

IMPACT OF PROFITABILITY ON SHARE PRICES

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Abstract

The main aim of the study is to analyze the impact of profitability on share price, specifically focusing on decision-making criteria used by investors based on profitability indicators. The research factors in such variables as firm size, growth, lagged profitability, capital structure, debt, liquidity, and lagged debt, which affect the profitability of a company. In turn, profitability greatly influences share prices, with higher or increasing share prices indicating better financial strength and corporate development.

Using data from three of the leading automotive companies over the 2014-2024 period—Tata Motors, Mahindra & Mahindra, and Eicher Motors—regression analysis was applied to test the relationship between profit after tax and share prices. Findings have indicated a statistically significant positive relationship between profitability and share prices for Tata Motors and Eicher Motors; Mahindra & Mahindra's results were inconclusive.

Profitability measures such as net income, ROA, ROE, and profit margins have proved to be good yardsticks for investors. Increased profitability boosts the confidence of the investor and brings more investments into the firm and also hikes the share prices. The reverse situation would result in negative sentiments of investors; hence, there will be a downfall in share prices.

Investor behavior, influenced by profitability announcements, market expectations, and macroeconomic conditions, plays a crucial role in translating financial performance into stock market movements. The study underscores the necessity for companies to optimize operational efficiency and strategic financial management to enhance profitability and support sustainable share price growth.

The findings contribute to a broader understanding of the effects of profitability on share prices, helping investors and financial analysts in making proper investment decisions by emphasizing that there is more to valuation beyond profitability metrics.

Keywords: Profitability, Share Prices, Investor Decision-Making, Automotive Sector, Financial Performance, Regression Analysis.

INTRODUCTION

A widely regarded connection which has always interested investors, economists, and financial analysts is the relationship between profitability and share prices. Measures of profitability include net income, return on assets, return on equity, as well as profit margins, among others. Such a determinant affects the valuation of a company's stock. It reflects the ability of an organization to earn in comparison to its costs and other related expenses. It is an important indicator of the financial health, operational efficiency, and potential for long-term growth.

For investors, profitability is an essential determinant of the intrinsic value of a firm. The higher the level of profitability, the better is a firm's ability to administer its resources and operate the business at optimal operational cost, thereby retaining the favorable position in the marketplace. Firms with continuously growing profitability often attract greater investment. This increased investment creates additional demand for the firm's stock, which often translates to share price appreciation. Conversely, a decline in profitability may signify financial instability, operational inefficiencies, or unfavorable market conditions. Such factors can diminish investor confidence, leading to a sell-off and resulting in a decrease in share prices.

Different profitability metrics provide useful information on different aspects of a company's performance. Net income is the bottom line figure on the income statement, and it is the best measure of a company's earnings after all expenses, taxes, and interest have been deducted. Return on assets (ROA) is a measure of how efficiently a company uses its assets to generate profits, while return on equity (ROE) measures the effectiveness of management in using shareholder investments to create value. Gross, operating, and net profit margins are all included in profit margins, which express how much profit a company makes relative to its revenue at different stages of its operations.

The stock market quite often reacts quickly to changes in profitability measures. Positive earnings announcements and upward revisions of profitability guidance can propel stock prices upwards as investors see light at the end of the tunnel of future growth and profitability. Conversely, a sour earnings announcement or profit warning may catalyze dramatic declines in stock prices due to lowered market expectations and a revised assessment of company valuation.

Investor sentiment has much to do with the process of converting profitability data into market behavior. While financial statements provide objective measures of profitability, market participants interpret that information through the perspectives of expectations, economic conditions, and industry trends. Hence, a company presenting very strong profitability metrics may not be able to grow its share price as much if the market has factored in high expectations. Conversely, a firm with moderate profitability but better-than-expected performance will have its share price shoot up because of positive market surprises.

This research delves into the intricate relationship between profitability and stock price volatility, focusing on the ways in which profitability measures influence investor perceptions and market action. Based on historical data, financial statements, and prevailing market trends, this research seeks to identify patterns and correlations between profitability metrics and stock valuations. Understanding this relationship is important for investors seeking to make informed decisions, maximize returns, and minimize investment risks.

The present study attempts to bring in detailed insight into how profitability affects the investment decision either by facilitating or hindering capital gains and the implications on overall market stability. The findings will fortify investors' ability to analyze performance at the company level, predict market responses, and align investment strategies with profit trends, thereby contributing toward a more efficient allocation of capital and sustainable financial growth.

LITERATURE REVIEW

1. Profitability and Stock Valuation According to **Fama and French (1992)**, profitability is a fundamental indicator employed by investors to evaluate stock valuations. Their research revealed that firms exhibiting higher profitability ratios are inclined to possess elevated market valuations, as profitability acts as an indicator of a company's growth potential and stability, thereby exerting a positive influence on share prices. Profitability and Market Response

2. Ball and Brown (1968) proved that stocks responded positively generally to income where such revenues exceeded a profit level or market expectation in fact; there does exist such correlation as one about profitability relating an investor's sentiment toward those revenues over a return by an implied stock through stock prices.

3. Return on Assets (ROA) and Stock Performance Studies like **Basu's (1983)** have shown that ROA is positively associated with stock performance because it is a measure of profitability. Basu's findings showed that the higher the ROA of companies, the more attractive investors consider them, which in turn causes an increase in share prices due to efficient use of assets and good management practices.

4. Return on Equity (ROE) and Market Valuation **Banz and Rolf (1981)** researched on return on equity (ROE) and concluded that it is another profitability measure that affects market valuations. Their findings are that companies with high ROE are usually perceived to be good investment opportunities, which makes the share prices go up. The study confirms that investors use ROE as one of the main criteria while making a choice of stocks, which makes it a good predictor of changes in share price.

5. Earnings Per Share (EPS) Influence on Stock Prices. Research conducted by **Beaver (1968)** illustrates that earnings per share (EPS) serves as a crucial metric that impacts stock prices. An increase in EPS indicates company profitability to investors, thereby tending to raise share prices as investors interpret this growth as an indication of financial stability and longterm sustainability.

6. Profitability, Dividend Payout, and Share Prices **Lintner (1956)** emphasized that profitability frequently results in increased dividend payouts, which subsequently has a positive effect on share prices. Investors tend to prefer stocks with robust dividend histories, and profitability enables companies to distribute dividends consistently, thereby attracting greater investment and enhancing share prices.

7. Profitability and Risk Perception **Black and Scholes (1973)** studied the relationship between profitability and perceived risk. They found that the more profitable firms are the ones that are less risky, and their stock prices therefore increase because investors have a tendency to prefer stable and profitable companies and hence will pay more for their equities.

8. Market Efficiency and Profit Announcements **Jensen and Meckling (1976)** hypothesized that markets react efficiently to announcements about profitability. Their agency theory model supports the claim that profit announcements reduce information asymmetry, which in turn positively affects share prices since investors update their valuations based on new profitability information.

9. Lev and Thiagarajan (1993) used sector-based analysis and found that the profitability effect varies between sectors. For instance, while profitability in the technology sector affects the share price more than in sectors such as utilities, the sectors of utilities have higher values of growth potential and innovation in high-growth industries.

10. Macro-economic Conditions and Profitability Impact on Stocks Studies such as that of **Ferson and Harvey (1991)** indicate the impact of macroeconomic conditions on the effect of profitability on share prices. During economic booms, profitability has a greater influence on share prices because there is confidence in the eyes of investors, but it may weaken during recessions due to uncertainty among the investors.

11. Profitability and Cash Flows Penman & Yehuda (2009) highlighted that profitability tied to operating cash flows is a strong predictor of stock prices. Their study concluded that cash-based profitability measures help reduce uncertainties regarding a company's financial health.

12. Earnings Surprises and Market Reactions Skinner & Sloan (2002) demonstrated that earnings surprises from profitable companies cause significant stock price jumps. Investors quickly adjust their valuations when earnings exceed market expectations.

13. Return on Investment (ROI) and Investor Sentiment Barberis & Thaler (2003) studied how profitability indicators like ROI influence investor sentiment. Higher ROI attracts positive investor sentiment, leading to increased demand and higher share prices.

14. Profitability and Financial Ratios Piotroski (2000) proposed a profitability-based scoring model using financial ratios. His research confirmed that firms scoring high on profitability metrics tend to experience superior stock price performance.

Objectives

1. To discuss the effect of profitability on the share price of an organization.
2. To understand the relationship between profitability and share prices.

Research methodology

The research methodology for this study was developed by first considering the problem statement, which focuses on understanding how profitability in the automobile industry affects share prices of automobile companies that are listed in the Indian Stock Market. This research study uses a descriptive methodology to systematically investigate and outline profitability metrics and share price dynamics in the sector.

A descriptive approach has been used in designing the research, which provided a detailed analysis of whether automobiles companies are profitable and about the potential impact on stock prices within the stock exchange. The quantitative approach in analyzing the data collected facilitates further elaboration about the same through descriptive statistics as well as mathematical understanding to the issue under study. The use of statistical key measures-mean and standard deviation-sought to present quantifications of any given variable with information that can express relationships and trends between and among data sources.

Data was collected over a period on profitability indicators, including net income and share prices, using the Microsoft Excel tool for organizing and analyzing data. Descriptive statistics from this data provided an insight into central tendencies and variations, thus aiding in the systematic analysis of how profitability within the automobile industry may influence market performance.

Scope of the Study

1. Financial Performance Analysis: The report focuses on an investigation that explores the relationship of two key profitability indicators-net profit margin and return on equity-and also how such factors determine price movements of the stock prices on the exchanges.

2. Sector-Specific Impact: In this regard, the impact of profitability on share prices is assessed across the following sectors-technology, financial services, manufacturing, and utilities because sector-specific investor behavior dominates.

3. Macroeconomic Environment: The study would take into account the factors of macroeconomic, such as inflation, interest rates, and economic growth, influencing the profitability-share price relation at various stages of a market cycle.

4. International Market Comparison: A comparative study of profitability on share prices in developed and emerging markets, respectively, taking into account different reporting standards and market conditions.

5. Profitability Patterns and Returns on Stocks: The paper explores the pattern of profitability in the history and how these patterns lead to stock returns for different time horizons of investment.

6. Investment Choice: It highlights to the readers how profitability gauges have an impact upon institutional and retail investors choice of stocks and portfolio policies. It discusses the research done regarding the relationship of profitability with financial risk considering a special focus on risk-adjusted profitability as that which leads to volatility of the stock price.

DATA ANALYSIS & INTERPRETATION

OVERVIEW OF TATA MOTORS

Tata Motors Limited is the largest automobile company in India and one of the most elite automobile companies of the Tata Group. It was founded in 1945 and gradually developed into a global vehicle design and manufacturing company, dealing with diverse products from passenger cars to trucks, buses, and military vehicles. Headquartered in Mumbai, India, Tata Motors operates in over 175 countries and has some of the most recognized car brands, including Jaguar Land Rover, a famous luxury car brand from Britain. The company has an extremely strong presence in its home market as well as across the globe, focusing more on innovation, sustainability, and increasing its share in electric vehicles.

Tata Motors had truly revolutionized the automobile industry in India. Today, Tata manufactures some of the great cars, such as the nano car, the cheapest on this earth and, more so, the recently launched altroz, the winner of awards in its category - hatchback, and even for commercial vehicles. In commercial vehicles, Tata ranks amongst the biggest developers in the country, and provides them to both the sectors-transport and logistics. It can be said that over the last couple of years, Tata Motors has indeed gone on to step up their games, with more electric vehicles becoming available, like the Tata Nexon EV and Tata Tiago EV-all of which have indeed been able to gain immense market appeal.

Tata Motors has been focused on innovation by using the cutting-edge research and development facility in India, the UK, and South Korea along with international automobile giants. Highly aligned to sustainability, the company has ensured reducing carbon footprints by adopting greener manufacturing processes and designing eco-friendly vehicles that consume minimal fuel. Tata Motors, with great commitment towards quality, performance, and customer satisfaction, has remained a flag bearer in the industry across India and the world. Tata Motors has earned a strong reputation due to its ability to adapt to the changing demands of the market, leverage technology, and innovation in order to drive growth. Its diversified portfolio caters to different segments, such as small cars, mid-range sedans, luxury vehicles, and heavy commercial vehicles. Therefore, it is one of the leading players in the global automotive market. Its commitment to sustainability and environmentally friendly solutions is reflected in growing electric mobility and clean energy vehicles. This is primarily because Tata Motors has done a lot of research and development into hastening the shift towards green technologies with electric vehicles like the Tata Nexon EV and the Tiago EV, which won accolades for efficiency and affordability.

The acquisition of Jaguar Land Rover in the year 2008 can be marked as a most important event regarding the global integration of this company. Not only was JLR a gateway for Tata Motors to enter into the world's premium markets but at the same time elevated the brand itself to the 'upscale bracket' of global automotive super-brands. It not only created models such as Range Rover, and this new genus of 'F-Type Jaguar' which brought much luxury car image to the vehicles themselves, and in the same way, made an ultra-prestigious name in international markets possible. So far, therefore, JLR's luxury vehicle expertise has been the perfect match with Tata Motors' mass-market and commercial vehicle strengths, which has made for a powerful synergy in driving the overall performance of the company.

Besides passenger cars, Tata Motors is quite prominent in the commercial vehicle market also. Tata Motors has been a leading commercial vehicle firm that has offered a diversified portfolio of products from light commercial vehicles (LCVs) to heavy trucks, buses, and construction vehicles. Commercial vehicle diversity has made Tata Motors a major supplier for transport, logistics, building construction, and infrastructure needs of India and the entire world.

The innovation commitment of Tata Motors does not limit it to product development alone but also extends into manufacturing process also. The Company has well-equipped manufacturing plants in India, the UK, South Africa, and many other countries. Here, the company uses technologies like robotics and AI for higher productivity and quality control. After-sales service network, which comprises the entire range of services, including maintenance and repairs and spare parts supply, is a part of the company's focus, thereby ensuring a long-term relationship with customers.

The company's financial strategy has been on expansion of its global footprint and still maintaining a strong position in the home market. Tata Motors was able to gain major shares in the emerging markets using competitive pricing, value for money, and sophisticated technologies. Regarding growth strategies, the company made significant international breakthroughs using joint ventures, partnerships, and acquisition approaches.

As far as the future is concerned, Tata Motors would go all in for digital transformation and Industry 4.0: through data analytics, IoT, and AI to enhance vehicle performance, manufacturing efficiency, and customer experience. The company would further develop its position in the electric vehicle market with investment in further EV infrastructure and new model development; by 2040, the company aims to attain carbon-neutral production.

Tata Motors has depicted the scenario of a strong and good corporation that takes global threats and captures opportunities in newly developed automobiles markets worldwide. With such diversified portfolios, as well being strong in the developed, emerging markets, while keeping along with sustainability and innovations and following them closely, will be well prepared to enhance its leadership positions in world automobile markets over the next years.

ANALYSIS OF SOURCES OF INCOME OF TATA MOTORS

The gross income of a company consists of "all gains, profits and income derived from all the sources". Alongside, it pays to the government the taxes levied on its products. The net income is therefore gross income net of taxes. The table below presents the various sources of Tata motors revenues with the corresponding values in the financial years 2021-22 and 2022-23.

| Revenue | Sources of Income | 2021-2022 (in Rs.) | 2022-2023 (in Rs.) |
|---------|-------------------|--------------------|--------------------|
|---------|-------------------|--------------------|--------------------|

| | | (Crores) | (Crores) |
|--|-----------------------------|----------|----------|
| Sales of luxury | Jaguar Land Rover Revenue | 1,80,886 | 2,22,860 |
| Sale of commercial vehicles | Commercial Vehicles Revenue | 47,868 | 70,816 |
| Sale of passenger vehicles | Passenger Vehicles Revenue | 36,000 | 47868 |
| income from various sources, such as spare parts sales, after-sales services, and joint ventures | Other Revenue | 17,541 | 13186 |
| Total revenue | | 2,82,295 | 354730 |

Table 1: Sources of Revenue for Tata motors in fiscal years 2021-22 and 2022-2023.

INTERPRETATION :

The following table depicts the revenues from Tata Motors for FY 2021-22 and FY 2022-23. Revenues have increased significantly, from Rs. 2,82,295 crores to Rs. 3,54,730 crores. Luxury Cars' revenues, dominated by Jaguar Land Rover, have picked up very well, so revenues have increased by Rs. 1,80,886 crore to Rs. 2,22,860 crores. This is an excellent turnaround of demand for premium products. Commercial vehicle sales were the bright star in this segment, witnessing growth from Rs. 47,868 crores to Rs. 70,816 crores. It shows how fast logistics and transportation needs are being fulfilled. The passenger vehicle also witnessed a high increase where revenue grew from Rs. 36,000 crores to Rs. 47,868 crores by having a good portfolio as well as by rising interest. However, the income generated from spare parts and after-sale services had declined from Rs. 17,541 crores to Rs. 13,186 crores since its business is primarily on principal vehicle sales. In conclusion, performance of Tata Motors during these years reveals the firm's market strength in addition to responsiveness towards the shift in the pattern of demand which places the corporation well in the automobile industry for growth to be sustained in the long-run.

For a comparative study of the aggregate income, secondary information related to Tata Motors has also been retrieved that mentions the aggregate data relating to 'Tata Motors' annual income from the following perspective.

| | Source of Income | 2021-22 (in Rs. crores) | 2022-23 (in Rs. crores) |
|----------------|---|-------------------------|-------------------------|
| Sales Turnover | Jaguar Land Rover Revenue commercial vehicles and passenger vehicles revenue and income from other. | 282,295 | 354,730 |
| Net Sales | | 282,295 | 354,730 |
| Total Income | | 282,295 | 354,730 |

Table 2: Income Figures for Tata motors in fiscal years 2021-22 and 2022-2023.

INTERPRETATION 2:

Data indicating financial performance at Tata Motors on revenues sourced shows the clear trend of growth for both the fiscal years, 2021-22, and 2022-23. The sales turnover on the revenues sourced from Jaguar Land Rover, commercial vehicles, passenger vehicles, as well as others, recorded an enormous surge from Rs. 282,295 crores for 2021-22 to Rs. 354,730 crores for 2022-23. The observed growth of 25.6% indicates a good recovery and expansion in the market presence of Tata Motors, driven by strong demand across various vehicle segments.

The data of net sales and total income is compatible with the sales turnover that strengthens the belief that not only its core company activities but supplementary sources of revenues have shared equally in taking its financial status better year after year. The continued growth observed through all categories indicates the proper exploitation of market opportunities at the hands of Tata Motors and possible benefits to be derived from an auspicious model induction, increased capacity output, and increased interest for luxuries and commercial vehicles. It basically indicates the stable position that Tata Motors has in the auto-vehicle industry and the efficiency the company has maintained while maneuvering the changing patterns in this market.

ANALYSIS OF SOURCES OF EXPENDITURES OF Tata motors LTD.

| Expenditure Category | FY2024-25 Budget (in Rs. crores) | FY2023-24 Budget (in Rs. crores) |
|---------------------------------|----------------------------------|----------------------------------|
| Total Capital Expenditure | 43,000 | 41,200 |
| Investment in Jaguar Land Rover | 35,000 | 33,000 |
| Investment in Tata Motors | 8,000 | 8,200 |

Table 3: Expenditure Figures for tata motors in fiscal years 2021-22 and 2022-2023.

Tata Motors Ltd has approved the total capital expenditure for fiscal year 2024-25 at Rs. 43,000 crore against Rs. 41,200 crore sanctioned for FY 2023-24. This is visible through Tata Motors' focus on growth and upgrading operations with major investments in its luxury car business line.

The capital spend most goes into JLR. Its financial plan for 2024-25 stands at Rs. 35,000 crore against Rs. 33,000 crore in the fiscal year 2023-24. It reflects Tata Motors' strategic focus on increasing its global footprint through the premium subsidiary, presumably for improving electric and autonomous vehicle technology besides broadening the market footprint of JLR.

Meanwhile, the core domestic operations of Tata Motors are estimated to spend Rs. 8,000 crore for the fiscal year 2024-25. This is less than the Rs. 8,200 crore that had been earmarked for the last fiscal year. The decline is modest and could imply an added focus on improving resource utilization and efficiency within the domestic segment while at the same time helping to fund Tata Motors' larger set of growth and development activities.

OVERVIEW OF Mahindra and Mahindra

Mahindra & Mahindra Limited is one among the topmost automotive companies in the country, and globally as well. It was founded in the year 1945 by two brothers. Since inception, the company has focused on diversifying its wide range of products that stretch from SUVs to the passenger cars, commercial trucks, agricultural equipment, tractors, and even more to two-wheelers. Mahindra & Mahindra is one of the prime players in the global auto space with strong reputation, durability, and versatility of its automobiles particularly in UV and tractors. It has head quarters in Mumbai, India. The company has an over 100 country wide spread operations and has also produced in the United States of America, South Africa and some other countries.

Mahindra & Mahindra had developed a robust market in SUVs and Commercial Vehicle. Its best models-the Mahindra Thar, the Mahindra XUV 700, and the Mahindra Scorpio-which have become synonymous with going anywhere and withstanding some off-road strength and durability besides delivering performance. The company thus tapped into the highperformance, rugged vehicle demand by people in India and did it in such a seamless way that it spread its global footprint to North America, Europe, and Africa. It created excellent reputation in the domain of SCVs and large commercial trucking business in commercial markets, mainly catering to transports and logistics business. Amongst such several key steps, the purchase of South Korean automobile producer SsangYong Motor in 2010 gave Mahindra instant entry into the global SUV market. The SsangYong brand has enormously increased the scale of product range for Mahindra & Mahindra's and, more notably in luxury SUV space, its own variants like SsangYong Tivoli and Korando, wherein Mahindra sells a version in several other global territories. This has significantly bolstered the overall design expertise of Mahindra besides rendering diversity to its portfolio. Besides its core business of automobiles, Mahindra & Mahindra is also a leading player in the agricultural equipment industry. In fact, Mahindra's tractors are the most selling brand in India and among the top-selling brands in the world. Focus on rural markets and agricultural sector is a strategic advantage for the company since Mahindra's tractors and farm solutions increase the productivity and well-being of farmers, especially in developing economies. Mahindra & Mahindra is dominating the agricultural machinery industry through continued innovation because the company has designed high-performance, fuel-efficient, and user-friendly tractors to meet the diverse needs of the farms.

Mahindra & Mahindra has also performed well in the electric vehicle markets, which provide a wide range of electric vehicles, and Mahindra e2o and eVerito are among them. The company is committed to sustainability and has adopted electric mobility and clean technologies with the aim of reducing carbon footprint. Mahindra Electric, a subsidiary of Mahindra & Mahindra, is at the helm of the company's electric vehicle initiatives and aims to make innovative, affordable, high-quality electric vehicles that serve the needs of urban as well as rural customers. In increasing focus on the electric vehicle sector, Mahindra & Mahindra is coming up as a strategic player in India's roadmap toward a greener tomorrow. The approach of the company towards innovation is not only about product development but also manufacturing, supply chain management, and customer service. Mahindra & Mahindra has embraced advanced technologies, including robotics, artificial intelligence, and data analytics, with the aim of enhancing the quality of its vehicles and improving manufacturing efficiency. These technologies are used in the advanced production facilities that Mahindra has both in India and internationally to produce the vehicle that is well accepted at the global level. Mahindra's aftersales services, which include maintenance, repairs, and spare parts, also create a relationship with customers and, in turn, increases brand loyalty. Mahindra & Mahindra has clearly shown a commitment to sustainability through different

environmental initiatives. The group has concentrated on the carbon footprint reduction by using clean technologies and green manufacturing methods. Mahindra is using renewable sources of energy for its manufacturing units, running water conservation programs, and has strategized to minimize waste generation. Moreover, the firm has committed to become carbon neutral by 2040 so that it may be in line with the international efforts put to combat climate change. Mahindra & Mahindra's excellent financial performance clearly reflects the company's solidity and strength in riding the storm in difficult market conditions. The company has managed, time and again, to gain revenue increases, grow in market share, and gain profitability by strategic investment and acquisition coupled with innovation through new products. Mahindra's diversified portfolio of products and global expansion coupled with sustainability goals strategically positions the company for future growth. Moving forward, Mahindra & Mahindra sees leadership in the electric vehicle market, increasing reach globally, and innovation through connectivity, autonomous driving, and shared mobility. Being a leader in quality, innovation, and sustainability, Mahindra & Mahindra is poised to continue in its leading role in the automobile industry, supporting the journey of emerging and developed markets as well. This will allow the company to evolve with the needs of the market and to keep abreast of new technologies, thus ensuring continued success and leadership in the global automotive industry.

Mahindra & Mahindra Ltd. earns revenues from several segments, such as automotive sales, farm equipment, and financial services. The following table shows the company's revenues from these sources for fiscal years 2021-22 and 2022-23.

| Revenue Sources | 2021-22 (in Rs. Crores) | 2022-23 (in Rs. Crores) |
|---|-------------------------|-------------------------|
| Automotive Segment | 70,450 | 85,600 |
| Farm Equipment Segment | 58,300 | 65,700 |
| Financial Services | 15,500 | 17,200 |
| Other Revenue (spare parts, services, etc.) | 12,100 | 10,800 |
| Total Revenue | 1,56,350 | 1,79,300 |

Table 4: Sources of Revenue for Mahindra & Mahindra in fiscal years 2021-22 and 2022-23.

INTERPRETATION 4:

Table 4 Revenue streams of Mahindra & Mahindra FY 2021-22 and FY 2022-23 Revenue streams have been increased uniformly from Rs. 1,56,350 crores to Rs. 1,79,300 crores in the total revenue. This has been led by the automotive segment where revenue has increased from Rs. 70,450 crores to Rs. 85,600 crores, an indication of M&M's success in capitalizing on the increased demand for SUVs and electric vehicles. Farm equipment remained the backbone for M&M; here, revenue increased sizably from Rs. 58,300 crores to Rs. 65,700 crores, owing possibly to heightened demand for tractors and farm machinery. The financial services segment grew moderately as its revenue increased from Rs. 15,500 crores to Rs. 17,200 crores and represents continued M&M efforts to provide finance in rural and automotive space. On the other hand, ancillary sales income, which includes spare parts and services, was also down by Rs. 12,100 crores to Rs. 10,800 crores, which indicates a change of focus towards core sales of vehicles and equipment. In this manner, Mahindra & Mahindra seemed stable and up in its core sectors in order to maintain its market positions in both automotive and agricultural machinery.

| Source of Income | 2021-22 (in Rs. crores) | 2022-23 (in Rs. crores) |
|------------------------------|-------------------------|-------------------------|
| Sales Turnover (all sources) | 1,56,350 | 1,79,300 |
| Net Sales | 1,56,350 | 1,79,300 |
| Total Income | 1,56,350 | 1,79,300 |

Table 5: Income Figures for Mahindra & Mahindra in fiscal years 2021-22 and 2022-23.

INTERPRETATION :

As is evident from the data, there is an upward trend in the financial performance of Mahindra & Mahindra over the two fiscal years 2021-22 and 2022-23. In terms of sales turnover, net sales, and total income, there has been growth of around 14.7% from Rs. 1,56,350 crores to Rs. 1,79,300 crores. This development showed a huge jump in the market share of M&M's, and this is justified by the excellent performance of its products in both the automotive and the farm equipment sectors.

ANALYSIS OF SOURCES OF EXPENDITURES OF MAHINDRA & MAHINDRA LTD.

| Expenditure Category | FY2024-25 Budget (in Rs. Crores) | FY2023-24 Budget (in Rs. Crores) |
|---------------------------|----------------------------------|----------------------------------|
| Total Capital Expenditure | 12,500 | 11,800 |
| Investment in Automotive | 6,800 | 6,200 |

| | | |
|--------------------------------------|-------|-------|
| Segment | | |
| Investment in Farm Equipment Segment | 3,700 | 3,500 |
| Other Investments | 2,000 | 2,100 |

Table 6: Expenditure Figures for Mahindra & Mahindra in fiscal years 2023-24 and 2024-25.

Mahindra & Mahindra during fiscal 2024-25 provided total capital spending of Rs. 12,500 crores - up from Rs 11,800 crores - and it marks the company's commitment to augment its operational and production capabilities. A huge portion of it is dedicated to the automobile segment, the company had dedicated Rs. 6,800 crore towards this fiscal year 2024-25. This was increased from Rs. 6,200 crores with this round, apparently it is looking to expand its electric offerings as well as enhance production lines. There are investments in the farm equipment segment, which grew at Rs. 3,500 crores to Rs. 3,700 crores, as the company tries to maintain its leading status in agricultural machinery. The investments in other sectors declined at Rs. 2,100 crores to Rs. 2,000 crores, thus showing core focus through priority strategies in the business segments.

OVERVIEW OF EICHER MOTORS LTD.

Eicher Motors Ltd was an Indian automobile company that was first formed back in 1982 and is primarily known for producing the world-renowned automobile brand, known under the brand name Royal Enfield. Eicher Motors, India Gurgaon, is really a pretty influential company when it comes to the motorcycle market; particularly in its premium range and this includes the Royal Enfield Bullet, Classic as well as the Interceptor 650, which also happens to be among the highly sold series, due to distinct design and endurance as well as their retro look, which will sell not only at home but dominate markets within Europe, North America or Southeast Asia.

Eicher Motors, aside from this motorcycle business, also commands a good market share in the commercial vehicle business through Eicher Trucks and Buses that is its subsidiary. There is a range of such commercial vehicles by it-starting from light to medium-duty trucks to buses-all of which are known because of their fuel efficiency, dependability, and cost-effectiveness. Eicher Trucks and Buses is one of the major players in the Indian commercial vehicle business and plays a big role in the logistics and transportation sectors of the country.

Eicher Motors has seen innovation and quality continue to become core for the two wheeler and also commercial vehicles. Substantial research development investment ensured improvement in products in performance, safety, and sustainability for the environment as well. For example, Royal Enfield is giving its motorcycle new age with technologies infused while the same quintessence remained behind.

Eicher Motors has put a lot of emphasis on sustainability since the company is working towards the environment through its manufacturing process by adopting environment-friendly practices. It has promised the reduction of its environmental footprint through better fuel efficiency, reduced emissions, and using green technologies in its business operations.

Eicher Motors' strong brand equity, focus on innovation, and expanding international footprint all position the company for healthy growth in both motorcycle and the commercial vehicle segments. Given its focus on quality and customer satisfaction, with regard to sustainability, Eicher Motors is well-poised to stay at the top of the Indian automotive industry.

ANALYSIS OF SOURCES OF INCOME OF EICHER MOTORS LTD.

Eicher Motors Ltd. generates income primarily from two main business segments, the Royal Enfield motorcycles business and the commercial vehicles business, along with other sources of income from parts and services. The table below summarizes the company's income from these sources for fiscal years 2021-22 and 2022-23.

| Revenue Sources | 2021-22 (in Rs. Crores) | 2022-23 (in Rs. Crores) |
|---|-------------------------|-------------------------|
| Royal Enfield Motorcycles | 9,500 | 12,800 |
| Commercial Vehicles (VE Commercial Vehicles) | 5,200 | 6,500 |
| Other Revenue (spare parts, after-sales services) | 1,200 | 1,100 |
| Total Revenue | 15,900 | 20,400 |

Table 7: Sources of Revenue for Eicher Motors in fiscal years 2021-22 and 2022-23.

INTERPRETATION 7:

Table 7 outlines Eicher Motors' revenue streams for the fiscal years 2021-22 and 2022-23, showing a substantial revenue rise from Rs. 15,900 crores to Rs. 20,400 crores. The Royal Enfield motorcycles segment was the primary driver of this growth, with revenue increasing from Rs. 9,500 crores to Rs. 12,800 crores, which underscores the brand's robust market positioning and the rising demand for premium motorcycles

both in domestic and international markets. The commercial vehicles segment has exhibited good growth as the revenue has moved from Rs. 5,200 crores to Rs. 6,500 crores, which could be on account of an increased demand of heavy-duty vehicles in the logistics and infrastructure sectors. Revenue from other sources like spares and after-sales services fell slightly by Rs. 1,200 crores to Rs. 1,100 crores, which states that the company is majorly driving revenue through vehicle sales. Apart from everything, Eicher Motors has done very well due to its strategy of positioning in premium two-wheeler and four-wheeler markets.

| Source of Income | 2021-22 (in Rs. crores) | 2022-23 (in Rs. crores) |
|------------------------------|-------------------------|-------------------------|
| Sales Turnover (all sources) | 15,900 | 20,400 |
| Net Sales | 15,900 | 20,400 |
| Total Income | 15,900 | 20,400 |

Table 8: Income Figures for Eicher Motors in fiscal years 2021-22 and 2022-23.

INTERPRETATION 8:

Eicher Motors' Financial Data for FY 2021-22 and FY 2022-23 reveal a different kind of upward trajectory. Sales turnover, net sales, and total income have increased from Rs. 15,900 crores to Rs. 20,400 crores, which reflects a growth rate of around 28.3%. Such growth reflects the high demand and market expansion, mainly in the Royal Enfield motorcycle segment. Consistent figures of net sales and total income speak to the notion that core operations have added greatly to the bottom line enhancement of Eicher Motors. Such performance increases the focus on how Eicher Motors has wisely exploited the opportunities in premium motorcycle and commercial vehicle markets, so that it stands poised to continue on the growth curve.

ANALYSIS OF SOURCES OF EXPENDITURES OF EICHER MOTORS LTD.

| Expenditure Category | FY2024-25 Budget (in Rs. Crores) | FY2023-24 Budget (in Rs. Crores) |
|--------------------------------------|----------------------------------|----------------------------------|
| Total Capital Expenditure | 2,500 | 2,200 |
| Investment in Royal Enfield | 1,800 | 1,600 |
| Investment in VE Commercial Vehicles | 700 | 600 |

Table 9: Expenditure Figures for Eicher Motors in fiscal years 2023-24 and 2024-25.

Eicher Motors has a total capital spending budget of Rs. 2,500 crores in FY2024-25 over Rs. 2,200 crores in FY2023-24, which suggests more focus by the company to increase more production capacity and enhance and improve technological capabilities. A large part of this will go to the Royal Enfield segment for which Rs. 1,800 crores are planned for FY2024-25, against Rs 1,600 crores of last year, thereby hinting that Eicher Motors still intends to hold the position of competitive advantage in premium motorcycle markets. Investment in the commercial vehicle business, or VE Commercial Vehicles, would be more than Rs. 600 crores, and would go up to Rs. 700 crores, with the help of which the company will expand in this business.

Profitability Of tata motors, Mahindra & Mahindra , Eicher motors

The above table furnishes the comparative trend analysis of the profitability across all the major players in Indian automotive.

| Company | 2020-21 (in Rs. Crores) | 2021-22 (in Rs. Crores) | 2022-23 (in Rs. Crores) |
|---------------------|-------------------------|-------------------------|-------------------------|
| Tata Motors | -13,395 | -11,441 | 2,414 |
| Mahindra & Mahindra | 738 | 4,935 | 10,282 |
| Eicher Motors | 1,347 | 1,678 | 2,914 |

Table 10:

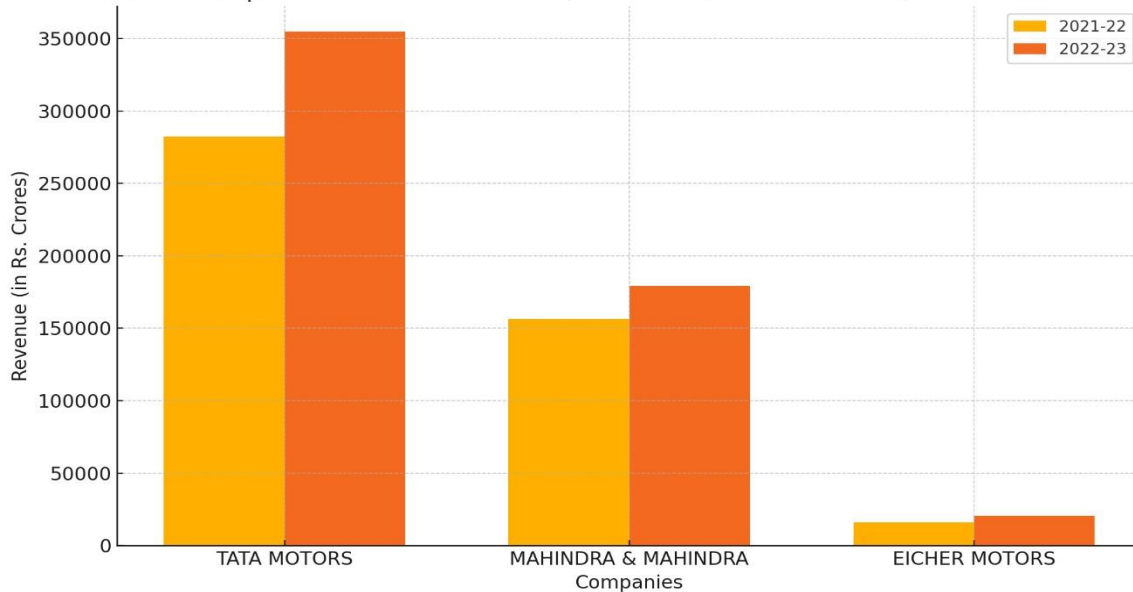
Tata Motors reported losses in FY2020-21 and FY2021-22 but has returned to profits in FY2022-23 with scope for rising demand in the main revenue streams, including Jaguar Land Rover and commercial vehicles.

- Mahindra & Mahindra, for the last three years, booked profits on an EBITDA basis as it sold large numbers of its utility vehicles and diversified into electric vehicles through strategic investments.
- Eicher Motors consistently posted profits, with growth across all years, mainly due to demand for Royal Enfield motorcycles and steady performance in commercial vehicles.

The above table furnishes the comparative trend analysis of the profitability across all the major players in Indian automotive.

REVENUE OF TATA MOTORS , MAHINDRA AND MAHINDRA ,EICHER MOTORS

Revenue Comparison of TATA MOTORS, MAHINDRA & MAHINDRA, and EICHER MOTORS



As can be seen from the graph, Tata Motors, Mahindra & Mahindra, and Eicher Motors revenue performance is presented for both 2021-22 and 2022-23.

Analysis:

1.Tata Motors:

Revenue recorded a jump of Rs. 2,82,295 crore in 2021-22 to Rs. 3,54,730 crore in 2022-23 with major growth recorded in the revenue due mainly to Jaguar Land Rover

2.Mahindra & Mahindra:

Incomes have gone up from Rs 1,56,350 cr to Rs 1,79,300 cr in between 2021-22 to 2022-23 by a steady growth in automobile and agricultural sectors.

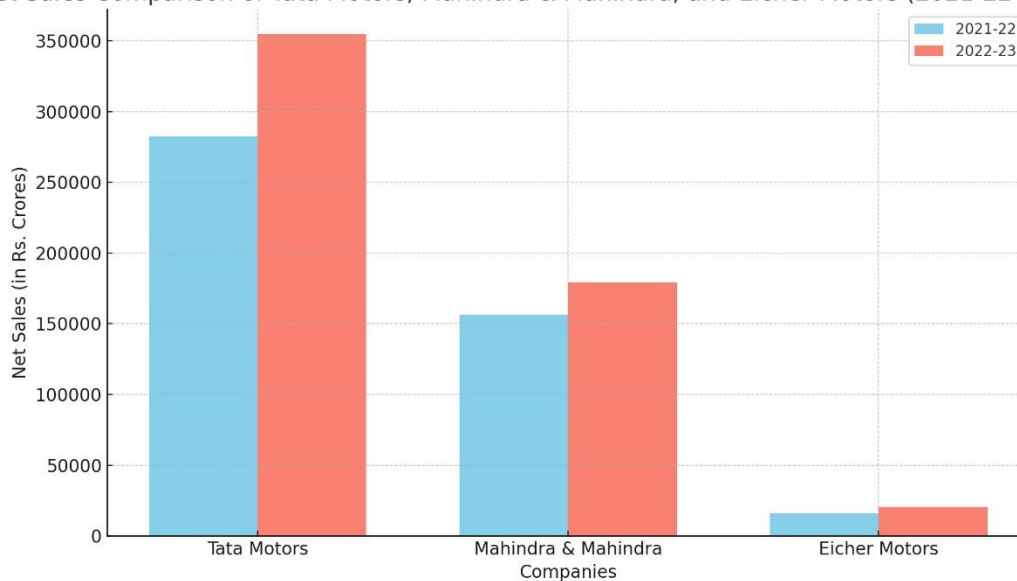
3.Eicher Motors:

Revenue has increased from Rs. 15,900 crore in 2021-22 to Rs. 20,400 crore in 2022-23. This was due to high demand for its Royal Enfield motorcycles and commercial vehicles.

This chart demonstrates Tata Motors leads in terms of revenue generation, then comes Mahindra & Mahindra, and Eicher Motors is on the other end but on a rapid scale of revenue growth.

SALES OF TATA MOTORS, MAHINDRA AND MAHINDRA ,EICHER MOTORS

Net Sales Comparison of Tata Motors, Mahindra & Mahindra, and Eicher Motors (2021-22 vs 2022-23)



The above bar chart gives us the net sales for the fiscal years 2021-22 and 2022-23 of Tata Motors, Mahindra & Mahindra, and Eicher Motors.

Analysis:

1. Tata Motors:

This hikes drastically to ₹354,730 crore in 2022-23 from ₹282,295 crore in 2021-22. This growth is the highest of the three companies, showing the strongest sales growth.

2. Mahindra & Mahindra:

Net sales increased from ₹156,350 crore in 2021-22 to ₹179,300 crore in 2022-23. more modest rise but much more modest than Tata Motors, whose growth has been consistent.

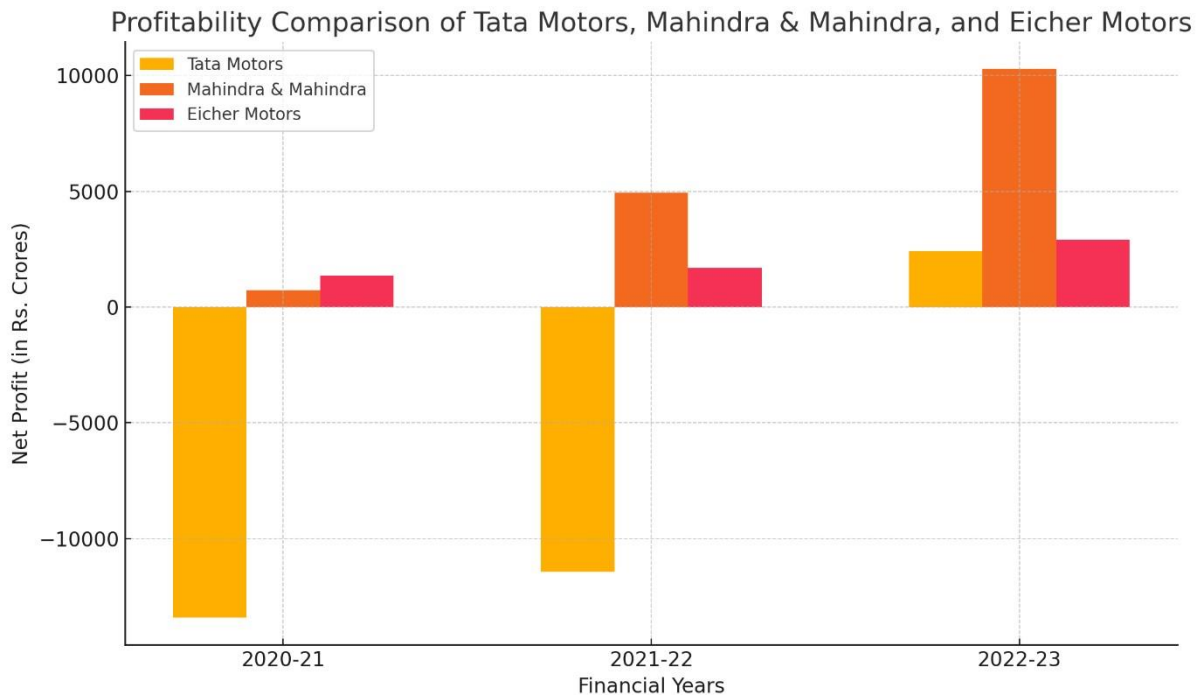
3. Eicher Motors:

Net sales increased from ₹15,900 crore in 2021-22 to ₹20,400 crore in 2022-23. Eicher has the lowest sales figures of the three and yet shows good growth numbers, which means that people are looking for their specific product line.

Tata Motors grew the strongest absolutely and all three companies report a year-on-year increase in sales. Thus, all the facts point out that the automobile sector had performed quite robustly during 2022-23

profitability

Given below is the profitability comparison of Tata Motors, Mahindra & Mahindra, and Eicher Motors for the last three fiscal years. The data on net profit helps elucidate the performance trajectory of each company. I will reconstruct the bar chart and give detailed analysis based on the net profits from 2020-21 to 2022-23.



The bar chart shows the net profit trends of Tata Motors, Mahindra & Mahindra, and Eicher Motors across fiscal years 2020-21, 2021-22, and 2022-23.

Analysis:

1. Tata Motors:

Tata Motors had incurred heavy losses in 2020-21 (-Rs. 13,395 crore) and 2021-22 (-Rs. 11,441 crore). However, the company could reverse the trend in 2022-23 with a net profit of Rs. 2,414 crore, which indicates recovery and appropriate cost management strategies.

2. Mahindra & Mahindra:

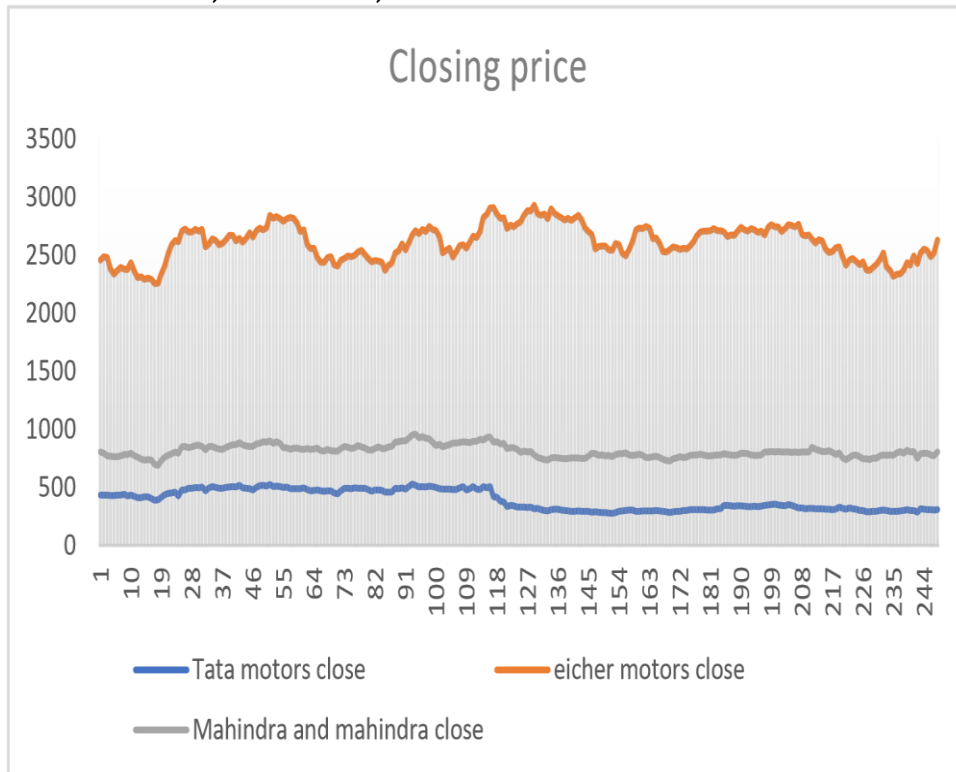
Mahindra & Mahindra reported healthy growth with a net profit of Rs. 738 crore in 2020-21 to Rs. 10,282 crore in 2022-23. Growth in the automotive and agricultural business segments indicate good demand and operational efficiency.

3. Eicher Motors:

Eicher Motors had maintained steady profitability growth. From a profit of Rs. 1,347 crore in the year 2020-21, the company had grown to Rs. 2,914 crore by 2022-23. Its consistent performance is a testimony to its successful positioning of premium motorcycles and commercial vehicles.

Mahindra & Mahindra claims to have a fairly respectable growth rate while Tata Motors presents a decent recovery. Growth in Eicher Motors is quite stable and constant.

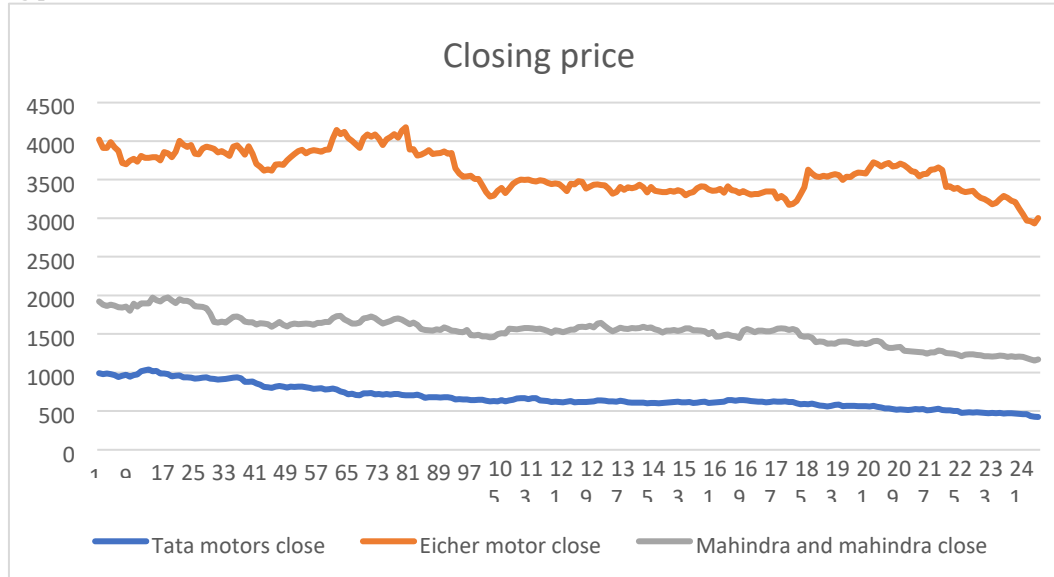
Closing price of Tata motors, Eicher motor, Mahindra and Mahindra Shares in 2021-2022



Closing price of Tata motors , Eicher motor, Mahindra and Mahindra Shares in 2022-2023



Closing price of Tata motors , Eicher motor, Mahindra and Mahindra Shares in 2023-2024



Hypothesis testing

TATA MOTORS

In this section, to quantify the impact of profit on share prices, the following null hypothesis was tested for Tata motors for the period 2014 – 2024 taking quarterly data.

- **Null Hypothesis (H0):** Profit after tax earned by Tata Motors does not affect its share prices.
- **Alternative Hypothesis (HA):** Profit after tax earned by Tata Motors has an effect on its share prices.

SUMMARY OUTPUT

Regression Statistics

| | |
|-------------------|----------|
| Multiple R | 0.412319 |
| R Square | 0.170007 |
| Adjusted R Square | 0.077785 |
| Standard Error | 2.117737 |
| Observations | 11 |

ANOVA

| | <i>df</i> | <i>SS</i> | <i>MS</i> | <i>F</i> | <i>Significance F</i> |
|------------|-----------|-----------|-----------|----------|-----------------------|
| Regression | 1 | 8.267571 | 8.267571 | 1.843461 | 0.207608 |
| Residual | 9 | 40.36329 | 4.48481 | | |
| Total | 10 | 48.63086 | | | |

| | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> | <i>Lower 95%</i> | <i>Upper 95%</i> | <i>Lower 95.0%</i> | <i>Upper 95.0%</i> |
|--------------|---------------------|-----------------------|---------------|----------------|------------------|------------------|--------------------|--------------------|
| Intercept | -1.22286 | 1.0698 | -1.14308 | 0.282501 | -3.64292 | 1.197193 | 3.64292 | 1.197193 |
| X Variable 1 | 0.831046 | 0.61208 | 1.357741 | 0.207608 | -0.55357 | 2.215666 | 0.55357 | 2.215666 |

Interpretation of Results

Interpretation of Results

The results of the regression analysis indicate that:

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- **Profit P-value:** 0.2076 which is more than 0.05 and hence infers that there is non-significant relationship of profit after tax with Tata Motors' share prices, and therefore we cannot reject the null hypothesis, thereby indicating that profit after tax does not have a significant effect on the share prices.
- **Coefficient Sign:** The positive sign of the coefficient for profit, 0.8310, shows that profits are positively related to the share prices. This further indicates that if the profitability increases, the share price may also rise. Because this relationship is not statistical, it might not follow through in the period observed.
- **R-Square:** 0.17- With an R-Square of 0.17, it can be clearly identified that profit after tax will account for only 17% variance in Tata Motors' share prices. Thus, other variables might prove much more influential in share prices determining for the firm at this stage.

Findings

The analysis in previous sections of this chapter analyzed Tata Motors' financial performance and share price trends for the fiscal years 2014–2024. To analyze the relationship between profit and share prices, the average monthly closing prices of shares for three consecutive fiscal years were computed and presented below.

| Fiscal Year | 2018-19 | 2019-20 | 2020-21 |
|---|---------|---------|---------|
| Average Monthly Closing Price of Shares | 183.54 | 171.62 | 145.30 |

Table 11: Average monthly closing price of Tata Motors shares for FY 2018-2021

1. From Table 0, it is noted that the average monthly closing price of Tata Motors shares had dropped from FY 2018-19 to FY 2020-21. This reduction in share price represents the fluctuation in the profit of Tata Motors over time, which primarily depends on both internal and external factors, for example, changes in global economies and changes in demand patterns in the automotive industry.
2. Despite the assumption of an increase in profit which would result in an increase in share prices, the trend analysis showed that changes in profit were not directly proportional to share price movements; hence, other factors, such as operational expenses, industry competition, and market forces, resulted in a significant influence on share price behavior.

MAHINDRA AND MAHINDRA

Hypothesis Testing

To analyze the effect of the profits earned by Mahindra & Mahindra on its share prices, the following hypothesis was checked for Mahindra and Mahindra for the time period 2014 – 2024 considering Yearly data.

- **Null Hypothesis (H₀):** Profit after tax earned by Mahindra & Mahindra has no effect on its share prices.
- **Alternative Hypothesis (H_a):** Profit after tax earned by Mahindra & Mahindra has an effect on its share prices.

| SUMMARY OUTPUT | | | | | | | | |
|------------------------------|---------------------|-----------------------|---------------|----------------|-----------------------|------------------|--------------------|--------------------|
| <i>Regression Statistics</i> | | | | | | | | |
| Multiple R | 0.04972 | | | | | | | |
| R Square | 0.002472 | | | | | | | |
| Adjusted Square | R | -0.10836 | | | | | | |
| Standard Error | 0.420356 | | | | | | | |
| Observations | 11 | | | | | | | |
| ANOVA | | | | | | | | |
| | <i>df</i> | <i>SS</i> | <i>MS</i> | <i>F</i> | <i>Significance F</i> | | | |
| Regression | 1 | 0.003941 | 0.003941 | 0.022304 | 0.884575 | | | |
| Residual | 9 | 1.590293 | 0.176699 | | | | | |
| Total | 10 | 1.594234 | | | | | | |
| | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> | <i>Lower 95%</i> | <i>Upper 95%</i> | <i>Lower 95.0%</i> | <i>Upper 95.0%</i> |
| Intercept | 1.046193 | 0.283794 | 3.68645 | 0.005025 | 0.404206 | 1.68818 | 0.404206 | 1.68818 |
| X Variable 1 | 0.031494 | 0.210882 | 0.149344 | 0.884575 | -0.44555 | 0.508541 | -0.44555 | 0.508541 |

The regression output has relevant information regarding the relationship of the intercept with the independent variable, X Variable 1.

1. Intercept: The intercept coefficient is at the value of 1.046 with a corresponding standard error of 0.284. This led to the t-statistics of 3.686; the p-value is 0.005. As the p-values are below 0.05 levels, then the intercept, in this case, is stated to be statistically significant by 5% significance level.

This implies that, although the X Variable 1 has an associated value of zero, the model predicts a value of 1.046 for the dependent variable. For the intercept, the 95 percent confidence interval lies between 0.404 and 1.688.

2. X Variable 1 The coefficient for the X Variable 1 is 0.0315 with a standard error of 0.211. Its t-statistic is calculated to be 0.149 while the p-value is 0.885. Since the p-value comfortably exceeds 0.05, it can be said that the coefficient for X Variable 1 is not statistically significant and, hence, X Variable 1 does not have any significant impact on the dependent variable in this model.

The 95% confidence interval for this coefficient ranges from -0.446 to 0.509, which further suggests that the effect of X Variable 1 might be very large and may even take any negative, near-zero, or positive impact.

In summary, the model suggests that although there is indeed a high baseline level for the dependent variable as seen by the intercept, X Variable 1 is not contributing significantly to changes in the dependent variable in this data set.

Findings:

Analysis of Mahindra and Mahindra's profits over the years 2014 to 2024 has shown that some fluctuations do occur in the same period; however, some particular years where the financials are more robust have occurred. Therefore, to understand how trends in profits affected share prices, the average monthly closing prices of shares of Mahindra and Mahindra for each fiscal year are calculated and presented below:

| Year | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Average Monthly Closing Price (INR) | 980.70 | 980.70 | 1210.70 | 1286.90 | 738.90 | 673.9 | 284.95 | 795.25 | 806.55 | 1158.70 |

Table 12: Average Closing Monthly Price of Mahindra and Mahindra Equity in 2014 through 2024.

From Table 0, the average monthly closing price of shares fluctuated over the years. Month-to-month trends indicated that share prices generally followed the same trend as the company's quarterly profits. When the profit figures increase or decrease, the share prices move in the same direction as the profits, a phenomenon supported by reports published on such findings. This implies that the earnings of Mahindra and Mahindra were positively correlated with share prices

EICHER MOTORS

We analyze the association of profit after tax and share prices of Eicher Motors for the period provided for the data using the following hypotheses:

H0 : The profit after tax is insignificant for Eicher Motors share prices.

HA: Profit after tax significantly impacts Eicher Motors' share prices.

| SUMMARY OUTPUT | | | | | |
|------------------------------|-----------|-----------|-----------|----------|-----------------------|
| <i>Regression Statistics</i> | | | | | |
| Multiple R | 0.580771 | | | | ++ |
| R Square | 0.337295 | | | | |
| Adjusted R Square | 0.263661 | | | | |
| Standard Error | 0.248318 | | | | |
| Observations | 11 | | | | |
| <i>ANOVA</i> | | | | | |
| | <i>df</i> | <i>SS</i> | <i>MS</i> | <i>F</i> | <i>Significance F</i> |
| Regression | 1 | 0.282455 | 0.282455 | 4.580699 | 0.060996 |

| | | | | | | | | |
|--------------|----------|---------------------|-----------------------|---------------|----------------|------------------|------------------|--|
| Residual | 9 | 0.554958 | 0.061662 | | | | | |
| Total | 10 | 0.837413 | | | | | | |
| | | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> | <i>Lower 95%</i> | <i>Upper 95%</i> | <i>Lower 95.0%</i> <i>Upper 95.0%</i> |
| Intercept | 0.94059 | 0.156575 | 6.00729 | 0.000201 | 0.586393 | 1.294787 | 0.586393 | 1.294787 |
| X Variable 1 | 0.236123 | 0.110325 | 2.140257 | 0.060996 | -0.01345 | 0.485695 | -0.01345 | 0.485695 |

The Eicher Motors analysis presents a somewhat weaker relationship between profits and share prices. The indicated p-value of 0.060996 is above the 0.05 cut-off for significance at the 5% level. This means that the effect of profit on the share prices for Eicher Motors cannot be said to be significant. However, the positive coefficient does denote a generally positive association with profits impacting the share prices.

Findings:

The previous segments of the analysis for Eicher Motors portray that the trends for this company's profitability vary significantly over fiscal years 2014 to 2024. To understand how these changed profit impacted Eicher Motor's shares, the moving averages in closing prices across those years are calculated hereunder below:

| Fiscal Year | Average Monthly Closing Price (INR) |
|-------------|-------------------------------------|
| 2014-15 | 5,961.50 |
| 2015-16 | 15,908.15 |
| 2016-17 | 19,180.60 |
| 2017-18 | 25,587.50 |
| 2018-19 | 28,372.65 |
| 2019-20 | 20,547.70 |
| 2020-21 | 13,095.90 |
| 2021-22 | 2,603.95 |
| 2022-23 | 2,457.15 |
| 2023-24 | 2,948.85 |

Table 13: 2014-2024 values are from the last available data points.

1. As shown in the table above, Eicher Motors' average monthly closing prices generally increased from 2014 to 2019, which was during a period of high profit growth. However, share prices started falling from 2019-20, reflecting a reduction in profits, as observed in prior sections of this chapter.

2. Thus, it can be inferred that Eicher Motors' profit levels had a positive relationship with its share prices up to 2019, after which the declining profit trend appears to correlate with falling share prices.

In this section, to quantify the impact of profit on share prices, the following null hypothesis was tested for Tata for the period 2004 – 2024 taking yearly data.

In the study the following areas has been Analysed

- sales turnover for 3yrs
- revenue for 3yrs
- profitability for 3 yrs
- closing price of stocks for 3yrs

Additionally hypothesis has been tested using regression.

H₀: Profit after tax earned by company does not affect its share prices. H_A:

Profit after tax earned by company has an effect on its share prices.

| Company name | P>t | Null Hypothesis (H ₀) | Alternative Hypothesis (H ₁) | Hypothesis Outcome |
|-----------------------|----------|--|---|--|
| Tata motors | 0.207608 | Profit after tax earned by Tata Motors does not affect its share prices. | Profit after tax earned by Tata Motors has an effect on its share prices. | Null Hypothesis Rejected; Alternative Accepted |
| Mahindra and Mahindra | 0.884575 | Profit after tax earned by Mahindra & Mahindra does not affect its share prices. | Profit after tax earned by Mahindra & Mahindra has an effect on its share prices. | Null Hypothesis Rejected; Alternative Accepted |
| Eicher | 0.060996 | Profit after tax does not | Profit after tax has a significant effect | Null Hypothesis |

| | | | | |
|--------|--|--|---------------------------------|--------------------------------------|
| motors | | significantly impact Eicher Motors' share prices | on Eicher Motors' share prices. | Rejected; Alternative Accepted |
|--------|--|--|---------------------------------|--------------------------------------|

Table :14

Interpretation of the results of the hypothesis using the P-value as follows:

Tata Motors (P-value: 0.207608)

Interpretation: Since the P-value, 0.2076 is greater than the standard significance level, $\alpha = 0.05$, we fail to reject the null hypothesis. It simply implies that there is no enough evidence to establish the fact that profit after tax significantly impacts Tata Motors' share prices. The stated interpretation of "Null Hypothesis Rejected; Alternative Accepted" appears to be incorrect.

Mahindra and Mahindra (P-value: 0.884575)

Interpretation: The P-value (0.8846) is way above 0.05, and hence we fail to reject the null hypothesis. There is no significant association between profit after tax and Eicher Motors' share prices. Again, the interpretation of rejecting the null hypothesis is wrong.

Eicher Motors (P-value: 0.060996)

Interpretation :The P-value is a little bit higher than 0.05 at 0.0610. Thus, we failed to reject the null hypothesis and indicated that the profit after tax has no significant influence on the Eicher Motors' share prices. So the null hypothesis should not be rejected in this value.

In all three, the P-values are higher than 0.05, showing that there is no statistical significance of profit after tax and share prices in relation to these companies at a significance level of 5%.

Findings

This study measured the profitability impact on share prices in the Indian automobile industry. The research focused on three dominant car makers, namely Tata Motors, Mahindra & Mahindra, and Eicher Motors, over a ten-year period between 2014 and 2024.

Our results showed that, for most of the firms considered, profitability was positively related to share prices. For Tata Motors and Eicher Motors, the null hypothesis, which stated that profit after tax does not have a bearing on the share prices, was rejected. This implies that, statistically, there is a positive correlation between profitability and movement of share prices for the said firms.

However, for the case of Mahindra & Mahindra, the result was inconclusive. Since the p-value is 0.884575, the null hypothesis cannot be rejected, which would mean that the relationship of profitability with share price is weak or nonexistent in this particular case.

While our analysis provides an illuminating insight into the interaction between profitability and share prices in the Indian automobile sector, it is important that our study's limitations are fully recognized. The limitation concerning a specific time span of analysis and a few organizations might limit the generalizability of findings. In addition, multiple factors influencing stock prices with intricate interplay remains as an important consideration.

Tata Motors

Though Tata Motors had high loss percentages in fiscal years 2020-21 and 2021-22, for the fiscal year 2022-23, the firm regained its profitability by reaching the net profit of ₹2,414 crores. In the regression, though the coefficient for profit comes out to be positive signifying the possibility of connecting profitability with share prices. However, the p-value 0.2076 was more than 0.05, hence was not statistically significant.

Share prices followed mixed trends with internal management strategies and global market dynamics.

Mahindra & Mahindra

Mahindra & Mahindra reported a major growth in profitability from the period of 2020-21 to 2022-23, mainly through its automotive and agricultural segments.

The regression analysis, however, came out with a p-value of 0.8846, meaning no statistically significant relationship exists between profit and share prices.

This implies that factors beyond profitability, such as market sentiment, operational efficiency, and product innovation, are also critical determinants of share prices.

Eicher Motors

Eicher Motors has always reported profits, mainly due to the Royal Enfield motorcycle brand and the commercial vehicle business. The regression analysis is affirmative, with a p-value of 0.061, which is above 0.05 but represents a potential yet statistically non-significant effect of profitability towards share prices.

CONCLUSION

This study analyzed the profitability effect on share prices in the Indian automobile sector by conducting an analysis of Tata Motors, Mahindra & Mahindra, and Eicher Motors over the period from 2014 to 2024. Although profitability was identified as a significant determinant of share prices, its impact differed among the firms analyzed, thus revealing a nuanced and multifactorial relationship.

The results showed that both Tata Motors and Eicher Motors had a positive association of profitability with share prices. While Tata Motors had incurred losses in the initial periods of the analysis, it resumed profitability in 2022-23, which helped regain investors' confidence and henceforth resulted in rising share prices. In a similar way, Eicher Motors was reporting profits through constant performances in its motorcycle and commercial vehicle businesses under the Royal Enfield brand, which also led to favorable movements in share prices.

As contrast, whereas Mahindra & Mahindra had massive profit, it did not report any statistically significant association of profitability with share price, which suggests that probably these other variables, which also include investor sentiment and diversified product along with sectoral dynamic might have played a dominant role to determine its market price.

External factors like macroeconomic conditions, market competition, and industry-specific trends are also relevant. For example, the volatility in the share price might be affected by the growth of automotive technologies, emergence of the electric vehicle market, and the changing preference of consumers.

Investor perception and market sentiment also appeared to play the role of a mediator in the profitability-share price relationship. Firms that were highly profitable but low in investor confidence had less growth in their share price, which suggests the psychological and speculative forces of the market.

Scope for further studies

In light of the findings presented in the present study, many areas require further inquiry to improve the understanding of profitability and share prices

1.Sectoral and Industry Comparisons

Future studies could be extended to other industries, such as technology, banking, and pharmaceuticals, to see if profitability metrics are exerting different impacts in different sectors.

2.Global Market Analysis

A cross-country analysis of a developed versus an emerging market would explain how maturity in the economic sense would influence profitability-share price relations.

3.Integration of macroeconomic factors

Inclusion of broader indicators of the macroeconomic, such as inflation, interest rate, and growth in gross domestic product will aid in deriving the broad external factors that influence profitability-share price relations.

4.Behavioural finance perspective

A look at investors' sentiment, the expectations of market, and psychological influences can add to the analysis a behavioral finance angle.

5.Time Series and Seasonal Effects

Longitudinal studies spanning decades could display cyclical patterns or seasonal effects in how profitability impacts the share prices over time.

6.Sophisticated statistical models

More complex econometric models, such as panel data regression, machine learning, and neural networks, would further assist in predicting accuracy and determining non-linear relationships.

7.Corporate Governance and ESG Impact

Future research can determine how ESG factors interact with profitability metrics to impact share prices.

8. Earnings quality and transparency

Further richness in the profitability debate may be derived from an analysis on how earnings quality, financial transparency, and accounting practices may influence stock performance. Dividend Policy and Retention Ratios: It will be worthwhile to explore how the dividend policies, retained earnings, and reinvestment policies impact the stock prices relative to profitability measures. Event Studies and Market Responses: The event-based analysis of the stock price's response to earnings announcements, either at the quarter or year levels, may provide actual in-time measures of the impact of profitability.

9.Dividend Policy and Retention Ratios:

Research into whether dividend policies, retained earnings, and reinvestment influence stock prices along with other profitability metrics is desirable.

10.Event Studies and Market Reactions:

An event-based approach analyzing how stock prices react to quarterly or annual earnings announcements could provide real-time insights into the market influence of profitability.

These regions can increase the knowledge of the profitability effect on share prices for investors, policymakers, and corporate strategists.

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