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A Strategic Audit of Tesla, Inc.

Cody McCain
University of Nebraska - Lincoln

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by
Cody McCain, BS
Accounting and Agribusiness
College of Business

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Faculty Mentors:
Samuel Nelson, PhD, Center of Entrepreneurship

Abstract

After Tesla completed its first every back to back profitable quarters at the end of 2018, sales started to decline in the first quarter of 2019 and many question if the company would every be profitable. Through a strategic audit of Tesla and the electric vehicle industry several key factors have been identified to help improve Tesla's profitability. Analysis tools used to analyze the company and the industry include Porter's Five Forces, SWOT Analysis, and PEST Analysis. At the conclusion of the audit there are three recommendations given to help improve Tesla's strategy. First it is recommended that Tesla focuses in on achieving economies of scale by opening factories in both the European and Chinese markets. Second it is recommended that Tesla replaces Elon Musk as CEO of the company to foster more sustainable and stable decision making for the company. The last recommendation is to reduce research and development projects to only those that are the most sensible for the company to be investing in. The combination of these recommendations should hopefully help Tesla become sustainably profitable in the years to come.

Key Words: Tesla, Strategy, Business, Vehicles, Management

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Background

Tesla was found in 2003 by entrepreneurs Martin Eberhard and Mar Tarpenning, the company was named after the famous inventor Nikola Tesla. Elon Musk, who now is the face of Tesla, joined the company in 2004 as chairman of the board after making a $30 million investment into the company. The founding idea of the company was to produce the first all-electric sports car, but today the company's mission has evolved and is state on their website as: "Tesla's mission is to accelerate the world's transition to sustainable energy." In 2008, after much research and development, Tesla unveiled its first car, the Roadster. The Roadster was a first of its kind, electric sports car that could travel up to 245 miles on one charge and do 0 to 60 in less than four seconds. Also, in 2008, following the two founders, Eberhard and Tarpenning, leaving the company Musk took over as CEO and still serves in that role today ("Tesla, Inc.").

Tesla went public in 2010, the first American car manufacturing company to do so since Ford went public in 1956. The initial public offering raised over $226 million for the company ("Only Seven Years"). Tesla would end the production of the Roaster shortly after so that the company could work on its new project, the Model S, a four door sedan. Additionally, in 2012 Tesla began building its vast network of charging stations across the United States as part of its plan to make electric cars more feasible. In the first quarter of 2013 Tesla posted it first ever profitable quarter as sales of the Model S began to grow. The success was short lived however, as the company continued to pour money into research and development for newer cars and its self-driving software ("This History of Tesla").

In 2016, Tesla started sales of its first ever crossover sport utility vehicle (SUV), the Model X, additionally the company posted a profit in the third quarter, its second ever. But the

profits where short lived as Tesla would increase its capital expenditures as the company prepared for its most ambitious car yet, the Model 3 ("This History of Tesla").

The Model 3 was set to starting hitting the market in 2017 and was planned to be a cheaper alternative to the Model S and Model X. Tesla had plans to sell the base model of the Model 3 for $35,000, way less than the Model S and Model X price tags which ranged from $80,000 to over $100,000. The Model 3 was to be Tesla's first mass produced car and a big profit driver for the company. In the first day that consumers could order the Model 3 over 200,000 reservations where made ("This History of Tesla").

Tesla was supposed to start rolling off Model 3 cars in 2017, but due to "production hell" as Musk described it, manufacturing issues delayed deliveries. Additionally, it would not be until 2019 the Tesla would start offering the Model 3 for the promised $35,000 price tag ("Tesla Offers"). It was not until 2018 that Tesla began to ramp up production of the Model 3. In the third and fourth quarters of 2018 Tesla posted it's first ever back to back profitable quarters and Musk stated that Tesla would be profitable all quarters moving forward. In the 2018, Tesla sold 245,240 cars, nearly a 100,000 car increase from 2017 ("Tesla Reports").

While things where finally looking up for Tesla in 2018, concerns for the company where renewed in the first quarter of 2019. While at the time of this writing numbers have not been released, Musk has already announced that the company will not be profitable. Additionally, sales and demand for the Model 3 have started decline in the United States, while sales of the Model S and Model X have become flat. Leaving many to wonder if the company could ever actually be profitable. Additionally, in 2018 Tesla announced that they would be closing all of their stores across the United States and move to all online sales in an attempt to cut costs. However, a few weeks after the announcement the company back peddled and decided to keep

the stores open, but instead raised the prices on all the cars except the $35,000 Model 3 (Boudette and Zhong).

In the first quarter of 2019, Tesla unveiled its next production car, the Model Y, which is a cheaper crossover SUV, Tesla hopes to begin production in 2020 (Boudette and Zhong). Also currently planned for Tesla's future is a Tesla Semi, Pickup, and new version of the Roadster. Tesla also plans to continue to improve their autopilot software with the goal that one day cars will be able to safely drive themselves. Tesla, hopes to expand their sales in both the Europe and China markets and is currently working on building a production facility in China to help save cost and lower the price of their cars. (Eric).

It is important to note that Tesla also sells roof top solar panels for homes and Powerwalls which is a battery to store electricity produced from their roof top solar panels. Both of these products are to help Tesla achieve their mission, however, for the purposes of the strategic audit, this paper will only focus on the car manufacturing side of the business.

Situational Analysis

Porter's Five Forces

Threat of New Entrants: Getting started in the electric vehicle industry is not an easy task, especially for a startup. If you take Tesla for example, it has taken the company over 15 years and billions of dollars of debt to get to where the company is today, and they can still barely turn a profit. So, the likelihood of another electric car company starting up in the United States is slim to none. Outside of the United States it is more possible to find startups in the electrical car industry especially in China and Europe, but it will take them years to catch up to Tesla. Tesla's biggest threat of new entrants comes from existing car companies such as GM, Fiat-Chrysler, Audi, Ford, and other well-established car manufactures deciding to enter the market as electric

cars become more popular and feasible. In Germany alone it is estimated that car manufactures will invest over $45 billion in electric car technologies over the next three years (Behrmann). Given these factors the threat of new entrants is medium.

Bargaining Power of Buyers: The power of electric car buyers is high. This is due to a variety of factors. For starters, there is becoming more and more electrical car options available for consumers to purchase creating competition in the field. Car buyers often only purchase and use one car at a time because of the high prices that cars are sold at, because of this someone who just purchased a car from a company is not going to be buying another car anytime soon. Car buyers can easily switch from one car brand to another when they want to purchase a new car. As new car companies have started producing electric cars at lower costs than Tesla, consumer pressure has been placed on Tesla to produce cars at lower cost so as to compete with new entrants (Dudovskiy).

Threat of Substitution: In today's world there are many different modes of transportation and ways to get around. The closest substitute for an electric vehicle would be gas-powered and hybrid vehicles. Besides the energy source from which the vehicles depend on there is little to no differences from an electric vehicle compared to a gas one. While not as comparable electric vehicles also must compete with other modes of transportation such as public buses, subways, biking, trains, etc. Because there are many and a variety of substitutions the threat of substitutions is high.

Bargaining Power of Suppliers: Tesla works with numerous suppliers to produce its vehicles. Pressuring suppliers for lower prices was a part of GM and Chrysler's strategy when they tried to avoid bankruptcy during the last financial crisis, as a result many of their suppliers when bankrupt. In the electric car industry companies like Tesla control the quality and quantity

of parts that are purchased from suppliers. In 2018, Tesla put on pressure on suppliers asking for them to refund Tesla for past payments made on parts and to negotiate lower prices for future contracts ("Tesla, Pushing'). Suppliers are usually well established into a car manufacture's supply chain and parts are custom produced for the manufacture making it impossible to sell them elsewhere. It is evident that car manufactures have more power over suppliers than suppliers do over the car manufactures, making the bargaining power of suppliers low.

Industry Rivalry: Overall the electric car industry rivalry is considered to be medium. This is mainly due to the fact that there is not much competition in the market as of now. Additionally, to major car companies such as GM, electric car sales are small compared to gas power vehicles. Companies such as GM are just breaking into the electric vehicle industry and not as wholly invested as Tesla currently is.

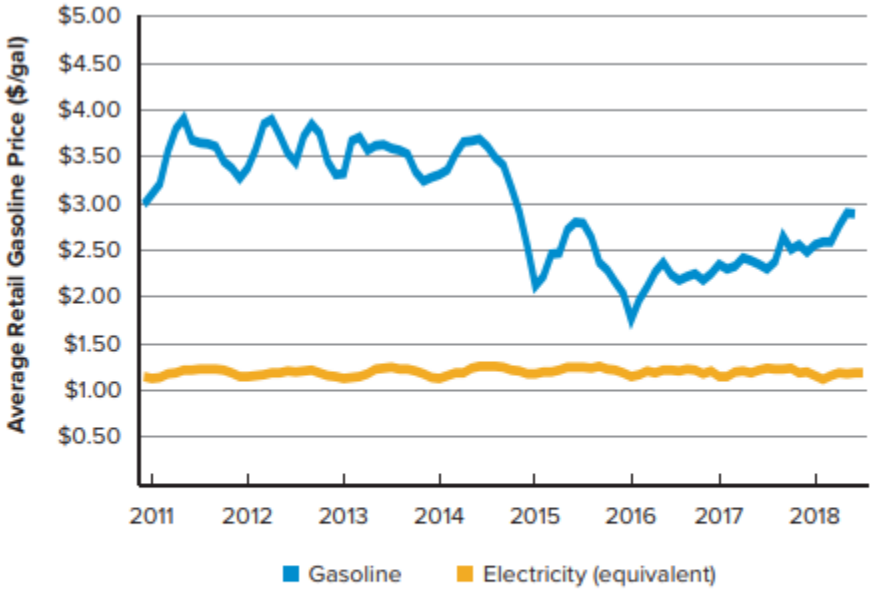
PEST Analysis

Political: The electric vehicle industry that Tesla competes in has a very political friendly climate. Renewable energy technologies have been boosted by numerous government programs throughout the last few decades. In the United States purchasers of electric vehicles can qualify for up to a $7,500 tax credit for buying an electric vehicle. It should be noted however that during the 2018-year Tesla sold its 200,000 car under the credit program and as a result the tax credit will be phased out to zero in 2019 for Tesla car purchases ("Tesla Scrambles"). Still many other countries especially in the European market offer nice incentives for people to purchase electric vehicles. As demand for renewables and climate change concerns continue to grow it is likely that governments will continue their current incentive programs.

Economic: Consumer purchasing power has been on the rise since the Great Recession in 2008. As economies around the world have grown so as the consumer's ability to spend more on

expensive cars such as Teslas. Additionally, the threat of higher gas prices is also good for Tesla as electric cars are the only current alternative to gas powered vehicles and as the below chart shows are cheaper to operate than gas powered vehicles. Higher gas prices raise the ownership cost of having a gas-powered vehicle and as a result makes electric vehicles more attractive to consumers.

U.S. Average Gasoline Price vs. Equivalent Electricity Price



Source: U.S. Energy Information Administration

Note: Electricity equivalent calculated using the U.S. Department of Energy eGallon methodology, which assumes average EV efficiency of 32.6 kWh/100 miles and average gasoline car efficiency of 27.9 mpg.

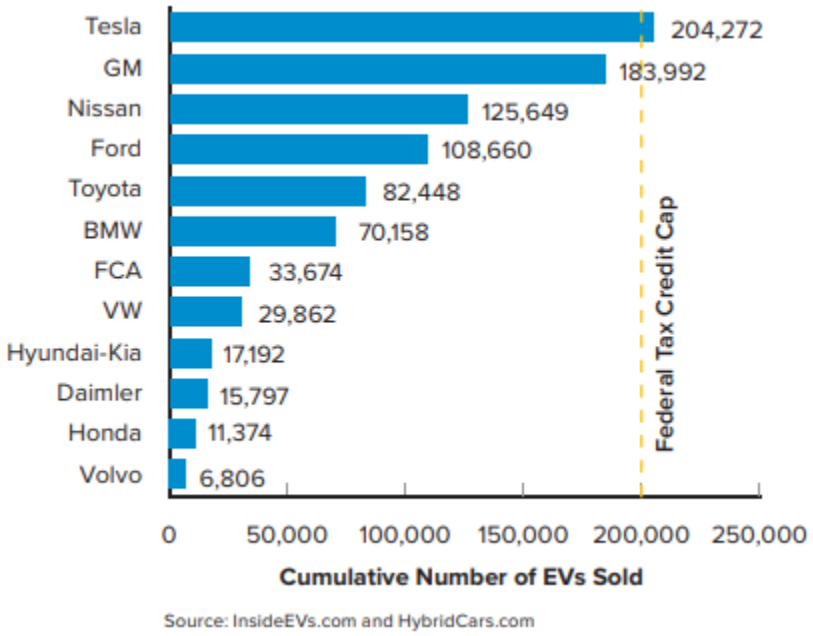
Social: The largest social factor that is beneficial for Tesla is the growing concern of climate change and how much gas-powered vehicles contribute to green house gases. Today, many believe that climate change is one of the largest threats to civilization. As Earth's climate continues to warm due to greenhouse gasses, environmental conscious consumers look for green solutions such as electric vehicles to lessen their own carbon footprint. This social factor will also probably drive political change which will benefit renewable technologies such as electric vehicles.

Technology: Tesla is no stranger to technological advancements and development. Being a leader of automotive technology is one of the competitive advantages that Tesla has. Looking towards the future the next big disruptor to the automotive industry is going be full self-driving cars. Tesla is on the leading age of self-driving car technology and is continuing to develop its self-driving car software. As of now Tesla's autopilot system is just meant to be an assistant to the driver. However, Tesla's end goal is to have a self-driving car that is safe for passengers to ride in. Other companies such as Uber, Google, and even Dyson have invested money in self-driving cars as well, but does not have the infrastructure to produce on a mass scale as Tesla has.

SWOT Analysis

Strengths: Tesla is a leader in the electric vehicle industry as the below chart shows and was one of the first companies to make a practical electric car to sell to consumers. One of Tesla's strengths is that they sell all their cars directly to consumers, instead of the common practice of selling cars through dealerships. This helps Tesla sell the cars at a lower price because their vehicles are not marked up by dealerships. Additionally, Tesla is a leading competitor in self-driving car technology that gives it a competitive advantage over other electric cars. Tesla has also built an impressive network of charging stations for customers to charge their vehicles, according to Tesla's website the company has over 1,441 Supercharger Stations in North America, Europe, and Asia, and that number continues to grow.

Total Electric Vehicle Sales by Automaker

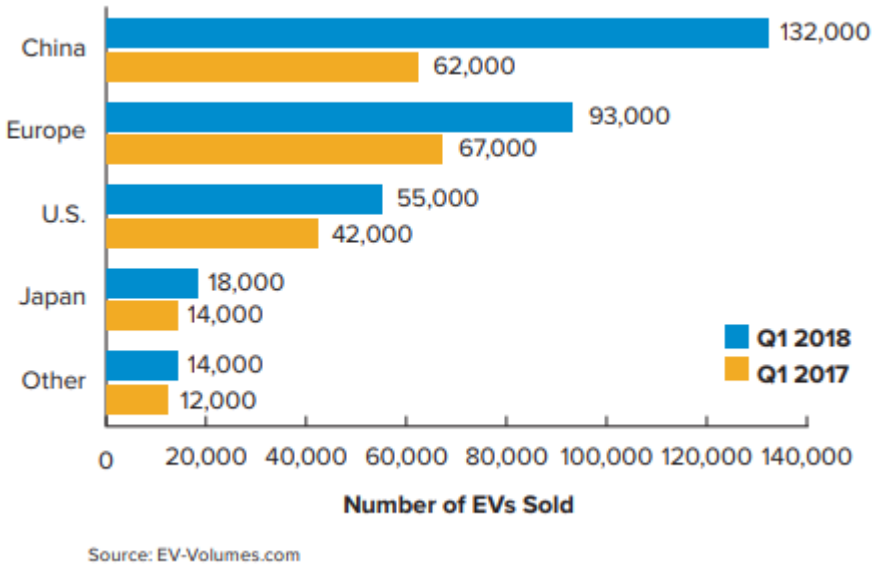


Weaknesses: Tesla has many weaknesses that it needs to overcome. First, the company has a large debt load due to heavy capital expenditures and years of losses. This could hinder future investments as the company tries to pay down its debts. Another weakness of Tesla is that all of its vehicles are produced in one facility in California. This creates additional cost when selling vehicles in Europe in China as consumers have to pay for shipping and import taxes. Additionally, because Tesla sells all of their vehicles directly to consumers, they also have to ship all of the vehicles directly to consumers which Musk as described as "delivery logistics hell" ("What Tesla's").

Opportunities: The electric car market is going to continue to grow as consumers become more environmentally conscious and technology improves to make the electric vehicles more affordable. Tesla is well established in the United States market and has a growing presence in both Europe and China. As the below figure shows in the first quarter of 2018 China and Europe

both topped the list for most electric vehicle sales. Tesla is currently in the process to begin building a factory in China and scouting for a factory location in Europe (Eric).

Global Electric Vehicle Sales by Country



Source: EV-Volumes.com

Threats: Tesla's electric vehicles are expensive to produce and as a result come at high price tag. As better established vehicle companies begin to sell electric cars at a lower price points, Tesla could struggle to reach its much needed growth. Another threat to Tesla it is an American car manufacture which could cause problems when trying to grow in foreign markets as consumers may prefer vehicles made by manufactures in their home country.

Leadership

Sitting at the helm of Tesla, Inc. is the CEO and former chairman of the company Elon Musk. Musk and Tesla go hand in hand, it is hard to find a news article about Tesla that does not mention Musk in it. Musk has control of the company and as CEO has been tremendous in growing the company to where it is today. Musk brings many benefits to Tesla, including running other advanced companies such as SpaceX and PayPal. Musk's work with these other companies gives him the experience to run a sophisticated company such as Tesla. Additionally,

Musk is an optimistic visionary who demonstrates his futuristic outlook by setting bold challenges for his company.

While Musk has his upsides, he also has several downsides as a leader. Musk can often be very unpredictable as a leader which can lead to trouble. In 2018, Musk tweeted that he was planning to take Tesla private at $420 a share and had funding secured but weeks after the announcement changed course and decided to keep the company public. This launched a Securities and Exchange Commission (SEC) investigation as many accused Musk of tweeting the information to help raise Tesla's stock price which was trading well below the $420 a share price tag. In the end Tesla and Musk settled with the SEC. Both Tesla and Musk each had to pay $20 million fine and Musk had to step down as chairman of the board for at least three years. Additionally, the board had to appoint a council of approve Musk's communications and tweets before sending them out to ensure such an incident do not occur again. However, at the time of this paper, Musk and the SEC are currently in another battle over a tweet that Musk sent out saying the Tesla was going to produce over 500,000 vehicles in 2019, about 100,000 more than originally reported by the company ("Elon Musk").

Additionally, Musk as a leader several times has made strategic decisions for the company, only to reverse those decisions a few weeks later, this causes some concern and could threaten consumer and investor confidence in the company. Musk also places lofty goals that are not always achievable like when Musk wanted to get Tesla to produce over 5,000 cars a week, but the company struggled to barely meet that goal on a few occasions in 2018.

Musk also has his distractions as he runs two other well known companies, SpaceX and the Boring Company. It could be concerning for some that Musk spends time running the other two companies and that he is not giving all of his efforts as CEO of Tesla.

Strategy Alternatives

Tesla needs to continue to refine and adapt its strategy if the company wants to be successful in the long run of the ever-evolving electric vehicle industry. The first alternative is that Tesla should focus in on is achieving economies of scale to become profitable. In order to do this, the company needs to quicken their pace to building and opening factories in both the Chinese and the European markets. While Tesla has plans for this, projects have been slow to come to fruition.

The second alternative is that Tesla should branch into the hybrid vehicle market to reach more consumers. Hybrid vehicles use a combination of power sources to run the vehicle such as diesel engine that powers a battery which drives the car. Hybrid vehicles are becoming more and more popular with consumers. With Tesla's competitive advantage from advanced battery technology and autopilot features, Tesla could probably make a move into the hybrid car market and become a top selling car. Many of the Tesla's existing models could be easily redone into hybrid cars and be produced at mass scale.

The third alternative is that Tesla should replace Musk as a CEO. Musk is constantly working strategy for Tesla but has little oversight on him which has caused the company issues in the past. Tesla is in need of a steadier leader than Musk. Under this alternative Musk would still work in Tesla but would focus on business development and production which he already does, but would like a new CEO focus on strategy and company administration.

The fourth alternative to is cut back on research and development projects that cannot be produced on a mass scale. Tesla is engaged in multiple projects for Tesla Semi, Pickup, and a new version of the Roadster. While these projects help diversify Tesla's product mix they may take valuable resources away from more profitable and sustainable projects.

Strategy Recommendations

It is recommend that Tesla implement a combination of alternative strategies one, three, and four. While alternative strategy number two is sensible, producing hybrid vehicles would go against Tesla's mission and would probably not benefit the company in the long run.

It is recommended that hires a new CEO who can focus in on directing the company towards growth and can be 100% devoted to the company's strategy. The new CEO would be tasked with quickly finishing the Chinese factory facility and getting production going right away. Additionally, a factory site should be selected in Europe and ground breaking should happen quickly. Two new factories would help Tesla scale its mass production cars of the Model 3 and Model Y and take advantage of economies of scale. Two evaluation criteria that would be used to measure the success of this recommendation is gross profit margin and the number of cars that Tesla annually sells.

As for cutting research and development cost, the company for now should cut plans for the Tesla Semi, Pickup, and Roadster. An only focus on Model 3 and Model Y, improving battery technology, and achieving full self-driving car software. The evaluation criteria for this would be decreased research and development cost.

Strategy Justification

To justify why achieving economies of scale is so important and example can be made when comparing Tesla to other automotive competitors. In 2018, Tesla had a gross margin ratio of 18.8% higher than both Ford (15.1%) and GM (9.6%). Yet both GM and Ford are profitable because their gross profits are 3.5 and 6 times higher than Tesla's. If Tesla sold more vehicles at its current gross profit margin it would have higher gross profits to cover general and administrated expenses as well as research and development cost.

The justification for cutting back on research and development cost comes from the fact that Tesla spent $1.4 billion on research and development in 2018, which is more than major car manufactures spend and was approximately 35% of Tesla's gross profit. Cutting out projects like the new Tesla Roadster is sensible because the vehicle is a luxury car and will not sell on a mass production level. By cutting out projects like the Tesla Roadster the company can devote more resources to the Model 3 and Model Y which can be produced on a mass scale.

Lastly, removing Musk as CEO can help create some stainability in the company as well as ensure that the other recommendations are implemented. Musk is proud of the work that he has done at Tesla, and would probably not be very willing to let go of projects like the Tesla Semi and Roaster.

Implementation

To implement this new strategy Tesla's board of directors should begin the search for a new CEO immediately with the goal of finding a new CEO within two months. Once hired the new CEO should set and focus in on goals for factories in both China and Europe. Ideally, the China factory which is already being built would be fully producing cars by the end of 2019 or earlier 2020 and achieve full production capacity by the end of 2020. In Europe a factory location needs to be founded by the fall of 2019 with building starting in early 2020 and cars rolling off the assembly line sometime by 2021.

Research and development projects should be accessed by the management for which are the most viable and important to Tesla's profits in the next few years. Assessments should be completed by fall of 2019 with non-sensible projects cut immediately after the assessments have been ended.

Contingency Plan

One of the recommendations that might be hard to implement is that Musk may not being willing to let go of his position as CEO, especially since he was just forced to be removed as board chairman by the SEC in the fall of 2018. As a contingency plan if Musk refuses to step down as CEO the board could comprise with him and recommend hiring a Co-CEO who would be an equal to Musk but each fulfilling different roles. Musk could focus on design and innovation which he thrives at, while a Co-CEO could focus on implementing strategy and other important management tasks.

Musk may also not the like the idea to cut back on research and development costs and cut projects such as the Roadster or Tesla Semi as these are both projects that Musk created. As an alternative Tesla could work on cutting other general and administrative expenses or instead make a promise to resume cut projects in a few years once Tesla becomes more profitable.

Lastly, the hardest contingency to plan for is achieving economies of scale. If Tesla fails to start production in China and Europe it will be hard for the company to become profitable at its current production. Tesla could open additional production facilities in the United States, but doing so would not make its vehicles competitive in foreign markets due to shipping costs and important taxes.

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