SWOT Analysis

S
STRENGTHS

- Gigafactory plants located in several countries which efficiently mass produce batteries for their electric vehicles (EV) and potentially for other manufacture getting into EVs.
- At the forefront of innovation with several patents and battery tech breakthroughs.
- Owns one of the largest and most extensive charging network station.

W
WEAKNESSES

- Tesla has a thin margin due to the costly business nature of the automotive industry.
- Made a pledge to not intiate lawsuit against parties who infringe on their EV related patents.
- Tesla is a fairly new company and does not have the extensive experience that other legacies have in manufacturing and design of cars.

O
OPPORTUNITIES

- Tesla can get in the ride-sharing bussiness
- In control of the EV market and are in a positon of growth.
- As their Full Self-Driving program (FSD) matures they will be able to increase their subscription pricing which will allow them to have an increased constant cash flow.

T
THREATS

- Ex-employes of Tesla have become top rivals.
- Tech gaints like Apple have announced their own EV.
- Evolving regulations for self-driving might restrict the features of Tesla’s self driving FSD system.

TESLA

Supporting Details

Strengths

There are total of 5 Gigafactory's as stated in the manufacturing section of their 10-K which are located in Nevada, NY, TX, Shanghai, and Berlin. Not only will the Gigafactory decrease battery cost/kWh by more than 30%, but it will produce more cell batteries than the 2013 global supply. [3][4]

Tesla's most recent patents that was filed was the "Electromagnetic Windshield Wiper" alongside 138 granted patents and 141 pending applications from the United States Patent and Trademark Office (USPT). [4]

Tesla charging network comprises of 30,000+ global supercharger stations that have been steadily built throughout the years with prices less than gasoline. [1]

Weakness

Tesla's total revenue is 31,536 million, and their gross profit is 6, 630 million for 2020. That is essentially a 21% retention of revenue with 78.9% of it being used for business expenses. [4]

To speed up the adoption of EV, Tesla has allowed other legacy and new automotive manufactures to utilize their EV patents. This will obviously give their competitors an advantage in quickly adopting EV and presenting Tesla with fearsome competition. [4]

Tesla early tax history goes back to 2004 and in their 10-k SEC file report they stated that they were incorporated in the State of Delaware on July 1, 2003, so they are fairly new to the automotive industry and have less industry knowledge when it comes to car design or manufacturing. In addition, they have less history in comparison to legacy car companies and have to build-up their reputation and customer base from scratch. [4]

Opportunities

In their business overview, Technology section, of their 10-k SEC file report, they state in verbatim that "[Tesla] intend to establish in the future an autonomous Tesla ride-hailing network, which we expect would also allow us to access a new customer base even as modes of transportation evolve." This confirms their plans to go into the ride-sharing business model like Uber. [4]

63% of registered EV in the U.S are Tesla products. Notably two of their models are at the top of the list and their model 3 sedan has gone up 27% in registration. Coupled up with the fact that EVs make less than 3% of the cars in US, Tesla is poised to grow rapidly in the coming years.

Tesla FSD capabilities are subscription-based with basic tier being $199/month and an enhanced version being an additional $99/month. Therefore, as the FSD program matures, the cash flow from the subscription plans will increases. [5]

Threats

Ex-employees of Tesla such as Sterling Anderson, Gene Berdichevsky, Henrik Fisker, and Peter Rawlinson have founded their own EV companies with each of them being valued in the billions and posing a potential threat of eroding Tesla's market share. [6]

Apple is expected to launch their own EV by 2025 to shift the company's business. Apple has been found hiring experts in self-driving software like Tesla's former self-driving director and opening job lists that focus on automotive safety features. [7]

As stated in the SEC report by Tesla, foreign regulations are different from that of the US, and some (mainly European regulation) have hindered the key parts of the design for self-driving features due to safety concerns. As a result, the setbacks will wane on the development of Tesla's autonomous EV ambitions. Self-driving is new technology and there is no fair robust regulation on it, so some countries have put unreasonable restriction on it until major leaps are made. [4]

Strategies

- Tesla's major weakness are their thin margins, charitable nature of EV patents, and a relatively new entrance to the automobile industry.
- To increase their margins Tesla can charge other companies to use their deep charging networks as it will be much cheaper for other car manufacturers to utilize pre-existing Tesla infrastructure than to make their own.
- Tesla Gigafactory can produce cell-batteries for other companies (new revenue source) and for their energy generation/storage business.
- There plans to get into the ride-sharing business is also another solution to their thin margins.
- As for Tesla's charity of EV patents, it will create competition, but it also will increase the transitioning of ICE cars to EV. Furthermore, Tesla still has other patents like the FSD that will be exclusive to them. Because Tesla has the better self-driving system that does not require expensive LiDAR sensors, they can sell a subscription plan to their competitors.
- Even though the company is new and must build a sense of trust/reputation, Tesla does not suffer from the corrupt management that older companies face. Therefore, they are more innovative and can take more risks as Tesla does not have to deal with large debt like legacy automotive companies.

- The two threats by Apple and ex-employees will further speed-up the adoption of EV globally and as a result will grow Tesla's market share. The best plan now is increasing the rate of EV conversion, so that Tesla will further grow their car networks and gain even more data from their cars for the FSD development. Then as the Full Self Driving software advances, regulations will soften, and self-driving software can potentially be mandated.
- With final version of the FSD, Tesla will be positioned in a unique place as they can provide insurance for autonomous vehicles. Currently an insurance for a driverless vehicle is unheard of and can be a great chance for Tesla to tap into a new lucrative market.

Reference

[1] “Supercharger.” *Tesla.com*, Tesla Inc., www.tesla.com/supercharger.

[2] Motors, Tesla. “Gigafactory.” *Tesla*, Tesla, 24 Sept. 2014, www.tesla.com/blog/gigafactory.

[3] “Tesla, Inc.” *Tesla.com, Inc. Patent Filings*, uspto.report/company/Tesla-Inc/patents.

[4] *SEC.gov*, SEC, 31 Dec. 2020, www.sec.gov/ix?doc=%2FArchives%2Fedgar%2Fdata%2F1318605%2F000156459021004599%2Ftsla-10k_20201231.htm.

[5] “Full Self-Driving Capability Subscriptions.” *Tesla.com*, Tesla, 4 Aug. 2021, www.tesla.com/support/full-self-driving-subscriptions.

[6] Ohnsman, Alan. “The Tesla Mafia: Elon Musk's Ex-Employees Vie to Become His Top Rival.” *Forbes*, Forbes Magazine, 3 Mar. 2021, www.forbes.com/sites/alanohnsman/2021/02/19/the-tesla-mafia-elon-musks-ex-employees-vie-to-become-his-top-rival/?sh=50d134589ea0.

[7] Gurman, Mark. “Apple Accelerates Work on Car Project, Aiming for Fully Autonomous Vehicle.” *Bloomberg.com*, Bloomberg, www.bloomberg.com/news/articles/2021-11-18/apple-accelerates-work-on-car-aims-for-fully-autonomous-vehicle.