Siena Market Line
1st week of November 2016

Tesla, Inc.

NASDAQ:TSLA

Analyst: Alexandre Thiam
Sector: Consumer Goods.

SELL

Price Target: $133.66

Key Statistics as of 11/4/2015

Market Price:	$190.56
Industry:	Automotive
Market Cap:	$28b
52-Week Range:	$141.05-$269.39
Beta:	0.88

Catalysts:

- **Short-term**: SolarCity deal end of November.
- **Medium-term:** Unprofitability
- Tesla cutting its growth plan

Company Description:

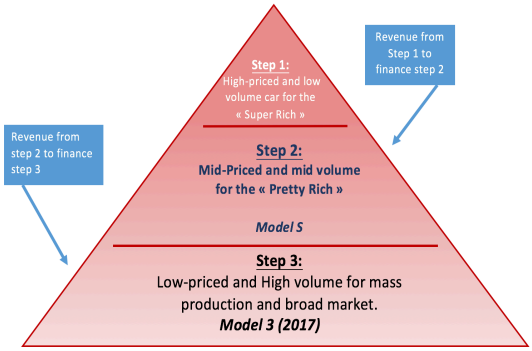
Tesla is an American Automaker and Energy Storage company that was created in 2003 by a billionaire philanthropist called Elon Musk. The company had the vision to redefine the future of the automotive industry with electric engines. The Initial Public Offering took place on June 29 2010 for a total amount of 13,300,000 shares at the initial price of $17 per share, and the company currently trades on the NASDAQ index. The company sells a more sustainable future via electric cars across 3 main venues which are North America, Europe, and China. Tesla is currently seen as the reference in terms of Electric cars and sustainable transportation techniques.

Thesis

- Tesla motors sells more dream than actual sustainable solutions. Investor invest solely in the future outlook and hope that it becomes a reality.
- The current financials and relative valuation is showing that tesla is highly unprofitable, and there are some major flaws in its Business Model.
- The current management of the firm is poor. Board, namely CEO Elon musk show signs of non-rational thinking through their Acquisition strategy in regards to their current financial struggle

Business Plan

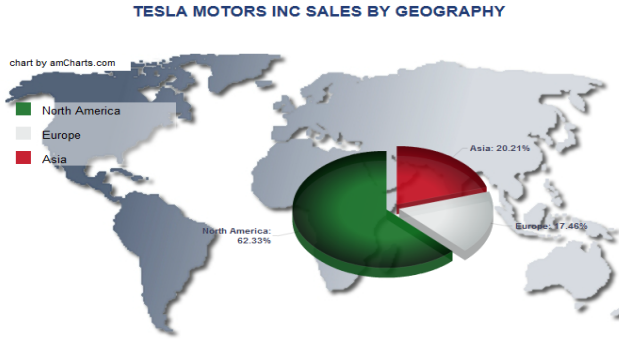
Tesla operates under a very specific business model. The slogan of the firm is "The End of Compromise". The company futuristic outlook allowed the stock price the skyrocket to $280.02 in June 2015.



I draw an organigram of Tesla's current business plan showing what they tried to achieve during these past 10 years. The company simply launched products in order to be able to finance its future project without seeing any future for these specific products. The Tesla roadster which represent the "step 1" shown above defined by high priced products (starting at $129,000 in the U.S.) started to be produced in 2009 and the ended in 2012, three years later. Production of the model S (Step 2, current phase) started the same year in 2012 and will most likely end by 2017 when Model 3 will be launched. Tesla will be entering the final phase of the plan in 2017 with the launch of the cheap Model 3 (starting at US$35,000). All things considered for the company it would be supposedly entering its mature phase with level of unprofitability never observed in that industry. The risk are obvious, investors see a future in Tesla, but is the car market and the mankind ready yet?

Segments

It is hard to argue that the fully electric car market is growing regarding the unsustainability of the current mainstream thermic technologies. The mission of the company is clear: to accelerate the advent of sustainable transport by bringing compelling mass market electric cars to market as soon as possible. The firm is selling its products in 3 different areas, Europe, U.S. and China. The geographic breakdowns shows that North America represent the majority of sales with 62.33% followed by Asia, at 20.12% and Europe with 17.46%. In 2010 Europe was ahead with 60% which shows a shift in demographics for Tesla.



The company operates under two main axes which are

-**Direct Sales** represent 92% of total revenue ($4,046 m in 2015) with $3,741 millions**.** consists of a network of 177 company owned showrooms in 2016. Compared to all major car dealership tesla owns all its sales point and do not use a franchise system. Direct Sales also use Internet sales which represents 33% of Auto sales.

-**Services** represents roughly 8% of total revenue with $305 millions. It consists of service centers located throughout the world. Clients could charge as well as service their car if needed, but tesla equipped their cars with an error monitoring device that allows the company to fix issues on cars from long distance directly from their service centers. Superchargers are a network of charging stations throughout the world (China, Europe, and U.S.) where tesla owners could fully charge their car within 30 minutes as compared to 10 hours with a standard 240-volt line.

The company also offers some other products and technologies that they sell to other auto makers as well as so called new energy storage solutions, but we will get to this later.

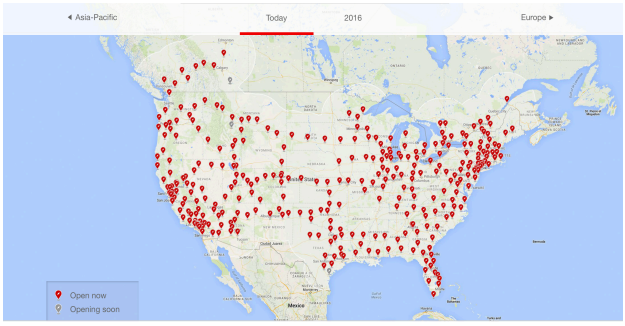
Technology vs. Competition

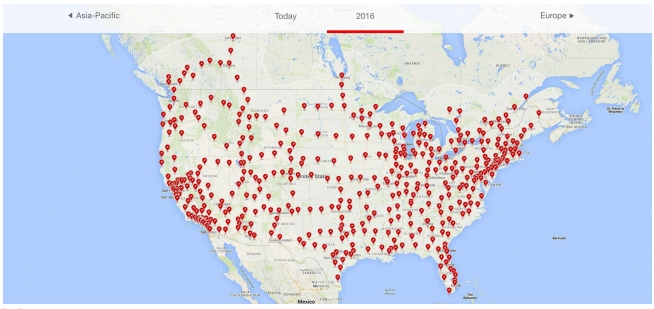
AutoPilot: Tesla launched in late 2014 its Auto-Pilot technology and equipped all manufactured vehicles since then. The technology was announced as vanguard by the company but only uses existing technologies from its European competitors. The function is semi-automated where the car can assist the driver in daily maneuvers such as parking a car. In June of this year Tesla was involved in a polemic as one of Tesla owner died in car accident involving the Autopilot tech. The investigation is still running as Tesla hidden this information to its shareholders and to the market trying to make it go under the radar. It could be signs of guilt towards potential flaws in their technology.

Batteries: Tesla said that it was the most efficient full electrical maker having the lowest cost for car batteries, estimated at $190 per kWh. The company have quarterly CapEx of approximatively $400 millions, spending 17.74% of total sales in R&D. The fact is that GM reported last year that it was in capacity to manufacture an inexpensive mass market car that could simply put tesla out of business. Indeed, GM has both the resources (physical, and material) to mass produce fully electrical cars. The reasons for GM and other big players in the automotive not to destroy Tesla are simple; Tesla is currently devoting all its time and resources (financially close to distress) to improve the future of the industry with breakthrough technologies that will be simply copied within couple of weeks by other engineers once they are out in the market.

Powerwall: For some bearish investors, Tesla is not so much an automaker but more an energy storage provider and manufacturer of energy solutions. On April 2015, Tesla said it would release this technology designed for home and store usage. It is a lithium-ion rechargeable battery stations using solar energy systems. It is said to save up to 20% on yearly bill for electricity of users.

Superchargers: This Network is viewed by bullish investors as what separates Tesla to any other electric car maker, and therefore represent a huge driver in the stock price and overvaluation of the firm. Below is a comparison between the current number of location and the expected amount by the end 2016.





The growth of the network is on the decline, and we currently are 2 months down the end of the year, so I find it difficult to see how Tesla could meet its target. As I previously said the number of Supercharger stations is a driver of the stock price so I would image that the market will have a consequently bad reaction in case of Tesla miss targets.

Financial Struggle/Relative Valuation

Based on its business plan (step 1, 2, and 3) Tesla sells cars with pre-orders thanks with its e-commerce operations. It should collect cash quickly but has a conversion cash cycle of 53 days. GM and Ford both have lower CCC with 35 days and -22 respectively, this shows issues with inventory with 148 of inventory to cash days.

1) Key Stats | 2) I/S | 3) B/S | 4) C/F | 5) Ratios | 6) Segments | 7) Addl | 8) ESG | 9) Custom
10) Profitability | 12) Growth | 13) Credit | 14) Liquidity | 15) Working Capital | 16) Yield Analysis | 17) DuPont Analysis

In Millions of USD except Per Share	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
12 Months Ending	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015
Accounts Receivable Turnover	-	8.73	32.89	22.90	25.14	22.72	53.02	23.20	20.46
Days Sales Outstanding	-	41.95	11.10	15.94	14.52	16.11	6.88	15.73	17.84
Inventory Turnover	-	1.69	5.14	2.51	2.99	2.41	5.12	3.58	2.80
Days Inventory Outstanding	-	216.13	71.06	145.14	121.88	152.15	71.36	101.94	130.42
Accounts Payable Turnover	-	3.11	4.98	2.72	2.14	2.79	5.03	5.42	4.07
Accounts Payable Turnover Days	-	117.61	73.35	134.40	170.87	131.23	72.50	67.39	89.70
Cash Conversion Cycle	-	140.46	8.80	26.68	-34.47	37.02	5.74	50.28	58.57
Inventory to Cash Days	-	258.07	82.15	161.08	136.40	168.26	78.24	117.67	148.27

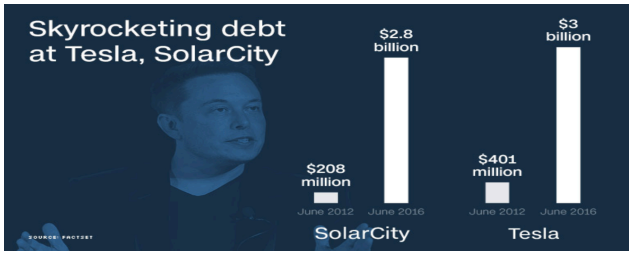
EPS 1-yr growth currently stands at -193.64% with an industry average at 55% (if we subtract Tesla). Further investigations shows that Operating Statistic are also quite ugly for the company apart from sales growth at 26% vs 11.55 on average. Most of Tesla's margins are in negative territory. The EBITDA margin is at -7.27% when its direct competitors are averaging 6%. This clearly shows fundamental issues with profitability and cash flows with an inventory turnover of 2.80. As I mentioned earlier the company is currently unprofitable, where only gross margins are positives for the future. When we look at the operating margins Tesla also ranks worst in class with

-17.71% as compared to 5% on average for the competitors. Same with the profit margin that currently stands at -14.60% which shows ultimately the struggle of the company with its liquidity and finances.

Name (BI Peers)	Sales Growth 1 Year	Gross Margin	Operating	Profit Margin (Trailing)	Return on Assets (Trailing)	Return on Equity	Return on Capital (Trailing)
Average	11.55%	16.77%	-0.45%	-0.06%	0.59%	6.80%	-0.24%
(100) TESLA MOTORS INC	26.50%	22.82%	-17.71%	-14.60%	-8.60%	-42.74%	-16.06%
(101) FIAT CHRYSLER AUTOMO...	18.20%	13.04%	4.23%	2.33%	2.12%	14.11%	--
(102) GENERAL MOTORS CO	-2.29%	15.78%	6.20%	6.09%	4.85%	24.86%	9.28%
(103) FORD MOTOR CO	3.80%	15.42%	5.48%	5.95%	3.99%	30.97%	6.05%

Acquisitions

Earlier in 2016, Elon Reeve Musk announced a massive project of implementing solar panels on the roof of future Tesla cars. Furthermore he also wanted its Powerwall stations to operate in autonomy and not to rely on any Solar and PV manufacturer. On August 1, 2016 Tesla announced the acquisition of SolarCity Corp. (Nasdaq:SCTY) for a mind blowing $2.6 billions. Let's place the context, SCTY is owned by Rive Lyndon a South African billionaire which happens to be Elon Musk's cousin. SolarCity has in excess of $2.8b of debt for a market cap of $1.8b for a D/E ratio of 178.8%. The 1-yr Default probability is an impressive 5.69%. No need to state that SolarCity is flirting with Bankruptcy on a daily basis. On the other hand, Tesla is not performing much better with a D/E of 100.5% and more than $3 b in debts.



Raising concerns are oriented towards two main issues. The first is that SolarCity will be a real financial liability for Tesla that is already struggling. Indeed, some managers are saying that a buyback could push SCTY to delay the payments of its payables in the case Tesla acquire which would put additional financial pressure on Tesla's shoulders. The second issue is that for some investors and half of the board of directors, this deal is highly looking like a bailout plan from Elon Musk to revive his cousins sinking company. I would hardly see how markets will react positively to the deal if it goes through, as this will put Tesla in further financial and liquidity distress.

Market's Reactions

The market is solely relying on the beautiful future that Tesla is willing to offer. So far, the stock price is only driven by news announced by the company rather than rational valuations. Previously the stock price of the firm had massive overreactions to news such as the Model X SUV announced on Feb 9, 2012 that sent shares up by 5% the following week.

In 2015, the company announced the Powerwall stations that pushed the price up by roughly 5% the next day. But recent news (a part from the model 3 unveiling) shown little to no positive reactions from investors. On Aug. 23, 2016 the company announced a battery pack (P100D) that would make the model S production faster, and shares plunged by 6% the next week. A little further down the year on Oct. 19, 2016 Tesla revealed its "Full Self-Driving Hardware" that sent the shares down by 1.0%.

On October 26, 2016 the company released its Earnings and the stock went up by 6% and went to $213 from $202. The shares then plunged to $188 a week later representing a 13% dive, as shown on the graph below.

This maybe shows that market makers are getting tired of the stock and correct the overreactions sooners than before. As I mentioned earlier I would forecast that the market will remain unimpressed if the SolarCity deals goes through.

Summary

I see an extreme overvaluation of the current stock price as I computed an intrinsic value at $127.78. The technology is not any better than competitors as we saw that major players could actually kill Tesla. The management is also questionable with an expansion strategy that seems unrealistic regarding the current shape of the firm. Tesla said in its 10-K that this was the best quarter ever, yet there is nothing impressive. The question is whether or not the market will self-correct and value Tesla more fairly closer this value in a close future, and if yes when?

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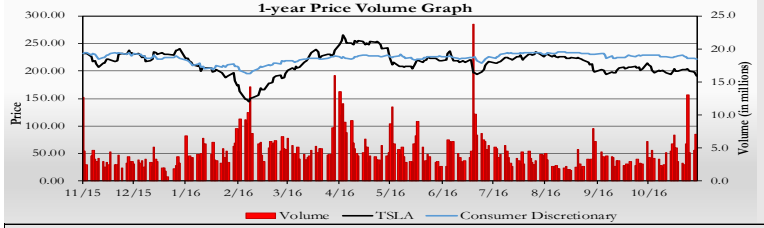
1st week of Novembe

Tesla Motors, Inc. (TSLA) — CENTER FOR GLOBAL FINANCIAL STUDIES — BEARISH

Analysis by Alexandre THIAM | Current Price: $190.56 | Intrinsic Value $124.78 | Target 1 year Return: -29.66%
11/4/2016 | Divident Yield: 0.2% | Target Price $133.66 | Probability of Price Increase:

1-year Price Volume Graph



Description

Tesla Motors, Inc. designs, develops, manufactures, and sells electric vehicles and stationary energy storage products in the United States, China, Norway, and internationally.

General Information

Sector	Consumer Discretionary
Industry	Automobiles
Last Guidance	November 3, 2015
Next earnings date	February 10, 2017
Estimated Country Risk Premium	3.84%
Effective Tax rate	21%
Effective Operating Tax rate	21%

Market Data

Market Capitalization	$28,563.27
Daily volume (mil)	5.14
Shares outstanding (mil)	149.89
Diluted shares outstanding (mil)	138.22
% shares held by institutions	74%
% shares held by investments Managers	55%
% shares held by hedge funds	2%
% shares held by insiders	21.21%
Short interest	18.77%
Days to cover short interest	8.07
52 week high	$269.34
52-week low	$141.05
Levered Beta	1.33
Volatility	47.19%

Past Earning Surprises

Quarter ending	Revenue	EBITDA
9/30/2015	-35.89%	-251.33%
12/31/2015	-36.68%	-167.29%
3/31/2016	-31.26%	-204.14%
6/30/2016	-33.53%	-191.65%
9/30/2016	-13.78%	39.28%
Mean	-30.23%	-155.03%
Standard error	4.2%	50.5%

Peers

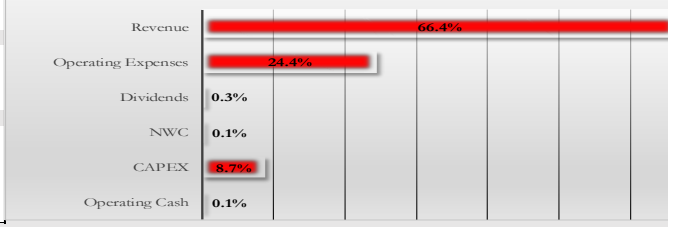
Ford Motor Co.
General Motors Company
CarMax Inc.
AutoNation, Inc.
Ferrari N.V.

Target Price Distribution--P(price↑)=1%

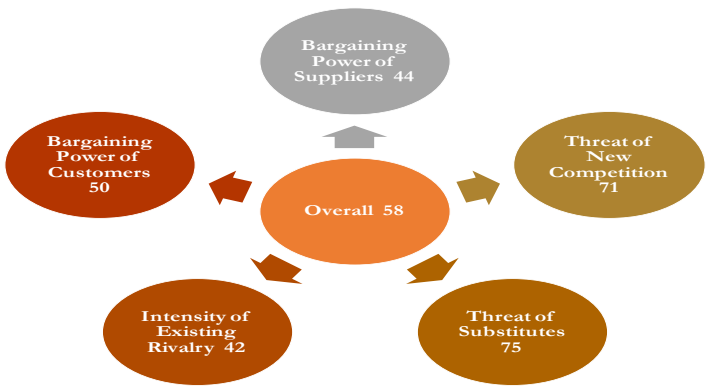
Management	Position	Total compensations growth	Total return to shareholders
Musk, Elon	Co-Founder, Chairman of the	2.46% per annum over 5y	5.26% per annum over 5y
Wheeler, Jason	Chief Financial Officer	N/M	0% per annum over 0y
Straubel, Jeffrey	Chief Technology Officer	-29.75% per annum over 5y	5.26% per annum over 5y
Field, John	Vice President of Engineerin	N/M	0% per annum over 0y
Branderiz, Eric	Chief Accounting Officer, Vi	N/M	N/M
Evanson, Jeff	Vice President of Investor R	N/M	N/M

Profitability	TSLA (LTM)	TSLA (5 years historical average)	Industry (LTM)
ROIC	3.0%	3.24%	6.60%
NOPAT Margin	3%	1.48%	7.4%
Revenue/Invested Capital	1.00	2.18	0.89
ROE	1.0%	1.79%	14.07%
Adjusted net margin	1%	0.14%	5.4%
Revenue/Adjusted Book Value	1.82	12.66	2.61
Invested Funds	**TSLA (LTM)**	**TSLA (5 years historical average)**	**Industry (LTM)**
Total Cash/Total Capital	33.0%	29.9%	14%
Estimated Operating Cash/Total Capital	28.3%	21.1%	N/A
Non-cash working Capital/Total Capital	-18.5%	-12.2%	-6%
Invested Capital/Total Capital	95.4%	91.1%	91%
Capital Structure	**TSLA (LTM)**	**TSLA (5 years historical average)**	**Industry (LTM)**
Total Debt/Common Equity (LTM)	0.12	0.09	1.80
Cost of Existing Debt	7.04%	6.17%	3.11%
Estimated Cost of new Borrowing	3.72%	3.51%	3.11%
CGFS Risk Rating	BB	BB	BBB
Unlevered Beta (LTM)	1.23	0.52	0.53
WACC	8.83%	5.82%	4.97%

Sensitivity Attribution Analysis



Porter's 5 forces (scores are out of 100)



Valuation

Period	Revenue growth	NOPAT margin	ROIC/WACC
Base Year	56.5%	3.0%	0.34
9/30/2017	25.3%	7.4%	0.70
9/30/2018	54.3%	14.0%	6.11
9/30/2019	31.8%	14.1%	5.97
9/30/2020	38.3%	14.7%	6.32
9/30/2021	56.9%	15.0%	6.36
9/30/2022	30.0%	15.2%	6.43
9/30/2023	19.3%	15.4%	6.51
9/30/2024	11.3%	15.6%	6.60
9/30/2025	5.8%	15.8%	6.72
9/30/2026	-74.5%	16.1%	6.85
Continuing Period	4.1%	16.3%	4.15

Period	Invested Capital	Net Claims	Price per share
Base Year	$632.84	$5,363.15	$119.24
9/30/2017	$1,177.10	$2,412.24	$127.38
9/30/2018	$1,545.20	$2,054.10	$133.16
9/30/2019	$4,468.75	$1,621.33	$138.75
9/30/2020	$5,934.89	$1,204.08	$144.21
9/30/2021	$8,918.74	$769.08	$149.48
9/30/2022	$2,419.50	$311.38	$154.66
9/30/2023	$2,567.52	-$382.25	$161.36
9/30/2024	$2,623.69	-$890.30	$166.37
9/30/2025	$2,733.53	-$1,434.21	$171.31
9/30/2026	$2,828.98	-$2,020.69	$176.19
Continuing Period			