



Financial Analysis of the Company Tesla

Yifei Li

Rutgers, The State University of New Jersey, New Brunswick, NJ 08544, USA
yl2178@scarletmail.rutgers.edu

Abstract. Tesla's costs are divided into R&D, manufacturing, sales, administrative, capital, and operating expenses. R&D funds new vehicles, battery technology, and autonomous driving. Manufacturing costs cover labor, supplies, and operations. Sales costs are primarily driven by word-of-mouth and free media. Administrative expenses include payroll, overhead, and legal fees. The structure of shareholders is analyzed. Retail investors hold 43.16% of Tesla's stock, while institutional ownership decreased from 43.01% to 42.84%. Corporate insiders, banks, asset management businesses, and investment advisors hold the majority of shares. The SWOT analysis is used to make a comprehensive analysis from four aspects. Tesla has strengths in energy efficiency, innovative design, and a strong brand image. However, it has difficulties with things like price, a wide choice of products, and limited visibility. Possibilities include internal battery manufacturing, eco-friendly automobiles, and autonomous driving technologies. New technology, heightened competitiveness, and long-term sustainability are among the threats.

Keywords: Tesla, SWOT, Operating Expenses.

1 Introduction

The main focus of this article is to provide a comprehensive analysis of Tesla's financial condition, including costs distribution, shareholders structure and overall environment. Investors can use this information to make wiser investment choices. The substantial corpus of existing research on consumer psychology about the acceptance of Tesla's electric vehicles can also assist the EV industry in comprehending client behavior more effectively.

Tesla has been described as the market champion in the manufacture of automobiles powered by electricity. It was the first business to recognize the market's demand for a more environmentally friendly vehicle than conventional gasoline-powered automobiles and provide an approach to address that need. [1]. With 2.3 million sales globally as of the end of 2021, Tesla is the world's leading manufacturer of electric automobiles. [2]. Early in August 2009, the business said it was accomplishing business performance for the whole month of the preceding month. [3]. The company stated that it generated around US\$1 million from US\$20 million in revenue.

In order to develop an electric sports car, Tesla Motors was founded. Eberhard served as Tesla's chief executive officer (CEO), and Tarpenning as its chief financial officer (CFO). Although a number of individuals contributed money to the company, PayPal creator Elon Musk stood out as the biggest donor, contributing more than \$30 million to the venture and becoming chair in 2004.

The fully electric Roadster, Tesla Motors' first vehicle, was introduced in 2008. It attained a staggering 245 miles (394 kilometers) on just one load during the business testing, a first for an electric automobile now in production.

The Securities and Exchange Commission (SEC) of the United States brought charges against him in September 2018 for allegedly making "false and misleading" tweets. Later on in the month, the SEC's proposed settlement was turned down by Tesla's board, allegedly as a result of Musk's resignation threats.

As the 2020s rolled around, Tesla started doing what automakers had been doing for decades: adding new models and updating its current lineup. In 2020, Tesla unveiled the Model Y, a crossover that shared many parts with the Model 3 and was smaller and more reasonably priced than the Model X. The Model Y's sales soon caught up to those of the Model 3, and by 2023, it was the most popular car sold by Tesla worldwide.

The study of costs will be the first of four sections in this essay. The structure of shareholders comes up second. A SWOT analysis of Tesla is shown in the third. Finally, the limits and conclusion are discussed.

2 Analysis of expenses

2.1 Breakdown of expenses

Costs can be roughly divided into the following categories.

Research and Development (R&D). The majority of Tesla's spending is allocated to research & development. This covers the creation of new automobiles such as the Roadster and Cybertruck, advancements in battery technology, and developments in autonomous driving capabilities. For Tesla to keep its technological and innovative competitive advantage, research and development is essential.

Manufacturing and Production Costs. The cost of production and manufacturing is another significant outlay for Tesla. This covers the price of labor, supplies, and running its operations, such as the Gigafactories in Texas, Nevada, Shanghai, and Berlin. Tesla has been progressively expanding its capacity to suit the growing demand while utilizing economies of scale to reduce production costs.

Sales and Marketing. Tesla relies significantly on word-of-mouth and free media coverage, spending relatively less on marketing than traditional automakers. The

running of the company's showrooms, service facilities, and Supercharger network, among other things, still results in sales-related costs. These costs are necessary for attracting, servicing, and keeping customers.

Administrative Expenses. These consist of general and administrative expenses including payroll for staff members not directly engaged in production or research and development, as well as other overhead costs and legal fees. Tesla's administrative expenses increase along with its growth, although the business strives to minimize these costs through effective operations.

Capital Expenditures (CapEx). Tesla invests a large amount of cash in order to expand its manufacturing capacity, develop new products, and build infrastructure, including the energy storage systems and charging network. Although they demand a large initial outlay, these expenditures are essential for long-term prosperity.

Operating Expenses. This covers a broad range of expenses related to the company's daily operations, such as shipping, logistics, warranty servicing, and repairs.

2.2 Analysis of operating expenses

This covers a broad range of expenses related to the company's daily operations, such as shipping, logistics, warranty servicing, and repairs. Tesla aims to achieve profitability and long-term sustainability by increasing its production capacities, developing technology, and broadening its global reach, all while controlling its operating expenses. Tesla's overall operating costs in the fiscal year 2023 were \$8.8 billion, a record that was exceeded by 22%, or \$1.6 billion, over the year before. Operating costs for Tesla were \$8.8 billion in 2023, up 24% from the previous fiscal year. Tesla's operating costs have risen by 434% over the last eight years, or by 54% annually on average since 2015. (Tesla Investor Relations)

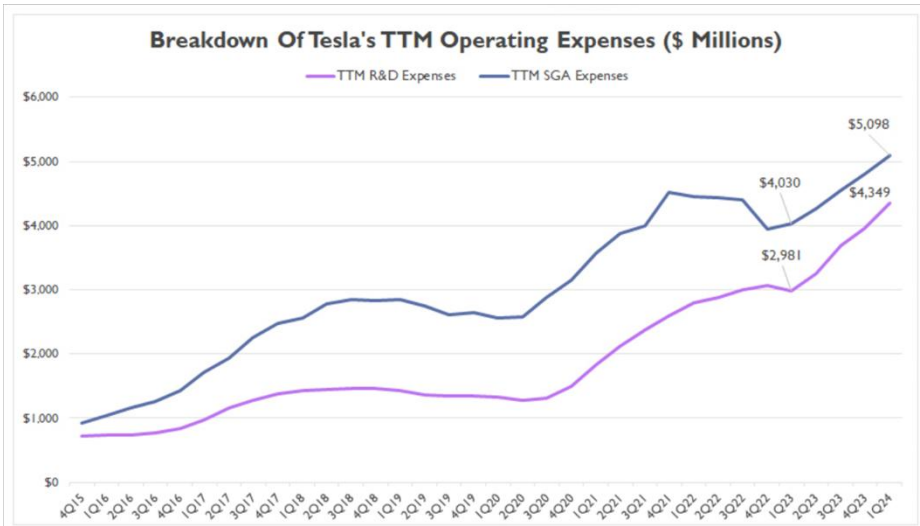


Fig. 1. Tesla operating expenses by TTM breakdown (Picture Credit: Original)

According to Figure 1, Tesla has incurred SGA costs that are far more than R&D costs. Tesla's SGA costs hit a record \$5.1 billion as of the first quarter of 2024, while R&D costs came in at \$4.3 billion. Comparing these numbers to a year earlier, there was a notable increase. Between 1Q 2023 and 1Q 2024, TTM SGA expenses came to an average of \$4.5 billion per quarter, whereas R&D only came to \$3.6 billion—a far smaller amount than SGA—during the same time period. (Tesla Investor Relations) The operating margin is being adversely affected by Tesla's increasing operating costs. By 2024, operating margin had fallen to an all-time low.

2.3 Summary for expenses

Tesla's operating expenditures are increasing, but the firm is still growing its revenue at a much faster rate. But as of late, the pattern has changed. For the first time since 2015, Tesla's operating expense growth in 2024 has surpassed revenue growth. The company's declining revenue and growing operational costs should be watched by investors. If this pattern persists, Tesla may suffer from declining profits. Stockholders are concerned about it.

3 Shareholders

3.1 Overview

Regular stock investors who appreciate Tesla's CEO, Elon Musk, and are betting on the transition to sustainable energy sources have long favored the electric vehicle (EV) manufacturer, Tesla (TSLA). Tesla Inc. was established on July 1st, 2003, in

California. It creates, produces, and markets electric cars in addition to energy storage devices (Powerwall and Power-pack) [4]. By valuation, Tesla is the seventh-largest company in the world, with a market value of over \$635.37. The firm went public with its shares in June 2010 at a price of \$17 each. Ten years later, the stock was trading at over \$1,000, a gain of more than 5,700%. [5] As the corporation increased its vehicle sales and manufacturing capacity, the share price skyrocketed, reaching an all-time high in November 2021. But in 2022, the price fell by 51% as a result of a sharp sell-off in the financial markets, yet since Musk bought the social networking site Twitter, the stock's allure has diminished somewhat. Tesla distributed its equity to investors in August 2020, awarding them five shares for each share they owned at the time. On August 25, 2022, the company's shareholders decided to divide the shares again, this time three for one. A stock split raises the overall quantity of shares in circulation without affecting the company's market value. Every share now costs less as a result. This might make a company more attractive to small-scale investors, especially if their brokerage forbids them from buying fractional shares. Tesla said in a US Securities and Exchange Commission (SEC) filing that a second stock split would improve the company's ability to draw and keep talent with its pay plans.

3.2 Breakdown of shareholders

Retail investors held the largest block of shares as of March 2, accounting for around 1.36 billion shares, or 43.16%. The proportion of institutional ownership in the company, which totaled 1.35 billion shares, dropped from 43.01% at year-end to 42.84%. Company executives possessed 14% of the equity, or 442.8 million shares. (Willing)

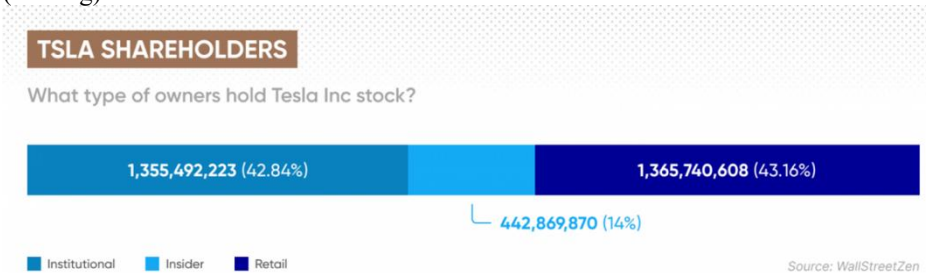


Fig. 2. Tesla shareholders (Picture Credit: Original)

According to Figure 2, unlike its competitors in the auto sector, Tesla's stock is significantly owned by corporate insiders. Insiders own just 2% of the shares of US automaker Ford (F), whereas officials at General Motors (GM) own 12.8% of the company's equity. Banks, asset management businesses, financial services corporations, and investment advisors and managers are among the institutional investors who own the highest shares in Tesla. They collectively hold the majority of Tesla's shares and have the power to influence the price of the stock.

3.3 Breakdown of shareholders

With a combined 15% of Tesla's outstanding shares, the main institutional investors are Capital World Investors, Blackrock (BLK), and Vanguard Group. Let's examine the top five institutional Tesla stock holders and the rationale behind their holdings.

Vanguard Group. Among institutional Tesla shareholders, Pennsylvania-based financial advisor Vanguard Group holds the highest position (6.89%, valued at \$44.28 billion). According to ADV Ratings' ranking of the top asset management companies worldwide [6], the company was founded in 1975 and is currently the second largest asset manager globally, behind Blackrock. Vanguard offers a variety of investment products, retirement programs, and advisory services to professional investors, institutions, and individual investors. Vanguard was a pioneer in developing index-tracking mutual funds and exchange-traded funds (ETFs) to facilitate ordinary investors' easy access to the stock market. These funds provide investors with market exposure without requiring them to conduct in-depth research on and make investments in individual firms. Instead, they track the performance of a benchmark index, such as the US Tech 100 (US100) or the S&P 500 (US500).

Biggest individual Tesla shareholders. With a 13.04% position in Tesla, Musk is the company's largest stakeholder and may significantly affect the direction of the share price. Following a Twitter poll in which he inquired as to whether he should sell part of his shares in order to pay taxes, Musk liquidated 10% of his position, which caused the stock to decline in value in November 2021. As Musk sold additional shares in 2022 to fund his acquisition of Twitter, the social media network, investors started to worry about his ability to manage both businesses concurrently, which caused the share price to drop once more. Musk's ownership of Tesla has decreased; as of February 2022, he owned about 17% of the company. According to SEC filings, Musk sold stock multiple times in the previous year. Due to Musk's stock sales on the public market, the company's share of retail investors has risen. By implying that the stock is overpriced, Musk has already caused surges in the volatility of Tesla's share price.

4 Method

SWOT analysis is an easy-to-understand, productive method for identifying potential benefits and threats from the outside world, an organization's market, and its resource strengths and weaknesses [7]. An internal and external SWOT analysis has two components. Environmental factors, opportunities, and hazards are examples of external dimensions; organizational factors, strengths, and weaknesses are examples of internal dimensions [8].

4.1 Strengths

Efficiency in energy use. In terms of electric car technology, Tesla is a major pioneer as it heavily relies on green energy sources, including sunlight.

Collaboration. Major players like Yes Energy and Southeast APDA are partners of Tesla. These partnerships enable Tesla to increase its presence in international markets and the renewable energy space.

Really creative. The design of Tesla is excellent. When developing and engineering their electric vehicle, they also paid close attention to how pleasant their customers would be.

Robust brand perception. The public is optimistic about the company and anticipates excellent products as well as the development of renewable energy. It is really widely recognized presently.

4.2 Weakness

Restricted awareness. In addition to trying to establish itself in the very competitive car sector, Tesla is also looking to expand globally.

Superior selection of products. Tesla is a well-known, upscale sustainable energy brand. Their potential obstacles include the matter of cost and customer skepticism regarding electric cars.

The plan of succession. With Elon Musk serving as its public face, Tesla is now viewed as a one-man show. Having saying that, Elon Musk leads a busy life.

4.3 Opportunities

Technology for autonomous driving. Tesla is well known for its reliable and useful autonomous technology, gaining the confidence of the share market and clients. Tesla's self-driving capabilities are always changing.

Eco-friendly automobiles. There are fewer fuel-powered cars on the road and a greater demand for electric vehicles due to customers' growing environmental concern.

Technology for producing batteries. It is Tesla's intention to produce its own battery cells. By assisting the corporation in reducing its manufacturing expenses, this might significantly alter the game's rules. This will boost the economy by producing a large number of employment.

4.4 Threats

Heightened rivalry. Numerous studies on renewable energy-powered vehicles are underway, and big businesses are beginning to take aim at Tesla.

Novel technologies. Vehicles are utilizing cutting-edge energy-saving techniques. Increased operating costs and reduced profit margins might result from rivalry hardship.

Extended durability. For a company producing automobiles run by renewable energy, long-term sustainability is crucial. Given Tesla's precarious production conditions and the sparse EV service network in North America and some regions of Asia, this might be cause for alarm. If Tesla wants to fully achieve its potential in the BEV business, it should use the insights from this type of SWOT analysis to inform the creation of the strategic worldwide marketing plan that will be discussed in the section that follows [9].

5 Conclusion

5.1 Results

As a pioneer in the electric car sector, Tesla's advancement is critical to its referential value. The extensive body of prior research on consumer psychology the acceptability of electric vehicles and behavioral intention to purchase should help the EV business better understand how clients behave. Analysis of the business strategy and future development of Tesla is also studied. The current emphasis of Tesla's innovation and development is primarily on the promotion of electric vehicle development and the research of its organizational structure. However, there is a lack of comprehensive analysis about the budget structure and shareholder analysis of Tesla.

Tesla's cost structure includes R&D, production, sales, administrative, capital, and operational expenditures. R&D funds autonomous driving, battery technology, and new car development. Shareholding structure shows retail investors own 43.16% of Tesla's stock, while institutional ownership dropped from 43.01% to 42.84%. The majority of shares are held by banks, asset management companies, corporate insiders, and investment advisers. Among Tesla's advantages are its cutting-edge design, energy economy, and solid brand recognition, but faces challenges like a

small market share, a wide product range, and cost concerns. Threats include long-term sustainability, emerging technology, and increased competition.

5.2 Limitations

This study still has several shortcomings. For instance, the SWOT analysis may present an unduly simplistic image. The SWOT analysis lacks prioritization of criteria, inadequately defines factors, and is susceptible to subjectivity and prejudice from managers who may provide an exaggerated evaluation of the company's attributes. Furthermore, data on Tesla's present financial situation might not be current or thorough enough to allow for the formation of a strict and impartial conclusion.

When authoritative and trustworthy social data for each location has been obtained, future trends and recommendations will be explored. In the future, researchers can experiment with a novel kind of analysis known as Tesla strategy analysis and ASEB (activities, settings, experiences, benefits) grid analysis.

References

1. Maradin, Dario, Ana Malnar, and Ana Kaštalan. "Sustainable and clean energy: the case of tesla company." *Journal of economics, finance and management studies* 5.12 : 3531-3542 (2022).
2. Kane, Mark. "Tesla Q4 2021 Final EV Delivery Numbers And Outlook" *InsideEVs*. (2022).
3. Garthwaite, Josie. "Tesla Motors Claims \$1M July Profit (a First!), Thanks to Roadster 2" (2009).
4. FINANCE, MASTERS IN. TESLA INC. COMPANY REPORT. Diss. NOVA–School of Business and Economics (2016).
5. Willing, Nicole. "Tesla Shareholders | Who Owns the Most Shares in Tesla?" *Capital.com*, 2 Mar. 2023, capital.com/tesla-shareholder-who-owns-the-most-tesla-stock.
6. "World's Top Asset Managers 2019." *Advratings.com*, 2019, www.advratings.com/top-asset-management-firms.
7. THOMPSON, A. A., STRICKLAND, A. J. & GAMBLE, J. E. *Crafting and Executing Strategy-Concepts and Cases*, (15th Edition), USA: McGrawHill/Irwin. (2007).
8. Gurl, Emet. "SWOT analysis: A theoretical review." (2017).
9. Mangram, Myles Edwin. "The globalization of Tesla Motors: a strategic marketing plan analysis." *Journal of Strategic Marketing* 20.4 289-312 (2012).

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

