't sufficient enough to justify the elevated valuation. Also, despite the "earnings surprise" and the 8% price increase in after-hours trading on the day of the earnings press release, SHAK's price didn't increase as much as I expected it. Shares traded up about 5% today (5/18) and can continue to do so in the short term, but I think there is an asymmetric payoff favoring the shorts if they miss future earnings estimates.

A recession will likely cause consumers to cut their spending. The cheapest burger on the menu is $3.80. $3.80 is at the high end of what consumers pay for a plain burger compared to companies like Burger King, Wendy's, and McDonald's. Companies that sell premium products usually sell off during recessions due to consumers alternating to cheaper options.

Risks to my short thesis

Investor psychology - Isaac Newton once said, "I can calculate the motion of heavenly bodies, but not the madness of crowds." It looks to me that this company is clearly overvalued, but it doesn't mean that it can't continue to get even more overvalued. If investors are willing to pay ever increasing multiples for this stock, the price will continue to increase.

A further appreciation in price will occur if Shake Shack beats earnings estimates for the 2nd quarter. They report on August 10, 2015.

Any unforeseen event that may extend the lock up expiration period. As stated, the lock up expiration is 7/29/15. I confirmed this with the S1 document where on page 48-49 it states:

"We and each of our directors, executive officers, and holders of substantially all of our common stock...have agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any shares of common stock or securities convertible into or exchangeable for…shares of common stock during the period from the date of this prospectus [1/28/15] continuing through the date 180 days after the date of this prospectus…All of the our shares of common stock outstanding as of the date of this prospectus may be sold in the public market by existing stockholders following the expiration of the applicable lock-up period, subject to applicable limitations imposed under federal securities laws."

Conclusion

Wall St. analysts are currently skeptical of the growth assumptions that are priced into Shake Shack's $2.6 billion valuation. Over the past three years, Shake Shack has grown revenues at 45%. With a 5% net income margin, a P/E of 30, and no discounting of future earnings, the value per share is around $39. This is a 50% decrease from the current share price. Although I believe this company has very good service and food, the low share float has created a small supply of shares and the high demand has resulted in a market cap that isn't warranted. I believe once the lock up period expires in late July, insiders will start to sell their shares and the price will trend down. This lock up period is my main catalyst. If this catalyst don't materialize though, an earnings miss is likely to send the shares back to earth or a pullback in the economy will cause the company to halt its expansion plans and cut growth projects.

Sources:

- 1. http://www.nasdaq.com/markets/ipos/company/shake-shack-inc-953529-77326
- 2. Ben Levisohn, Barron's articlehttp://blogs.barrons.com/stockstowatchtoday/2015/02/24/shake-shacks-so-expensive-not-even-its-lead-underwriters-rate-it-a-buy/
- 3. Shake Shack 10K, page 84

Updated 12/17/2015

Overview:
Since I wrote this idea in late May of 2015, the stock price has gone down about 45%. This price depreciation was mostly due to insider sales, but also to the high valuation that the market priced this company at in May. I still think the company is overvalued, but the reward for the shorts isn't as high as it was when the company traded above $70. The $40 support level has held very steady also, and Shake Shack doesn't have a broken business model, so breaking this support level may prove difficult. It is important to note the large amount of short selling that occurred from insiders over the last couple of days though. This is very likely the reason the share price went down 3.4% today and why the decline may continue, so I won't be looking to initiate a long position yet.

Insider Sales:

There were 19 insider sales, and 0 insider buys over the last 3 days. The chart below shows 9 of those. This doesn't include all of the insider selling that has occurred since May though. According to Dataroma and Form 4 filings, there have been 178 insider sales valued at $513,358,946 and 0 insider buys since May 20, 2015

Reporting Name	Relationship	Trans. Date	Purchase/Sale	Shares	Price $	Amount $
ACG Shack LLC	10%	16 Dec 2015	Sale	50,000	40.17	2,008,500
Sloate Laura J	10%	14 Dec 2015	Sale	6,000	41.08	246,480
Sloate Laura J	10%	14 Dec 2015	Sale	2,000	40.66	81,320
Sloate Laura J	10%	15 Dec 2015	Sale	5,000	40.75	203,750
Sloate Laura J	10%	16 Dec 2015	Sale	2,500	40.4642	101,160
Select Equity Group, LP.	Director, 10%	14 Dec 2015	Sale	4,505	40.46	182,272
Select Equity Group,	Director, 10%	14 Dec 2015	Sale	16,915	40.46	684,381

LP.						
Select Equity Group, LP.	Director, 10%	14 Dec 2015	Sale	28,580	40.46	1,156,347
Select Equity Group, LP.	Director, 10%	15 Dec 2015	Sale	4,505	40.82	183,894

Source: http://www.dataroma.com/m/ins/ins.php?t=d&fr=2015-12-16&to=2015-12-16&am=0&sym=shak&o=fd&d=d

<u>Improvements Over The Last 2 Quarters</u>:

Other factors that make a short case not as compelling as it was in May are the increases in revenue, operating cash flow, and free cash flow over the last 2 quarters. Revenue increased from $38 million in 1Q 2015 to $53 million in 3Q 2015, operating cash flow increased from $5M to $13M, and free cash flow from ($3M) to $5M. Shake Shack's business model isn't damaged since they are still selling burgers and fries that are satisfying customers. If these numbers continue to improve then that will be another headwind for investors with a short position.

<u>Conclusion:</u>

Insider selling is still occurring and although the price drop may have appeared to create an opportunity for long investors, the $1.5B market cap is still too high for me to establish a long position. I will revisit this opportunity if the equity drops into the mid 20's.