

# Tata Motors: A Comprehensive Equity Research Analysis-Buy, Sell or Hold

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## Abstract

This industry internship report presents an in-depth equity research analysis of Tata Motors with a "Buy, Sell, or Hold" recommendation. This study applies both fundamental and technical analysis techniques that use financial ratios, valuation models, and market trends to determine the financial health and stock performance of Tata Motors. The study has included the important financial indicators EBITDA margin, net profit margin, debt-to-equity ratio, interest coverage ratio, return on equity (ROE), and return on capital employed (ROCE).

The study shows significant improvements in the financials, with EBITDA margin increasing from 8.02% in 2020 to 14.95% in 2024, a debt-to-equity ratio from its peak of 3.13 in 2022 to 1.16 in 2024, and a considerable rise in ROE to 36.97% in 2024.

The report also discusses Tata Motors' market positioning, competition, and macroeconomic influences. Particular attention is given to Jaguar Land Rover (JLR), a significant revenue generator for the company, and its challenges in supply constraints and market demand fluctuations. The results indicate that Tata Motors has a good potential for financial recovery and growth. The recommendation depends on the risk appetite of the investor; it is a "Buy" for long-term investors who are confident in the strategic growth of the company and a "Hold" or "Sell" for risk-averse investors who are concerned about short-term market volatility. This research is a valuable reference for investors, analysts, and financial professionals interested in Tata Motors and the Indian automotive sector

## Introduction:

Equity research professionals are responsible for producing analyses, recommendations, and reports on investment opportunities that may be of interest to investment banks, institutions, or their clients. Sell-side Analysts They typically publish research reports on the securities of companies or industries with specific recommendation to buy, hold, or sell the subject security. These include the analyst's expectations of the earnings of the company and future price performance of the security ("price target"). These analysts work for firms that provide investment banking, broking, advisory services for clients. Sell-side analysts are financial experts employed by brokerage firms and investment banks to provide research and recommendations on publicly traded companies. Their primary role is to analyze financial data, market trends, and industry dynamics to offer investment advice In equity research, sell-side analysts perform valuation to determine the intrinsic value of a company's stock, which aids investors in making informed decisions

### Objective of the study

1. provide buy, hold, or sell recommendations to help investors make informed decisions. These are based on detailed analysis of company fundamentals, market trends, and economic conditions
2. Determine the intrinsic value of companies using various valuation models. This helps investors understand if a stock is overvalued or undervalued compared to its market price.
3. Predict future earnings of companies to guide investment decisions. This involves analyzing financial statements, industry trends, and management strategies.
4. Offer insights into broader market trends and sector performances. Analysts study economic indicators, geopolitical events, and market dynamics to provide a comprehensive view.
5. Produce detailed reports that summarize findings and investment recommendations. These reports include financial analysis, forecasts, and risk assessments, aiding clients in their investment choices.

### Scope of the study :

1. Sell-side analysts are employed by investment banks and brokerage firms, and their primary function is to provide research, analysis, and investment recommendations on publicly-traded companies and securities to the firm's institutional and individual investor clients.
2. Investigate the criteria and processes used to develop investment recommendations (e.g., buy, hold, sell). Assess how analysts set target prices and the factors that influence their recommendations.
3. Explore the primary valuation methods employed by sell-side analysts. Discuss the strengths and limitations of each method and how analysts choose between them.

### Research Methodology

**Sources:** Money control, Screener ,Yahoo Finance . The websites of the chosen, companies (annual reports).

**EBITDA Margin:** A high EBITDA margin of a firm, it reflected the firm's higher efficiency of operation compared with other group companies.

**Net Profit Margin (NPM):** A firm rating with a greater ratio is regarded as more efficient in the cost and profit control. A trend of increasing margins means improving profitability

**Current Ratio:** This ratio is a measure of the company's liquidity by comparing its current assets with its current liabilities. A ratio greater than 1 indicates/that the company has current assets, larger than its current liabilities.

**Quick Ratio:** Higher the ratio better the liquidity, but lesser will be the returns as cash is not a great source of generating returns.

**Debt/ Equity (D/E):** D/ E of 1 or less should be considered as the threshold and then, depending on the industry, history of the company.

**Interest Coverage Ratio:** A company can pay interest on its outstanding debt.

**Return on Equity (ROE):** That can be used to quantify the ability of a company to monetize its shareholders' investments.

### VALUATION: VALUATION:

Dividend Yield – Price to Dividend Ratio

When dividend yields are very low, market analysts turn to earning yields, a step up to take into account the investment opportunity in an equity.

**PE Ratio:** A high PE stock with respect to the peer group, with respect to the market PE is considered an overpriced stock.

**Growth Adjusted Price to Earnings Ratio (PEG Ratio):**

As earning yields are low or the price to earnings ratios are high, analysts go to growth adjusted earning yield or growth adjusted price to earnings ratio, which are two steps forward, to make investment prospects appear more favorable.

**Techniques: Techniques:**

Data Visualization: Bar Graphs , Line chart .

**Results and Analysis**

The profitability ratios compare a business firm’s capacity to generate profits from its sales or operations or other balance sheet assets or shareholders’ funds. They show how effectively a firm mobilises resources and creates value for shareholders. If the value of the ration is higher than other companies, it will be more desirable to show success at converting revenue to profit. These ratios are employed in comparing the present standing of a business concerning its prior years’ standing, or concerning equivalent businesses or the industry mean. The sign of profitability can be ascertained at any level of P/L statement. The two key factors of profitability are usually

1. EBITDA Margin
2. Net profit margin (NPM) or Profit after tax margin (PAT margin)

Thorough analysis of firms’ financial statements reveals that the above-defined types of margins provide a clear insight into the profitability of organisations to a great extent.

**1.EBITDA Margin :**

This ratio is helpful in determining the amount of profitability of the company without considering the peripheral earnings. It is calculated as

$$\text{EBITDA Margin} = (\text{EBITDA}/\text{Net Sales})$$

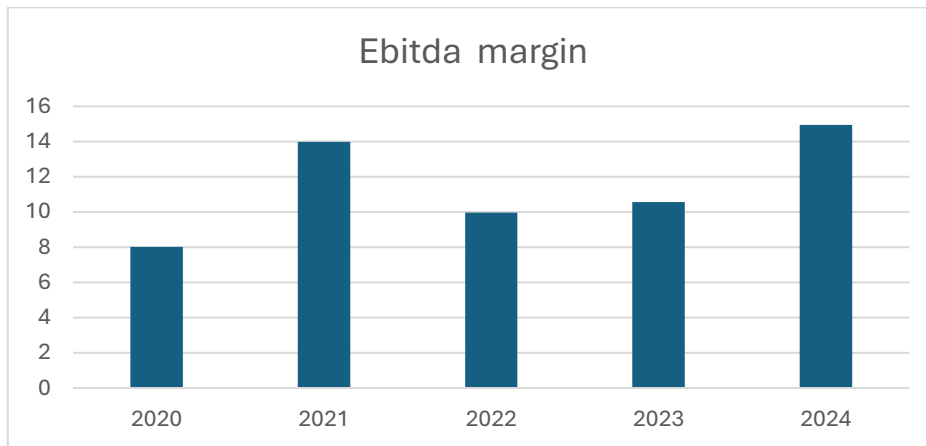
It signifies net margin of the business before interest, taxes and depreciation.

Higher EBITDA margin signal that there is a better operating efficiency compare to the other member group firms Since EBITDA is not influenced by the depreciation policies, funding decisions and taxation rates of the companies, the EBITDA margins are useful in establishing the profitability forces in an industry.

**1. EBIT Margin :**

Years	Mar-24	Mar-23	Mar-22	Mar-21	Mar-20
EBITDA margin	14.95	10.56	9.97	13.98	8.02

**Table 01**



**Fig 01 .EBITDA Margin**

**Interpretation**

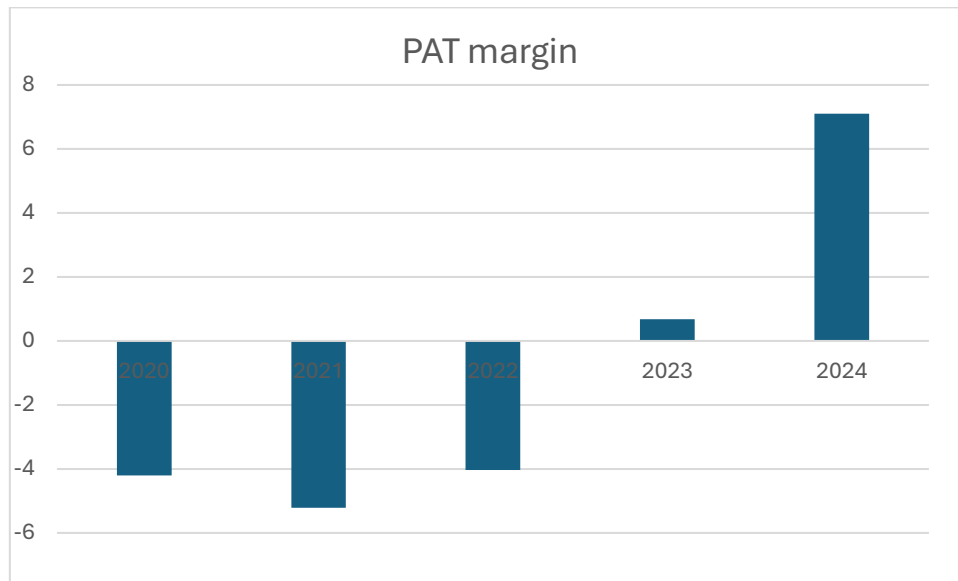
The above table also shows that the EBITDA margin ratio trend of Tata Motors until 2020 is 8.02%. This margin reduced to 11.89% in 2020 but expanded to 13.98% in 2021, especially after the company understood the market environment after the COVID-19 outbreak. Though, the margin in 2022 was way down to 9.97% that might have been driven by increased costs or supply chain disruption. From the above analysis, the business seems to have received some relief from 2023, where the EBITDA margin improved slightly to 10.56%. However, at last in 2024, the margin has increased to 14.95% which can be due to the effective management strategies that need to be followed and might be due to more sales

**2. Net Profit Margin (NPM) or Profit After Tax margin (PAT margin):**

The business owners receive their dividends last, after all the other stakeholders here especially the government has been paid. Therefore, it is important for them to find out the proportion of the business the company gets that actually comes to them. This is found by applying PAT Margin calculation.  $PAT\ Margin = PAT / Net\ Sales$  The ratio shows that a firm with a higher figure of the ratio is considered to be more efficient in cost control and profitability. And, a trend of increasing margins indicates enhancement of profit levels.

Years	Mar-24	Mar-23	Mar-22	Mar-21	Mar-20
PATMargin	7.1	0.68	-4.03	-5.21	-4.2

**Table 02 Net Profit Margin (NPM)**



**Fig 02 PAT margin**

**Interpretation**

The above table Also shows that Gross Profit Margin for Tata Motors decreased to 16.30% in the year 2020, while Profit After Tax (PAT) margin was at -4.2% which means that the company incurred a loss in the year 2020. This negative margin was down at -5.21 percent in 2021, which means that the company continued to battle with its finances. However, in 2022 this PAT margin again becomes negative and is - 4.03% despite the fact that it is in positivethe following year, in 2023, Tata Motors realizes a positive PAT margin of 0.68% thus posting a turnaround in the company. Finally, the PAT margin rise in 2024 to 7.1% which also affected by its successful financial performance and strategic management.

**Liquidity Ratios**

It is very important to note that the fulfillment of a business's obligations is time and circumstance dependent. Two simple steps for it are

- 1) Current ratio
- 2) Quick ratio

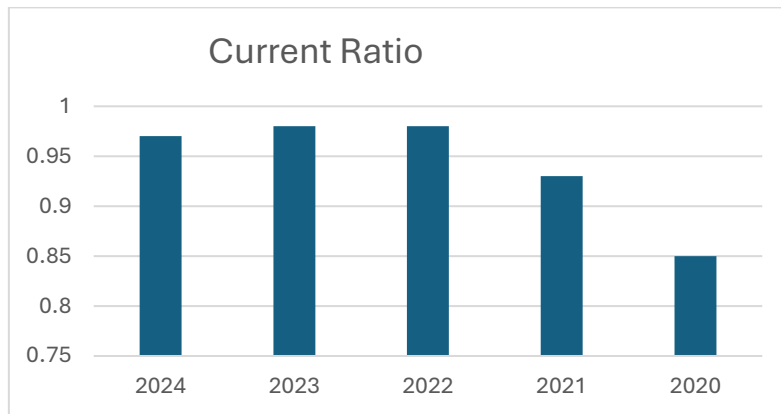
**1) Current Ratio :**

This is the measure applied in finance in the determination of an organization's liquidity position based on a relationship between the current assets and the current liabilities of the firm. Any ratio larger than 1 signifies that current assets in the firm are much greater than its current liabilities. It is termed as Working Capital Ratio.

Current Ratio = current assets/ current liabilities Quick ratio:

Years	Mar-24	Mar-23	Mar-22	Mar-21	Mar-20
Current Ratio	0.97	0.98	0.98	0.93	0.85

**Table - 03 Current Ratio**



**Fig - 03 Current Ratio**

**Interpretation:**

The Current Ratio calculated for Tata Motors in the above table in 2020 was 0.85 which indicates that company’s current liabilities are more than the current assets showing the vulnerability of liquidity problem. Currently in 2021, Current Ratio slightly rises to 0.93 and thus, although, there has been a slight improvement in the organization ability in paying current liabilities in the shortest possible time, the Current Ratio is still below the desirable 1. The Current Ratio in 2022 slightly rises to 0.98 this is show that the company is nearer to paying the current liabilities as they incorporate current asset. This modicum of stability was extended into 2023 where the ratio also stands at 0.98. Nonetheless, in 2024, the Current Ratio was down to 0.97, though it lowered only slightly suggesting that the liquidity situation is similarly positioned

**The Quick Ratio**

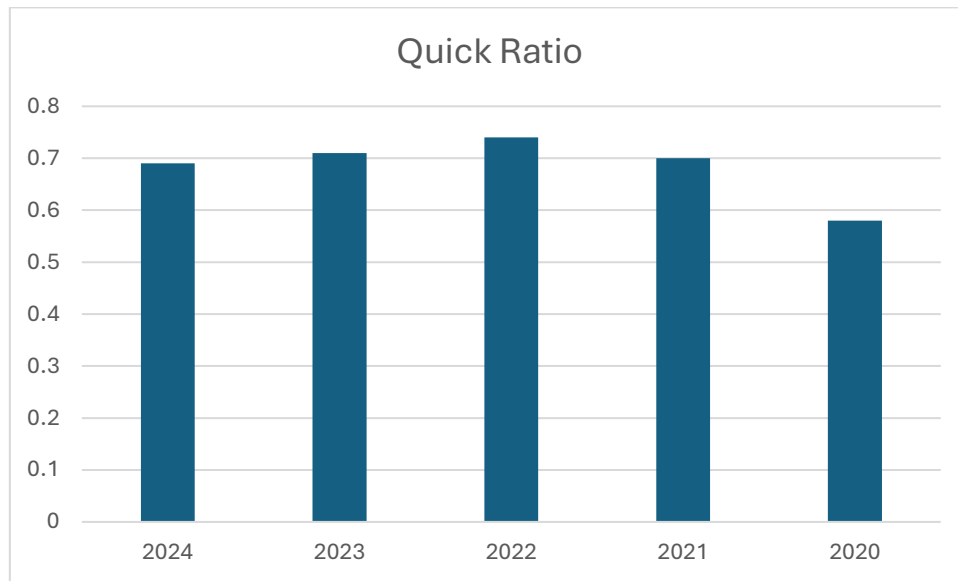
It represents a more stringent version of the liquidity ratio since it excludes some assets that are considered current but which cannot easily be liquidated into cash. One prime example of such current assets is inventories. Therefore, the Quick Ratio formula is stated as follows: (Prepaid Expenses – Inventories)/current liabilities.

Accounts receivable, cash, and investments in liquid funds all are components while calculating the quick ratio.

The higher the ratio, the better is the liquidity, but lesser will be the returns because cash is not a great source of generating returns.

Years	Mar-24	Mar-23	Mar-22	Mar-21	Mar-20
Quick Ratio	0.69	0.71	0.74	0.7	0.58

**Table : 05 Quick Ratio**



**Fig 05 Quick Ratio**

**Interpretation:**

From the above table, it hence can be ascertained that Quick ratio of the Tata Motors declined to 0.58 in 2020 meaning the company has a poor liquidity position and may struggle to meet short terms claims. But it is also noticeable a slight enhancement in quick ratio in the year 2021 with the ratio of 0.7 as well for the company which evidence better handling in liquidity aspect expending. This trend of expansion was also recorded in the year 2022 where we realized a Qick ratio of 0.74 signifying solager’s dwindling ability to meet near-co Dryden other demands. Still, it has been slightly reduced in 2023 to 0.71 in a Quick Ratio indicating a slight deterioration in liquidity. The Quick Ratio was down to 0.69 by 2024 while remaining fairly constant, which was a clear indication that the firm needed to continue paying adequate attention to the short term assets so as to maintain adequate liquidity.

**Leverage Ratios:**

Having used a lot of debt for operation might be risky for business at economic times when the economy has weakened and profits declined.

**Leverage:**Ratios help to examine how much a business uses debt and whether it can pay off what it owe s. The two key measures are the

- 1) Debt / Equity ratio and
- 2) Interest coverage ratio.

**Debt/Equity (D/E):** As discussed earlier, too much debt in a business can be damaging. If an enterprise cannot pay its lenders, it may go bankrupt.

When

businesses rapidly grow their assets using borrowed funds,it can be very risky if those assets do not bring the expected money and profit. The company will still have to pay its debts.

Investors must carefully avoid companies which are plagued by severe levels of indebtedness. For all conservative purpose, any D/E less than or equal to 1 may be treated as a benchmark. On basis thereof, depending on industry factors, the record of such company, required capital for project, detailed working related to project should an investor choose to take his investment. The D/E is determined by the ratio given:

$D/ERatio = \text{LongTermDebt} / \text{Net Worth}$

**Interest Coverage Ratio:** Companies having high debt need to pay high interest as well. Whether a company is headed for a trouble can be simply seen by comparing its earnings with the interest (we are not talking about principal repayment yet). This ratio, popularly known as Interest Coverage Ratio, tells us how many times the earnings of the business is vis a vis its interest obligation. This is simply defined as:

Interest Coverage Ratio =  $EBIT / \text{Interest Expense}$  If this ratio is high, then that business is in good position. The ratio may be less than one or negative for some businesses which may mean that earnings are lower than interest, or the earnings are negative and they have to pay interest. The businesses are likely borrowing money or bringing in new investors to operate, and thus they could face serious problems if they do not improve quickly.

**Debt/ Equity (D/E):**

The debt-to-equity (D/E) ratio is used to evaluate a company's financial leverage and is calculated by dividing a company's total liabilities by its shareholder equity.

Years	Mar-24	Mar-23	Mar-22	Mar-21	Mar-20
D/E	1.16	2.77	3.13	2.08	1.58

Table : 06 Debt/ Equity (D/E)

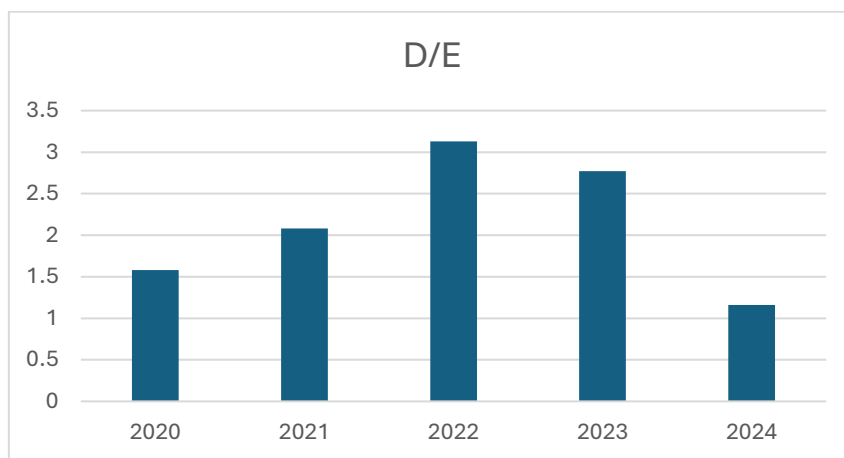


Fig 06 Debt/ Equity (D/E)

**Interpretation:**

From the above table, debt to equity ratio was 1.58 in case of Tata Motors which show that company had a significantly higher leverage by comparing debt and equity. This ratio was at 1.67 in 2020 which rose slightly to reach 2.08 in 2021 meaning that the company used more of debt financing at this period probably to deal with cash flow issues cause by the pandemic.

The D/E ratio has further risen to 3.13 in 2022 meaning the company was highly leveraged and was mostly financed through debts as opposed to equity. But in fiscal 2023 it came down to 2.77, although this shows that the company was in the process of worrying less about debts. Last is the D/E ratio, which fell to 1.16 in 2024, testifying to the lower extent of the company’s debt in relation to equity and improved financial stability.



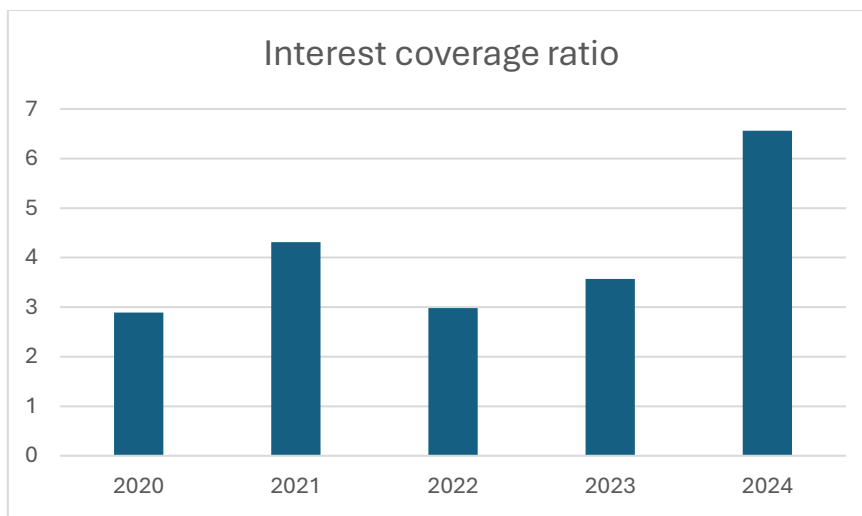
**Interest Coverage Ratio:**

A company can pay interest on its outstanding debt. It is calculated by dividing a company's earnings before interest and taxes (EBIT) by its interest expense during a given period.

$$\text{Interest Coverage Ratio} = \text{EBIT} / \text{Interest Expense}$$

Years	Mar-24	Mar-23	Mar-22	Mar-21	Mar-20
<b>Interest coverage Ratio</b>	<b>6.56</b>	3.57	2.98	4.31	2.89

**Table : 07 Interest Coverage Ratio**



**Fig 07 Interest Coverage Ratio**

**Interpretation:**

Above table shows that Tata Motors’ Interest Coverage Ratio was 2.89 in 2020 which shows that the company was capable to earn enough to cover the interest expenses to nearly 3 times. This ratio also improved in 2021 to a figure of 4.31, meaning that the company was in a better position to provide interest for its debts, and more probably because of higher earnings 2022 saw Interest Coverage Ratio reduce to 2.98 meaning that the company was less capable of providing for its interest expenses probably because of high debts or low earnings. But in the year 2023 it again shifted and became 3.57 which makes us to believe that Tata Motors improved its earnings as well as its financial power.

**Return Ratios:**

Even though profitability ratios show an indication of what the enterprise is earning against each rupee of sales but reflect nothing about any efficiency the rupees invested in business might have. The efficiency of capital used or allocated within the enterprise and even the allocation aspect can thus be determined by setting or comparing profits against capital deployed. Among the commonly observed metrics for this context includes Return on Equity and Return on Capital Employed Return on Equity (ROE):

It can be defined as return on equity ratio-a finance ratio that measures a business enterprise's ability to raise profit from the shareholder capitals.

ROE communicates how a business allocates its capital and generates return.

It has been understood that the business's quality is reflected in high ROE, and low-quality business will have a lower ROE.

ROE, sometimes known as Return on Net-worth (RoNW), is defined as

$$ROE = PAT / \text{Net-worth}$$

**Return Ratios :**

Profitability ratios tell us about the profitability earned for every rupee of sales by the business but do not convey anything on the efficiency of every rupee invested in the business. This element of capital allocation and productivity is reflected in comparing profits with capital deployed in the business.

The ratios to consider here are, Return on Equity (ROE) and Return on Capital Employed (ROCE).

**Return on Equity (ROE):**

Also known as return on shareholder’s equity ratio, the return on equity ratio can be defined as a financial ratio that is utilized to measure the company’s ability to generate profits from the investments made by the shareholders to the firm.

ROE tells a story of how a business invests and returns.

Very few business analysts talk about the idea that high ROE business is efficient allocator of capital and poor quality of business is inefficient allocator of capital.

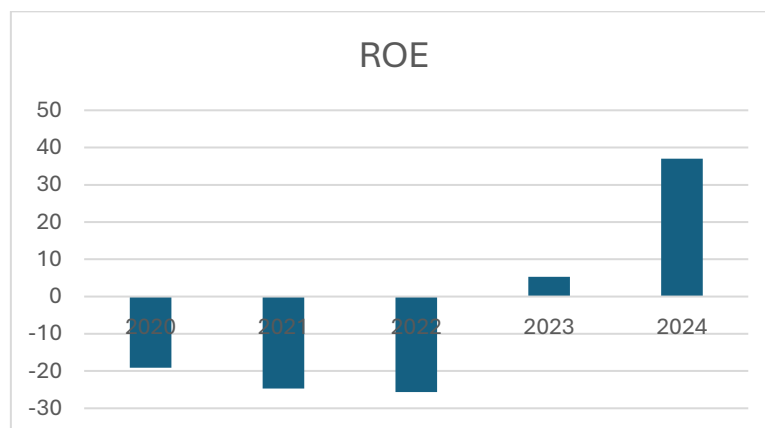
ROE, or Return on Equities, is also referred to as Return on Net-worth (RoNW).

is calculated as

$$ROE = PAT / \text{Net-worth}$$

Years	Mar-24	Mar-23	Mar-22	Mar-21	Mar-20
ROE	36.97	5.32	-25.67	-24.34	-19.13

**Table 08 Return on Equity (ROE)**



**Fig 08 Return on Equity (ROE)**

**Interpretation**

From the above table, we can see that Tata Motors' Return on Equity (ROE) was -19.13% in 2020, indicating a huge loss concerning the shareholder's equity. In 2021, this negative performance only became worse, such that its ROE at -24.67% showed that the company had found it difficult to generate returns to shareholders. The ROE still went down to -25.67% in 2022 as well. Yet in 2023, Tata Motors realized a

ROE of 5.32% — an important turnaround as the company started to generate profits and return more to its shareholders. In 2024, however, the ROE skyrocketed to 36.97%, demonstrating remarkable profitability and high-return on equity, which is very advantageous to shareholders

**Return on Capital Employed (ROCE):**

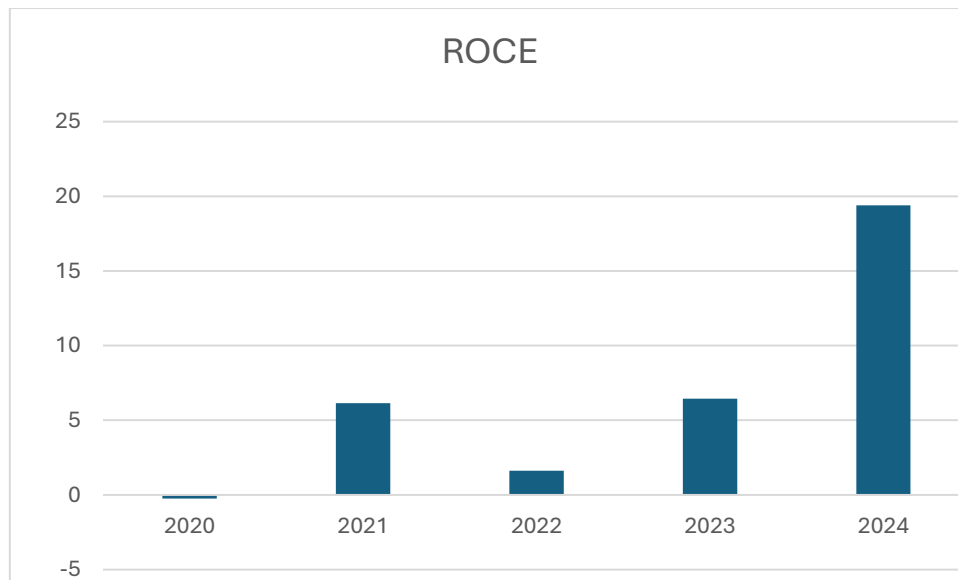
This ratio takes into account EBIT and it is the percentage of the money employed in the firm by equity and debt.

$$ROCE = EBIT / \text{Capital Employed}$$

Higher the ratio, better the firm since it is generating higher returns for every rupee of capital employed. This helps investors to comparing the returns of companies of with contrasting scales in an identical trade

Years	Mar-24	Mar-23	Mar-22	Mar-21	Mar-20
ROCE	19.39	6.45	1.63	6.14	-0.25

**Table 09 Return on Capital Employed (ROCE):**



**Fig 09 Return on Capital Employed (ROCE):**

Here are detailed explanation and highlights of the above table: (Tata Motors ROCE was -0.25% in 2020, some cool report) This indicates that the company was not earning enough to cover its capital costs during this period. Tata Motors' ROCE improved significantly, to 6.14%, in 2021, meaning that it finally began making positive returns on its capital — a clear success. But going back a year (to FY2022), that ROCE is down to 1.63% still means the company is making a return; but is a return less effectively than the year before. But, ROCE improved again in the year 2023 by 6.45%, proving that the company is back in the game with its operations and is able to utilize its capital. To wrap it up, the ROCE was 19.39% in 2024, which showed excellent efficiency at generating returns from capital employed

**Efficiency Ratios :**

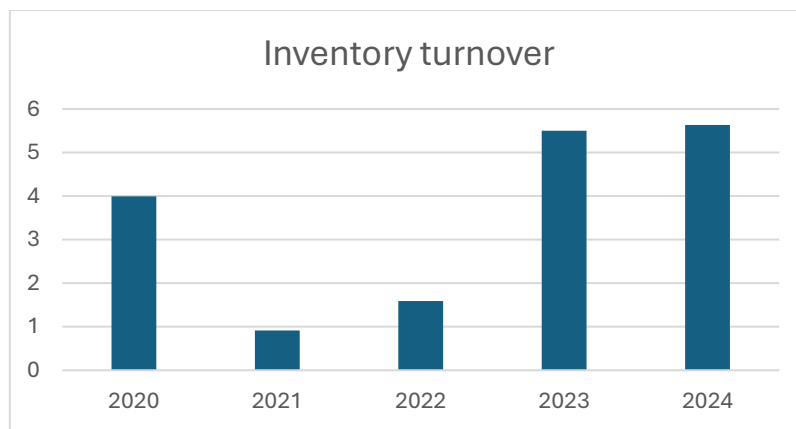
You should check whether a business functions efficiently. And so the efficiency would help business improve its capital allocation, and so the profitability and return ratio.

**Inventory Turnover** — This ratio tells the number of times inventory is rotated by a company so obviously, a higher ratio means a better business. Inventory, unless converted into sales fast, would imply money is locked in the business. In addition, such perishables can start to degrade if inventory is not converted into sales rapidly enough. This ratio will be high for FMCG companies and low for capital goods companies.

$$\text{Inventory Turnover} = \text{Sales} / \text{Inventory}$$

Years	Mar-24	Mar-23	Mar-22	Mar-21	Mar-20
Inventory Turnover	5.63	5.50	1.59	0.91	3.99

**Table10 Inventory Turnover**



**Fig 10 Inventory Turnover**

**Interpretation**

But in 2021, that ratio fell off a cliff at 0.91, implying a serious slowdown in sales or build-up in inventory, which suggests overproduction or simply a fall in sales. The Inventory Turnover Ratio showed improvement at 1.59 in 2022, indicating that Tata Motors started to reduce the impact of inventory on business, but still this ratio was lower as compared to 2020 level. The ratio soared to between 5.5 in 2023 as the company dramatically increased sales relatively to inventory when the company did have strong demand levels. Lastly, in 2024, the Inventory Turnover Ratio underwent a slight jump to 5.63, exemplifying efficiency in handling inventory and powerful sales performance

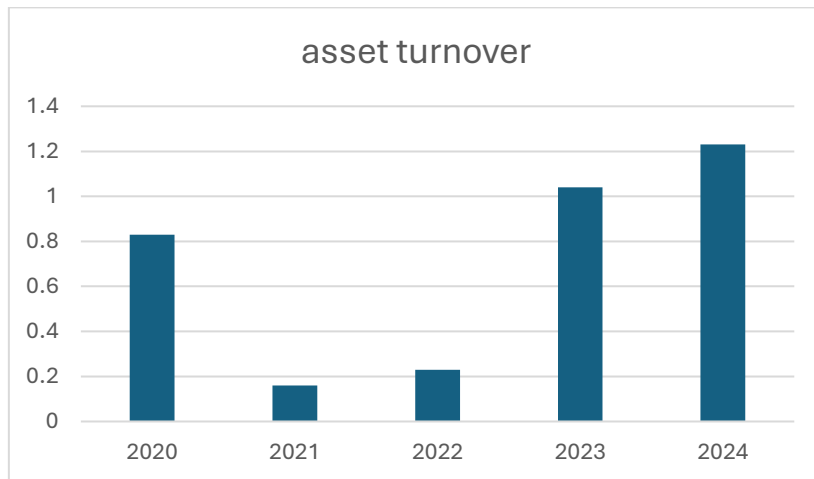
**Asset Turnover:**

This ratio reflects how many times the assets of the business are churned/used over to earn revenues for the business. Obviously in the event that resources are sitting idle, that is awful for business as capital is put but it is not earning any revenue. If asset is continuously churned/put to use to On the other hand, create products and solutions, it will increase the revenues as well as the income. Thus, the higher the ratio, the better the firm.

The sale to equity ratio is also part of Du Pont Analysis, through which ROE is decomposed for an even better understanding of the company’s drivers.

Years	Mar-24	Mar-23	Mar-22	Mar-21	Mar-20
Asset Turnover	1.24	1.04	0.23	0.16	0.83

**Table 11 Asset Turnover:**



**Fig 11 Asset Turnover**

**Interpretation**

The ratio of Asset Turnover in the above table shows Tata Motors Asset Turnover Ratio was 0.83 in 2020. This means for every 1 of asset, Tata Motors sold 0.83 of sales. However, as 2021 revealed the ratio decreased to 0.16 thus showing inefficiency or the company making little sales in relation to its asset. This could be driven by volumes reduced or under utilization during the period of industry downturn. In 2022, the Asset Turnover Ratio marginally increased to 0.23 indicating that Tata Motors was recovering and began to use the assets more efficiently though the rate was still low. Thus, the condition is that by the end of 2023, the ratio increased to 1.04, which testifies to a kind of reboot by the company as it created higher sales revenue than the assets used efficiently. Then, in 2024, the fixed Asset Turnover Ratio improved slightly and got to 1.24, which shows that the company maintained high efficiency to use its assets.

**VALUATION:**

**PE Ratio:**

**Price to Earnings Ratio which we can formalize as:**

$P/E \text{ Ratio} = \text{Current stock price} / \text{Earnings Per Share (EPS)}$

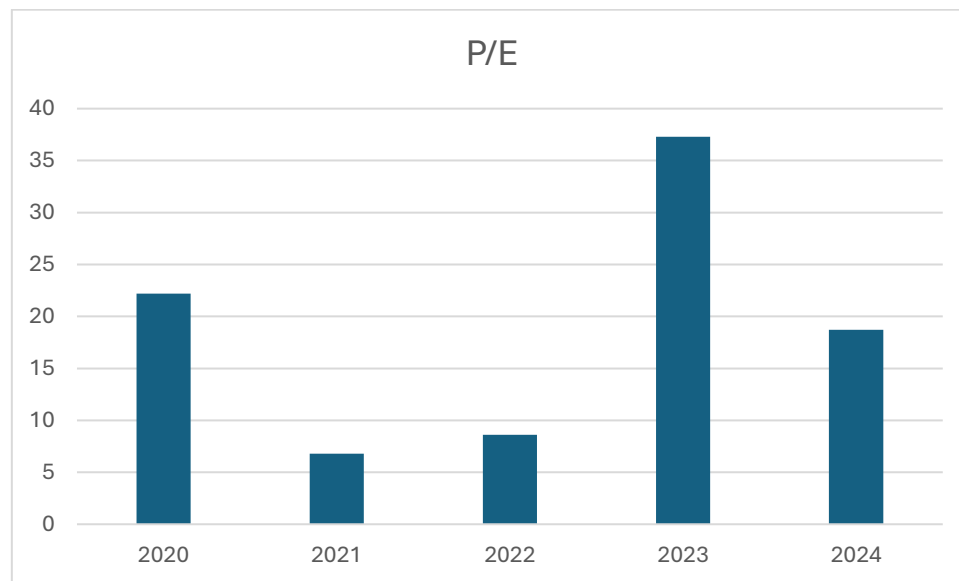
EPS is profit for a holder of equity. Overall only a portion of EPS is given as dividend and the rest is kept by the company for its future growth.

A Stock which has a high PE with respect to peer group numbers and even market PE, is considered to be an expensive stock. A high PE multiple based on historical earnings may seem high for a stock, but stocks that trade on forward PE Multiple may seem cheap, given the eps given by a company or analyst so on a forward earnings basis. Based on Future PE, Forward PE needs to be used carefully, as a better estimation of the earnings will lead to a right conclusion on the value of the stock. Investigating a stock with a PE multiple on the lower end may indicate a cheap stock or a value stock. However, we have to see if the market has discounted that stock due to bad quality of earnings.

During a bull market, PE ratios of all stocks are usually high, and during a bear market, they are low. For TATA MOTORS, this means that the investors are ready to shell out 18.59 times times earnings to acquire 1 share of the company

years	2020	2021	2022	2023	2024
P/E	22.2	6.8	8.6	37.3	18.7

**Table 12 PE Ratio**



**Fig 12 PE Ratio**

## FINDINGS, SUGGESTIONS AND CONCLUSION

EBITDA margin grow from 8.02% by 2020 to 14.95% by 2024: Showing effective management strategies, increasing sales.

The Debt-to-Equity (D/E) ratio reached a peak of 3.13 in 2022 but fell sharply to 1.16 in 2024 showing effective debt enhanced financial strength and deleveraging.

Interest Coverage Ratio selected from 2.89 in 2020 to 6.56 in 2024 definitely indicates the ability to cover the interest over its earnings improved from 2020 to 2024 for Tata Motors.

As it stands, investors are paying a P/E multiple of about 18.59x for Tata Motors' earnings, indicating that the stock may be undervalued in relation to its growth prospects

Jaguar Land Rover (JLR): JLR, whose sales make up a significant portion of Tata Motors' revenue, has seen difficulties in the form of supply constraints and a softening outlook for demand in important markets such as China and Europe<sup>13</sup>. But recovery is anticipated in the H2 FY25 as production issues are tackled.

Buy: If you have faith in the long-term potential growth of Tata Motors and its strategic efforts. Sell or Hold: If you are risk-averse or cautious about the immediate financial performance and market conditions affecting the automotive sector.

## References

1. Bradshaw, M. T. (2011). Analysts' Forecasts: What Do We Know After Decades of Work?
2. Available at SSRN: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1880339](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1880339)
3. Clement, M. B. (1999). Analyst Forecast Accuracy: Do Ability, Resources, and Portfolio Complexity Matter?
4. Available at ScienceDirect: <https://www.sciencedirect.com/science/article/pii/S0165410199000130>
5. Clarke, J., Khorana, A., Patel, A., & Rau, P. R. (2007). The Impact of All-Star Analyst Job Changes on Their Coverage Choices and Investment Banking Deal Flow.
6. Available at ScienceDirect: <https://www.sciencedirect.com/science/article/pii/S0304405X07000705>
7. Groysberg, B., Healy, P., & Chapman, C. (2008). Buy-Side vs. Sell-Side Analysts' Earnings Forecasts.

8. Available at JSTOR: <https://www.jstor.org/stable/40390168>
9. Hong, H., & Kubik, J. D. (2003). Analyzing the Analysts: Career Concerns and Biased Earnings Forecasts.
10. Available at JSTOR: <https://www.jstor.org/stable/3094520>
11. Irvine, P. (2001). Do Analysts Generate Trade for Their Firms? Evidence from the Toronto Stock Exchange.
12. Available at ScienceDirect: <https://www.sciencedirect.com/science/article/pii/S0165410100000336>
13. Jacob, J., Lys, T. Z., & Neale, M. A. (1999). Expertise in Forecasting Performance of Security Analysts.
14. Available at ScienceDirect: <https://www.sciencedirect.com/science/article/pii/S0165410199000191>
15. Michaely, R., & Womack, K. L. (1999). Conflict of Interest and the Credibility of Underwriter Analyst Recommendations.
16. Available at JSTOR: <https://www.jstor.org/stable/2646113>