



A Comparative Analysis of Financial Performance of Tesla and BYD Based on Financial Statements Ratios

Xinyue Cao

Beijing University of Technology, Chaoyang District, Beijing, China

caoxinyue@emails.bjut.edu.cn

Abstract. In recent years, with the increasing awareness of environmental protection among people, the new energy vehicle industry is gradually emerging. What investors in automotive industry concern most is how to invest in a wisdom way to reduce risks. This study intends to analyze financial performance of Tesla and BYD and give investment advice in new energy vehicle industry. Case study and comparative analysis are employed as two main methods to achieve above objectives. Liquidity ability, asset management ability, solvency ability and profitability is adopted as four main ratios to identify Tesla and BYD's financial performance at present and their future development. Research has found that Tesla's financial and risk situation is superior to BYD's, and both Tesla and BYD have broad development potential in the future. This study analyzes the ratio data and operation performance of two representative companies in new energy vehicle industry and generates guiding significance for investment in the new energy vehicle industry.

Keywords: Financial Performance Analysis, Ratio Analysis, Automotive Industry.

1 Introduction

BYD, as one of the leading vehicle manufactures in the worldwide automotive industry located in China whose products contains multiple areas, including pure electric vehicles, plug-in hybrid vehicles, and conventional hybrid vehicles [1]. Since March 2022, BYD has focused on producing fuel pure electric and plug-in hybrid vehicles instead of fuel vehicles [2]. Tesla is a famous and leading new energy vehicles company located in America whose products covers electrical cars and other services and products [3]. In 2023, Tesla and BYD have market shares of 19% and 17% respectively.

Facing the complicated, risky and volatile investment market, ratio analysis works as a necessary way for investors to identify the operation performance of certain company. As two representative companies in the automotive industry, the compared ratio analysis of Tesla and BYD generates significant meaning to evaluate investment and development of automotive industry.

This study mainly intends to analyze ratio comparatively of Tesla and BYD from 2020-2023 to determine the operation performance of two companies and give investment advice. In details, the main objectives can be divided into three specific objectives. Firstly, evaluating the operation performance of Tesla and BYD respectively by analyzing certain value in income sheet, balance sheet and cash flow. Additionally, compare the result of ratio analysis to determine the strengths and weaknesses of the two companies in their development. Last, give investment advice on Tesla and BYD to investors in automotive industry.

Selecting Tesla and BYD as research subject, several methods are adopted to research. The study will employ case study to select two representative companies in the new energy vehicle industry, Tesla and BYD, as cases to analyze their operation performance by ratio analysis, giving investment advice on Tesla and BYD to investors in the automotive industry. Then, comparative analysis is used to compare the ratio data and operation performance of Tesla and BYD to evaluate their advantages and disadvantages in previous development, which will work as an important support in investment advice giving.

Based on the concerning of development of new energy, environmental awareness and so on, how to invest in the new energy vehicle industry rationally becomes a vital problem to investors in automotive investors. Under the background of this situation, this study will analyze the ratio data and operation performance of two representative companies in new energy vehicle industry and compare two companies' strengths and concerns in operation and development to offer an investment feasibility analysis, which generate guiding significance for investment in the new energy vehicle industry.

The basic framework of the remaining work will be introduced. The second chapter is methodology where all financial ratios adopted in analysis will be introduce. The third chapter is analysis. The third chapter is an analysis. The ratio mentioned in Chapter Two will be calculated and a comparative analysis of BYD and Tesla will be organized. The fourth chapter is the conclusion. The conclusions will be summarized to give investment advice on Tesla and BYD.

2 Methodology

2.1 Liquidity Ratio

Liquidity ratio analysis contains three main ratios: current ratio, quick ratio, and average payment period. The liquidity ratio plays an important role in the company's financial health, which is crucial for relevant company engagers, such as managers, investors, and suppliers. The liquidity ratio determines the firm's ability to pay short-term debt [4]. Hence, comparing the current ratio, quick ratio, and average payment period of Tesla and BYD can obtain the financial ability to pay each company's liabilities to evaluate their investment risk.

Three main ratios will be introduced:

Current Ratio. The current ratio can be calculated using the formula (1).

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current Liabilities}} \quad (1)$$

Formula (1) evaluates the connection between current assets and current liabilities. The value of the current ratio demonstrates that each 1 dollar of current liabilities will meet how much current assets [5]. A higher value of the current ratio refers to a healthier financial situation of the company, which means current assets can pay for current liabilities.

Quick Ratio. The quick ratio can be calculated using the formula (2).

$$\text{Quick ratio} = \frac{\text{Cash} + \text{Marketable securities} + \text{Accounts receivable}}{\text{Current liabilities}} \quad (2)$$

Formula (2) evaluates the relationship between current liabilities and cash and accounts receivable. The value of the quick ratio determines that each 1 dollar of current liabilities will be covered by how much cash or accounts receivable [6]. A higher quick ratio value means a stronger liquidity ability for the company.

Average Payment Period. The average payment period can be calculated using the formula (3).

$$\text{Average payment period} = \frac{\text{Accounts payable}}{\text{Cost of goods sold per day}} \quad (3)$$

Formula (3) calculates the relationship between accounts payable and cost of goods sold per day. The average payment period analyzes the time period of paying for its suppliers by using the cost of goods. A shorter average payment period refers to a higher efficiency of funds turnover and more sufficient funds.

2.2 Asset Management Ratio

Three vital ratios are evaluated to determine the company's ability to manage assets. These three ratios are total assets turnover, fixed asset turnover and inventory turnover. The asset management ratio describes the speed of cash turnover inventory turnover, which analyzes the financial performance of managing assets [7]. Presenting the difference in total assets turnover, fixed asset turnover, and average collection period between Tesla and BYD is necessary to evaluate their ability to manage assets.

Three main ratios will be introduced:

Total Asset Turnover. The quick ratio can be calculated using the formula (4).

$$\text{Quick ratio} = \frac{\text{Cash} + \text{Marketable securities} + \text{Accounts receivable}}{\text{Current liabilities}} \quad (4)$$

Formula (4) evaluates the relationship between current liabilities and cash and accounts receivable. The value of the quick ratio determines that each 1 dollar of current

liabilities will be covered by how much cash or accounts receivable [8]. A higher quick ratio value means a stronger liquidity ability for the company.

Fixed Asset Turnover. Fixed asset turnover can be calculated using the formula (5).

$$\text{Fixed asset turnover} = \frac{\text{Net sales}}{\text{Fixed assets}} \quad (5)$$

Fixed asset turnover establishes the relationship between net sales and fixed assets, which shows the comparison between sales and fixed assets. To some extent, a higher fixed asset turnover is a positive sign of company performance. However, an extremely high fixed asset turnover may also demonstrate the problem of technologically obsolete equipment in the company [7].

Inventory Turnover. Inventory turnover can be calculated using the formula (6).

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Inventory}} \quad (6)$$

Inventory turnover describes the relationship between the cost of goods sold and inventory, which reflects the amounts of goods and inventory comparison. A higher inventory turnover shows a lower inventory situation, where the company may face a loss of potential trades. A lower inventory turnover means excess inventory in the company stores [7].

2.3 Solvency Ratio

Debt Ratio. The debt ratio can be calculated using the formula (7).

$$\text{Debt ratio} = \frac{\text{Total debt}}{\text{Total asset}} \quad (7)$$

Formula (7) reflects the total debt and total asset comparison, which measures the extent to which the company's finance depends on debt. A higher debt ratio refers to a stronger reliance on debt, which will increase the companies' financial risk [8].

Interested Earned Ratio. The formula (8) can calculate interest earned ratio.

$$\text{Interest earned ratio} = \frac{\text{Earnings before interest\&tax}}{\text{Interest expense}} \quad (8)$$

The interest earned ratio demonstrates the comparison of earnings before interest & tax and interest expense, which shows the extent of earnings decline after purchasing interest and tax. A lower level of interest earned ratio refers to a lower risk of company operation.

2.4 Profitability Ratio

The profitability ratio contains return on equity, return on assets, and profit margin, which analyzes the profitability situation of the overall enterprise and the operation performance. It also plays an important role in predicting the future profitability ability of the company [9]. Hence, analyzing these ratios of Tesla and BYD will offer investors a clear view of the companies' ability to generate profit and the variation of profit in recent years.

Three main ratios will be introduced:

Return on Equity. Return on equity can be calculated using the formula (9).

$$\text{Return on equity} = \frac{\text{Net income}}{\text{Average gross asset}} \quad (9)$$

Return on equity determines the company's efficiency using investors' money and shows the companies' earnings on the stockholder's equity [10]. The higher ROE of the company will attract more investors due to its efficient management of funds and strong profitable ability.

Return on Asset. Return on the asset can be calculated using the formula (10).

$$\text{Return on asset} = \frac{\text{Net income}}{\text{Average total assets}} \quad (10)$$

Return on assets illustrates the efficiency of the company's funds management. Better profitability and potential development will be achieved if the ROA of the company is higher than that of other companies.

Net Profit Margin. The profit margin can be calculated using the formula (11).

$$\text{Net profit margin} = \frac{\text{Net income}}{\text{Net sales}} \quad (11)$$

Return on assets illustrates the efficiency of the company's funds management. Better profitability and potential development will be achieved if the ROA of the company is higher than that of other companies [11].

3 Analysis

3.1 Ratio Analysis

Liquidity Ratio Analysis.

Current Ratio.

Table 1. Current Ratio of Tesla and BYD from 2020 to 2023

Time	2020	2021	2022	2023
Tesla	1.88	1.38	1.53	1.73
BYD	1.05	0.97	0.72	0.67

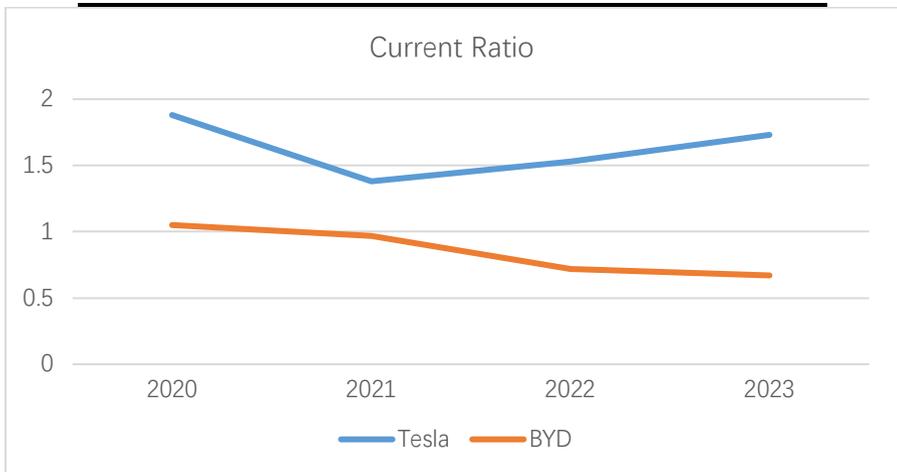


Fig. 1. Current ratio of Tesla and BYD from 2020 to 2023

As can be found in Table 1 and Fig. 1, from 2020 to 2023, Tesla's current ratio initially declined in 2021 and 2022 but increased in 2023, reaching 1.73 by the end of the year. This indicates some fluctuations in Tesla's financial health. However, Tesla's current ratio has remained around 1.5 over the past four years, suggesting overall financial stability and a consistent ability to cover its current liabilities with current assets.

In contrast, BYD's current ratio has continuously declined from 2020 to 2023, reaching its lowest point of 0.67 in 2023. For the past three years, BYD's current ratio has remained below 1.0, indicating increasing financial risk in meeting short-term liabilities, which could potentially lead to operational challenges.

When comparing Tesla and BYD, Tesla's current ratio has been consistently higher than BYD's from 2020 to 2023. Additionally, Tesla's trend in current ratio movements has been more favorable than BYD's, suggesting that not only is Tesla's ability to meet its liabilities stronger at present, but it is also likely to remain more financially stable in the future.

Quick Ratio.

Table 2. Quick Ratio of Tesla and BYD from 2020 to 2023

	2020	2021	2022	2023
Tesla	1.49	0.99	0.72	0.69
BYD	0.52	0.51	0.27	0.38

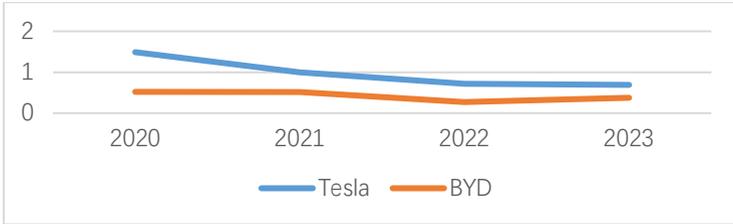


Fig. 2. Quick Ratio of Tesla and BYD from 2020 to 2023

According to the Table 2 and Fig. 2, Tesla’s quick ratio has declined over the past four years, reaching its lowest point of 0.69 in 2023. This decline indicates a decreasing liquidity position for Tesla in recent years.

Similarly, BYD’s quick ratio has also decreased over the past four years, hitting its lowest value of 0.27 in 2022. However, by the end of 2023, BYD’s quick ratio showed a slight increase of 0.11, reaching 0.38.

When comparing Tesla and BYD, Tesla’s quick ratio has remained higher than BYD’s over the past four years. This suggests that Tesla has a stronger ability to cover its liabilities using cash and accounts receivable, contributing to a more stable operational position.

Average Payment Period.

Table 3. Average Payment Period of Tesla and BYD from 2020 to 2023.

Time	2020	2021	2022	2023
Tesla	109.02	109.58	108.23	79.34
BYD	124.22	142.04	145.67	147.64

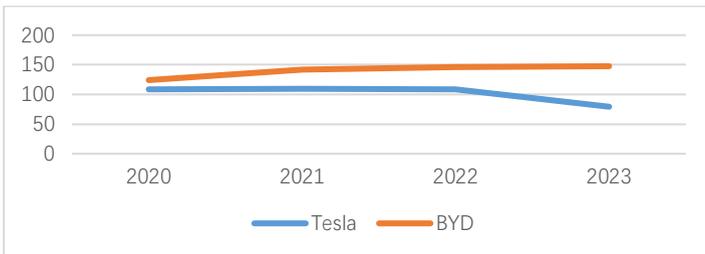


Fig. 3. Average Payment Period of Tesla and BYD from 2020 to 2023

According to the Table 3 and Fig. 3, Tesla's average payment period remained around 109 days from 2020 to 2022 before decreasing to 79.34 days in 2023. The minimal changes from 2020 to 2022 indicate a stable financial position for Tesla. The decline in 2023 suggests that Tesla has improved its efficiency in fund turnover, allowing it to settle payments to suppliers more quickly.

In contrast, BYD's average payment period has steadily increased from 2020 to 2023, reaching its longest duration of 147.64 days in 2023. This extended payment period indicates a decreasing ability to turn over capital, suggesting that BYD may be experiencing liquidity constraints.

When comparing Tesla and BYD, Tesla's average payment period has been consistently shorter than BYD's from 2020 to 2023. This suggests that Tesla faces lower financial and capital turnover risks, contributing to a more stable liquidity position.

Asset Management Ratio Analysis.

Total Asset Turnover.

Table 4. Total Asset Turnover of Tesla and BYD from 2020 to 2023

Time	2020	2021	2022	2023
Tesla	0.60	0.87	0.99	1.00
BYD	0.78	0.73	0.86	0.89

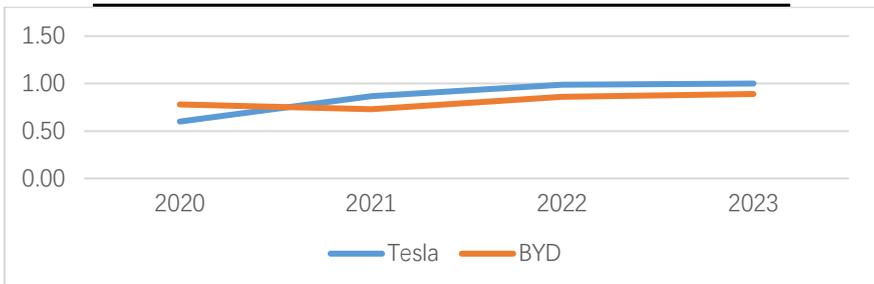


Fig. 4. Total Asset Turnover of Tesla and BYD from 2020 to 2023

Table 4 and Fig. 4 demonstrates total asset turnover of Tesla and BYD from 2020 to 2023. Tesla's total asset turnover has continuously risen from 2020 to 2023, achieving the highest value at 2023, which is 1.00. The increase of total asset turnover shows that Tesla uses more and more assets to produce sales or revenues, which refers to a higher efficiency of asset management and fund turnover.

Considering the total asset turnover of BYD, BYD's total asset turnover is also constantly rising in recent four years, achieving the highest value 0.89 at end of 2023. This phenomenon is a sign where BYD's asset and fund management has become better and more efficient.

In contrast to BYD, Tesla's total asset turnover is consistently higher than BYD is the four years evaluated. This situation demonstrates that Tesla's fund management and

turnover ability is stronger than BYD at present. However, due to the growth trend of total asset turnover, both of them will have a stable development in the future.

Fixed Asset Turnover.

Table 5. Fixed Asset Turnover of Tesla and BYD from 2020 to 2023

Time	2020	2021	2022	2023
Tesla	2.47	2.85	3.46	3.25
BYD	2.87	3.53	3.22	2.61

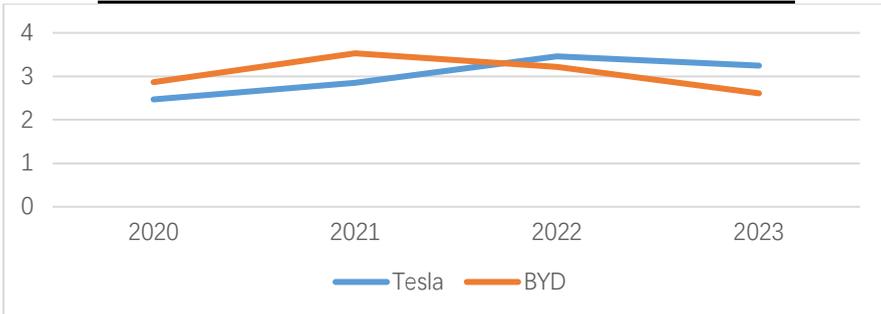


Fig. 5. Fixed Asset Turnover of Tesla and BYD from 2020 to 2023

On account of the Table 5 and Fig. 5, Tesla’s fixed asset turnover has been fluctuate changed in during the four evaluated years but it shows an upward trend overall. This kind of financial performance on fixed asset shows that Tesla adopts more fixed assets to earn revenues by selling products, which refers to a good financial performance.

BYD’s fixed asset turnover also demonstrated a fluctuation and change in the four years while the ratio consistently grew from 2020 to 2021. However, the fixed asset turnover declined in both 2022 and 2023. These changes show that from 2020 to 2021, BYD’s asset management ability strengthened while there is a negative change in fund management in 2022 and 2023.

To compare Tesla and BYD, the situation of fixed asset management of both of them fluctuate changes. In the view of the overall changes, Tesla’s ability of fixed asset management is better than BYD.

Inventory Turnover.

Table 6. Inventory Turnover of Tesla and BYD from 2020 to 2023

Time	2020	2021	2022	2023
Tesla	4.94	5.80	3.98	4.87
BYD	4.02	4.34	4.45	5.48

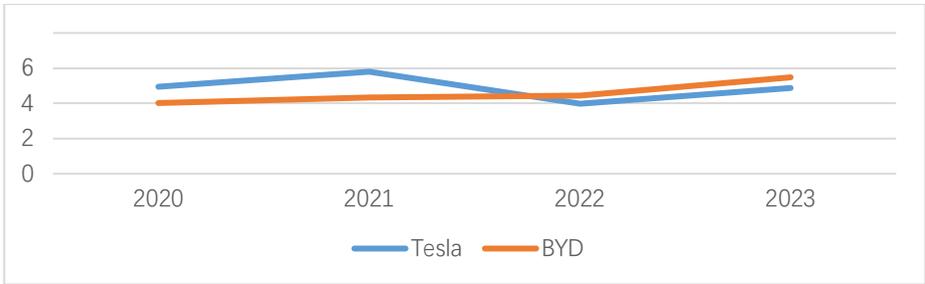


Fig. 6. Inventory Turnover of Tesla and BYD from 2020 to 2023

As can be demonstrated in Table 6 and Fig. 6, for Tesla, Tesla’s inventory turnover has changed fluctuate in the four years but overall it demonstrated a decreasing trend. The decrease of the inventory turnover refers to Tesla’s poor ability to make financial profit by selling inventory, which means Tesla’s ability of inventory management weakened.

In the view of BYD, the inventory turnover has constantly grown during the recent four years, reaching the highest value 5.48 at the end of 2023. The increase of the ratio demonstrates a stronger inventory management ability but the loss of potential trade-off may be an operation problem of BYD, if the inventory turnover ratio grows to an extremely high value.

By comparison, BYD’s inventory management capability is stronger than Tesla. Meanwhile, Tesla may focus on the problems of excess inventory while BYD should pay attention to potential loss of trade-off due to its high inventory turnover.

Solvency Ratio.

Debt Ratio.

Table 7. Debt Ratio of Tesla and BYD from 2020 to 2023

Time	2020	2021	2022	2023
Tesla	0.54	0.49	0.44	0.44
BYD	0.68	0.65	0.75	0.78

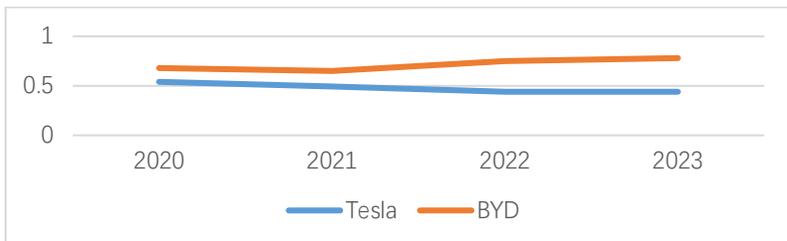


Fig. 7. Debt Ratio of Tesla and BYD from 2020 to 2023

Table 7 and Fig. 7 describes the debt ratio of Tesla and BYD from 2020 to 2023. From the perspective of Tesla, the debt ratio has shown a downward trend during the four years researched, reaching the lowest value 0.44 at both 2022 and 2023. The decrease of the debt ratio is a sign of decreasing reliance on debt, which will reduce the financial risk.

However, BYD’s debt ratio is fluctuate changes and demonstrates an upward trend from 2020 to 2023. In operation, BYD’s dependence on debt continues to increase, which will generate future risk for operation.

By comparison, Tesla’s risk in operation and financial turnover is lower than BYD because Tesla’s debt ratio is lower than BYD overall. A lower dependence on debt will perform a healthier financial situation at present and in the future.

Interest Earned Ratio.

Table 8. Interest Earned Ratio of Tesla and BYD from 2020 to 2023

Time	2020	2021	2022	2023
Tesla	1.54	17.1	71.83	63.93
BYD	11.73	5.7	26.89	202.55

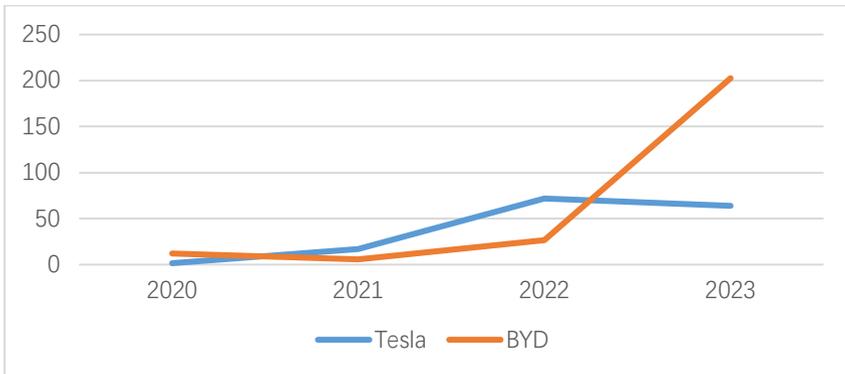


Fig. 8. Interest Earned Ratio of Tesla and BYD from 2020 to 2023

According to Table 8 and Fig. 8, Tesla’s interest earned ratio grew in an upward trend from 2020 to 2023. The growth of interest earned ratio refers to more earnings the company generated after paying interest and tax, which means Tesla’s operation risk decreases.

BYD’s interest earned ratio has a significant fluctuate during the researched years. The risk of operation is highest in 2021 due to its lowest ratio while the risk is lowest in 2023 due to its highest ratio.

By comparison, in 2022 and 2023, Tesla’s risk in operation is more stable than BYD, which may generate a more stable financial performance.

Profitability Ratio.

Return on Equity.

Table 9. Return on Equity of Tesla and BYD from 2020 to 2023

Time	2020	2021	2022	2023
Tesla	41.65%	21.08%	33.60%	27.95%
BYD	7.44%	3.61%	14.73%	22.10%

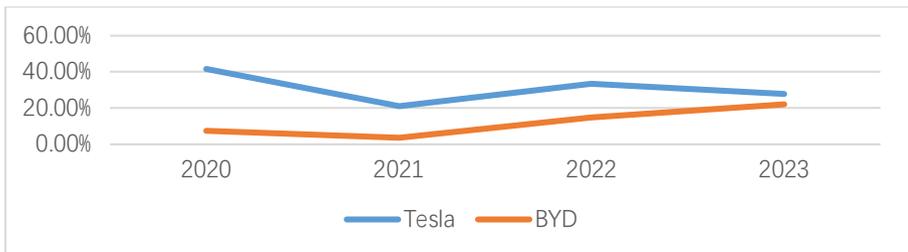


Fig. 9. Return on Equity of Tesla and BYD from 2020 to 2023

Table 9 and Fig. 9 illustrates return on equity of Tesla and BYD from 2020 to 2023. From 2020 to 2023, Tesla's return on equity fluctuate changes and it shows downward trend, achieving lowest ratio by the end of 2021 which is 21.08%. This financial situation indicates that Tesla's efficiency of investing money from investors decreases, which may generate loss of investors and funds.

Considering BYD, the return on equity has fluctuating grown from 2020 to 2023, attaining 22,10% by the end of 2023. The increase of return on equity suggests that BYD earned more earnings on the stockholders' equity, which refers to an increasing profitable ability.

In conclusion, at present, Tesla's return on equity is higher than BYD overall, demonstrating that Tesla's profitable ability is stronger than BYD. However, in the long-term, Tesla's future development in profitability may in downward trend while BYD is in the upward trend.

Return on Asset.

Table 10. Return on Asset of Tesla and BYD from 2020 to 2023

Time	2020	2021	2022	2023
Tesla	11.57%	9.67%	17.42%	15.88%
BYD	3.91%	1.23%	4.21%	5.12%

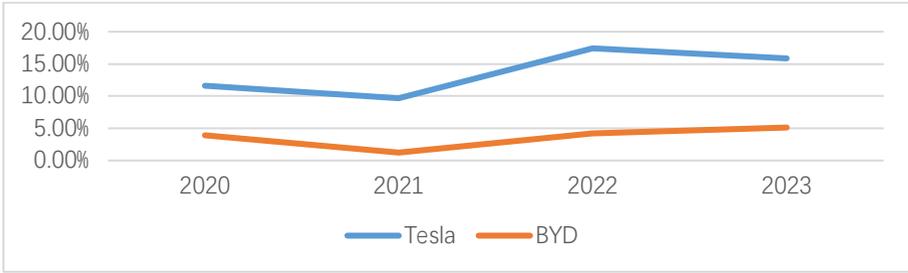


Fig. 10. Return on Asset of Tesla and BYD from 2020 to 2023

As can be showed in Table 10 and Fig. 10, from 2020 to 2023, Tesla’s return on asset has fluctuating risen, attaining the highest value 14.72% at the end of 2022. This financial changes in profitability ratio demonstrates the increasing efficiency of asset management and turnover, which may attract more investors.

Considering BYD, the return on asset has fluctuating risen, achieving the highest value 5.12% by the end of 2023, referring the higher profitable ability in the potential development.

In contrast, Tesla’s return on asset is higher than BYD overall, which generate a more efficient use of fund and asset so that Tesla may absorb more investors in the future. BYD’s present lower ratio may show a huge potential in future financial development.

Net Profit Margin.

Table 11. Net Profit Margin of Tesla and BYD from 2020 to 2023

Time	2020	2021	2022	2023
Tesla	2.19%	10.26%	15.45%	15.50%
BYD	3.25%	1.41%	3.92%	4.99%

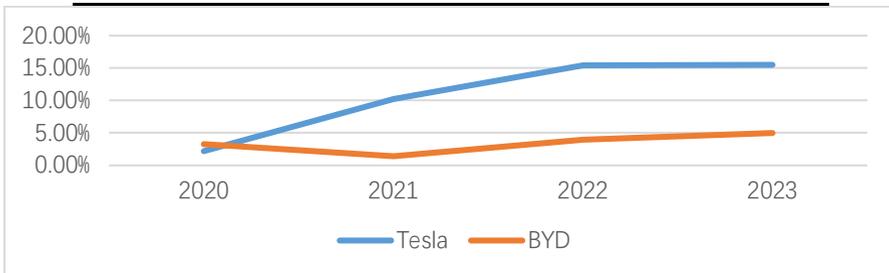


Fig. 11. Net Profit Margin of Tesla and BYD from 2020 to 2023

Table 11 and Fig. 11 shows the profit margin of Tesla and BYD from 2020 to 2023. Tesla’s net profit margin has continuously increased, reaching the highest value 15.50 by the end of 2023. This financial change demonstrates that Tesla earn more profit in the period of limited time, which is a sign of stronger profitability ability.

In the view of BYD, BYD's net profit margin also shows upward trends though it experienced a significant decline in 2021. The increasing trends of net profit margin shows that the increase net profit the company earned.

Overall, Tesla's profit margin is higher than BYD, which indicates a more efficient fund usage and stronger profitability so that Tesla may attract more investors.

3.2 Comparative Analysis

Combining the analysis of Tesla and BYD, a conclusion of the financial performance of Tesla and BYD will be performed based on liquidity ability, asset management ability, solvency ability and profitability.

Liquidity Ability. In the view of the analysis of current ratio, quick ratio and average payment period, Tesla's financial performance on liquidity is better than BYD due to its higher current ratio, quick ratio and shorter average payment period, which generates a stronger ability to pay for short-term debt and liabilities and healthier finance operation.

Asset Management Ability. On account of the analysis of total asset turnover, fixed asset turnover and inventory turnover, Tesla's asset management is more efficient than BYD due to its higher ratio in turnover, which demonstrates the effective asset turnover and sufficient funds owned by the company.

Solvency Ability. Based on the analysis of solvency ratios of Tesla and BYD, BYD is more dependent on debt and liabilities compared to Tesla while BYD's earnings after tax and interest is also less stable, indicating that Tesla's financial risk is lower than BYD while financial performance and healthy is more stable than BYD.

Profitability Ability. According to the evaluation of ROE, ROA and net profit margin of Tesla and BYD, BYD's profitability is weaker than Tesla due to its lower ratios in profitability. However, BYD's ROE is upward trend while Tesla's in downward trend, which means BYD has potential for future development.

4 Conclusion

With the increase awareness of environmental issues and sustainable transportation, new energy vehicles have become a popular choice for consumers. It is crucial for investors in automotive industry to decide how to invest in a ration way to maximize profit and minimize risk. Focusing on this main concern, this study intends to choose Tesla and BYD as two representative companies to analyze its financial performance comparatively and give recommends to investor in automotive industry.

Based on the above ratio analysis, the financial statement of Tesla and BYD from 2020 to 2023 can be clearly identified and compared because the ratio covers four main aspects of companies' financial performance, including liquidity, asset management, solvency and profitability.

By comparison, Tesla's stronger liquidity, asset management, solvency and profitability generate a more stable financial performance compared to BYD at present time. However, many ratios of BYD are showing an improving trend, which may generate a quicker speed in future development. In new energy automotive industry, Tesla may be an investment object with lower risks and more profits while BYD is an investment object with potential development prospects. As two representative enterprises in new energy automotive industry, the considerable profitability and risk with broaden future development of Tesla and BYD indicates that investment in the new energy automotive industry is a rational investment choice for investors.

In the future, more researches on other companies in automotive industry by other models can be conducted to evaluate the investment prospects in the future more macroscopically and integrally.

References

1. Li X.Y.: Research on Financial Analysis and Comprehensive Evaluation of Financial Competitiveness of BYD Company (2023).
2. Liu Y.Q.: Financial Analysis of BYD Company Based on Harvard Analysis Framework (2023).
3. Amal A., Huda A.: Financial Analysis of Tesla (2021).
4. Andal V., Suganya S., Vennilaa S.: Financial Performance Analysis of Puma. *International Journal of Management (IJM)*10 (6), 239–246(2019).
5. Rashid C.A.: Efficiency of Financial Ratios Analysis for Evaluating Companies' Liquidity. *International Journal of Social Sciences & Educational Studies* 4(4), 110-123(2018).
6. Lars L.M.: *Financial Analytics Toolkit: Ratio Analysis* (2019).
7. Melicher, R. W., Norton, E. A. *Introduction to finance: Markets, investments, and financial management* (2013).
8. Zahra N.: Ratio Analysis to Measure Company Financial Performance AT PT. Cipta Beton Sinar Perkasa in Makassar City (2025).
9. Ma Q.P., Wang X.: Performance Evaluation of Industrial and Commercial bank of China based on DuPont Analysis. *International Journal of Mathematical Sciences and Computing(IJMSC)*9(1), 37-44 (2023).
10. Chio L.S.: A Study of 4 Automobile Companies in China through DuPont Analysis. *Industrial Engineering and Innovation Management* 6, 33-38(2023).
11. Yan Y.B. and Chen Y.M.: An Analysis of the Causes of the Bankruptcy of Transaero Airlines Based on the DuPont Analysis. *Financial Engineering and Risk Management* 5, 47-52 (2022).

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.

