A COMPARATIVE STUDY ON THE FINANCIAL PERFORMANCE OF TATA MOTORS AND MAHINDRA & MAHINDRA MOTORS

Dr. Sivaprakash JS*1, Nitesh Nanda K*2

*1Assistant Professor, School Of Management, SASTRA Deemed University, Thanjavur, India.
*23rd Year CSBS, 124018038, School Of Computing, SASTRA Deemed University, Thanjavur, India.

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ABSTRACT

The reason for selecting the topic is the possibility of learning about the practical Indian Leading Motors. Ratios are utilized to analyze financial documents for identifying a company’s strengths, weaknesses, past performance, and current financial status. My study covers the calculation of ratios for TATA MOTORS & MM MOTORS to determine their financial performance. To better comprehend the company's status and performance, I will conduct research using financial statement analysis and examine relationships between component sections of financial statements. This study uses various financial methods to analyze TATA MOTORS & MM Motors’ overall financial situation, such as funds flow analysis, cash flow analysis, and ratio analysis. The expected outcome of this study is the ability to compute financial statements and ratios to determine the company's financial performance. It is necessary to understand how businesses operate and how society contributes to the sector's development. This research aims to examine the financial aspects of the two Indian-made cars, TATA Motors and MAHINDRA & MAHINDRA Motors, using various financial and statistical approaches, mainly using secondary data taken from financial documents. The study evaluates automobile firms’ short- and long-term solvency, profitability, and efficiency to compare their financial ratios over the last five years.

Keywords: Tata Motors, Mahindra & Mahindra Motors.

I. INTRODUCTION

The automobile industry in India has witnessed significant growth in recent years, with Tata Motors and Mahindra & Mahindra Motors being two major players in the market. As competition intensifies, the need for evaluating and comparing the financial performance of these companies becomes crucial. This research article aims to conduct a comparative study on the financial performance of Tata Motors and Mahindra & Mahindra Motors for the period of 2018-2022. The study will use financial ratios such as liquidity, profitability, efficiency, and solvency to analyse the companies’ financial performance. The data will be collected from the annual reports and financial statements of the companies. (Gopal, P. R. C., & Thakkar, J. (2016).

The research article will begin by providing a brief overview of the Indian automobile industry and the companies under study. It will also highlight the importance of financial performance analysis in decision-making for investors, stakeholders, and management.

Furthermore, the article will review relevant literature on financial performance analysis, financial ratios, and comparative studies in the automobile industry. The methodology section will explain the data collection process, data analysis techniques, and statistical tools used in the study. The findings of the study will be presented and analysed, followed by a discussion of the implications of the results for the companies, stakeholders, and investors. Finally, the article will conclude with a summary of the key findings, limitations of the study, and future research directions.

II. REVIEW OF LITERATURE

(Kumar & Singh, 2019) analyses the financial performance of Tata Motors and Mahindra & Mahindra Motors, providing an overview of the automotive industry in India. The authors highlight that the Indian automotive industry has witnessed remarkable growth in recent years, and both Tata Motors and Mahindra & Mahindra have played a crucial role in this growth.
(Pandey, 2005) discusses the financial ratios used to evaluate the financial performance of companies. The authors argue that financial ratios provide a quick and easy way to assess a company's financial health and identify potential areas for improvement. The ratios used in the study include liquidity ratios, profitability ratios, and solvency ratios.

(Bhatia & Mahajan, 2017) focuses on the financial performance of Tata Motors. The authors examine the company's financial statements for the past five years and analyze its liquidity, profitability, and solvency ratios. They conclude that Tata Motors has shown steady improvement in its financial performance over the past few years, with a positive trend in its profitability and liquidity ratios.

(Jain & Sharma, 2019) (Kathiravan et al., 2021) concentrates on the financial performance of Mahindra & Mahindra Motors. The authors compare the company's financial ratios with those of its competitors and conclude that Mahindra & Mahindra is performing well in terms of liquidity, profitability, and solvency. They also suggest that the company's strong financial performance is a result of its diversification strategy and focus on innovation.

(Gupta & Gupta, 2018) (Kathiravan et al., 2019) provides a comparison between Tata Motors and Mahindra & Mahindra Motors, highlighting their strengths and weaknesses in terms of financial performance. The authors note that while Tata Motors has a larger market share, Mahindra & Mahindra has shown consistent growth and profitability over the past few years. They also suggest that Tata Motors needs to focus on improving its liquidity position, while Mahindra & Mahindra needs to improve its profitability margins.

III. RESEARCH METHODOLOGY

Research method is a method used in all types of research to solve research problem systematically. Here are the steps to study the research problem with the science behind them. Research is the systematic search for relevant information on a specific structured topic, problem recognition, sampling technique, sampling structure, data collection, data analysis, and generalization of a solution to a problem or general formulation of some theoretical formula. The main goal of the research is to Comparative Study on the Financial Performance of Tata Motors and Mahindra & Mahindra Motors.

1.1 Research Design:

- **Period of the Study:**
The Study covers the 5 years period starting from the year 2018-19 to 2021-22.

- **Population of the Study:**
Three Industries are taken into consideration. Those are as follows:
  (a) TATA Motors Ltd.,
  (b) Mahindra & Mahindra Ltd.

- **Source of Data:**
The proposed study will be entirely based on secondary data. The data will be compiled from annual reports of the respective companies, text books, reference books, journals, articles, magazines and from the internet. The study would add a wealth of knowledge to the researcher. It is a quantitative analysis of the financial data of selected industries. The necessary data will be collected from the CMIE data base PROWESS The Centre for Monitoring Indian Economy.

- **Tools and Techniques:**
For the purpose of analysis of data various ratios relating to Profitability, Liquidity, Leverage and Efficiency will be calculated. Moreover, the simple statistical techniques will also be applied to analyse the performance of a company under the study:
  - Inter Firm Comparison,
  - Intra Firm Comparison,
  - Profitability Statements,
  - Analysis of Ratios, Leverage and Percentages
  - Mean, Median and Standard Deviation
  - Tables, Graphs & Diagrams
1.2 Objectives of the Study:
- To analyze the short-term solvency position of both the companies in the past 3 years
- To analyze the long-term solvency position of both the companies in the past 3 years
- To analyze the Profitability position of both the companies in the past 3 years
- To analyze the efficiency of both the companies in the past 3 years.

1.3 Hypotheses of the Study:
- To find out there is not a significant difference in the financial performance of both the companies of the TATA Motors and Mahindra & Mahindra Motors

1.4 Limitations of the Study
- The research is based primarily on the company's annual reports
- Only secondary data (Quantitative financial data) will be used for the performance evaluation of selected industries.
- Only five years period will be taken with limited no. of financial indicators.
- The study will be restricted to only three selected industries i.e. (a) TATA Motors Ltd., (b) Mahindra & Mahindra Ltd.
- Whatever limitations the published data of Sample Companies will consists, the Study will also suffer with the same

IV. DATA REPRESENTATION AND INTERPRETATION

Statistics is primarily a branch of mathematics that arose from the use of quantitative techniques. Analysts and investors in finance gather information about firms, markets, expectations, and volume data. In this study some statistical tools have been used to determine the financial position of both the companies (i.e., Tata Motors and Mahindra & Mahindra Motors). For this mean, standard deviation, coefficient of variation, growth and annual growth has been calculated for each ratio and presented in a tabular form for better understanding of the data

4.1. To Analyse the Short-Term Solvency Position:

i) Current Ratio

The current ratio is a widely used business indicator for evaluating a company's short-term liquidity in relation to available assets and pending liabilities. To put it another way, it measures a company's ability to raise enough cash to pay off all of its obligations as they become due. It's a metric that's used all over the world to assess a company's overall financial health

\[ \text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} \]

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<thead>
<tr>
<th>Factors</th>
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<tbody>
<tr>
<td>TATA</td>
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<td>0.85</td>
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<tr>
<td>MAHINDRA</td>
<td>1.20</td>
<td>1.18</td>
<td>1.19</td>
<td>1.40</td>
<td>1.34</td>
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ii) Quick Ratio

The quick ratio is a measure of a company's ability to fulfil short-term obligations with its most liquid assets and is an indication of a company's short-term liquidity status. It's also known as the acid test ratio because it shows a company's ability to pay down current liabilities rapidly using near-cash assets (assets that can be converted quickly to cash)

\[ \text{Quick ratio} = \frac{\text{Liquid assets}}{\text{Quick liabilities}} \]

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<td>0.97</td>
<td>0.98</td>
<td>1.22</td>
<td>1.13</td>
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4.2. To Analyse the Long-Term Solvency Position:

i) Debt to Equity Ratio

Divide a company's total liabilities by its shareholder equity to get the debt-to-equity (D/E) ratio. The balance sheet of a company's financial statements contains these figures. The ratio is used to determine the financial
leverage of a business. In corporate finance, the D/E ratio is a crucial measure. It's an indicator of how much a corporation relies on debt to finance its activities rather than wholly-owned funds. In the event of a market downturn, it represents the willingness of shareholder equity to pay all outstanding debts.

Debt to Equity Ratio = Total Debt / Shareholders' Equity

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<td>1.56</td>
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ii) Interest Coverage Ratio

The interest coverage ratio is a metric that assesses a company’s ability to manage its debt. It's one of the debt ratios that can be used to assess a business's financial health. Market analysts and investors value a high interest coverage ratio because a business cannot prosper and may not even be able to survive unless it can pay the interest on its current obligations to creditors.

Interest Coverage Ratio = earnings before interest, taxes, depreciation and amortization/ interest expenses

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<tr>
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<td>2.45</td>
<td>1.80</td>
<td>1.86</td>
<td>3.11</td>
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</table>

4.3 To Analyse the Profitability Position

i) Margin Ratio

At different levels of calculation, margin ratios reflect a company’s ability to turn revenue into profits. Gross profit margin, operating cost ratio, net profit margin, cash flow margin, operating profit margin, EBITDA, EBITDAR are all examples of profit margins.

- **Gross Profit Margin**

  Gross profit margin is calculated by dividing gross profit by sales revenue. This illustrates how much money a company makes after deducting the costs of producing its products and services. A high gross profit margin ratio indicates that core activities are more efficient, allowing the company to pay operating expenses, fixed costs, dividends, and depreciation while still generating net earnings.

  Gross Profit Margin = gross profit/ total revenue

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<td>19.80</td>
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- **Operating Profit Margin**

  Operating Profit Margin measures earnings as a percentage of revenue before deducting interest and income taxes. Companies with high operating profit margins are better able to fund fixed costs and interest on obligations, have a better chance of surviving an economic downturn, and can deliver lower rates than their rivals with lower profit margins. Since good management can greatly boost a company’s financial performance by managing its operating costs, the operating profit margin is often used to measure the strength of its management.

  Operating Profit Margin = Operating income/ Total revenue
Net Profit Margin
The ratio of after-tax gains to net revenue is known as the net profit percentage. It shows how much profit is left after all manufacturing, administration, and finance costs have been deducted from sales and income taxes have been taken into account. As a result, it’s one of the best indicators of a company’s overall success, particularly when combined with a look at how well it manages its working capital. It’s also used to contrast a company’s output to those of its rivals.

Net Profit Margin = Net Profit / Total revenue x 100

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<td>11.74</td>
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Return Ratio
The capacity of a business to produce returns for its shareholders is expressed by return ratios. Return on assets, return on debt, return on equity, return on income, cash return on assets, return on retained earnings, risk-adjusted return, return on capital employed, return on invested capital are all examples of financial returns.

Return of Assets
The return on assets (ROA) is a profitability ratio that shows how much profit a business can make from its resources. Return on assets, in other words, tests how effective a company’s management is at producing profits from its economic capital or assets on its balance sheet. The higher the amount returns of assets, the better a company’s management is at handling its balance sheet to produce income.

ROA = Net Income / Total Assets

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Return on Invested Capital
The return on invested capital (ROIC) is a metric that calculates an efficiency of a company in allocating its capital to productive investments. The return on invested capital (ROIC) ratio shows how efficiently a business uses its capital to produce income. The return on invested capital ratio can be used to assess a company’s progress. Any company that generates excess returns on acquisitions that exceed the cost of raising capital is a value creator and, as a result, typically trades at a premium.

ROIC = NOPAT / Invested Capital

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Return on Equity
The percentage of net profits relative to stockholders’ equity, or the rate of return on the capital that equity investors have put into the company, is known as return on equity (ROE). Stock analysts and investors pay close attention to the return on equity (ROE) ratio. A high ROE ratio is commonly listed as a justification to buy a company’s stock. Companies with a high return on equity are more likely to be able to generate cash internally, reducing their reliance on debt funding.

ROE = Net Income / Shareholders’ Equity

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4.4 To Analyse the Efficiency of the Companies

i) Asset Turnover Ratio

The asset turnover ratio compares the value of a company's assets to the value of its sales or profits. It is a metric that measures how effectively a business uses its assets to produce revenue. A company's ability to generate revenue from its assets is measured by its asset turnover ratio. The higher the asset turnover ratio, the more effective it is. A low asset turnover ratio, on the other hand, means that a business is not effectively using its assets to produce revenue.

\[
\text{Asset turnover ratio} = \frac{\text{net sales}}{\text{average total sales}}
\]

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<td>14.01</td>
<td>3.86</td>
<td>0.77</td>
<td>12.66</td>
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ii) Inventory Turnover Ratio

Inventory turnover is a financial ratio that indicates how many times a company's inventory has been sold and replaced in a given timeframe. The days it takes to sell the inventory on hand can then be calculated by multiplying the number of days in the timeframe by the inventory turnover formula. The higher the inventory turnover, the better, since it indicates that a company sells items quickly and that there is enough demand for its products.

\[
\text{Inventory Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}
\]

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<td>8.58</td>
<td>6.78</td>
<td>6.78</td>
<td>5.23</td>
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V. MAJOR FINDINGS

- **Current Ratio:** M&M's operating cycle performance, or its ability to convert output into cash, is higher than Tata Motors. Tata Motors could face cash flow problems if its receivables aren't paid on time, or if its inventory turnover is too high.
- **Quick Ratio:** M&M’s capacity to meet short-term liabilities with short-term assets is greater than Tata Motors.
- **Debt to equity Ratio:** Tata Motors' high debt/equity ratio compared to M&M indicates that the company has been aggressive in using debt to fund its expansion. Because of the extra interest cost, this could result in unstable earnings.
- **Interest coverage Ratio:** Tata Motors' ability to cover interest costs could be a concern. When the interest coverage ratio is one, Tata Motors will only pay the interest and not the principle to the lender. M&M, on the contrary, indicated that the company could comfortably cover interest costs.
- **Gross Profit Margin:** With a poor gross margin, Tata Motors would have been unable to cover its operating and other expenses, let alone invest for the future. M&M motors, on the other hand, had a decent gross profit margin, despite being better than Tata Motors.
- **Operating Profit Margin:** A higher operating margin means that the company is making enough profits from operations to cover all of the expenses associated with running that business. A healthy operating margin is one that is greater than 15% therefore M&M motors are in good position than Tata Motors
- **Net Profit Margin:** With a low net profit margin, Tata Motors would have been unable to cover its operating and other expenses, let alone invest for the future. M&M motors, on the other hand, had a low net profit, despite being better than Tata Motors, which has a negative net profit margin.
Return on Assets: In comparison to Tata Motors, which had a negative ROA, M&M's average ROA indicates that earnings were produced from invested capital (assets). M & M's assets are made up of both debt and equity. Both of these funding options are used to finance the company's activities. M&M was turning the money it had to in a better way, as shown by the Better ROA figure. The Better ROA figure indicates to investors that M&M was essentially turning the capital it had to spend into net profits. However, the lower the ROA level, the worse it is for Tata Motors, since the company is earning less money on more investment.

Return on Invested Capital: It indicates how much profit is produced by each rupee of employed capital. M&M, a higher ratio is more desirable since it ensures that each rupee of capital employed generates more rupees of benefit. Investors in M&M are looking at the ratio to see how effectively the company uses its resources and its long-term funding plans. The returns on the assets should always be higher than the rate at which they borrow to finance them. M&M's Return on Invested Capital, which is a long-term profitability ratio, is higher than Tata Motors' because it demonstrates that M&M assets performed better when long-term funding was taken into account.

Return on Equity: This ratio compares a company's net profits to its average shareholders' equity to determine how profitable it is. The return on equity (ROE) ratio calculates how much the company's shareholders profited from their investment. In the case of M&M, the higher the ratio percentage, the more effective the management is in using its equity base and the greater the return to investors is. Tata motors shows a negative return on equity which indicates that the company has lost money. If we see a large magnitude of value, it's possible that the company has been losing money for a long time, as equity capital declines with each loss.

Asset Turnover: Since Tata Motors had a higher turnover ratio, it was able to generate more revenue with less assets, indicating that the business was doing well. However, M&M's lower turnover ratio indicates that the company is not making the best use of its assets.

Inventory Turnover Ratio: Since goods deteriorate due to weak sales, Tata Motors' low turnover was a bad sign. As a result, surplus inventory remained in a warehouse. The high M&Ms ratio indicated good sales.

VI. SUGGESTIONS

- It is suggested that there is a need for Indian automobile industry to adopt producing and selling wide range of products, to adopt better market strategy, by reducing cost and revising selling prices to enhance the value of turnover so as to go ahead in the era of competitions.
- Include a thorough analysis of the market share and sales growth rate of Tata Motors and Mahindra & Mahindra Motors to provide a better understanding of the competitive landscape. It is essential to identify the key drivers of revenue and profit growth, such as product innovation, expansion into new markets, and strategic partnerships.

VII. CONCLUSION

A study was conducted to analyse the working capital management of three automobile companies in India over a five-year study period from 2018 to 2022. The results of the study indicated that both Mahindra and Mahindra Ltd and Tata Motors Ltd had positive working capital throughout the study period. The use of ratio analysis aided in comparing the financial statements of the firms and examining their financial performance over time. The firms were found to have utilized more borrowed funds. The study revealed a strong positive relationship between liquidity ratio, effective inventory management, and conversion period, which resulted in increased liquidity for the companies.

Upon conducting a comparative analysis of the financial results of Tata Motors and Mahindra & Mahindra Motors, it can be inferred that the liquidity position of M&M Motors was higher than that of Tata Motors, indicating their ability to meet short-term obligations in a timely manner. Furthermore, Tata Motors' long-term solvency was lower, indicating that the company relied heavily on external funds for long-term borrowings, resulting in lower security for creditors. The profitability ratios of Mahindra & Mahindra Motors were higher than those of Tata Motors, which indicates that M&M Motors generated significant profits, which was beneficial for the company.

After considering all of the factors related to this data analysis, it can be concluded that while Tata Motors' output is satisfactory, Mahindra & Mahindra Motors maintains a strong market position. Consequently, [3005]
stockholders would be willing to take risks with their investments, as they would receive a healthy return, and their investments would be secure and stable.

VIII. REFERENCE


