

A Case Study of TESLA

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Abstract. We hope to observe this company (TESLA) from all angles. In this article, I quoted elements such as the PESTEL model, ESG concept and so on to evaluate Tesla. I hope that readers can have a general understanding of Tesla's development after reading. I will also analyze the development route of Tesla through some data, and have a part of the wait and see of the future route. In addition, I also analyzed the performance of Tesla stock market, hoping to provide some suggestions to those who plan to buy Tesla stock, so that they can choose to buy Tesla stock at a more reasonable time. In addition, some conditions of Tesla company are integrated to predict the performance of Tesla in the US stock market. In the third part, I evaluated and analyzed some risks of Tesla, which can help people understand some risks that the company will face when investing in Tesla and make them think more about the feasibility of investment.

Keywords: PESTEL; ESG; TESLA stock market.

1. Introduction

The renewable energy sector has remained remarkably resilient in 2021. Rapid technological improvements and falling costs of renewable energy, along with increased competitiveness of battery storage, have made renewable energy one of the most competitive energy sources in many fields. With rising climate change concerns and support for environmental, social, and governance (ESG) considerations, and accelerating demand for clean energy in most market segments, the growth of renewable energy is expected to accelerate in 2022. Meanwhile, the Biden administration's vision to fully decarbonize the U.S. economy is helping spur activity in the renewable energy sector, which could fuel further growth - especially if proposed legislation is implemented [1]. The competition in the new energy vehicle industry has intensified year by year, and many excellent new energy vehicle companies have emerged in the competition, such as BYD, NIO, China Changan Automobile Group, etc. But Tesla is still ahead of most others. Recognizing the potential of the battery market earlier than most other companies and constantly refining its R&D technology, Tesla has become the market leader and is expected to become stronger in the next decade. In addition, many investors think Tesla has potential, so Tesla has enough research and development funds to let them create freely. Sufficient funds can also further ensure that Tesla has sufficient creativity in the innovation department. A creative company means that it will be a company with sufficient vitality, which will also give investors more confidence.

The paper organization of the article is described from different angles, and different models are used to analyze the phenomenon, the company's situation, the company's problems and other aspects. The Search Gap of this article is that Tesla has now been removed from ESG due to some corporate issues, but since Tesla used to play a prominent role in ESG, I still analyze Tesla from the perspective of ESG. In addition, I only analyzed the recent period of the stock market in the following part, so the future prediction may not be accurate enough. The search objective of this article is to analyze Tesla Company. To understand Tesla Company from different angles, we can better criticize the main factors of whether Tesla company is suitable for investment. At the same time, we can understand some problems existing in the company.

2. Company profile

Tesla is a Palo Alto-based American electric vehicle and energy company with a market capitalization of \$210 billion. It makes and sells electric vehicles, solar panels and energy storage

devices. Tesla was founded in 2003 by a group of engineers who wanted to prove that people didn't need to compromise in order to drive an electric vehicle, and that Tesla produces not only all-electric vehicles, but also infinitely clean energy generation and storage products. Tesla believes the sooner the world stops relying on fossil fuels and moves toward zero emissions in the future. In 2016, Tesla introduced the Model 3, an inexpensive, high-volume electric car that began production in 2017. Soon after, Tesla unveiled its safest and most comfortable truck ever - the Tesla Semi - designed to save owners at least \$200,000 on 1 million miles of driving, in terms of fuel costs alone. In 2019, Tesla introduced the Model Y, a midsize SUV.

There are about 1.2-1.3 billion vehicles on the road globally, of which about 60 million are electric vehicles. Therefore, the market share of electric vehicles is small but still in its infancy. Tesla is clearly a pioneer in the design, manufacture, and sale of electric vehicles. Many of Tesla's new competitors are raising outside capital to invest in product development or increase factory capacity, all of which pose risks for Tesla. However, Tesla trades at an extremely high price-to-earnings ratio compared to traditional car companies. Tesla trades at about 100 times expected 2022 earnings. Such a super share price can also better guarantee the stable development of Tesla. At the same time, it can better ensure that Tesla is far ahead in the same industry track.

3. Company analysis

3.1 PESTEL Model

PESTEL is a tool that determines how external factors affect an organization and its business strategy. For political, (1) Tesla is a new energy vehicle which is more friendly to environment compared to traditional vehicles, so for the government, they will prefer customers to buy electric vehicles like Tesla, which can more effectively protect the environment because it has not pollution so the government will likely give a specific tax credit for using an electric car [3]. This can help the company to reduce some budget and provide more space for the development of the company. (2) Moreover, government incentives have strengthened its financial performance due to the drive for environmental sensitivity, and political factors favor Tesla's growth and secure its expansion in other countries. Tesla could use those tax breaks to lower its own costs, boost its profit margins, or spur consumers by lowering prices.

For economic, (1) The battery is the most expensive component of an electric vehicle. The Superfactory will help Tesla achieve its goal of significantly reducing battery module costs and accelerating the pace of battery innovation. Lower production costs mean they will have higher productivity and overall production volume, while companies will be able to make more profit [4]. (2) On May 27, 2020, Tesla announced that it will lower the prices of its entire lineup for sale in the North American market, and in mainland China, the imported Model S and Model X models will also have their own base prices lowered in tandem. Compared to other electric cars, the reduced prices have significantly improved the brand's competitiveness. [5] However, currency instabilities such as inflation can also affect the level of consumer demand for goods. In this unstable situation, lowering the price would also allow Tesla to maintain a relatively satisfactory sales volume in this situation. Although the profit per vehicle decreases, but the sales increase, the company's total revenue will not be greatly affected.

For social, (1) In May 2021, Tesla was ranked #262 on the 2021 Forbes Global 2000 list, and #100 on the 2021 Fortune 500 list on June 2, 2021 [6]. All of these signs show that consumers love and trust the brand and that it has an untouchable presence in the electric car industry, which was once a consumer destination of choice. (2) With increasing global warming and greenhouse effect, people are becoming aware of the need to protect the environment. More and more consumers will prefer to buy products that are green or have renewable energy, and Tesla delivers on both of those demand characteristics. It will also mean that the company will have more supporters and potential customers. This can help people better win the trust of the masses.

For technological, (1) Tesla is the only EV company that uses a three-year 18,650 lithium-ion battery. The 18650 lithium ion ternary battery has high energy density, high stability and good consistency. The technology is relatively mature, with large supply and high degree of production automation, which can effectively reduce the cost of battery system [7]. Lower production costs lead to more supply, and in order to maintain market equilibrium, the pricing mechanism will allow commodity prices to fall, which is beneficial to consumers. (2) Body Safety: Unlike the steel bodies commonly used in conventional cars, the body and chassis of Tesla models are primarily made of aluminum, which is inherently more ductile than conventional steel and therefore better at absorbing shock. The body frame is also reinforced with high-strength materials to absorb energy in the event of an impact, but the cockpit does not easily deform. Better security can make consumers feel more comfortable to buy. Tesla has had some safety accidents before, and the improvement of safety performance can better recover some potential consumers who give up Tesla due to safety problems.

For ecological, (1) Tesla cars are powered by secondary energy sources that must have environmental issues but are more efficient overall; The environmental impact is much lower than that of cars using primary energy sources. In addition, with the development of science and technology, the efficiency of Tesla will become higher and higher, which means the pollution to the environment will be further reduced in the future. (2) The exhaust emissions and noise from conventional fuel cars cause major pollution in cities, and the high CO₂ emissions are major contributors to the greenhouse effect and can even cause breathing difficulties for people. The Tesla, on the other hand, is an electric car that does not emit long-term emissions. With the popularization of electric vehicles, the ultimate beneficiary group will be the people themselves. Therefore, in the present city, more and more people choose electric vehicles.

For legal, (1) Tesla is constantly expanding its foreign business and expanding the company. Therefore, the company must constantly update and improve its policies to meet the rules of different regions. At the same time, consumers have raised issues with Tesla vehicles such as abnormal acceleration, battery fires, and remote vehicle upgrades (OTAs), which have greatly helped the company address some of the hidden issues. Tesla will update the vehicle system from time to time according to consumers' opinions, so as to give consumers a better car experience, which can also indirectly improve the brand awareness. (2) Tesla needs to bring some solutions to the external market. However, many markets have restrictions on direct sales, so Tesla needs to address the issues that external sales may pose in the limited space available. However, excellent vehicle internal system can better help Tesla solve program problems at any time. More urgent and rapid solutions to these problems can better bring users a better reputation, with a good reputation in the future in the field of new energy has a better performance.

Overall, the analysis of the Tesla PESTEL shows that Tesla has a relatively excellent performance among the automotive brands and that there are growth opportunities in the global automotive market. If a company looks at it from all angles, I will think that it is a company that can win people's trust, and it is also a company with potential. This also shows some of the reasons why Tesla is ahead of other electric cars.

3.2 ESG

Currently, ESG (Environmental, Social, and Governance) is seen as an important part of investing when people make decisions because of environmental issues caused by global warming [8]. Problems caused by global warming include melting glaciers, increase in pests on the ground, sea level rise, occurrence of unpredictable natural disasters, and land desertification (QingYuan government). As such, it is vital that we as investors support companies that are committed to protecting the environment, which could push the entire market in a direction where companies are more focused on ESG.

Environmental Aspects: In 2020, Tesla customers helped accelerate the global sustainable energy transition by avoiding 5.0 million tons of CO₂e emissions. In terms of environment, Tesla's contribution to the environment is constantly accumulated in each customer's use. Therefore, Tesla

will make more and more contributions to the environment as the total number of customers increases in the future.

Strategic Considerations: Sustainability is at the heart of Tesla's mission, and as a solar power provider, they are doing great. Although the current business model is not sustainable. To make an ethical purchase, wait for Tesla to take cobalt and improve working conditions and lower the price of cars. By making up for Tesla's falling profits in price by increasing Tesla's sales, Tesla's total interest rate in its next development is guaranteed. This can also better ensure the stable development of enterprises.

Social Issues: Tesla will not initiate patent lawsuits against anyone who, in good faith, wishes to use our technology. Tesla has a mission focused on social responsibility; it strives to develop products that have both social and economic benefits. Tesla maintains a good competitive relationship with other competing companies. The rapid development of other companies can indirectly promote Tesla's enthusiasm for product research and development. Tesla has made a great contribution to the protection of the social environment. The environmental protection of the society can reflect the corporate ethics of the company, and good corporate ethics can often better elicit the help of the government.

All in all, Tesla is still very sustainable. Not only are governments strongly committed to green vehicles, but this brand has also made a notable contribution to ESG. Although Tesla recently dropped out of the ESG list due to differences between some corporate concepts and the ESG concept, Tesla has contributed greatly to the development of the ESG concept and the development of society.

3.3 Stock Market

Recently, the U.S. stock market has been very volatile, especially after the CPI data released in May this year, investors' concerns about the risk of going out of going out of inflation have risen sharply, so the market has greatly raised the Fed's expectations for raising interest rates. The Federal Reserve also concluded discussions at the interest rate meeting in June, which was also the largest single rate increase since the 1990s [9].

Tesla's stock price has naturally become unstable in this turbulent stock market. Before the Federal Reserve raised interest rates crazily, from the beginning of March to mid-April, Tesla went from the original 840-US dollars to 1,020 US dollars from mid-April. In just one and a month and a half, Tesla's stock price rose by 20%. It can survive, but in May of this year, the Federal Reserve began to raise interest rates crazily in June. Sill-a fell from a stock price of 1,020 US dollars to \$690 in just two months, falling by more than 30% of the stock value, which is very harmful to the company. But Tesla has increased its sales by lowering the price of its products. Let the company survive in this turbulent stock market. At present, Tesla's approach is obviously successful. The racket's US dollars have brought the stock price back to the \$900 stock price in this unstable market. Timely measures were taken to make up for the losses caused by the Federal Reserve's crazy interest rate hike. Such timely corporate decision-making ability is also destined to make Tesla a better company in the future. After taking a beating from the U.S. stock market, the company's shares can continue to stabilize at the same level, and this performance can give Tesla shareholders better confidence. Further get more investment support.

4. Risk analysis

Even with generous government incentives such as The cost option, the Model 3, was previously \$43,990 in tax credits and gas savings in May 2021, which is still out of reach for most drivers [10]. Tesla needs to find other ways to reduce its own costs in order to reduce the price of its products and continue to be absolutely ahead in the competitive new energy vehicle industry.

Two well-known competitors, the Chevy Bolt and Nissan Leaf, failed to gain an early foothold due to high selling prices and limited range. As of Oct. 11, 2021, the Nissan Leaf has a starting price of \$27,400 (around \$6,400) and a range of up to 226 miles. The 2022 Chevrolet Bolt Model starts at

\$31,000 before incentives, and as of October 2021, Tesla's standard 3.12 model has a range of 259 miles, up from 220 miles. Other companies plan to enter the EV market in the coming years, including Mercedes-Benz, Volkswagen, Subaru, Ford, and BMW. If that happens, Tesla's market share could start to get crowded. In this regard, Tesla also needs to continue to develop its unique technology and attract more customers of other companies to buy its products through high-level technology. This also illustrates the importance of technology in the market. Only when a company has an absolute leading position in technology, it can better guarantee the company's better performance in the new energy market. This is one of the main reasons Tesla still dominates the market right now.

Many investors want to see high investments, but on the other hand there has to be a return. This seems especially true in a nascent industry full of failed startups. Tesla has invested billions of dollars developing its Model 3 and Model X vehicles, and the battery factory itself has been costly. In a filing with the Securities and Exchange Commission (SEC) in the first quarter of 2021, Tesla estimated that capital expenditures could increase to \$4.5 billion or even \$6 billion per year. Tesla could spend as much as \$6 billion annually on investments over the next several years, according to SEC filings. Tesla has occupied a huge operating space in the new energy vehicle market with high investment, but it still needs to pay continuous attention to the investment situation to prevent, such as the fracture of the capital chain, which will harm the company. The stability of the capital chain is also one of the important considerations of an excellent company.

5. Conclusion

Although I have mentioned some risks in Tesla above, I still believe that Tesla is a company with great potential. For example, from the PESTEL model, we can see that Tesla is still far ahead in the field of new energy vehicles. New energy vehicles in the automobile industry is a kind of industry supported by the government, as the leader of this industry will surely receive more attention from all aspects. In addition, Tesla is also a company with sustainable development. From the previous ESG list, it is also easy to find that Tesla is a company that values the future and uses the development concept of environmental protection. This is also part of the main factor that Tesla has made great contribution to the development of ESG concept and the development of society. Tesla's performance in the US stock market is also worth looking forward to, although Tesla has been hit a lot in the US stock market in the past period. But the stock price of the company did not disappoint too much and after a period of time, the stock price went back to the previous stock price. Such perseverance in the stock market can better win the trust of shareholders. Based on the above analysis, I have enough reasons to expect Tesla to be a company with a future, and it is worth investing in one of the companies waiting for the further growth of the company.

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