



# An Analysis of Tesla's Market Position and Future Prospects

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**Abstract.** This paper analyses Tesla's position and performance in the new energy vehicle industry. Tesla's leadership in electric vehicle technology and brand influence has contributed to the popularity and marketability of electric vehicles, driving the automotive industry towards sustainable energy. Global market performance highlights Tesla's strong sales in the U.S. and China, with Elon Musk's personal charisma adding to the brand's appeal. The operating model focuses on direct sales, user experience and customised production, complemented by ongoing feedback and data collection. Future trends include expanding Gigafactories, advancing self-driving technology, and exploring new business models. financial analysis from 2020 to 2023 shows gross margins rising to 25.60% in 2022 before declining to 18.25% in 2023 due to price reductions and rising costs. Debt to net worth ratio decreases from 76.36% in 2019 to 40.34% in 2023 indicating improved financial stability. ROCE increases from 28.04% in 2021 to 38.78% in 2022 reflecting improved asset utilisation and profitability. Current ratios are trending upwards, but caution is still required with respect to debt covenant restrictions and access to capital. Risks include fluctuations in market demand, supply chain disruptions, policy subsidy rollbacks and financial risks. Forecasts indicate continued growth in vehicle sales, leasing, services, and energy production and storage, with revenues reaching \$125.5 billion in 2024, \$125.5 billion in 2024, \$153.7 billion in 2025, and \$199.9 billion in 2026. Looking ahead, Tesla will expand market share, introduce innovative products, strengthen supply chain management, and invest in social responsibility to maintain strong growth momentum and industry leadership.

**Keywords:** Tesla, New Energy Vehicles, Market Performance, Financial Analysis, Risk Assessment, Future Trends.

## 1 Introduction

Tesla is a leader in the new energy vehicle industry, and its technologies, products and services are driving the industry's rapid growth. And it continues to innovate in the fields of electric vehicles, autonomous driving and energy storage, leading the industry change. Tesla has performed well in the global market, with continuous sales growth and strong brand influence. Tesla is unique in its operating model, as the company

company adopts a direct sales model and sells directly to consumers, eliminating the need for dealerships, lowering costs and improving efficiency [1]. Tesla also focuses on user experience and customised production, optimising and upgrading its products by constantly collecting user feedback and data. The study helps to understand the business model and market laws of the new energy vehicle industry. In the recent U.S. election, founder Elon Musk has a close relationship with the newly elected Trump, and there is a lot of room for research. And Elon Musk himself has great charisma, and his influence on Tesla Inc. is enormous. Tesla's insight into future trends and strategic planning is also very forward-looking. Studying Tesla can provide a deep understanding of the latest news and development trend of the new energy automobile industry, and provide useful references and lessons for academic research and practical exploration in related fields. Tesla's successful experience and development model are of great significance to the study of future trends and changes in the new energy vehicle industry.

Tesla is mainly engaged in electric vehicle business, energy storage products, solar energy products, auto parts and services. The revenue segment is broadly divided into car sales, car leasing, services and other businesses, and energy production and storage. Car sales are the main source of revenue for Tesla, Inc. with services and other businesses, energy production and storage coming in second and maintaining rapid growth. The car leasing business still has a lot of room for growth. Tesla Inc. has shown a steady growth trend in its revenue profile in recent times, gradually unfolding the company's strategy globally. This paper will analyse the company's internal and external environment and risk assessment and prediction. The external environment is mainly presented through SWOT analysis, while the internal environment is mainly presented by analysing the financial performance of the company.

### 3. External Environment

Due to Tesla's relatively monopolistic market position, the electric vehicle industry has fewer competitors, making comparisons difficult. Therefore, the author of this article chooses to use a more flexible SWOT analysis to examine the external environment.

## **2 External Environment Analysis based on the SWOT Framework**

### **2.1 S (Strengths)**

Tesla's strength lies first in the intrinsic value and uniqueness of its product portfolio.

In terms of intrinsic value, Tesla continuously invests in R&D to drive technological innovation, maintaining a leading position in the industry. Tesla has significant technological advantages in battery technology and autonomous driving technology for electric vehicles [2]. While innovating, Tesla also strictly controls product quality and user experience, this is one of its advantages. As a global leader in electric vehicle manufacturing, Tesla has strong brand influence and market position. Is seen as a symbol of luxury, innovation, and environmental responsibility.

In terms of uniqueness, Tesla's product line is relatively streamlined and adopts a direct sales model to meet consumer demand through a small number of well-designed products, which enables it to better control production and operating costs. Tesla has always adhered to the strategy of sinking technology in the process of product development and production, and has integrated technological innovation and quality assurance into every detail. Tesla not only focuses on the development of electric vehicles itself, but also devotes itself to building a complete ecosystem, providing users with more convenient and intelligent travelling solutions [3].

The second strength is its ability to attract and retain high-quality employees. In terms of talent introduction, Tesla cooperates deeply with universities to carry out targeted talent delivery and integrated education and training projects. Employees receive above-average wages, excellent rights and benefits such as medical insurance, stocks, and other benefits, including housing subsidies. The compensation strategy of "low salary + high stock" attracts loyal employees willing to work for the company's long-term development. An open, cooperative, and innovative corporate culture encourages employees to be brave in trying and creating.

## **2.2 W (Weaknesses)**

As a company positioned at the higher end, the first weakness is the high cost and price of its products. Although Tesla has been continuously reducing costs in recent years, its product prices are still higher than those of traditional cars, limiting further market expansion. Its higher prices deter many potential customers.

Second, the service network is insufficient. With increasing sales volume, the global service network construction lags, affecting customer maintenance and repair experiences. For example, charging stations are not as widespread globally as gas stations for internal combustion engine vehicles, and charging speeds have certain disadvantages [4].

Lastly, there are issues with market acceptance and consumer perception. Despite significant achievements in the electric vehicle sector, some consumers remain skeptical about the performance and reliability of electric vehicles, presenting a clear disadvantage in capturing these customers.

## **2.3 O (Opportunities)**

With growing global emphasis on environmental protection and policy support, the electric vehicle market is experiencing explosive growth, offering Tesla vast market opportunities. As the world pays more attention to environmental protection and sustainable development, the electric vehicle market has significant opportunities to capture markets traditionally held by conventional car manufacturers. Governments around the world are implementing policies to support the development of the electric vehicle industry, including purchase subsidies and tax incentives, further boosting the growth of the electric vehicle market.

The second opportunity lies in the maturation of autonomous driving technology. Tesla has made considerable investments in autonomous driving technology, which

has always been a major selling point for Tesla. Once Tesla's autonomous driving technology matures and gains wide recognition, it will bring new growth points for the company.

As Tesla's second-largest source of revenue after car sales, the energy business has room for expansion. Investments and development in storage services, energy generation, and storage are comprehensive. Tesla's layout in solar panels and home batteries provides new directions for the company's long-term development.

## 2.4 T (Threats)

Firstly, competition intensifies as the electric vehicle market grows, with more manufacturers entering the field, making competition increasingly fierce. Tesla needs to continuously innovate and improve product quality to maintain its competitive edge.

Another threat is the excessive reliance on Elon Musk. Musk, as one of the early investors and co-founders of Tesla, plays a crucial role in Tesla's development. Musk's personal behavior, such as stock sales and social media comments, often causes significant fluctuations in Tesla's stock price. Additionally, Musk's considerable say in management decisions brings significant personal and decision-making risks [5].

Tesla also depends on the continuous supply of lithium-ion battery cells. Tesla's lithium-ion battery supply chain involves multiple links and regions. Geopolitical factors may also adversely affect Tesla's lithium-ion battery supply chain. Forty percent of Tesla's lithium-ion battery cells come from China; political instability or trade conflicts between China and the USA could lead to supply chain disruptions or logistical blockages [6].

Union activities in the United States also pose a threat to Tesla. Tesla employees have organized strikes to demand better working conditions and higher wages. U.S. courts have intervened in disputes between Tesla and unions, making rulings against Tesla.

## 3 Internal Environment Analysis

This paper has analysed Tesla's annual reports for the last few years in terms of ratios.

After calculation, Tesla's gross profit margin is 21.02% in 2020, 25.28% in 2021, 25.60% in 2022 and 18.25% in 2023. It can be seen. 2020 to 2022, Tesla's gross profit is gradually growing, first of all, Tesla's excellent performance in cost control, through the cost suppression of suppliers and scale purchasing, effectively reducing the cost of raw materials and components. In addition, Tesla further reduced production costs by increasing the commonality of parts. Secondly, Tesla's sales volume continued to grow globally, especially in the Chinese market. The increase in sales volume brings in more revenue while spreading out the fixed costs, thus improving the gross profit margin. And as Tesla's sales continue to increase, the scale effect is gradually emerging. Tesla has gained greater bargaining power in production,

procurement and sales. In terms of technology, Tesla has made a number of technological innovations in the fields of batteries, motors, and autopilot, which have not only improved the performance and quality of its products, but also reduced production costs. For example, Tesla has reduced its reliance on external chips by developing its own FSD chip, thus reducing procurement costs [6]. Tesla is also committed to business diversification, and is actively expanding its business in car leasing, car services, and energy and carbon emission quota sales, in addition to whole car sales. In 2023, however, Tesla's gross profit is significantly lower, and I see a couple of main reasons for this. First, in order to stimulate demand and drive delivery growth, Tesla has adopted a price reduction strategy in 2023. While the price cuts increased sales, they also compressed profit margins on individual vehicles. Second, affected by the global economic situation and supply chain fluctuations, Tesla faces pressure from rising raw material costs in 2023. Despite Tesla's excellent performance in cost control, the rise in raw material costs still had a negative impact on gross profit margins. Thirdly, market competition is intensifying. As the electric vehicle market continues to grow, competition is becoming increasingly fierce. Tesla, under the dual competitive pressure from traditional car companies and new power car companies, had to invest more resources and funds in research and development, marketing and after-sales service in order to maintain its market position, and Tesla's investment in research and development reached an all-time high, mainly for the development of autopilot and other new technologies. The high R&D expenses offset the revenue growth to some extent [7].

Secondly, it calculated the ratio of total debt to net assets, which declined linearly from 76.36% in 2019 to 40.34% in 2023, which means that Tesla's debt stress is reduced, financial stability is increased, and it is more able to withstand economic fluctuations and risks. It can be seen that Tesla Tesla Inc. has implemented specific measures in various aspects such as capacity enhancement and cost control, product strategy and market expansion, financial management and financing strategy, quality management and brand building, and risk management and internal control.

Through large-scale investment and expansion, it has built a number of Superfactories around the world, such as the Shanghai Superfactory and the Berlin Superfactory [8]. It has also increased its production capacity and lowered its production costs by introducing advanced production lines and automated equipment, and by reducing manual intervention. In terms of cost control, it has established long-term and stable relationships with major raw material suppliers to ensure the stability of raw material supply and price advantages. Tesla has also reduced raw material costs by adopting new technologies, such as the use of cobalt-free batteries.

**Table 1.** ROCE of Tesla from 2021 to 2023

	ROCE	=	Profit Margin for ROCE	×	Asset Turnover	×	Capital Structure Leverage
Dec 31, 2023	32.71%		15.49%		1.15		1.82
Dec 31, 2022	38.78%		15.41%		1.24		2.02
Dec 31, 2021	28.04%		10.25%		1.08		2.51

As Table 1 shown, Tesla's ROCE grows from 28.04% in 2021 to 38.78% in 2022 and remains at a high level despite a slight decline in 2023. This reflects the company's significant improvement in asset utilisation and profitability. This is closely linked to Tesla's actions to scale up production, improve productivity and optimise its cost structure.

Tesla's ROCE margin has been increasing year on year, growing from 10.25% in 2021 to 15.49% in 2023. This indicates that the company has achieved significant results in cost control. The increase in ROCE margin is closely related to Tesla's continuous optimisation in cost control. The company has effectively reduced its cost per vehicle by improving production efficiency, optimising supply chain management and reducing operating costs.

Tesla's asset turnover ratio is on an overall upward trend, growing from 1.08 in 2021 to 1.15 in 2023 (although 2023 is slightly lower than 2022). This indicates that the company is making positive progress in asset management. The improvement in asset turnover is closely related to Tesla's adjustments in its asset utilisation strategy. The company has effectively improved its asset turnover by optimising asset allocation, improving the efficiency of asset utilisation and strengthening inventory management.

Tesla's capital structure leverage ratio has been declining year on year, from 2.51 in 2021 to 1.82 in 2023. The decline in leverage ratio is closely related to Tesla's actions in adjusting its financial strategy. In the face of uncertainty in the financial markets and tightening of regulatory policies, the company has chosen to reduce its financial risk by lowering its financial leverage and reducing its debt financing.

**Table 2.** Tesla's Liquidity Ratios.

	Dec31,2023	Dec 31,2022	Dec 31,2021	Dec 31,2020	Dec 31,2019
Current ratio	1.73	1.53	1.38	1.88	1.13
Quick ratio	1.13	0.94	1.00	1.49	0.71
Cash ratio	1.01	0.83	0.90	1.36	0.59

From Table 2, it can be seen that Liquidity Ratio is trending upwards, but it is reviewed Tesla's annual report which specifically cautions:

(1) The debt agreements contain covenant restrictions that may limit its ability to operate its business. In addition, Tesla is required to maintain a certain level of liquidity under certain circumstances. If any of the debt is accelerated, it may not have sufficient funds to repay the debt.

(2) Tesla may not be able to obtain additional funds when it needs or wants them. The business and future expansion plans are capital intensive and the exact timing of cash inflows and outflows may fluctuate significantly from period to period. If Tesla is unable to raise additional capital when it needs it, the financial condition, results of operations, business and prospects could be materially and adversely affected.

This indicates a degree of financial risk for Tesla.

Overall, Tesla's internal environment in recent years has been positive and dynamic. Tesla has made significant progress not only in hardware, but also in

software and services, and is committed to providing better electric vehicle products and services.

## 4 Risk Assessment & Forecast

### 4.1 Risk Assessment

Firstly, looking at the Electric vehicle market as a whole, market demand can fluctuate, as consumer awareness and acceptance of Electric vehicles continues to change. The market environment of increasing competition is also one of the risks.

Secondly, risks in the supply chain. Electric vehicles are more high-tech products and rely on key raw materials such as lithium and cobalt, the supply of which is subject to uncertainty. Any disruption or price fluctuation in the supply chain will have a direct impact on production costs and product quality [9].

Third, the electric vehicle industry has been booming in recent years, and the government's subsidy policy for electric vehicles is one of the key factors driving the industry's development. However, as the industry matures and develops, the policy subsidies may gradually be rolled back, which will have an impact on the profitability and market competitiveness of EV companies.

Further assessing from within Tesla, there are certain financial risks, as mentioned earlier, the covenant restrictions contained in the debt agreements may limit the company's ability to operate its business and Tesla does not have sufficient funds to repay the debt if it needs to be accelerated; the company also has the problem of not being able to obtain sufficient funds.

### 4.2 Forecast

**Table 3.** Estimates of Tesla from 2024 to 2026

	Automotive Sale	Automotive Leasing	Service and Other	Energy Production and Storage Sector	Total
2024	100 billion	2.5 billion	10 billion	8 billion	120.5 billion
2025	125 billion (25%increased)	3.7 billion (50%increased)	15 billion (50%increased)	10 billion (25%increased)	153.7 billion
2026	156.2billion (25%increased)	5.6 billion (50%increased)	22.5 billion (50%increased)	15 billion (50%increased)	199.3 billion

In the automotive sales segment, based on the continued expansion of production capacity and market share, coupled with the overall growth trend of the electric vehicle market, Tesla will continue to benefit from market growth and product innovation for sustained growth (see Table 3).

In the car leasing segment, based on the expansion of the leasing market and the improvement of service quality, the popularity of Tesla's automotive products and the increase in consumer acceptance of electric vehicles, the leasing business will become an important growth point for Tesla's revenue.

Service and other income segment, based on Tesla's continuous innovation and expansion in the service field and the expansion of Tesla's owner group, the service demand will continue to grow.

In the energy production and storage segment, based on the expansion of the new energy market, Tesla continues to introduce new products including solar rooftops and home battery storage systems. These new product lines are expected to be new revenue growth drivers [10].

Overall, as the electric vehicle market further matures and consumer demand for sustainable mobility increases, Tesla, as an industry leader, is expected to continue to benefit from this trend and achieve sustained revenue growth.

## 5 Conclusion

Tesla has taken a leading position in the new energy vehicle industry, driving the popularity and marketability of electric vehicles. In the global market, Tesla sales continue to climb, especially in the United States and China. Showing the internal environment through SWOT analysis, Tesla has advantages in product development, brand influence and employee attraction, but has deficiencies in product cost, service network and consumer acceptance. The external environment points out that with the global emphasis on environmental protection and policy support, the electric vehicle market is experiencing explosive growth, providing Tesla with broad market opportunities; at the same time, intensified competition, unstable supply chain and geopolitical risks pose threats. The risk assessment points out that Tesla is facing challenges such as market demand fluctuation, supply chain risk, policy subsidy retreat and financial risk. Taken together, it predicts that Tesla will continue to grow in the business areas of car sales, car leasing, services and energy production and storage, benefiting from market growth and product innovation.

Tesla will continue to expand its share of the global market, especially in emerging markets such as Europe and Asia. Tesla is expected to introduce more innovative products, including more efficient battery technology, more advanced autopilot system and new models to meet the needs of different consumers. In order to cope with the challenges of unstable supply chain and rising costs, Tesla will further strengthen its cooperation with suppliers to optimise supply chain management and reduce costs. Tesla may strengthen its investment in social responsibility, including environmental protection, employee welfare and community development to enhance brand image and social recognition. In conclusion, Tesla, as a leader in the new energy vehicle industry, will continue to maintain strong growth momentum in the next two to three years, and is expected to achieve sustainable development and maintain its leading position in the industry.

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