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Tesla's Dilemma and Future Development Trends

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ABSTRACT

This paper's main objective looked into Tesla's dilemma and future development trends in the business organisation. The paper methods and materials used are Tesla's financial and corporate strategy to analyze. The results demonstrated that the association faces hardships at the current phase of its activities. The answers for its troubles are required and taking a gander at the estimates of Tesla's benefit in the following five years. It tends to be finished up consequently that, through the investigation of fiscal reports and plan of action in late three years, the monetary and business attributes of Tesla are acquired, and the benefits of Tesla in the following five years are anticipated and examined.

This way, the paper depicts the foundation and meaning of the subject and advances the examination strategy and structure. It then, at that point, clarifies the examination strategies for the organization. Tesla's essential investigation is likewise shown and talks about the organization's monetary circumstance. These two parts of the investigation decide the dangers and the executive's strategy changes reflected by Tesla at this stage. The paper conclusively dissects the dangers of Tesla. Through the risk investigation of Tesla financial statements.

Keywords: *Strategic analysis, Financial analysis, Future profitability,*

1.INTORDUCTION

With the development of electricity technology and increased awareness of environmental protection, electric vehicles have gradually entered customers' field of vision. Aside from the obvious emissions advantage, there is another way that an electric car can vastly outperform a gasoline car – in a word, torque. [1] An electric car not only meets the demand of less emission, but also provides high performance. As a result, the growing amount of people are shifting to electric vehicles instead of traditionally powered vehicles.Under this environment, the automotive industry has ushered in long-lost innovation, which overturned the dominance of gasoline cars in the past and put significant pressure on traditional car companies. Thanks to this opportunity, a brand-new company named Tesla has entered the public eye, whose main business is the production of new energy vehicles and the generation and storage of clean energy. As a company on the forefront, Tesla attracts the worldwide attention, whether inside or outside observers. This is also the reason why Tesla was selected for this paper. In this paper, an overall analysis and forecast of Tesla's current financial situation and future income is made to help investors better understand Tesla., and this study provides implications for investors in investment decision making. According to the inspection of the existing literature, most of them focus on the historical financial analysis for previous years. We documented past strategy adopted by Tesla. and financial data until 2020, and forecast income for the foreseeable future. Therefore, this article aims to make a certain contribution to the future's investment decision and corporate image. The paper is organized followingly; section one is strategy analysis using porter five forces analysis. Section two is financial analysis using common-size statement and annual reports. Section three is a forecast based on previous data and current trend.

2. METHOD

The data used in the report is the annual report from 2018 to 2020. by comparing the data of these three years, we can understand tesla's profitability and risk.

Secondly, it uses swot analysis method to study tesla's strategy. By analysing the marketing strategy and segmenting the market, Tesla has a clear market positioning. Then, through tesla's proportion analysis, study its liquidity and evaluate the enterprise's financial situation and operating performance in a certain period. Through the prediction of tesla's future earnings, on the premise of studying its reasonable prediction assumptions and prediction benchmarks, predict and calculate the total profit, net profit, earnings per share, P/E ratio, and other important financial events in the future accounting period.

3. STRATEGIC ANALYSIS AND FINANCIAL ANALYSIS

3.1. Strategic Analysis

To better understand the overview and the strategy of Tesla, a Porter five force a*n*alysis is selected. According to, “the collective strength of the forces determines the ultimate profit potential in the industry”.[2]

Based on the historical data from its financial report and the information gathered from its official websites, Tesla has different performances facing different forces in Porter five force analysis.[3] Firstly, the threat of new entrants is low. As a pioneer in this industry, Tesla has tremendous experience and advanced technology in developing and manufacturing, which are protected by patent law and can be the foundation of Tesla's business landscape. Meanwhile, Tesla is currently domine the electric car market for an outstanding market share and reputation, which provide Tesla countless order making the scale of production higher than other competitors and making it almost impossible be overpass by others. Besides that, other traditional auto companies are also experimenting with new energy vehicles, which usually have a complete manufacturing chain and complete vehicle solutions, making the emergence of any emerging competitors more difficult. As discussed, it would be difficult for a new company focused on electric cars to start up, but it is much easier for pre-existing car companies to expand into the electric vehicle market. [4] Secondly, the force that threat of substitutes is moderate. Although many companies want to have a share in this industry, their products differ from Tesla. Tesla is also known for its excellent driving assistance system and car-machine system, making their products unique and irreplaceable. The third force is the bargaining power of customers, which is also moderate. Competitors provide customers with diversified choices, which increases their bargaining power of customers. Some customers do not have to buy a particular Tesla product when its price is higher than its competitors. At that time, this caused Tesla to lose a certain number of customers. However, Tesla's products are unique enough, and its product status is much higher than other products, which makes Tesla still the best choice for purchase, which means that Tesla does not worry about customers too much. The fourth force in Porter analysis is the bargaining power of suppliers, which is moderate. Tesla is continuously expanding its productivity, demanding sufficient supplies from suppliers. Although it seems that Tesla needs its suppliers to continuously provide corresponding parts to meet the production needs and give suppliers the bargaining power, but as a supplier, they cannot afford to lose a company like Tesla. The consequences of big customers. Therefore, both parties have reached long-term strategic cooperation, and even Tesla acquired some suppliers to solve some problems. In the end, as a result of the game between the two parties, neither party can take much advantage in price. Tesla has received tremendous pressure from global competition. Although he is a leader in new energy vehicle companies, it is not enough to expand the new energy vehicle market if he wants to occupy a larger market share. For Tesla, his goal is to ban gasoline vehicles, thereby gaining more shares in the automotive industry. This means that Tesla's competitors will be those traditional car companies that have been deeply involved in the past century, such as Mercedes-Benz, BMW and Volkswagen. In the United States, General Motors is dominant. That company has greater motivation to keep their leading relationship, which should be the greatest challenge in Tesla’s future expansion.

3.2. Financial Analysis

3.2.1. Financial Ratio Analysis

According to the annual report, we can learn that Tesla's main business composition is mainly divided into two parts; 1. Business area 2. Among them, the main business is automobile sales, accounting for 93.68%. The second is energy storage power generation, accounting for 6.32%. The region is mainly dominated by the US and Chinese markets, accounting for 48.22% and 21.12%, respectively.

According to the balance sheet and income statement from 2018 to 2020, the company's current assets accounted for 27.93% of the total assets in 2018[5]. Therefore, Tesla's asset structure has strong liquidity at this stage, with less asset risk, the ratio of total shareholders' equity to total assets was 16.55%. The asset-liability ratio was 77.99%. The ratio of shareholders' equity to the sum of assets and liabilities is 95.32%, less than 1. Tesla still has financial risks in 2018, and its ability to repay long-term debt is not strong. In 2019, the company's current assets accounted for 35.28% of total assets, the ratio of total shareholders' equity to total assets was 19.29%, the asset-liability ratio was 76.36%, and the sum of shareholders' equity ratio and assets and liabilities was 95.65%, less than 1. Therefore, Tesla had liabilities during this period, and the financial risk of the enterprise cannot be ignored. The increase of current liabilities mainly includes notes payable, accounts payable, and accounts received in advance. The increase of the absolute amount of current assets in the current period is less than the increase of current liabilities. On the whole, the total assets of the enterprise show an upward trend, the scale of the enterprise continues to expand, and the financial risk is decreasing, but there are still risks. In 2020, the current assets accounted for 51.23% of the total assets, showing that Tesla's asset structure has strong liquidity and low asset risk during this period. The ratio of total shareholders' equity / total assets is 42.62%, the asset-liability ratio is 54.59%, the shareholder's equity ratio and asset-liability ratio are 97.21%, less than 1, the asset-liability ratio is greater than the shareholder's equity ratio, the enterprise has financial risks, but the liabilities in this period are greater than 50%. The liabilities are at the controllable level. Compared with the previous period, the risk has been reduced, and the enterprise's financial situation is good.

As for Tesla's liquidity ratio from 2018 to 2020, as shown in Figure 1, compared with the average liquidity ratio of the same industry, Tesla's capital turnover gradually slows down. The liquidity ratio gradually increases with the increase of years, while the liquidity ratio in 2020 is 1.88, indicating that Tesla's liquidity ratio is high. The enterprise's debt-paying ability is gradually strengthened.

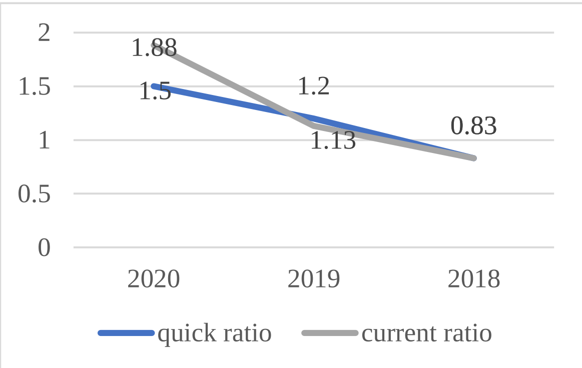


Figure 1 Liquidity Ratio

According to the calculation and analysis of the given data, we know that Tesla's return on net assets in 2018 is -21.311%, that in 2019 is -14.938%, and that in 2020 is 4.784%. The obtained return on equity capital reveals three factors of Tesla's corporate profitability in these three years: 1. Cost control ability. The net sales profit is: 2018: 1.85%, 2019: 2.31%, 2020: 7.46%. Tesla's net sales profit has increased year by year, indicating that the costs caused by Tesla in all aspects have been controlled in these three years. 2. According to the calculated asset turnover rate, the use efficiency of assets is 2018: 0.722019: 0.7012020: 0.605, all lower than 80%. It shows that the total asset turnover speed of the enterprise has not been improved in a period, and the sales capacity of the enterprise is not strong. Tesla can accelerate the asset turnover and increase the profit by means of small profit and quick turnover. 3. Financial financing capacity. According to the equity multiplier (total assets / shareholders' equity), 2020:2.22019:4.242018:4.72. Tesla's equity multiplier is gradually decreasing with the passage of time, indicating that Tesla has repaid some debts during this period, the asset-liability ratio is decreasing, the total assets invested by the owners are increasing, and the scale of the enterprise is gradually expanding, the degree of debt is reduced, and the protection of creditors is improved.

3.2.2. Cash Flow Statement:

3.2.2.1. Operating Activities

Tesla's net loss is adjusted by depreciation, amortization, and deferred impairment, and the operating cash flow is positive. For the company's operation, especially in the state of net loss, this is undoubtedly a signal of operating safety. Tesla's net income from continuing operations in 2018: - 10.63 million, 2019: - 7.75 million, 2020: 8.62 million. The year-on-year growth was 211.23%. Tesla's net income increased by 211.23% in 2020, 27.06% in 2019 and 52.58% in 2018. It shows that Tesla's sales showed a rapid upward trend during this period, and its business status showed a steady increase. In 2020, the change of working capital increased by 152.72% year-on-year. A large number of monetary funds were withdrawn from operating activities, and the financial situation was in a period of development.

3.2.2.2. Investment Activities

According to Tesla's cash flow statement, the cash received from the sale of property, plant, and equipment and the cash received from the sale of intangible assets and other assets in the cash inflow are opened. However, the cash flow from investment activities is negative, mainly due to Tesla's continuous construction of new plants during the development period[6]. Among them, the net cash from continuous investment activities is 2020: - 31.32 million, 2019: - 14.36 million, 2018: - 23.37%, and the ratio of capital expenditure to sales is negative, indicating that the cash inflow generated by Tesla's investment activities is greater than the cash outflow generated by investment activities. The new business investment in this stage is large, or it is in an investment stage at the initial stage of equity investment. There is a risk that there is no return on investment or the investment is greater than the return on investment.

3.2.2.3. Financing Activities

According to Tesla's financial reports in recent years, Tesla has been financing, so the main source of cash flow from financing activities is the issuance of convertible bonds and other bonds. Among them, the net cash from continuous financing activities is in 2020: 99.73 million, 2019: 15.29 million, and 2018: 5.74 million. Tesla company absorbs investment income from financing activities, and the net cash flow from financing activities increases rapidly. At this stage, we need to invest a lot of money to form more production capacity and explore new markets. Among them, net financing cash flow increased by 2020: 695.92%, 2019: 814.94%, 2018: - 96.23%, indicating that investment and financing are interdependent during the expansion period, but at the same time, capital flows out before benefits are generated in the investment stage. If investment activities expand too fast, it will cause its ability to create cash in operating and financing activities to be difficult to support the cash outflow in investment activities[7]. Therefore, predictable risks need to be controlled.

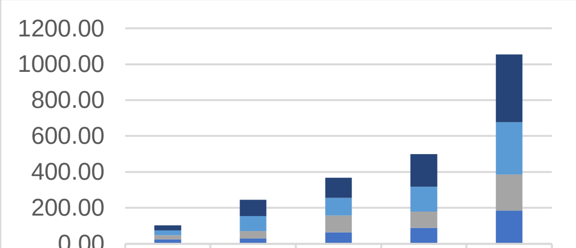
3.2.3. Income Statement

According to the annual report, the income level in the income statement in 2018 has achieved growth, with a year-on-year increase of 82.51%. The total revenue cost is $17419 million, and the total revenue is $17419 million. Therefore, the gross profit margin is 18.83%. Compared with revenue, the growth rate of revenue cost is slow, and there is still a loss in this year, but the growth of business volume and sales quota has improved the development trend of the company. In the income statement of 2019, the proportion of operating profit and total profit in operating revenue increased compared with the previous year, in which the revenue of automobiles accounted for a large proportion. In the summary of loss, it can be learned that net loss of this year was $775 million, a decrease of 1.3%compared with the previous year. However, the continuous rise of total expenses and the lack of income promote the low operating profit. Therefore, it is necessary to further strengthen the company's management, control costs, and increase sales revenue. In the profit statement of 2020, the total revenue is $31,536million, the total cost of revenue is $24,906million, the gross profit margin is 21.02% showing an increase compared with the previous year, and the net profit is profitable, indicating that the company has controlled the cost and increased the sales of products. Make the company from loss to profit.

For the losses from 2018 to 2019, a large part of the reason is that the management of the company's major departments is not in place, and there is no reasonable way to control the costs incurred by the enterprise's production so that the increase of costs leads to the reduction of operating profits. Therefore, the company needs to standardize the management and strengthen the management of the company. Secondly, we should also control the cost of purchasing the required production materials. Since the supplier cannot guarantee whether the parts provided meet Tesla's pricing range and quality requirements, Tesla needs to strictly control the cost changes caused by the supplier's risks. Finally, Tesla can improve its brand diversity while producing cars. For example, it can launch models suitable for more groups within the acceptable price range, launch more attractive new models, and carry out effective advertising marketing, so as to improve the universality of the brand and promote the sales volume, so as to increase the sales revenue [7].

3.3. Future Income Forecast

In the previous article, Tesla's financial information and related data have been analyses and forecasted. This part will focus on making a forecast of Tesla's revenue in the next five years. Because Tesla's revenue is mainly contributed by two segments, namely the automotive sector and the energy production and storage sector, the automotive sector also includes services and other revenues. Therefore, in the revenue forecast of the automotive sector, based on the historical data of the past five years and the first two quarters of 2021, in actual operation, first use the data of the first two quarters of 2021 and combine the trends of previous years to evaluate the performance in 2021. According to its annual and quarterly sales number, the number of 2021's last two quarters is requirable, shown in the following chart.



	2017	2018	2019	2020	2021
Q4	29.90	90.70	112	180.6	377.54
Q3	26.20	83.50	97	139.3	291.21
Q2	22.00	40.70	95.2	90.7	201.25
Q1	25.00	30.00	63	88.4	184.8

Figure2 Automotive Sales Forecast for 2021(Unit: thousand units)

Once the sales number for 2021 is determined, regression is used to get the next five years sales forecast. Based on the data of the past four years and the first two quarters of this year, a regression analysis was performed, and the regression equation was used to predict the sales volume in the next five years. However, as its productivity increases in 2021, its sales volume will also increase significantly, almost twice that of 2020. Therefore, the data obtained in the regression is relatively conservative; that is to say, Tesla's revenue performance in the automotive sector in the next five years should not be lower than the forecast data.

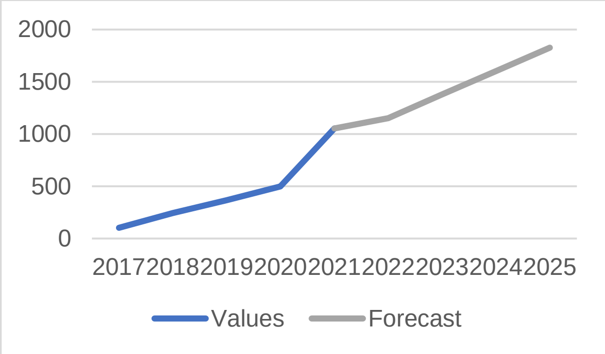


Figure3 Tesla's Automotive Annual Sales Forecast (Unit: thousand units)

The whole estimation is based on the annual sales, since the proportion of each model's sales number has its constant pattern. Based on the fixed proportion, it is possible to get the average income for per vehicle sold. In the previous forecast, the average revenue per car sales and the annual car sales have been obtained. Multiplying the data obtained before, you can get Tesla's revenue forecast for the next five years, as shown in the figure.

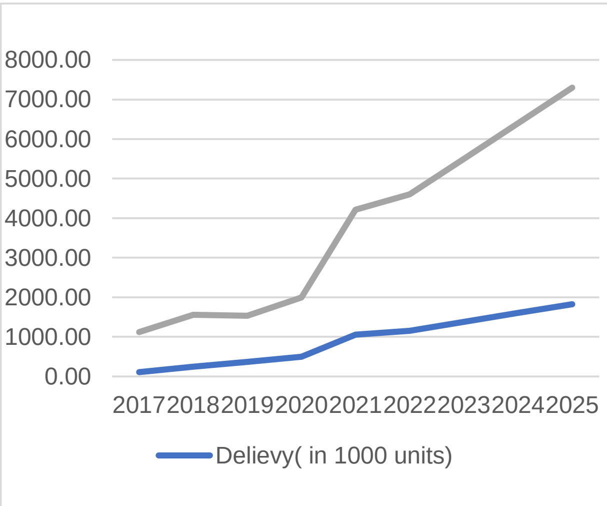


Figure4 Automotive Revenue Forecast for next 5 years

In addition, Tesla also has an energy production and storage department. This department is relatively small compared to the automobile department, accounting for about 20% of total revenue in 2020. However, as the new energy concept is gradually implemented, this step will be Usher in a period of rapid growth. In the following, the forecast is based on the kWh of the storage equipment that Tesla puts on each year to make an estimate of the overall sales of the equipment in the department.

According to the annual report, the figure of the revenue this segment does not increase as sharp as automotive segment does. However, many indicators have indicated that the future trend is promising. In the previous years, Tesla. acquired some company majoring in solar power and battery, such as Maxwell and solar city. Those company provides the solar power solution, super-capacitor, and dry battery to their customers. It can be inferred that Tesla's acquisitions in the past few years have all been preparing for the future. Once the technology and economic situation improve, more and more people will realize the significance of protecting the environment, and this segment will have an unprecedented revenue increase.

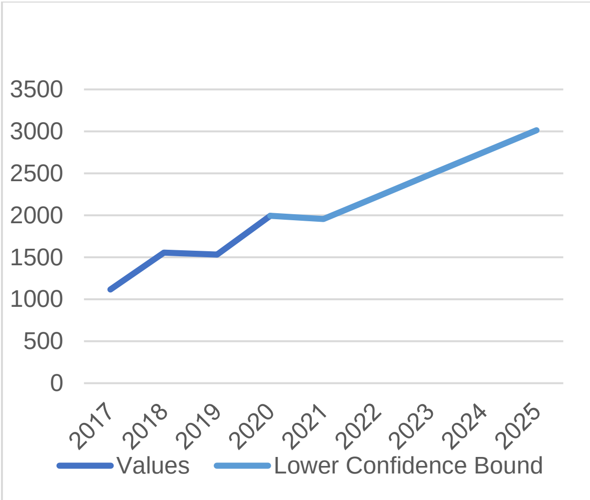


Figure5 EGS Revenue Forecast (unit: $ million)

In 2017, energy generation and storage segment's revenue started with $1116 million, and by the end of 2020, the total annual sales have reach about $2000 million. As mentioned above, with the awareness of environmental protection, more people would prefer solar power as their power source for household or facility usage, which is cheaper and more efficient in a long-term perspective. Therefore, the revenue would show a quick increase, which by the end of next five years would reach about $3500 million.

4. DISCUSSION

4.1. Lawsuit Risk

Tesla expanded its business and industry through the acquisition of the company in the process of development. In 2016, Tesla acquired Solar City, but during the acquisition, Tesla was accused by shareholders of violating the trust obligations related to the acquisition and filed a lawsuit in the court. Through many lawsuits and court mediation, the two sides reached a settlement. However, Tesla believes that the query and accusation about the acquisition are groundless and intends to actively defend. Secondly, from 2017 to 2029, for the securities litigation related to the production of Tesla's modal 3 automobiles, the court refuted the compensation events filed by the defendants. They believed that these claims had no factual basis, and the case was therefore shelved. From 2018 to 2020, many lawsuits related to Tesla had an impact on the reputation of the company. For example, in the process of cooperation with suppliers or government agencies, Tesla could not predict what the final investigation results would affect their business, business performance, future development prospects, and financial situation, so there were risks of uncertainties.

4.2. P/E Ratio

Tesla’s P/E ratio Tesla's P/E ratio fluctuates greatly, experiencing huge growth in 2020 and a huge decline in 2021. In December 2020, Tesla's P/E ratio even reached 1100, while the PE Ratio of the American traditional car market was only around 13.42. Although aside from the electric vehicle market, it is not objective to analyse Tesla's PE Ratio alone, but this number can no longer be described by an overvalue alone. [8] By 2021, Tesla's P/E ratio has dropped to 300~400, which is only about 100 higher than that of BYD, China's leading electric vehicle company, which is enough to prove that Tesla's P/E ratio advantage has been gradually shrinking. This may correspond to Tesla's successive lawsuits and the rise of other companies in the electric vehicle industry, causing the masses to trust other electric vehicle companies. According to recent news, the Intermediate People's Court of Lishui City, Zhejiang Province tried a case. The two parties in the trial were the owner Li Zhilong and Tesla Motors Sales and Service (Wenzhou) Co., Ltd. According to the court’s judgment, Tesla Motors Sales and Service (Wenzhou) Co., Ltd. will refund the full amount of Model X and compensate the owner Li Zhilong for economic losses of 778,200 yuan within ten days after the judgment, that is, " Get one back and lose one".[9] But Tesla still refused to approve the judgment. This kind of behaviour may seriously damage the brand image and public expectation. Tesla really should take the lawsuits seriously and try to restore public trust, otherwise it may lose customers. This has already shown some signs in China. According to the latest data released by the China Association of Automobile Manufacturers, as of the end of April this year, Tesla's total sales were only 25,845, which also included 14,174 car exports. If the export volume is not included in the data, then only 6,264 vehicles were actually sold in the domestic market, plus the 5,407 vehicles sold by Model Y, and the two together sold 11,671 vehicles. These figures are consistent with Tesla’s previous brilliant sales data. In comparison, it looks even more bleak. [10]

Figure 6 P/E ratioof BYD company

Figure 7 P/E ratio of Tesla company

4.3. Future Potential

In the past five years, Tesla has provided satisfactory results to the public, whether it is in the sales coverage of new energy vehicles or in the field of energy production and storage. Even under the influence of the 2020 epidemic, many industries have been hit, and many companies are on the verge of bankruptcy. However, Tesla's performance has risen instead of falling. Such a strong momentum is undoubtedly a boost for investors. Unsurprisingly, in the beginning of 2021, with the increase of its own production capacity, Tesla can meet the rapidly growing needs of consumers. Tesla's sales and revenue in the first two quarters have far exceeded the same period in previous years, all signs All show its strong profitability and huge future market potential. From the data point of view, Tesla's future will have faster growth because of policy orientation and consumer awakening.

5.CONCLUSION

Through the previous analysis, we can find that Tesla is a developing enterprise, there are still some potential risks, but it is also a new industrial enterprise with rapid development. The scale of its total assets is constantly expanding, and the scale of its enterprise is also expanding. Its profitability, solvency, and operating capacity also need continuous enterprise policy adjustment to make it reach a strong state. It has a good development prospect. However, in 2018, the company had some financial problems, the profit decreased compared with the previous year, and the shareholders' equity also decreased by 10.85%. There were cost management problems during this period, resulting in losses higher than revenue costs. In terms of finance, Tesla is recommended to control costs and increase sales to enhance its sustainable development ability. In terms of business, we should recognize some advantages over other competitive companies and learn from each other. In Tesla's financial analysis and prediction of its future profits, we understand that the company has losses. The hot news is constantly attracting the attention of the electric vehicle market and some stakeholders. Consumers gradually tend to choose environmentally friendly cars. This change has brought a large number of orders to Tesla and attracted the attention of other automobile manufacturers to Tesla. This research report explores some difficulties and solutions of Tesla at this stage through the analysis of second-hand data and financial ratios such as the annual report during 2018-2020. For Tesla's continuous losses, one of the reasons maybe Tesla's lack of cost control, which makes the loss account for more than 45% of the automobile revenue cost, and Tesla has not achieved full year profit. One of the reasons that cannot be ignored is that the interest expense exceeds the expectation, and there are high long-term debts. Therefore, most of the data in the ratio analysis reflect the potential threat of Tesla in the future.

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