Mike Gorlon Recommendation: Short Tesla (TSLA) Total Expected Return: 45% (1-2 year period)

Price per share as of 4/21/17: \$305.60 Price Target: \$167.76

Thesis

Tesla IPO'd on June 29, 2010 at \$17 per share and has been one of Wall Street's favorite speculative growth stocks of this market cycle. The price per share today is \$305.60, which is 18 times higher than its IPO price despite never earning an operating profit, never earning positive free cash flow, having only one year (2013) of positive operating cash flow, using debt to fund operations and diluting existing shareholders by raising equity. The market cap is almost equal to GM's and is higher than Ford's despite Tesla having revenue that is only 4% of what Ford's 2016 revenue was and what GM's 2016 revenue. There is too much hype in Tesla's forecasts of how many cars they will produce over the next five years, and when the company will become profitable. My catalysts are increased interest rates/higher cost of equity as the second longest bull market on record reverses its course, investors realize the overvalued stock and high growth assumptions, and any possible negative news. This news can include, but isn't limited to, vehicle recalls and missed production targets such as Elon's ambitious 500,000 vehicles produced per year in 2018 and 1,000,000 by 2020. These catalysts, I believe, will result in a 45% return or a price of \$167.76 per share from its current price of \$305.60 at the close of the market on April 21, 2017.

Business Description

Tesla manufactures and sells electric vehicles, solar energy systems, and energy storage products. In 2016, automotive revenue made up 97% of total revenues for Tesla while energy and storage made up the other 3%. Tesla manufactures and sells two vehicles types, the Model S and the Model X. The 2017 Model S's manufacturer's suggested retail price (MSRP) is from \$68,000 and the Model X MSRP is from \$85,500, but these prices don't include added accessories and tax credits. New inventory Tesla cars on their website sell for around \$80,000 to \$150,000 with the average around \$120,000, and pre-owned sell for a price between \$45,000 and \$125,000 with an average of around \$65,000. Tesla will begin production of its Model 3 in the middle of 2017 and it is estimated to price at \$35,000. Tesla will also begin to sell solar panels to homeowners, businesses, schools, non-profits, and government organizations with their \$2.6B acquisition of SolarCity.

| | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|------------|------------|------------|------------|------------|
| | | | | | |
| Short Term Debt | 51.00 | - | 602.00 | - | 1,150.00 |
| Long Term Debt | | | | | |
| and Capital Lease | | | | | |
| Obligation* | 401.00 | 586.00 | 1,865.00 | 2,082.00 | 5,978.3 |
| Additional Paid in | | | | | |
| Capital | 1,190.00 | 1,807.00 | 2,345.00 | 3,415.00 | 7,774.00 |
| | | | | | |
| Retained Earnings | (1,066.00) | (1,140.00) | (1,434.00) | (2,322.00) | (2,997.00) |

Balance Sheet Risks

Source: Morningstar (In millions)

*Long term debt was \$118M in 2016 and \$47.3M in 2015. The major portion of long term debt in Tesla's financial statements is related to capital lease obligations.

High cash outflows and losses have forced Tesla to take on more debt and issue more shares which dilute the existing shareholders in order to fund the company's operations. Wall St. is very optimistic about Elon's predictions and are forgetting Newton's Third Law in which every action has an equal and opposite reaction. If Elon

Musk is going to increase production of vehicles to reach his milestones of 500,000 in 2018 and 1 million in 2020, which he reiterates on the 4th Quarter 2016 conference call, then a large amount of cap ex will be needed to fund those production goals by issuing more equity and debt. This shouldn't necessarily be an issue over the long term, but over the next two years, it will continue to put a financial burden on the company and shareholders.

| | 2012 | 2013 | <u>2014</u> | 2015 | <u>2016</u> |
|-------------------------------|-------|--------|-------------|--------|-------------|
| Debt Issued | 189M | 660M | 2,300M | 319M | 2,853M |
| Debt Repayment | (16M) | (461M) | (11M) | (204M) | (1,904M) |
| Warrant Issued | - | 120M | 389M | - | - |
| Common Stock Issued | 221M | 415M | - | 750M | 1,702M |
| Other Financing Activities | 25M | (99M) | (535M) | 658M | 1,094M |
| Net Cash Provided by | | | | | - |
| Financing | 420M | 635M | 2,143M | 1,524M | 3,744M |

"All told there appear to have been at least 2,000 car makers, in an industry that had an incredible impact on people's lives. If you had foreseen in the early days of cars how this industry would develop, you would have said, "Here is the road to riches." So what did we progress to by the 1990's? After corporate carnage that never let up, we came down to three U.S. car companies – themselves no lollapaloozas for investors. So here is an industry that had an enormous impact on America – and also an enormous impact, though not the anticipated one on investors."

– Warren Buffett

Source: Morningstar

No Moat and Competitive Industry

| | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------|--------|-------|----------|----------|----------|
| Operating Profit | (394M) | (61M) | (187M) | (717M) | (667M) |
| | | | | | |
| Net Income | (396M) | (74M) | (294M) | (889M) | (675M) |
| | | | | | |
| Operating Cash Flow | (266M) | 258M | (57M) | (524M) | (124M) |
| Free Cash Flow | (505M) | (6M) | (1,027M) | (2,159M) | (1,564M) |

Tesla hasn't shown any competitive advantage as they continue to generate negative operating and net profit which translates into no returns on equity and capital. The car industry is very competitive and there aren't any significant barriers to entry. An interesting fact about the auto manufacturing industry is that Ford is the only company to never have gone bankrupt, but they did come close in 2008. This shows the competitiveness of the industry over its lifetime.

GM produces a viable competitor with their Chevy Volt, Nissan produces the Leaf, and other companies plan on bringing more competition to the market. Honda will begin production of the Clarity EV in late 2017, and Audi, Mercedes, Ford, Volvo, Porsche, and Hyundai plan on producing before 2020. It is also important to remember that existing internal combustion engine cars are also competing with Tesla since these vehicles serve a similar purpose of transportation. Electric vehicle sales saw an uptick in growth in 2016 despite the large decline in the price of oil over the last 5 years, but low gas prices are still a material headwind for Tesla.

Lastly, Elon Musk wrote on a blog post on the Tesla website, "Tesla Motors was created to accelerate the advent of sustainable transport. If we clear a path to the creation of compelling electric vehicles, but then lay intellectual property landmines behind us to inhibit others, we are acting in a manner contrary to that goal. <u>Tesla will not initiate patent lawsuits against anyone who, in good faith, wants to use our technology.</u>"

If a company enters the electric vehicle market using Tesla's patents they essentially get a free pass as long as they are working to bring electric vehicles to the market as soon as possible, which is Tesla's mission. This can be great for almost everyone except Tesla shareholders.

Valuation

Valuation Assumptions:

Tesla's outlook for the first half of 2017 is to deliver 47,000 to 50,000 Model S and Model X vehicles. If we assume a very bullish scenario where Tesla produces 100,000 vehicles in the second half of 2017 and then sells every vehicle, that would be 150,000 total vehicles total sold in 2017, and assume an average price of \$200,000 per vehicle, which is a very bullish scenario since it is above the average price, would result in revenue of \$30 billion. Attaching a profit margin of 10%, which is very optimistic for an auto manufacturer and for Tesla because they never generated a profit to begin with, results in a profit of \$3 billion. The current market cap of \$50 billion would imply a multiple of almost 17. 17 is a high multiple for the auto industry due to its lack of consistent and high profit margins and large amount of competition. Also, according to Morningstar, the industry multiple is only 10.6.

My optimistic sales assumptions above don't include the acquisition of SolarCity, but SolarCity wasn't generating income before it was acquired by Tesla anyway. It incurred losses of approximately \$55M between 2013-2015 meanwhile the industry for solar panels is very competitive also. The growth assumptions are too high, and are indicative of speculation and investors not wanting to miss out on that next breakthrough technology. I believe electric vehicles will have a significant impact on the auto market, but Tesla shareholders are likely to see large losses in their portfolios from current prices before it happens.

| | Market Cap* | Sales | Operating Profit | P/S | P/E | P/FCF | EV/EBIT |
|----------|-------------|--------|-------------------------|------|-----|-------|---------|
| Tesla | 50.2B | 7.0B | (667M) | 7.2 | N/A | N/A | N/A |
| GM | 51.0B | 166.4B | 9.5B | 0.31 | 5.6 | N/A | 11.7 |
| F | 45.2B | 151.8B | 4.1B | 0.30 | 9.7 | 4 | 36.5 |
| Toyota** | 159.2B | 258B | 26B | 0.62 | 9.5 | 43 | 11.5 |
| Fiat** | 19.2B | 118B | 5.2B | 0.16 | 8 | 10 | 5.0 |
| BYD** | 16.0B | 15B | 1.2B | 1.07 | 21 | N/A | 18.0 |

Relative Valuation:

Source: Morningstar and my calculations; Financial data based on 2016

*Market caps are at the close of the market on 4/21/17

**Financial data were in the company's domestic currency and converted at the USD rate at the close of the market on 4/21/17

Comparing Tesla's valuation with its competitors shows how overvalued the company's stock is. Even though Tesla has never earned a profit, the company sells for a higher price than all of the competitors I used in the chart above except for GM and Toyota. Tesla's market cap is less than \$1 billion of GM's market cap even though GM had sales of \$166.4B in 2016 and Tesla only had \$7 billion. Tesla also has a higher market cap than Ford which produced \$151.8 billion in sales. All ratios – Price/Sales, Price/Earnings, Price/Free Cash Flow, and Enterprise Value/Operating Profit - look very unfavorable for Tesla and show a lot more hype and ambitious expectations from Wall Street than a sustainable business. To put things more into perspective, consider that GM sold 10

million cars in 2016, Ford sold 6.5 million, Fiat sold around 2.2 million, and Tesla only sold 76,230. Auto sales in 2016 set a new record with 17.55 vehicles sold and Tesla's share of this is less than 1% of the total.

My Valuation and Price Target

The consensus eps estimate for analysts for 2017 is -2.35 and 1.84 for 2018. I have some doubt in Tesla's ability to produce a profit in 2018, but even if it does the earnings multiple would be 166 (\$305.60/\$1.84), which is about 16 times the industry average of around 10 if it earns what analysts are expecting. The highest estimate for eps in 2017 is \$4.13 and this would result in a P/E multiple of 74 which is high also. Free cash flow is very likely to be negative over the next two years due to Elon's ambitious goal of reaching 500,000 cars produced in 2018 and the development of its Gigafactory to produce lithium-ion batteries.

For the year 2017, the low estimate for eps is -5.80 and the high estimate is 4.13. In the 2018, the low estimate is - 3.65 and the high is 12.72. There is clearly a lot of uncertainty and that makes valuing this company difficult. If the high estimate in 2018 is achieved then that would result in earnings of \$2.08B and a P/E multiple of almost 24, a little more than double the current industry multiple of 10.6.

Using a two-stage model, I estimate 2016 revenue of \$7B to grow at 50% over the next 5 years to \$53.15B in 2021 and applied a 3% terminal growth rate. I assume a 5% profit margin starting in the third year (2019) and a terminal value multiple of 14, which is derived from dividing the number one by the required return of 10% minus the 3% terminal growth rate. This results in my price target of \$167.76.

Catalysts

<u>Higher Interest Rates or Cost of Equity</u>: Tesla has been able to raise capital through debt at low interest rates and capital at a low cost of equity. As the business cycle continues its second longest period ever after the cycle leading up to 2000, the probability increases that interest rates and the cost of equity will increase, and this will make it much more difficult and costlier for Tesla to raise capital to help it survive. The end of a business cycle also results in equity outflows and the overpriced and overhyped growth stocks are usually the first to be sold.

Earnings, Revenue, or Production Misses: Highly valued speculative growth stocks are always susceptible to sharp declines after a company misses analyst expectations. The consensus estimate that analysts are expecting for eps in Q1 2017 is -0.82 and -0.69 in Q2 17. The current market cap is priced where it is fragile to negative news. Negative news can consist of recalls and delays, but aren't limited to only these factors.

<u>Competition</u> – Tesla produces electric vehicles but it is important to remember that electric vehicles compete with internal combustion engine vehicles also, and gas prices have been low recently. In addition, other auto markets are coming out with electric vehicles over the next three years also, and Elon mentioned he won't sue for violation of patents.

Risks

<u>Continued low interest rates and bull market:</u> Second longest market cycle (Mar. 09-Apr.17 or 98 months) after the one leading up to 2000 and record low interest rates make it likely that Tesla will have to weather a recession eventually. There is a risk in taking a short position that the current eight-year bull market continues.

<u>Elon Musk:</u> Despite the company's cash flow troubles and overvaluation, I don't rule out the possibility of Elon Musk continuing to innovate. He has had some poor capital allocation decisions in the past, in my opinion, like his purchase of Solar City, but he did just buy 95,420 shares at \$262 for a total value of \$25,000,040. According to Forbes, Elon has an estimated net worth of \$13.2B, so \$25,000,000 is less than 1% of his net worth. I don't think Elon has been a good capital allocator in the past and I don't think this decision to buy at such an elevated level helps his case, but it's a positive for shareholders who are long that he is still putting his faith in Tesla by aligning himself more with them. In addition, he has a very low salary of less than \$40,000 a year.



Price per share as of 4/21/17:\$305.60 Price Target:\$167.76 Expected Return: 45% Timeframe: 1-2 years

THESIS

- IPO'd in 2010 at \$17 a share and now selling at \$305.60 (18 times higher)
- Never earned operating profit, free cash flow, net income, and had only one year of operating cash flow

| Stock Price TS | LA M | ore | | | | | | | | | | | | | |
|--------------------------------------|--|-------|--|-----|-------------------|---------|---------|---------|--------------------|---------|---------|---------|---------|---------|---------|
| | 1/2017 Zoom: 1D 5D 1M 3M YTD 1Y 3Y 5Y 10Y Maximu | um | Fiscal year ends in December USD in Million except per share data | | 2007-12 | 2008-12 | 2009-12 | 2010-12 | 2011-12 | 2012-12 | 2013-12 | 2014-12 | 2015-12 | 2016-12 | ттм |
| XNAS:TSLA:+281.7 | 1 +1,179.20% | | ▼ Cash Flows From Operat | | | | | | | | | | | | |
| | | | Net income | hil | (78) | (83) | (56) | (154) | (254) | (396) | (74) | (294) | (889) | (773) | (773) |
| | | | Depreciation & amortiz | h | 3 | 4 | 7 | 11 | 17 | 29 | 106 | 232 | 423 | 947 | 947 |
| 259.48 | | | Amortization of debt d | ы | _ | _ | _ | _ | _ | - | 9 | 70 | 72 | 87 | 87 |
| | | | Stock based compensati | ы | 0 | 0 | 1 | 21 | 29 | 50 | 81 | 156 | 198 | 334 | 334 |
| 179.48 | | / | Accounts receivable | ы | (0) | (3) | (0) | (3) | (3) | (17) | (22) | (184) | 46 | (217) | (217) |
| 175.46 | | | Inventory | ы | (2) | (15) | (8) | (20) | (14) | (195) | (463) | (1,050) | (1,574) | (2,466) | (2,466) |
| | | | Prepaid expenses | ы | (2) | 1 | (2) | (5) | (0) | 1 | (17) | (61) | (30) | 57 | 57 |
| 99.48 | | | Accounts payable | h | 1 | 9 | 1 | (0) | 32 | 188 | (0) | 253 | _ | _ | - |
| | | | Accrued liabilities | hil | 8 | 3 | 3 | 13 | 12 | 10 | 67 | 162 | _ | - | - |
| | | | Other working capital | hil | 15 | 26 | (32) | 4 | 61 | 56 | 561 | 623 | 1,064 | 1,932 | 1,932 |
| 19.48 | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | Other non-cash items | hil | 2 | 5 | 4 | 6 | 5 | 8 | 11 | 35 | 165 | (26) | (26) |
| Volume | | | Net cash provided by o | h | <mark>(53)</mark> | (52) | (81) | (128) | ⁻ (114) | (266) | 258 | (57) | (524) | (124) | (124) |
| 2010 | 2012 2014 2016 | 52017 | | | | | | | | | | | | | |



THESIS

- Market cap is higher than Ford's and almost as high as GM's, despite sales of \$78 compared to \$151.8B for Ford and \$166.4B for GM
- Too much hype in production targets and when the company will earn a profit
- My catalysts for a 45% drop in price over the next two years are:
- (1.) Increased interest rates and higher cost of equity when this bull market comes to an end
- (2.) Investors realize the overvalued stock and growth assumptions are too high
- (3.) Current market price doesn't take into account negative news that can occur like vehicle recalls and setbacks in production goals



BUSINESS DESCRIPTION

- Manufactures and sells electric vehicles, solar energy systems, and energy storage products
- Revenue from automotive segment made up 97% of total revenue in 2016
- Two main vehicle types are Model S and the Model X
- The new Model 3 will start production in 2017
- Purchased SolarCity for \$2.6B at the end of 2016

Results of Operations

Revenues

| | Year Ended December 31, | | | | | | | | |
|-------------------------------|-------------------------|-----------|----|-----------|----|-----------|--|--|--|
| (Dollars in thousands) | | 2016 | | 2015 | | 2014 | | | |
| Automotive | | | | | | | | | |
| Automotive | \$ | 5,589,007 | \$ | 3,431,587 | \$ | 2,874,448 | | | |
| Automotive leasing | | 761,759 | | 309,386 | | 132,564 | | | |
| Services and other | | 467,972 | | 290,575 | | 187,136 | | | |
| Total automotive revenue | | 6,818,738 | | 4,031,548 | | 3,194,148 | | | |
| Energy generation and storage | | | | | | | | | |
| Energy generation and storage | | 181,394 | | 14,477 | | 4,208 | | | |
| | | | | | | | | | |
| Total revenues | \$ | 7,000,132 | \$ | 4,046,025 | \$ | 3,198,356 | | | |
| | | | | | | | | | |





BALANCE SHEET RISKS

- High capital expenditures and large losses forced Tesla to fund operations through debt and stock issuance
- Losses will continue with ambitious goal of reaching 500,000 vehicles by 2018 and 1,000,000 by 2020, and the new Gigafactory to produce lithium ion batteries
- Progress has been made but the cost of manufacturing electric vehicles is still high due to limits in battery technology

| | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------|------------|------------|------------|------------|------------|
| | | | | | |
| Short Term Debt | 51.00 | - | 602.00 | - | 1,150.00 |
| Long Term Debt | | | | | |
| and Capital Lease | | | | | |
| Obligation* | 401.00 | 586.00 | 1,865.00 | 2,082.00 | 5,978.3 |
| Additional Paid in | | | | | |
| Capital | 1,190.00 | 1,807.00 | 2,345.00 | 3,415.00 | 7,774.00 |
| | | | | | |
| Retained Earnings | (1,066.00) | (1,140.00) | (1,434.00) | (2,322.00) | (2,997.00) |
| Source: Morningstar (h | millions) | | | | |

More stock dilutes existing shareholders

Source: Morningstar (In millions)

*Long term debt was \$118M in 2016 and \$47.3M in 2015, but the major portion of long term debt in Tesla's financial statements is related to capital lease obligations/

| Dataland | 10014 | | | 24014 | |
|-----------------|-------|--------|--------|--------|----------|
| Debt Issued | 189M | 660M | 2,300M | 319M | 2,853M |
| Debt Repayment | (16M) | (461M) | (11M) | (204M) | (1,904M) |
| Warrant Issued | | 120M | 389M | - | - |
| Common Stock | | | | | |
| Issued | 221M | 415M | - | 750M | 1,702M |
| Other Financing | | | | | |
| Activities | 25M | (99M) | (535M) | 658M | 1,094M |
| Net Cash | | | | | |
| Provided by | | | | | |
| Financing | 420M | 635M | 2,143M | 1,524M | 3,744M |

Source: Morningstar



NO MOAT AND COMPETITIVE INDUSTRY

- Negative operating income, net income, operating cash flow and free cash flow show no return on equity and return on capital
- Auto industry has been a competitive one throughout its lifetime
- Ford is the only auto company to have never gone through bankruptcy but came close in 2008
 "All told there appear to have been and the second se
- Low barriers to entry

| | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------|--------|-------|----------|----------|----------|
| Operating Profit | (394M) | (61M) | (187M) | (717M) | (667M) |
| | | | | | |
| Net Income | (396M) | (74M) | (294M) | (889M) | (675M) |
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| Operating Cash Flow | (266M) | 258M | (57M) | (524M) | (124M) |
| Free Cash Flow | (505M) | (6M) | (1,027M) | (2,159M) | (1,564M) |

"All told there appear to have been at least 2,000 car makers, in an industry that had an incredible impact on people's lives. If you had foreseen in the early days of cars how this industry would develop, you would have said, "Here is the road to riches." So what did we progress to by the 1990's? After corporate carnage that never let up, we came down to three U.S. car companies – themselves no lollapaloozas for investors. So here is an industry that had an enormous impact on America – and also an enormous impact, though not the anticipated one on investors."

- Warren Buffett



NO MOAT AND COMPETITIVE INDUSTRY

- Nissan produces the Leaf which is the second best selling electric vehicle in the world and GM produces the Chevy Volt, which is the second best selling electric vehicle in the U.S.
- Honda will begin production of the Clarity EV in late 2017
- Audi, Mercedes, Volvo, Porsche, and Hyundai plan on producing before 2020
- I don't see these companies having a material affect on Tesla right away but it's important to keep in mind the low barriers to entry in the auto market
- Also, Elon Musk stated that Tesla won't pursue patent lawsuits on companies that use their technology in good faith

| Top Selling Electric cars in 2010 | | | | | | | |
|-----------------------------------|-----------|--|-------------------|-----------|--|------------------|-----------|
| Car Model | Sales | | Car Model | Sales | | Car Model | Sales |
| | | | | | | | |
| 1. Tesla Model S | 50,935.00 | | 4. Chevrolet Volt | 28,295.00 | | 7. Tesla Model X | 25,372.00 |
| | | | 5. Mitsubishi | | | | |
| 2. Nissan Leaf | 49,818.00 | | Outlander | 27,850.00 | | 8. BYD Qin | 21,868.00 |
| | | | | | | | |
| 3. BYD Tang PHEV | 31,405.00 | | 6. BMW i3 | 25,576.00 | | 9. Renault Zoe | 21,626.00 |

Top Selling Electric Cars in 2016



NO MOAT AND COMPETITIVE INDUSTRY

- Internal combustion engine cars also compete with electric vehicles
- A barrel of oil is currently trading at a little less than \$50 and the average national gas price is \$2.421 according to AAA





ASSUMING VERY OPTIMISTIC ASSUMPTIONS

- Outlook for first half of 2017 is to deliver 47,000 to 50,00 Model S and Model X vehicles
- What if 100,000 additional cars are produced in the second half of 2017 and all 150,000 cars for the year are sold at an average price of double what the current price is now, and Tesla finds a way to earn a 10% profit margin, which is almost double the current profit margin for the industry as of January 2017?
- These optimistic assumptions would still only bring the profit multiple to 16.67 which is still higher than the industry average of 10
- Assumption only focuses on auto sales for Tesla but does it matter?
- 97% of 2016 revenue was derived from auto sales/leases, and SolarCity was losing money before it was acquired at the end of 2016

| | 50,000.00 | 1st half production |
|---|------------|---------------------|
| | 50,000.00 | 1st half production |
| + | 100,000.00 | 2nd half production |
| | 150,000.00 | Total produced |
| | | I |
| | | |
| | 150,000.00 | Assume all are sold |

| | 100,000.00 | Average price |
|---|------------|----------------|
| | | Double average |
| | 200,000.00 | price |
| | | |
| х | 150,000.00 | All are sold |
| | 30B | revenue |
| | | |

| | 30B | revenue |
|---|-----|---------|
| | | profit |
| х | 10% | margin |
| | | profit |
| | 3B | margin |

| 50B | Market Cap |
|-------|------------|
| 3B | Profit |
| 16.67 | Multiple |



RELATIVE VALUATION

| | Market Cap* | Sales | Operating Profit | P/S | P/E | P/FCF | EV/EBIT |
|----------|-------------|--------|------------------|------|-----|-------|---------|
| Tesla | 50.2B | 7.0B | (667M) | 7.2 | N/A | N/A | N/A |
| GM | 51.0B | 166.4B | 9.5B | 0.31 | 5.6 | N/A | 11.7 |
| F | 45.2B | 151.8B | 4.1B | 0.30 | 9.7 | 4 | 36.5 |
| Toyota** | 159.2B | 258B | 26B | 0.62 | 9.5 | 43 | 11.5 |
| Fiat** | 19.2B | 118B | 5.2B | 0.16 | 8 | 10 | 5.0 |
| BYD** | 16.0B | 15B | 1.2B | 1.07 | 21 | N/A | 18.0 |

Source: Morningstar and my calculations; Financial data based on 2016

*Market caps are at the close of the market on 4/21/17

**Financial data were in the company's domestic currency and converted at the USD rate at the close of the market on 4/21/17



RELATIVE VALUATION

- Sells at a higher market cap than Ford and almost as high as GM despite revenue of only \$7B in 2016
- Ford had revenue of \$151.8B and GM had revenue of \$166.4B
- GM sold 10 million cars in 2016, Ford sold 6.5 million cars, Fiat sold 2.2 million and Tesla only sold 76,230
- Price to Sales is high for an auto manufacture at 7x and P/E, P/FCF, and EV/EBIT are all negative due to cash burn



MY VALUATION AND PRICE TARGET

- Lots of uncertainty in eps estimates over the next two years
- 2017 estimates: consensus: -2.35, Low: -5.80, High 4.13
- 2018 estimates: consensus: 1.84, Low: -3.65, High 12.72
- Even at today's price, the p/e multiple would be high if Tesla were to achieve their high estimates of eps
- 2017: 305.60 (price per share close of 4/21/17) / 4.13 = 74 p/e multiple
- 2018: 305.60 (price per share close of 4/21/17) / 12.72 = 24 p/e multiple
- Current industry average is 10.6 according to Morningstar
- Never earned positive earnings and lots of capital expenditure over the next 2 years makes earning a profit not so likely
- In other words, Tesla at its current market cap is already overpriced even if it reaches the high estimates from the Street



MY VALUATION AND PRICE TARGET

- Required rate of return: 10%
- Terminal year growth rate: 3%
- Assumed profit margin starting in 2019: 5%
- Revenue growth rate: 50% per year
- Terminal value multiple: 14 (1/(.10-.03)
- My estimated value per share: \$167.76
- Current price at the close of 4/21/17: \$305.60
- Expected return: 45%



MY VALUATION AND PRICE TARGET

| | 0 | 1 | 2 | 3 | 4 | 5 | Terminal Value |
|----------------|----------|-------------|-------------|-------------|-------------|-------------|----------------|
| | 2016 | 2017 (Exp.) | 2018 (Exp.) | 2019 (Exp.) | 2020 (Exp.) | 2021 (Exp.) | 2022 (Exp.) |
| Sales | 7,000.00 | 10,500.00 | 15,750.00 | 23,625.00 | 35,437.50 | 53,156.25 | 54,750.94 |
| Profit | - | - | - | 1,181.25 | 1,771.88 | 2,657.81 | 2,737.55 |
| Discount Rates | | 0.91 | 0.83 | 0.75 | 0.68 | 0.62 | |
| Discounted FCF | | - | - | 887.49 | 1,210.21 | 1,650.29 | |
| - | | | - | | | | · |

| Multiple14Terminal Value38,325.66Discount Rate0.62Discounted23,797.22Terminal Value23,797.22Plus Total Disc27,545.21Shares27,545.21Outstanding164.19Value Per share167.76 | Profit in 2022 | 2,737.55 |
|---|-----------------|-----------|
| Discount Rate 0.62 Discounted Terminal Value 23,797.22 Terminal Value Plus Total Disc cash flows 27,545.21 Shares Outstanding (millions) 164.19 | Multiple | 14 |
| Discounted Terminal Value 23,797.22 Terminal Value Plus Total Disc cash flows 27,545.21 Shares Outstanding (millions) 164.19 | Terminal Value | 38,325.66 |
| Terminal Value 23,797.22 Terminal Value Plus Total Disc cash flows 27,545.21 Shares Outstanding (millions) 164.19 | Discount Rate | 0.62 |
| Plus Total Disc cash flows 27,545.21 Shares Outstanding (millions) 164.19 | | 23,797.22 |
| cash flows27,545.21SharesOutstanding (millions)164.19 | Terminal Value | |
| Shares Outstanding (millions) 164.19 | Plus Total Disc | |
| Outstanding (millions) 164.19 | cash flows | 27,545.21 |
| (millions) 164.19 | Shares | |
| | Outstanding | |
| Value Per share 167.76 | (millions) | 164.19 |
| | Value Per share | 167.76 |

| Sum of | | |
|----------------|----------|--|
| Discounted FCF | 3,748.00 | |

| Profit margin | 5.0% |
|------------------------|-------|
| Growth | 50.0% |
| Required return | 10% |
| Terminal growth | 3% |



CATALYSTS

(1.) Higher interest rates and cost of equity

- Current market cycle is in its second longest cycle ever after the one leading up to 2000
- A setback in the economy will make it more expensive for Tesla to borrow and issue stock, making it more difficult to fund the large losses and expansion that are occurring

(2.) Earnings, revenue, or production misses

 Highly valued speculative growth stocks are always susceptible to share declines after a missed analyst estimate or production miss



I/B/E/S Estimates vs Adjusted Actual (Fiscal Year)

| | I/B/E/S | Estimates vs Adjusted | I Actual |
|----------------------------------|----------------------------|-----------------------------|---------------|
| | Consensus Est. EPS (\$) | Adjusted Actual EPS (\$) | |
| Previous Year (Ends 12/31/16) | -2.32 (12 Analysts) | -2.87 | -2.90 / -1.65 |
| Current Year (Ends 12/31/17) | -2.35 (21 Analysts) | | -5.80 / 4.13 |
| Next Year (Ends 12/31/18) | 1.84 (19 Analysts) | | -3.65 / 12.72 |

Source: Fidelity



Source: CFRA/S&P Global

CATALYSTS

(3.) Competition from other vehicle makers, including fuel powered cars and hybrids

- Low oil prices make fuel powered cars more competitive than they have in the past. The chart below shows the top 20 vehicles for the current month. None of them are Tesla
- Honda will begin production of the Clarity EV in late 2017
- Audi, Mercedes, Ford, Volvo, Porsche and Hyundai plan on producing electric cars before 2020 also

| | Mar 17 | % Chg from Mar '16 | YTD 2017 | % Chg YTD | from 2016 |
|-------------------------|--------|-----------------------|----------|--------------|--------------|
| Ford F - Series PU | 81,330 | 10.1 | 205,281 | | 10.3 |
| Dodge Ram PU | 46,384 | 6.3 | 119,199 | | 5.2 |
| Chevrolet Silverado PU | 42,410 | -11.6 | 128,467 | -0.4 | |
| Nissan Rogue | 39,512 | 42.6 | 101,421 | | 46.9 |
| Toyota Camry | 35,648 | -3.6 | 83,459 | -13.3 | |
| Honda CR-V | 32,872 | 23.0 | 94,057 | | 32.1 |
| Toyota RAV4 | 32,027 | 10.3 | 80,533 | | 5.8 |
| Honda Civic | 31,520 | -4.1 | 81,654 | -6.5 | |
| Toyota Corolla / Matrix | 30,584 | -6.1 | 76,086 | -9.7 | |
| Nissan Altima | 28,511 | -18.2 | 73,985 | -13.3 | |
| Ford Escape | 28,113 | -1.4 | 76,338 | • | 6.6 |
| Honda Accord | 26,824 | -12.1 | 69,815 | -9.4 | |
| Hyundai Elantra | 25,063 | 43.2 | 54,202 | | 37.7 |
| Ford Explorer | 23,424 | -4.0 | 62,770 | -1.0 | |
| Chevrolet Equinox | 22,671 | 5.5 | 62,709 | | 4.7 |
| Nissan Sentra | 21,960 | -16.2 | 51,414 | -18.3 | |
| Jeep Grand Cherokee | 20,374 | 22.1 | 56,600 | | 18.8 |
| Ford Fusion | 18,759 | -36.8 | 50,786 | -32.3 | |
| Chevrolet Cruze | 18,607 | 88.3 | 53,923 | | 44.8 |
| GMC Sierra PU | 18,460 | -14.3 | 49,810 | -2.6 | |







Source: www.motorintelligence.com

Source: <u>www.motorintelligence.com</u>; Wall Street Journal

Tesla's market share is still small and there are many car companies to compete against

| Monday, April 03, 2017 | | | | | | | | | | | |
|------------------------------|---------------|---------------|---------------|-----------|-----------|---------------|---------------|----------------|-------------|-------------|--|
| | | SALES | | | YTD SALES | | | % MARKET SHARE | | | |
| | March 2017 | March 2016 | % Chg | 2017 | 2016 | % Chg | March 2017 | March 2016 | YTD 2017 | YTD 2016 | |
| | | 0.005 | | - | o 445 | | | | | | |
| Fiat Total Cars | 2,922 | 3,085 | -5.3 8.2 | 7,231 | 8,115 | -10.9 | 0.2 | 0.2 | 0.2 | 0.2 | |
| | 2,196 | 2,029 | | 5,265 | 4,857 | 8.4 | 0.1 | 0.1 | | 0.1 | |
| Total Light Trucks | 4,050 | 1,056 | -31.3 45.9 | 1,966 | 3,258 | -39.7 55.6 | 0.3 | 0.1 | 0.3 | 0.1 | |
| Total Cars | | - | | | | | | | | | |
| Total Light Trucks | 2,100 | 2,100 | | 5,800 | 6,050 | -4.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| | 1,950 | 675 | 188.9 | 5,950 | 1,500 | 296.7 | 0.1 | | 0.1 | | |
| Jaguar | 4,953 | 2,133 | 132.2 | 11,376 | 4,997 | 127.7 | 0.3 | 0.1 | 0.3 | 0.1 | |
| Total Cars | 2,766 | 2,133 | 29.7 | 6,135 | 4,997 | 22.8 | 0.2 | 0.1 | | 0.1 | |
| Total Light Trucks | 2,187 | | | 5,241 | | | 0.1 | | 0.1 | | |
| Land Rover ** | 7,965 | 8,733 | -8.8 | 19,875 | 20,805 | -4.5 | 0.5 | 0.6 | 0.5 | 0.5 | |
| Alfa Romeo * | 555 | 43 | 999.9 | 1,106 | 158 | 600.0 | | | | | |
| Mini * | 4,987 | 4,762 | 4.7 | 10,251 | 10,839 | -5.4 | 0.3 | 0.3 | 0.3 | 0.3 | |
| Smart * | 389 | 479 | -18.8 | 1,061 | 1,300 | -18.4 | | | | | |
| Ferrari * | 262 | 205 | 27.8 | 732 | 516 | 41.9 | | | | | |
| Maserati | 1,312 | 997 | 31.6 | 3,288 | 2,250 | 46.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Total Cars | 745 | 997 | -25.3 | 2,037 | 2,250 | -9.5 | | 0.1 | 0.1 | 0.1 | |
| Total Light Trucks | 567 | | | 1,251 | | | | | | | |
| Bentley | 249 | 119 | 109.2 | 552 | 262 | 110.7 | | | | | |
| Total Cars | 163 | 119 | 37.0 | 343 | 262 | 30.9 | | | | | |
| Total Light Trucks | 86 | | | 209 | | | | | | | |
| Lamborghini * | 106 | 102 | 3.9 | 229 | 253 | -9.5 | | | | | |
| Rolls Royce * | 114 | 75 | 52.0 | 359 | 222 | 61.7 | | | | | |
| Maybach * | | | | | | | | | | | |
| Total Car | 611,999 | 684,695 | -10.6 | 1,541,895 | 1,743,154 | -11.5 | 39.3 | 43.3 | 38.2 | 42.6 | |
| Domestic Car | 154,291 | 182,796 | -15.6 | 398,271 | 502,430 | -20.7 | 9.9 | 11.6 | 9.9 | 12.3 | |
| Import Car | 457,708 | 501,899 | -8.8 | 1,143,624 | 1,240,724 | -7.8 | 29.4 | 31.7 | 28.4 | 30.3 | |
| Total Truck | 943,860 | 897,069 | 5.2 | 2,491,150 | 2,351,647 | 5.9 | 60.7 | 56.7 | 61.8 | 57.4 | |
| Domestic Truck | 527,438 | 521,510 | 1.1 | 1,418,541 | 1,380,269 | 2.8 | 33.9 | 33.0 | 35.2 | 33.7 | |
| Import Truck | 416,422 | 375,559 | 10.9 | 1,072,609 | 971,378 | 10.4 | 26.8 | 23.7 | 26.6 | 23.7 | |
| TOTAL LIGHT VEHICLE SALES | 1,555,859 | 1,581,764 | -1.6 | 4,033,045 | 4,094,801 | -1.5 | 100.0 | 100.0 | 100.0 | 100.0 | |
| Selling Days | 27 | 27 | | 75 | 75 | | | | | | |

† Estimate * Imported cars only ** Imported trucks only

Source: www.motorintelligence.com

Source: <u>www.motorintelligence.com</u>;Wall Street Journal



RISKS

- This period of low interest rates and the current bull market continue
- Tesla will eventually have to weather a recession but.....
- Despite this being the second longest market cycle in history, there is no telling when the exact timing of the bull market will end

"The market can stay irrational longer than you can stay solvent"

- John Maynard Keynes



RISKS

- Elon Musk looks to be one of the best innovators of our time and it may not always work to one's advantage to bet against these innovators
- Purchased \$25,000,000 of stock in March 2017 at an average price of \$262 a share which aligns him more with shareholders
- Takes a salary of less than \$40,000 a year
- The large share purchase might be the catalyst for this most recent run up in the stock price, creating another great entry point for shorts
- Denies on the Q4 conference call that SpaceX will steal away his valuable time from Tesla but it is hard for me to believe



Thank you for reading and for your time!

