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COVER PAGE AND DECLARATION

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Introduction

Elon Musk, the visionary businessman who launched Tesla Inc. in 2003, has come to represent innovation, sustainability, and the direction of transportation. With its headquarters located in Palo Alto, California, Tesla has quickly transformed from a producer of specialty electric vehicles (EVs) to a leading global player in automotive and sustainable energy technologies. Beyond only building electric vehicles, the company wants to hasten the global switch to renewable energy sources. The Roadster, Tesla's first electric sports car, marked the beginning of the company's journey and not only changed people's opinions about electric cars but also paved the way for a seismic change in the automotive sector. Because of the Roadster's popularity, more accessible and reasonably priced electric cars were made possible, with models S, X, and Y becoming well-known brands. The secret to Tesla's success is its dedication to advancing technologically. The company is well known for its innovative battery technology, energy solutions, and autonomous driving capabilities (Chen & Perez, 2018).

Tesla's Gigafactories, which are positioned strategically throughout the world, are essential to the large-scale manufacture of electric vehicles and batteries, supporting the company's ambition for a sustainable energy future. Beyond the vehicle industry, Tesla has advanced renewable energy significantly. Its position in solar energy and energy storage solutions was strengthened with the acquisition of SolarCity in 2016. The solar roof, Powerwall, Powerpack, and Megapack are essential elements of Tesla's all-encompassing strategy for meeting global energy demands in a sustainable manner. Tesla has changed customer expectations and upended conventional wisdom in the automotive industry. Regular over-the-air software upgrades demonstrate the company's commitment to continuous innovation, which

translates into a focus on enhancing current products and smoothly introducing new capabilities (Cooke, 2020).

Performance Evaluation of Tesla Inc.

Tesla Inc. has become a major player in the energy and automobile sectors. Its developing company model, growing market presence, and inventive approach are all reflected in its financial performance throughout time. Using the data presented from 2019 to 2022, we will analyze Tesla's performance in terms of Profitability, Efficiency, short-term and long-term solvency, and market-based ratios (Jenčová et al., 2019).

a. Profitability

1. Gross Profit Margin

The gross profit margin for Tesla increased from 16.56% in 2019 to 25.60% in 2022 with a consistent rate of growth. As Tesla ramps up manufacturing, this indicates better cost control and production efficiency, which may be fueled by economies of scale.

2. Operating Profit Margin

The operational profit margin increased from -0.28% in 2019 to 16.76% in 2022, demonstrating a notable improvement. This shows that Tesla has improved its ability to manage its operating costs and make more money from its core business activities.

3. Net Profit Margin

Tesla's net profit margin has increased significantly, rising from -3.15% in 2019 to 15.45% in 2022. This shows how well the business can control its costs and taxes in addition to producing income (Jenčová et al., 2019).

b. Efficiency

1. Asset Turnover

With an increasing trend, the asset turnover ratio reached 1.13 in 2022. This implies that Tesla is making better use of its resources to produce income. In general, operational efficiency is shown by a higher asset turnover.

2. Account Receivable Turnover

Tesla is collecting its receivables faster, as seen by the steadily rising account receivable turnover ratio. This is advantageous since it increases cash flow and lowers the chance of bad debts.

3. Inventory Turnover

Despite a slight decline in 2022, Tesla's inventory turnover has remained consistently high. Overstocking may be indicated by a lower inventory turnover rate, whereas strong demand or effective inventory management may be indicated by a greater turnover rate.

4. Account Payable Turnover

There has been a downward trend in the ratio of accounts payable turnover. A lower ratio may be the consequence of better credit terms being negotiated with suppliers, but it may also suggest a longer period of time to pay off payables (Rusin et al., 2018).

c. Short-term and long-term Solvency

1. Debt to Equity

Between 2019 and 2022, Tesla's debt-to-equity ratio dropped significantly, from 202.77% to 6.93%. This implies a decrease in financial leverage and a decreased reliance on borrowing money from outside sources.

2. Debt to Asset

The debt-to-asset ratio has continuously decreased, much like the debt-to-equity ratio, suggesting a more stable financial structure and lower level of risk.

3. Equity Ratio

An increasing trend in the equity ratio indicates a larger share of equity in the capital structure. This may indicate the company's sound financial standing and its capacity to pay its debts using its equity (MARIASIU et al., 2019).

e. Market-based Ratios

1. P/E Ratio

There have been significant changes in the P/E ratio, which gauges the market's expectations for future earnings growth. Although it was negative in 2019, positive P/E ratios in the years that followed show that the market is feeling bullish about Tesla's potential for future profits growth.

2. P/B Ratio

When comparing a company's market value to its book value, the P/B ratio has been comparatively high. This implies that investors are prepared to pay a premium for Tesla's physical assets and have a favorable view of the company's future growth (Kumari & Bhat, 2021).

Table 1: Performance evaluation

	2022	2021	2020	2019
Profitability				
1- Gross Profit Margin	25.60%	25.28%	21.02%	16.56%
2- Operating Profit Margin	16.76%	12.12%	6.32%	-0.28%
3- Net Profit Margin	15.45%	10.49%	2.73%	-3.15%
Efficiency				
1- Asset turnover	1.13	0.94	0.73	0.57

2- Account receivable turnover	33.49	28.34	19.65	15.31
3- Inventory turnover	4.72	6.99	6.07	5.77
4- Account payable turnover	3.97	4.01	4.12	5.44
Solvency				
1- Debt to equity	6.93%	22.64%	52.59%	202.77%
2- Debt to asset	3.76%	11.00%	22.41%	39.11%
3- Equity ratio	54.29%	48.59%	42.62%	19.29%
Market-based Ratios				
1- P/E ratio	30.6	190	967	-83.2
2- P/B ratio	8.47	33.6	28.2	9.34

Positive trends have been seen in Tesla's financial performance in a number of areas. A stronger solvency position, more Efficiency, and better profitability measures highlight the company's capacity to overcome obstacles and seize chances. The market-based ratios show how confident investors are in Tesla's potential for growth. It's crucial to remember that a number of factors affect the stock market, so these ratios should be taken into account in addition to a careful examination of the macroeconomic environment and the industry. It will be up to Tesla to maintain and improve this performance through ongoing innovation, efficient cost control, and the successful implementation of its strategic plans. Investors and stakeholders should closely monitor not only the financial metrics discussed but also industry trends and the competitive landscape to make informed decisions about Tesla's future prospects (Kumari & Bhat, 2021).

Recommendations for Enhancing Tesla Inc.'s Performance

Tesla Inc. has demonstrated remarkable growth and innovation, but like any company, there are areas where improvement could further solidify its position in the market. Based on the analysis provided, below are recommendations for enhancing Tesla's overall performance:

Diversification of Product Portfolio

While Tesla has achieved substantial success with its electric vehicles, there is room for diversification in its product portfolio. Expanding offerings in different vehicle segments or entering new markets such as electric bikes or smaller electric vehicles could capture a broader customer base and hedge against market fluctuations.

Supply Chain Optimization

As Tesla continues to scale its production, optimizing the supply chain becomes increasingly critical. The company should explore strategic partnerships, invest in predictive analytics, and leverage emerging technologies like blockchain to enhance transparency and efficiency in its supply chain. This will mitigate risks related to component shortages and improve overall production stability (Gafarov, 2019).

Continuous Innovation in Autonomous Driving

Autonomous driving technology is a key differentiator for Tesla. Investing in research and development to further enhance the capabilities of its Full Self-Driving (FSD) technology will not only attract more customers but also contribute to Tesla's leadership in the automotive industry. Continuous improvements, along with addressing regulatory challenges, will be crucial for the widespread adoption of autonomous driving features.

Strengthening Environmental Initiatives

Given Tesla's commitment to sustainability, there is an opportunity to strengthen its environmental initiatives. This may include increasing battery recycling, investing more in renewable energy initiatives, and enhancing openness regarding the environmental impact of the products' production processes. Increased efforts in corporate social responsibility can draw in environmentally sensitive customers and have a positive public image (Dana, 2018).

Robust Risk Management

Tesla faces a variety of challenges in its ever-changing business environment, from geopolitical concerns to regulatory uncertainties. Putting into practice a thorough risk management plan that incorporates scenario planning will assist the business in anticipating and averting possible hazards. This is especially crucial because the automobile sector is changing quickly, and changes in geopolitical dynamics and regulatory frameworks are just two examples of these changes.

Enhanced Communication and Transparency

Tesla has a reputation for using unusual communication methods, mostly on social media. Although this has helped to create the company's distinct brand identity, there is a chance to improve openness and communication. Establishing trust with investors, consumers, and other stakeholders can be achieved by transparent communication regarding production targets, product roadmaps, and quality control concerns (Dana, 2018).

Talent Development and Retention

To maintain its competitive advantage, Tesla needs to prioritize the growth and retention of its workforce. Top-tier talent can be attracted and retained by making investments in employee training programs, encouraging an innovative culture, and offering competitive salary

packages. The cohesive power of a highly qualified team is essential to Tesla's continued success in the quickly changing automotive and technological industries.

Geographic Expansion with Strategic Considerations

It would make sense for Tesla to enter new markets as part of its global expansion. But it's crucial to carry out in-depth market research, taking into account things like regional laws, infrastructure, and customer preferences. To ensure that Tesla's expansion initiatives are as successful as possible, goods and marketing methods should be tailored to suit different markets.

Collaboration and Partnerships

Tesla's influence can be increased by partnering with other market participants, particularly in fields like energy storage and infrastructure for charging. Governments, utility companies, and IT businesses can partner with Tesla to expedite the development of all-encompassing solutions, which will benefit all parties involved. Entering new markets or industries might be facilitated by strategic relationships as well (Sharfman & Deluard, 2021).

Financial Prudence

It's essential to maintain financial discipline even in the face of great financial indicators. Tesla needs to make sure that all of its investment choices are in line with its long-term plan by closely monitoring how it allocates resources. This entails balancing rapid expansion with financial sustainability, maximizing working capital, and assessing the trade-offs between debt and equity financing.

In terms of technological innovation and environmentally friendly transportation, Tesla Inc. is at the forefront. Accepting these suggestions will put the business in a position for sustained success and adaptability in a business environment that is changing quickly. Tesla can further establish its position as a disruptive force in the automotive and energy industries by

concentrating on product diversification, supply chain optimization, ongoing innovation, environmental initiatives, risk management, open communication, talent development, strategic expansion, partnerships, and financial prudence. A visionary leadership team, a dedication to innovation, and a proactive approach to obstacles will be essential to Tesla's long-term success and influence on the direction of renewable energy and transportation (Sharfman & Deluard, 2021).

Recommendation of new investment

The construction of a new factory in India is one possible option for increased investment for Tesla. One of the biggest and fastest-growing markets for electric cars is India, where Tesla just established a company. Tesla might be able to reduce production costs, gain market share, and meet anticipated demand in the area for its goods and services by establishing a new facility in India. We can apply the NPV and WACC techniques to assess the project's viability. The difference between the present value of the cash inflows and outflows throughout the course of the project is measured by the net present value, or NPV, of the project. The weighted average cost of capital, or WACC, calculates the average cost of funding a project with a mix of loan and equity (Moore, 2021).

One must estimate the original investment, the yearly cash flows, and the discount rate in order to get the project's net present value (NPV). A new factory might require an initial outlay of about \$2 billion. The factory's operational expenses, price, and anticipated sales volume all affect the annual cash flows. We may estimate that the average cost of a Tesla vehicle is approximately \$50,000, the gross margin is approximately 25%, and the operating expenses are approximately 15% of sales based on Tesla's prior financial reports. We may estimate that the facility can produce 500,000 cars annually at full capacity and that India's demand for Tesla cars

increases at a rate of 10% annually. As a result, the project's yearly cash flows can be calculated as follows (Catarino, 2019):

Table 2: New investment cashflows

Year	Sales Volume	Revenue	Gross Profit	Operating Expenses	Net Income	Cash Flow
0	-	-	-	-	-	-\$2,000
1	100,000	\$5,000	\$1,250	-\$750	\$500	\$500
2	110,000	\$5,500	\$1,375	-\$825	\$550	\$550
3	121,000	\$6,050	\$1,513	-\$908	\$605	\$605
4	133,100	\$6,655	\$1,664	-\$999	\$665	\$665
5	146,410	\$7,321	\$1,830	-\$1,098	\$732	\$732

To calculate the discount rate, we need to use the WACC formula. The WACC formula is:

$$\text{WACC} = (E/V * Re) + ((D/V * Rd) * (1 - T))$$

Where:

E = market value of the firm's equity (market cap)

D = market value of the firm's debt

V = total value of capital (equity plus debt)

E/V = percentage of capital that is equity

D/V = percentage of capital that is debt

Re = cost of equity (required rate of return)

Rd = cost of debt (interest rate) T = tax rate

According to Tesla's latest financial statements, the market value of its equity is \$834 billion, and the market value of its debt is \$13 billion. Therefore, the total value of capital is \$847 billion, and the percentage of capital that is equity is 98.5%, while the percentage of capital that is debt is 1.5%. The cost of equity can be estimated using the capital asset pricing model (CAPM), which is (Catarino, 2019):

$$Re = Rf + \beta * (Rm - Rf)$$

Where:

Rf = risk-free rate

beta = systematic risk of the stock

Rm = market return

We can use the 10-year US Treasury yield as the risk-free rate, which is currently around 1.6%. We can use the historical beta of Tesla's stock, which is around 2. We can use the historical average return of the S&P 500 index, which is around 10%. Therefore, the cost of equity for Tesla is:

$$Re = 0.016 + 2 * (0.1 - 0.016) = 0.184$$

The cost of debt can be estimated using the yield to maturity of Tesla's bonds, which is around 3%. The tax rate for Tesla can be assumed to be 21%, which is the US corporate tax rate.

Therefore, the WACC for Tesla is:

$$WACC = (0.985 * 0.184) + ((0.015 * 0.03) * (1 - 0.21)) = 0.181$$

Using the WACC as the discount rate, we can calculate the NPV of the project as follows:

$$NPV = -\$2,000 + (\$500 / (1 + 0.181)) + (\$550 / (1 + 0.181)^2) + (\$605 / (1 + 0.181)^3) + (\$665 / (1 + 0.181)^4) + (\$732 / (1 + 0.181)^5) = -\$1,023$$

The NPV of the project is negative, which means that the project is not profitable and should not be undertaken. Because the project's rate of return is less than the weighted average cost of capital (WACC), insufficient cash flow is generated to meet the project's cost. Since it can only capitalize 40% of the project with its own capital, Tesla would have to utilize its own cash or retained earnings to fund the project. Using its own funds or retained earnings, however, would lower its Profitability and liquidity and may make it more difficult for it to fund future initiatives or distribute dividends. Consequently, it would be unprofitable for Tesla to proceed with this project (Sánchez Puebla, 2018).

Pay return earnings or not.

Tesla does not currently pay dividends and does not plan to do so in the future. The corporation argues that it wants to keep all of its profits in order to fund its expansion in the future. In the long run, however, this choice might not be the best one for the business and its investors. Tesla should think about paying dividends or finding alternative ways to distribute profits to shareholders, including share buybacks or special dividends. Tesla should pay dividends because it would demonstrate its confidence and maturity as a successful business. Over the last ten years, Tesla has grown remarkably, but it has also encountered numerous difficulties and unknowns, including production hold-ups, quality problems, legal troubles, and competition pressures. In order to finance its growth, Tesla has also mostly relied on debt and equity financing, which has raised its financial risk and diluted its owners. Tesla would show that it has achieved a steady and sustained level of Profitability and cash flow generation by paying dividends, proving that it is not in need of more funding from outside sources. Its legitimacy and reputation among analysts, consumers, and investors would all be improved by this, and it would even see a rise in share price and valuation (Huang, 2019).

Tesla should pay dividends because it would draw in and keep more investors who respect stability and income. Growth-oriented investors make up the majority of Tesla's present shareholder base; they are prepared to put up with significant volatility and meager payouts in exchange for large returns and capital growth. But as Tesla ages and its growth rate slows, it might come under further pressure from other dividend-paying businesses that can provide investors with both growth and income, like established automakers or massive internet companies. Tesla would attract more income-oriented investors, such as pension funds, mutual funds, and retirees, who value steady and predictable cash flows and lower risk by paying dividends. This would diversify Tesla's investment base. As a result, Tesla's shares would see an increase in demand and liquidity and a decrease in equity costs (Alsharari, 2022).

Tesla would optimize its capital allocation and increase its return on invested capital, which is a third argument for paying dividends. Tesla's present approach of putting all of its profits back into its expansion initiatives may not be practical or efficient, given that some of these initiatives may have short-term, declining returns or even negative returns altogether. For instance, Tesla's expenditures in solar energy, autonomous driving, and battery technology might not yield profits high enough to cover their expenses, or they might encounter competitive, technological, or legal barriers that restrict their potential. By distributing dividends, Tesla would compel itself to exercise greater restraint and selection when making investments, concentrating on the ventures with the best potential for profit and the fewest risks. Its Profitability and capital efficiency would increase as a result, increasing shareholder value.

There are certain disadvantages and difficulties with Tesla's dividend payments. One disadvantage of paying dividends is that Tesla would have less cash on hand to invest in upcoming projects or handle unforeseen emergencies, which would limit its financial flexibility

and growth prospects. Another disadvantage is that paying dividends would obligate Tesla to continue increasing or maintaining its dividend payments over time, which could not be desirable or possible in some circumstances. For instance, Tesla might have to reduce or stop paying dividends if it experiences a slump in business or a liquidity shortage. This would disappoint and enrage its shareholders and harm the company's brand and share price. Thirdly, since dividends are taxed at a rate higher than capital gains in some countries, paying them out would have tax ramifications for Tesla and its shareholders and would lower their after-tax profits (Alsharari, 2022).

As a result, Tesla should carefully assess the benefits and drawbacks of paying dividends. It should also take into account other, potentially more adaptable and tax-efficient methods of repaying revenues to shareholders, like share buybacks or special dividends. Repurchasing own shares from the market a firm lowers the total number of outstanding shares while raising the price and earnings per share. This is known as a share buyback. Special dividends are one-time or infrequent payments made by a business to its shareholders out of surplus funds or earnings; they do not establish a consistent expectation or duty for dividend payments in the future. Share buybacks and special dividends have some advantages over regular dividend payments, including attracting investors, demonstrating confidence, and optimizing capital allocation. However, they also have some disadvantages, including less financial flexibility, imposing dividend commitments, and raising tax obligations (Yan, 2020).

Conclusion

It is concluded that Tesla's standing as an industry leader can be strengthened by putting these suggestions into effect. Sustained innovation will be driven by expanding the product line, streamlining the supply chain, and developing autonomous driving technologies. Long-term

sustainability is facilitated by prioritizing talent development, improving communication, and bolstering environmental measures. A comprehensive strategy is completed by cautious financial management, strategic partnerships, and geographic expansion. By taking these steps, Tesla is positioned to grow in a changing environment and overcome obstacles, ensuring its place in the future of sustainable energy and transportation. The WACC is a critical component in determining the project's viability since it is computed taking into account Tesla's market valuations, cost of stock, and cost of debt. Due to the project's negative net present value (NPV), which suggests that it might not provide enough returns to achieve the needed rate of return, its viability in Tesla's financial environment needs to be carefully considered.

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