

Stock Market Says Tesla Is Hanging By A Thread

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Tesla: The Good, The Realistic And The Ugly Outlook
by Odysseus | about: TSLA

Why is Tesla (TSLA) currently trading at an average volume of 2.5 million shares and above \$50 per share when they have yet to post a single positive quarter? Their goal is to capture 1% of the luxury market share in 2013 and 2% in 2014 (according to their investor presentation). Some may deem these 40-50% growth goals very hard to reach due to a limited market worldwide for luxury cars and the amount of established competition. There is also growing competition from new international car companies competing in all market segments, with a work force that is paid much less than the domestic employee and the ability to adapt (some may say copy) existing technology.

What the Tesla Bulls are Betting On

In 2013 Tesla is targeting to ship 20,000 units, at a very high 10-15% operating margin rate. This is a very hard margin rate to achieve these margins in the automotive industry, especially when the major companies are operating at these margin rates:

Ford (F) ~5%
Toyota (TM) ~5%
Volkswagen ~6%
Tata Motors (TTM) 9%
Daimler ~7%
Audi ~12%
Porsche >15%

Lets assume they somehow hit their high-end target of 15% margin and also assume the high-end average of \$100k sale price per car. Doing the simple math the profit would be roughly \$15k per car, and multiplied by 20k units, that is \$300 million in profit. Now lets assume a loss of 2.5% due to taxes and expenses before getting to the net profit (industry margin rates). That leaves a profit of \$292.5 million and dividing it by the estimate of outstanding shares at the end of 2013 (at current outstanding share growth, assume 125 million shares), thus roughly \$2.34 earnings per share. So at this growth rate and future advertised growth rate of 40 to 50%, the market will probably peg the stock at a P/E of 40-50, putting the share price at \$93.6 to \$117. Then in 2014 if they reach their shipping goal of 30k units, the growth rate will decrease to 30% and market will drop their P/E to 30-40 which will put the price at about \$90-120 per share.

The Realistic Outlook

Based upon the competition in the automotive industry, emerging alternative fuels, hybrids vehicles and limited luxury market, the realistic outlook should be a 20-30% growth rate on the high end of estimates. If in fact the growth rate falls into the 20% range the market will most likely start trading the stock not as a startup, but as an established company with an industry perform or industry outperform growth rate. Currently established companies with growth rates at the top of their industries are trading anywhere from a price per earnings of 15 to 25. So lets look at the "units shipped forecast" under a realistic outlook:

2013 ~ 16-20k
2014 ~ 22.4-28k (40% growth)
2015 ~ 30k (20% growth)

So taking the realistic 2015 outlook and saying they remain somewhere in the high teens for margin (assume 17.5%) that leaves a \$525 million profit and a approximate net profit of about \$512 million in this scenario. Taking their outstanding share growth the projection at the end of 2015 should be about 145 million shares, leaving an earnings per share of \$3.53. If the market awards Tesla with a high end price per earnings of 20, that will put the stock \$70.6 per share. If the competition becomes too great or the margins slip, it will probably go down to trading between a P/E of 10 to 15, putting the stock at a \$35.3 to \$52.95 per share range.

My Ugly Prediction

The following prediction is based upon a lot of assumptions, uncertainties and questions that I hope you can answer in the comments field.

The Lithium Ion Battery Evaluation

Industry experts have said that lithium batteries have not advanced at a fast enough pace to warrant them the battery of choice for the future. According to Fred Schlacter, a lithium-ion battery expert and retired physicist from the U.S.-funded Lawrence Berkeley National Laboratory, "Significant improvement in battery capacity can only be made by changing to a different chemistry." (Washington Post Article). So although Tesla is betting on this technology, there are a lot of industry experts that are not convinced that this technology can be expanded and a switch to a new chemistry might be made in the future. But can Tesla switch to a new technology in a short period of time and have enough cash to stay afloat while doing so? If a new technology comes out tomorrow you can bet companies like GM or Ford can put it into production a lot faster and more cost effective than a small start up can.

In fact, the industry is already developing competing technologies. Companies are close to bringing Hydrogen technology to market (USA Today Article) as well as expanding the use of natural gas. For example, Clean Energy (CLNE) is establishing a large network of natural gas fueling stations to first support the trucking industry and in the future may try to bring these stations to the domestic car market (CLNE expanding with partners like UPS). So how certain is Tesla that its rush of orders are not mainly for enthusiasts who want to own the next new adult toy? Once a new technology comes out and offers a greater range from an alternative energy choice, will Tesla be able to keep the luxury market interested in its older lithium ion technology?

There has also been a lot of safety incidents with the lithium ion batteries from overheating in cars and airplanes. After the regulators grounded the Boeing 787 Dreamliner due to overheating Lithium Batteries, Mr. Schlacter added, "Smart people have been working on this for 10 years already and no one is close to a new kind of battery." (Reuters Article). To some experts this type of energy source seems to be at a dead end for growing capacities. A couple questions that should be on an investor's mind is will this technology continue to have safety issues and how long will it be a viable source of energy?

In this Science Daily article, the life of a lithium ion battery is currently 5-20 years and declines in weather that is above 86 degrees Fahrenheit. Elon Musk (Tesla's tweeting CEO) did announce a great battery warranty, but how long will that warranty last if most of these cars are driven in the high heat southern states and degrade in a short period of time?

The current cost of the batteries is also being subsidised by the government as alternative energy plants are being promoted. As the subsidies go down the cost may sky rocket, even though Mr. Musk says their margin rates (which he does not break down in their latest annual report) have little to do with government subsidies directly. However, the indirect subsidies to lithium manufacturing plants might disappear and who knows how hard that will hit Tesla's margin rates.

In 2009, the federal stimulus package dumped \$2 billion in battery plants but the results have been mixed. One company, A123 Systems, went bankrupt. It's still making batteries but now it's owned by a Chinese company. LG Chem, a South Korean company, got millions to build a battery plant in Holland, Michigan, but so far it's sitting idle and hasn't made any batteries. (NPR Article)

Taking these facts into account the outlook for the lithium battery car market is volatile. The government will most likely not continue to "dump" money into plants who sit idle and without the government's support it will be harder for Tesla to keep driving costs down on their batteries and improving their margin rate. This is also a cause for concern in the future as the real money is in the ability of Tesla to keep trimming costs and bring the prices down to the everyday consumer. But this will be next to impossible if they cannot keep driving down the cost of the lithium ion batteries.

We also have to take into account supply and demand. If pure electric cars like the Nissan Leaf and hybrids like the Prius (52 mpg at a base price of under 25k) become more popular the demand for lithium ion by all of the major manufacturers will go up and Tesla will most likely not be able to get more favorable pricing. Their volumes in the next several years will still put them at the bottom of the pecking order against the big car companies.

Lastly, the Tesla bulls seem to be forgetting to look at the domestic and global recovery. The government subsidies tend to go away once the economy strengthens and the market uses more goods when the economy improves. As seen by the Dow Jones and S&P Charts over the past several quarters, a lot of investors are betting that the economy is growing stronger and that the global economy is also turning around. As companies feel safer to spend their stock piles of cash, the run on lithium ion based products throughout the many different

industries that use it can increase the battery pricing enough to significantly hurt Tesla's margins.

Furthermore, many volume based agreements in the automotive industry are tied to price indices of all sorts including labor, metal and raw goods indices. When the global market picks up and demand for labor and raw goods increases the suppliers will use their indices tied contracts to raise prices for their goods. Tesla will not have much room to push back as they are a very small player that is in the back of the line when it comes to favorable pricing, which is always given to the bigger consumer of goods, i.e. the GMs and Ford's of the world.

The Market for Tesla

So what is the current (luxury) market size that Tesla is competing for? A recent Wall Street Journal article has this estimate in it:

(click to enlarge)

What can we infer from this chart? Domestic market in 2002 was 1,670k units in 2012 its 1,700k units, a growth of only 2% over 10 years. In large part this was due to the recession, but what is to say another recession is not around the corner? The estimate for the next 8 years is 5% per year, with most of the growth coming from China. But this growth is very uncertain and this Warc.com article points out this uncertainty. Both of the afore mentioned articles state that the Chinese market is volatile due to their government and other factors. If we take China out of the equation and look at the next four top global luxury car consumers, the growth rate is projected to be 909k units or approximately at a snail pace of 3% per year.

Although Tesla is experiencing a high growth rate since they started from a 0% market share and every new sale is taking a piece of the pie, the pie is a slow growing pie compared to other industries. So the initial wave of orders is exciting because the numbers represent a very deliciously growing piece of pie, but the growth will no doubt plateau. It will no doubt plateau because it seems as if the glutinous luxury market tend to try a new flavor and then go back to the traditional luxury brands that put out a new model every year. This statement can be validated by the fact that only a handful of luxury brands remain in the world.

There is also another market share concern that has yet to be mentioned and should be analyzed in a full Tesla analysis. This concern is how long will it be before the Chinese and the other dozens of Asian car companies copy this technology? Can Tesla compete with the additional taxes to export as well as the shipping costs in those markets? Or will they put out more shares and raise capital to try to build overseas factories?

It seems as if Tesla is the Guinea pig for the major manufacturers and if they show a profit quarter over quarter, how long before the major luxury makers with their versatile factories take the ion battery and adapt it to their luxury models? The Nissan Leaf has a long range and if Tesla has any success will Nissan and other manufacturers hesitate to put a bigger battery on a larger frame and put luxury features in the car? Tesla's price is highly dependent on high margins, which can erode due to the uncertain lithium ion market and a high base selling price which can also erode as competition comes from every manufacturer.

Another criteria to look at when paying for a premium item is its payback period versus an item with the same functionality at a lower price. Tesla's payback period is growing every quarter as hybrids are topping 50 mpg (at \$4 a gallon it would take about 100 years to payback Tesla's \$50k premium versus a 40 mpg Lexus ES Hybrid) and thus it does not make sense for most families to get a Tesla if they do the math. This in turn limits the market again to individuals with a lot of cash to spend.

In conclusion to this lengthy diatribe, there are just too many obstacles and unknowns to pay \$54 a share for a company that has not posted a positive quarter yet. I will only admit my assumptions are incorrect after three to four quarters of over 30% growth at high margin rates. I believe that it is a \$30 to \$40 stock and can grow further if they somehow can advance the technology and reduce the battery costs significantly to offer the everyday consumers a more affordable option. But right now I would be more inclined to bet on the Chicago Cubs winning the World Series than on Tesla sustaining its high growth rate.

Disclosure: I am short TSLA. I wrote this article myself, and it expresses my own opinions. I am not receiving compensation for it (other than from Seeking Alpha). I have no business relationship with any company whose stock is mentioned in this article. All views are my own speculations and are not meant to influence the stock price.

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