Investigate Tesla's Financial Condition Using SWOT Analysis

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Abstract. The natural environment is gradually degrading due to the fast expansion of the world's economy and technology, individuals are increasingly promoting environmental conservation and introducing electric automobiles. Tesla is the market leader in the field of electric automobiles. This essay will use the SWOT analysis to assess Tesla's operations, current state, and the hazards and risks that must be considered in the future. The major conclusion is that Tesla's greatest assets are its exceptional design and vehicle engineering. Using a single electric powertrain makes the electric car quicker and more fuel-efficient than a vehicle powered by an internal combustion engine. Tesla's vehicles' long-range and charging flexibility help to minimize consumer worry over range. This is also possible to argue that the image it produces on customers is positive. Innovation capabilities and consumer performance are also Tesla's strengths. Tesla's weakness is that its debt grows during the fiscal year, which will have a significant influence on following operational finance and even the company's reputation. Investing in or developing electric vehicles that consume less power is an opportunity for Tesla. Furthermore, there is still a significant disparity between other brands and Tesla in the worldwide market. Tesla should take advantage of this gap and accelerate its development efforts. The threat is that when competition heats up, it will almost certainly lead to reduced market pricing, revenue shortages, client loss, and other issues. In this instance, while Tesla has significant benefits, too much rivalry will restrict Tesla's earnings growth to some extent.

Keywords: Tesla Business, SWOT Analysis, Innovation and Development, Market and Profit.

1. Introduction

Over the past decade years, with the spread of technology and artificial intelligence to make our daily life more convenient, the vehicle industry developed fast. At the same time, because of the reduction of traditional energy sources, the trend of developing electric vehicles has become increasingly obvious. It is not easy to open up and develop the new energy vehicle market. This will necessitate radically reworking present energy and automobile business paradigms across the whole value chain, allowing fresh air in, Outside-the-industry innovators who will bring new business concepts with them. We have no clue how much Mother Nature is being harmed by our unrelenting speed of advancement, yet the planet is changing at a rate never seen before [1]. The new energy industry, dedicated to environmental protection and sustainable ecological development, is becoming increasingly important.

In the vehicle industry, new energy vehicle industry has evolved quickly and even took an important place in this area, especially Tesla. Right today, environmental protection is a big subject. Tesla appeared on the scene with its game-changing product proposition just in time to rescue the planet [1]. Tesla is currently helping to environmental conservation as the lone manufacturer of safely working electric vehicles. The low efficiency of the automobiles, the fuel they consume and the dangerous toxins they emit, which threatening our environment, are the point's automobile companies lack today. Tesla's goal is to offer vehicles that are durable, have strong engines, are aesthetically acceptable to consumers, particularly those who adore cars and are environmentally conscientious [1]. Tesla is well-known for being one of the most popular and lucrative vehicle sectors, with a market value of about $1 trillion [1]. Global sales rose by 35.8% in 2020 while measured against the same period in 2022 [2]. Although, regular cars are nowadays the vehicles have even integrated into people's lives, Tesla tried to use cars operating on electricity to replace regular cars.

The reason why author choose Tesla is because Tesla's business model, as a pioneer in the electric car market, is considerably different from that of other firms in the automobile industry. In today's

world, when technology is ubiquitous and people push for environmental protection, Tesla was the first to embrace the opportunity and strongly promote electric automobiles. In comparison to the standard business model, Tesla's business plan is more unique and up-to-date.

The author will utilize the SWOT analysis in this article to examine Tesla's business model based on its financial position, operating status, and other factors. SWOT stands for Strengths, Weaknesses, Opportunities, and Threats. SWOT analysis can assist professional people in challenging erroneous presumptions and identifying critical gaps in the performance of their business. It can also analyze the factors that affect the company's operations from both internal and external aspects of the enterprise.

2. Firm's Description

Tesla, Inc., formerly known as Tesla Motors from 2003 until 2017, is an American manufacturer of solar panels, electric automobiles, and home and vehicle batteries. It was introduced in 2003 by American businesspeople Martin Eberhard and Marc Tarpenning, who named it after Serbian-American inventor Nikola Tesla. It swiftly became one of the most well-known vehicle brands in the world.

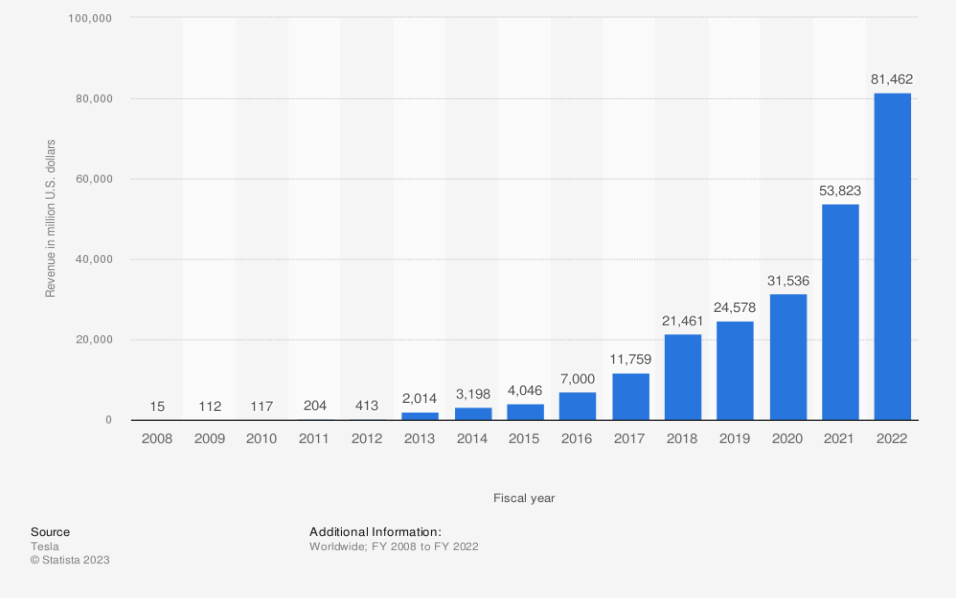

Fig 1. Tesla's revenue from FY 2008 to FY 2022 (in million U.S. dollars).

As shown in Figure 1, in the fiscal year 2022, Tesla's revenue had 51% increase from the previous year to approximately US$81.5 billion. Tesla's primary sales market is the United States. Tesla's automotive segment, including car design, production, and sales, generated more than $71 billion in revenue for the firm. The Tesla Model S, Model X, Model 3, and Model Y are the electric vehicle (EV) manufacturer's model portfolio as of March 2020. Models of light trucks from the brand, the Cybertruck, is not coming out as planned. The model's mass manufacturing is expected to begin in 2024. The Model Y has established itself as Top of the worldwide plug-in vehicle sales table in 2022: Tesla's best-selling model. Model 3 became the world's first electric car to surpass 1 million sales in June 2021. A significant portion of Tesla's funding has gone toward producing the Model 3 and Model Y, both of which are extremely popular and in great demand [3].

3. SWOT Analysis

3.1. Strengths

Tesla holds a commanding lead in the field of electric vehicles thanks to its outstanding design and vehicle engineering skills. Furthermore, Tesla's vehicles include an in-house, patented on-board

charging mechanism that allows for charging from practically any available electrical outlet. In addition, The Company can create lighter, more fuel-efficient cars which are mechanically less complicated than current cars with internal combustion engines or hybrids by using a single electric motor. As a result, Tesla's vehicles' long-range and adaptable charging help to greatly reduce client anxiety about the range, eliminate the need for expensive, bulky charging networks, and differentiate its vehicle from its competitors' electric vehicle offerings that have been made public in the past. As a result, it concentrates completely on electric car technology, coupled with a highly vertical manufacturing capacity and robust internal engineering. Consequently, the company's single concentration on electric vehicle technology, along with strong in-house engineering and highly vertical production capability, enables it to stay ahead of the curve in the electric car sector [4].

Tesla's capacity for innovation enables it to boost sales and commercial success. Its research and development (R&D) division concentrates on both the production of brand-new products and the augmentation of existing ones with additional features. R&D at Tesla is focused on the development of production methods, self-driving capabilities, and cost reductions for the Model S, Model 3, Model X, and Model S. Tesla can concentrate on developing new products thanks to its skills in car engineering, powertrain engineering, energy storage, and innovative manufacturing. The corporation invested US$2.593 billion, or 5% of total revenues, in R&D initiatives in December 2021 [4] (see Fig. 2).

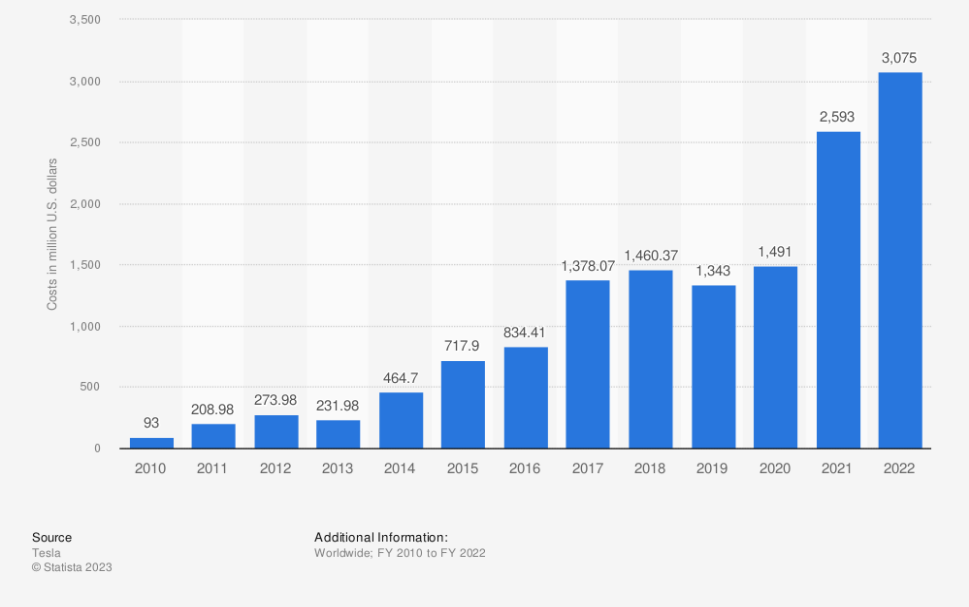

Fig 2. Tesla's research and development expenses from FY 2010 to FY 2022 (in million U. S. dollars).

In the fiscal year being examined, the firm increased its sales performance. Increased profit makes the firm to expand its operations and improve its financial success. Tesla announced an increase in sales of $53,823 million in FY2021, a 70.7% rise over FY2020 revenue of US$31,536 million. The revenue rise was mostly attributable to a 79.3% increase in the automotive section, a 39.9% increase in the Energy Generation and Storage segment, and a 64.9% increase in the Services and Other segment [4]. Tesla began to serve as an inspiration for the rest of the world. Tesla isn't simply selling batteries and other fast-charging apparatus to improve its work and motivate others to create previously unthinkable environmentally beneficial products. According to the poll, the number of Tesla customers is growing by the day, and the number of orders Tesla receives is also growing, when the company produces roughly 15 cars each week [1].

In addition to those, Tesla has achieved remarkable success by adopting a data-driven access to manufacture contrivance and administration. This approach puts information, data, and knowledge exchange at the heart of ecosystems and platform architectures, periodically creating and recreating commutable components to reduce intricacy and hazard [7].

3.2. Weaknesses

As the fiscal year has gone on, Tesla's debt has increased. A corporation may struggle to properly fulfill its short-term obligations if it has little liquidity. In fiscal year 2021, the business reported current debt amounting to $19,705 million, up from US$14,248 million in fiscal year 2020. When borrowing investment money, a company's position in the market and operational difficulties might be negatively impacted by a large growth in such obligations [4].

3.3. Opportunities

In the first place, due to the present growth in people's awareness of environmental preservation and the social environment, Tesla may invest in the creation of electric vehicles that require less power. Tesla is also willing to investigate electric vehicles that can create power on their own, that is, utilizing the electric vehicle itself to generate electricity rather than relying on batteries [1]. If successful, this would dramatically cut the cost of producing electric vehicles. Not purchasing batteries can also help to minimize debt, which is beneficial to the company's economy. The growth of this business has the abeyant to provide thousands of jobs for society.

In addition, from a global market perspective, Tesla still has an advantage. Today, the global electric vehicle market continues to grow. The growing global energy storage market will most likely also benefit Tesla's operations. Tesla's businesses might profit from the increasing worldwide energy warehouse sector. The market for energy warehouse systems is predicted to reach a value of over US$435.32 billion by 2030, growing at a compound yearly growth rate of 8.4% from 2022 to 2030, based on market research. The business is concurrently ramping up new commodities for instance the new Model S and Model X, as well as the Megapack and Solar Roof, establishing a base of production that spans three continents, and conducting research and manufacturing of innovative battery technologies. Tesla may gain income by developing, manufacturing, and selling the Solar Roof. Tesla may also earn money from the solar cells' operation while shielding the Solar Roof customer's building from the elements. [8].

3.4. Threats

Customers complained that the product did not live up to the hype and that the legal action taken had not satisfied them. The automobile sector stimulates innovation and competitiveness by providing suggestions for more sustainable energy strategies. This rivalry may drive up costs and put strain on already-existing items, which would reduce the market [5] (see Fig. 3).

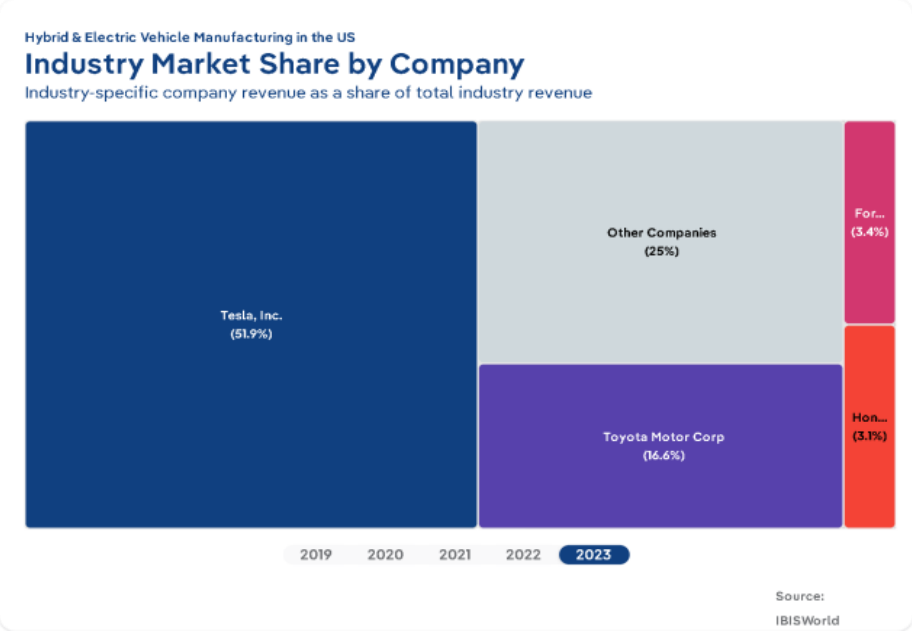

Fig 3. Industry market share by company.

By creating a range of electric vehicles for sale and quickening industry trends by providing economic developers with more alternatives in the renewable energy sector, Tesla in 2016 promoted domestic rivalry with other automakers [9]. However, as shown in Figure 4, escalated tournament could bring about lower prices, revenue deficiencies or customer losses, which could impair the Company's all-inclusive business stretching and financial condition. As the global electric vehicle market expands, more and more companies are participating in the competition, and even some traditional automobile companies have opened up new industries for electric vehicle production.

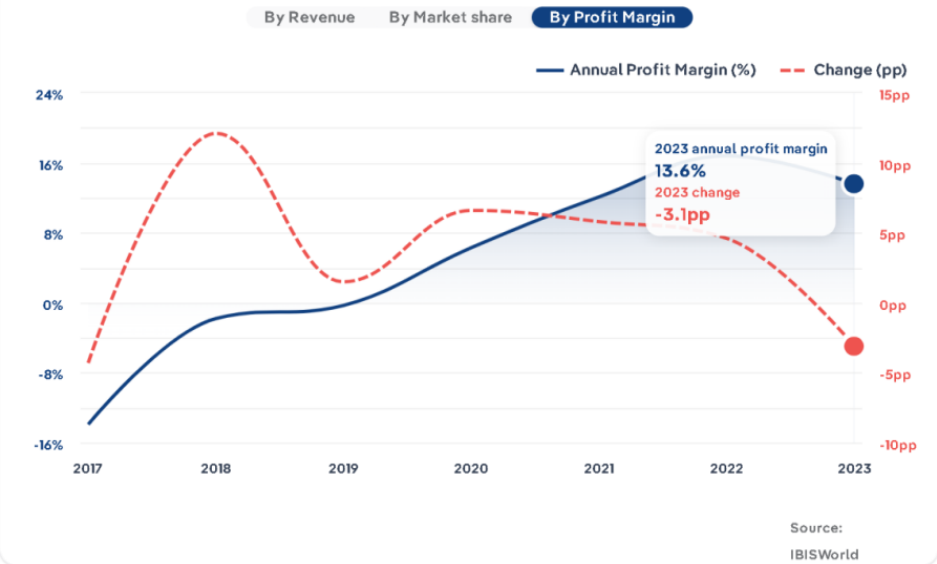

Fig 4. Overview of the company's industry revenue, market share and profit margin overtime.

In this case, although Tesla has certain advantages as a leading company, if there is too much competition, it will slow down Tesla's profit growth to a certain extent [6]. However, according to other research and analysis, Tesla is also improving its brand market. With the launch of its first model, the Tesla Roadster, Tesla Motors has entered the luxury market and is now directly competing with established premium automakers like Lamborghini in areas like acceleration [10]. So far, Tesla Motors is competing in high-margin, high-end market sectors with considerably more established rivals than in low-margin market groups [10].

4. Conclusion

In conclusion, this paper has given an account of how the economic situation of Tesla is and the reasons for why Tesla is poised to dominate the electric vehicle market. It can be seen through SWOT Analysis that the company, Tesla, is the top trademark in the vehicle industry because of its revolutionary concept. Through analysis, it can also be concluded that Tesla’s current advantage is its excellent design and engineering technology. Tesla cars' high width and charging flexibility facilitate alleviate customer worries, reduce the need for excessive massive charging base installation, and align its cars with entrants' already announced electrical power-driven vehicles. Automotive items stand out. Tesla's debt grew throughout fiscal year. An appreciable rise in debt may have negative effects on a company's reputation in the marketplace and create operational challenges when obtaining funding for capital projects.

The expansion of the global electric vehicle market is both an opportunity and a challenge for Tesla. If Tesla seizes this chance and builds a new self-powered electric car, it will be the first in the area of electric vehicles to enter a new stage. On the contrary, if other rivals technologically catch up with Tesla, Tesla will lose its technical edge. This will have a significant negative impact on Tesla's economic development.

In addition, although SWOT analysis may help people in analyzing situations from several viewpoints, it has limits. Because McKinsey proposed this model so early on, it is incapable of

thoroughly analyzing the business situations of firms in the current era. In the future, I will conduct a more comprehensive and multi-faceted analysis based on more research and financial conditions.

References

[1] Jiang, T.: A business model to analyze the Tesla based on SWOT analysis and POCD. Atlantis Press. (2022).

[2] Nandi, A.G.: Tesla: supercharging the future. Retrieved from New York University: https://www.stern.nyu.edu/sites/default/files/assets/ documents/con_042967.pdf. (2013).

[3] Tesla.: Tesla's revenue from FY 2008 to FY 2022 (in million U.S. dollars). Retrieved from https://www.statista.com/statistics/272120/revenue-of-tesla/. (2023).

[4] Tesla Inc.: MarketLine intelligence center. Retrieved from https://advantage.marketline.com/Company/Profile/tesla-motors-inc?swot. (2023).

[5] Dawson, C.: Tesla bets on bitcoin in blue-chip boost to cryptocurrency. Retrieved from https://www.bloomberg.com/news/articles/2021- 02-08/tesla-bets-1-5-billion- on-bitcoin-in-newpolicy-crypto-surges. (2021).

[6] Hybrid & electric vehicle manufacturing in the US - market size, industry analysis, trends and forecasts (2023-2028). IBISWorld (no date) IBISWorld Industry Reports. Retrieved from https://www.ibisworld.com/united-states/market-research-reports/hybrid-electric-vehicle-manufacturing-industry/. (2023).

[7] Lang, J.W., Reber, B., Aldori, H.: How Tesla created advantages in the ev automotive paradigm, through an integrated business model of value capture and value creation. Business & Management Studies: An International Journal 9(1), 385–404 (2021).

[8] Albers, A., Basedow, G.N., Heimicke, J., Marthaler, F., Spadinger, M., Rapp, S.: Developing a common understanding of business models from the product development perspective. Procedia CIRP, 91, 875–882 (2020).

[9] Liu, S.: IOPscience, IOP conference series: earth and environmental science. Retrieved from https://iopscience.iop.org/article/10.1088/1755-1315/692/2/022103. (2021).

[10] Thomas, V., Maine, E.: Market entry strategies for electric vehicle start-ups in the automotive industry - lessons from Tesla motors. Journal of Cleaner Production, 235, 653–663 (2019).