



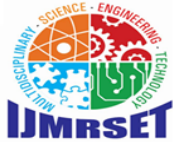
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A Study of Financial and Risk Analysis of TATA Steels Limited Using Working Capital, Leverages, EVA and Altman Z-Score Model

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ABSTRACT: This study analyses the financial performance and risk position of Tata Steel Limited using various financial analytical tools such as Working Capital Analysis, Leverage Analysis, Economic Value Added (EVA), and the Altman Z-Score model. The main objective of the study is to evaluate the company's liquidity position, financial risk, value creation capability, and overall financial stability. The research is based on secondary data collected from the company's published annual reports, financial statements, and other reliable financial sources for the period from 2021 to 2025. Working Capital Analysis is used to assess the company's short-term financial health and its ability to meet day-to-day operational requirements. Leverage Analysis helps to understand the extent to which the company uses debt financing and its impact on financial risk. Economic Value Added (EVA) is applied to determine whether the company is generating value for its shareholders after covering the cost of capital. Additionally, the Altman Z-Score model is used to evaluate the company's probability of financial distress and overall financial safety. The findings reveal that Tata Steel maintained positive working capital and a relatively stable liquidity position throughout the study period. Although EVA remained negative due to high capital investment and cost of capital, the Altman Z-Score indicates moderate financial risk with gradual improvement toward financial stability. The study concludes that effective financial management, efficient utilization of resources, and strategic planning can support sustainable growth and long-term value creation for the company.

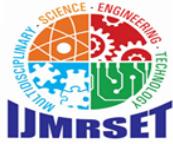
KEYWORDS: Financial Performance, Working Capital, Leverage Analysis, conomic Value Added (EVA), Altman Z-Score, Financial Risk

I. INTRODUCTION

In the present business world, financial performance analysis plays a vital role in understanding The financial health of a company. Investors, creditors, management, and other users of financial Statements depend on financial analysis to evaluate profitability, liquidity, solvency, efficiency, and Risk. Due to changing economic conditions, increasing competition, and market uncertainty, Companies must carefully manage their financial resources to ensure stability and sustainable Growth. Financial analysis helps in assessing how effectively a company utilizes its assets, controls costs, Manages working capital, and generates returns for stakeholders. It also assists in identifying Financial strengths and weaknesses, measuring risk exposure, and supporting informed decisionmaking. In capital-intensive industries, financial performance analysis becomes even more Important due to high investment requirements and exposure to market fluctuations.

II. STATEMENT OF THE PROBLEM

Understanding whether the company is creating value, managing its capital efficiently, maintaining financial stability, and avoiding potential bankruptcy risk has become essential. Therefore, there is a need to analyse the financial performance of the selected company using tools such as Working Capital Analysis, Ratio Analysis, Leverage Analysis, Economic Value Added (EVA), and the Altman Z-Score to identify the overall financial health and future prospects of the company



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III. RESEARCH OBJECTIVES

- To evaluate the overall financial performance and stability of the selected company
- To analyse the liquidity position of the company
- To assess profitability, value creation of the company and risk of the company
- To evaluate financial stability and future prospects of the company

IV. REVIEW LITERATURE

Didin Fatihudin, Jusni and Mochamad Mochklas (2018) explained the concept of financial performance and methods used to measure it through financial statements. Their conceptual study concluded that financial performance can be evaluated using indicators such as liquidity, profitability, solvency, efficiency, and leverage.

R. Myšková and P. Hájek (2017) assessed firm financial performance by combining financial ratio analysis with linguistic analysis of annual reports of 1,380 U.S. companies. The study found that firms with stronger financial performance tend to provide more positive and detailed managerial commentary, particularly regarding profitability, liquidity, and leverage.

M. R. D. Prihartono and N. Asandimitra (2018) examined factors influencing financial management behavior among 264 undergraduate students. The results indicated that income, financial literacy, and financial attitude significantly affect financial management behavior, while locus of control shows no significant influence.

V. RESEARCH METHODOLOGY

Research methodology refers to the systematic framework used to conduct research in a structured and scientific manner. It includes the selection of research design, data sources, tools, and techniques for collecting and analyzing data to ensure accuracy and reliability of findings.

The present study titled “A Comprehensive Financial Performance and Risk Analysis of Tata Steel limited Using Working Capital, Leverage, EVA, and Altman Z-Score Models” adopts a quantitative and analytical research approach. The study is entirely based on secondary data collected from the published annual reports of Tata Steel, audited financial statements, stock exchange filings, and the Moneycontrol website. The analysis covers a historical period of 2021–2025 and includes forecasting for 2026–2030 using trend analysis.

RESEARCH DESIGN

The study follows a descriptive and analytical design. It describes the financial performance of Tata Steel and applies financial models to evaluate liquidity, profitability, leverage, value creation, and bankruptcy risk.

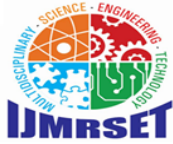
Data Collection

The research relies entirely on secondary financial data, including Income Statement, Balance Sheet, and Cash Flow Statement figures obtained from reliable and audited sources.

Tools and Techniques Used

The study applies the following financial tools:

- Working Capital Analysis (Current Ratio, Quick Ratio, Working Capital Turnover) to assess liquidity.
- Leverage Analysis (Operating, Financial, and Combined Leverage) to measure business and financial risk.
- Trend Analysis and Forecasting to evaluate revenue and profit growth patterns.
- Economic Value Added (EVA) to measure value creation
($EVA = NOPAT - Capital\ Employed \times Cost\ of\ Capital$).
- Altman Z-Score Model to assess financial distress risk using key financial ratios.
- Microsoft Excel is used for calculations, forecasting, and graphical representation.



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VI. FINANCIAL ANALYSIS

WORKING CAPITAL

Tata Steel Limited maintained positive working capital throughout the study period, indicating that current assets exceeded current liabilities. This reflects the company's ability to meet short-term obligations and maintain a satisfactory liquidity position despite year-to-year fluctuation

Particulars	2025	2024	2023
current assests			
Inventories	9230	9013	8930
Investments	9888	5674	3616
Cash and Cash Equivalents	1766	1739	4097
Short Term Loans and Advances	1	1	11
Other Current Assets	18701	18922	21739
Total Current Assets	39586	35349	38393
current liabilities			
Short Term Borrowings	8640.44	3841.52	7298.12
Trade Payables	18411	16975	16070
Other Current Liabilities	5974	5063	9644
Short Term Provisions	635	816	1872
	848	836	1380
	838	776	682
Total Current Liabilities	35346.44	28307.52	36946.12
working capital	4239.56	7041.48	1446.88

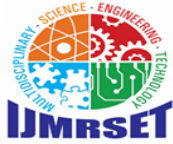
LEVERAGES

PARTICULARS	2025	2024	2023	2022	2021
Combined	-1.26	-4.03	-1.52	-1.06	0.44

INTERPRETATION: The operating financial and combined leverage ratios were within acceptable limits indicating a balanced cost structure. The company operates in a capital intensive industry. Its earnings remain relatively stable and financial risk is manageable due to adequate interest coverage and controlled at debt level

EVA (ECONOMIC VALUE ADDED)

The EVA values were negative during the study period, primarily due to high capital investment and cost of capital. However, this does not indicate poor performance, as the company continues to generate operating profits and invest in long-term growth, which may create economic value in the future.



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YEAR	EBIT	TAX RATE	NOPAT	CAPITAL EMPLOYED	WACC	capital employed * wacc	EVA
2021	21188	41%	12543.30	200681	0.024	4816.34	7727
2022	16106	17%	13384.09	226757	0.062	14058.93	-675
2023	11650	56%	5160.95	138131	0.081	11188.61	-6028
2024	11894	-329%	51013.37	145338	0.365	53048.37	-2035
2025	14428	62%	5443.68	151944	0.081	12307.46	-6864

FORECAST

YEAR	EBIT	TAX RATE	NOPAT	CAPITAL EMPLOYED	WACC	capital employed * wacc	EVA
2026	32822	22%	25601.47	235170.6	0.1226	28831.91	-3230.44
2027	39387		30721.70	282204.7		34598.29	-3876.59
2028	47264		36866.08	338645.6		41517.95	-4651.88
2029	56717		44239.34	406374.8		49821.54	-5582.21
2030	68061		53087.19	487649.7		59785.85	-6698.66

ALTMAN Z SCORE (FOR EMERGING MARKETS)

Based on the applied criteria ($Z > 2.60$ Safe Zone; $1.10-2.60$ Grey Zone; $Z < 1.10$ Distress Zone), the company remained in the Grey Zone throughout the study period. The Z-Score improved consistently from 1.513 in 2022 to 2.407 in 2025, indicating moderate financial risk but no immediate threat of bankruptcy, with gradual movement toward the Safe Zone.

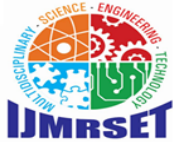
particulars	multiply by	calculations	2025	calculation	2024
X1	6.56	0.116	0.763	0.121	0.797
X2	3.26	0.178	0.580	0.162	0.527
X3	6.72	0.068	0.456	0.060	0.403
X4	1.05	0.579	0.608	0.592	0.621
z score			2.407		2.348

calculation2	2023	calculation3	2022	calculation4	2021
0.087	0.571	0.042	0.276	0.056	0.367
0.131	0.428	0.117	0.381	0.132	0.429
0.060	0.405	0.057	0.383	0.087	0.584
0.573	0.602	0.450	0.473	0.371	0.390
	2.006		1.513		1.770

VII. FINDINGS, SUGGESTIONS AND CONCLUSION

1. Working Capital and Liquidity:

The analysis indicates that Tata Steel Limited maintained positive working capital during the study period, showing that current assets were sufficient to meet current liabilities. The current and quick ratios reflect satisfactory short-term solvency, while stable operating cash flows indicate the company's ability to support its day-to-day operations effectively.



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2. Capital Structure and Coverage:

The company operates with relatively high leverage, which is typical in capital-intensive industries such as steel manufacturing. Although the debt ratio indicates reliance on borrowed funds, the interest coverage ratio suggests that operating profits are generally adequate to meet interest obligations, reflecting a manageable capital structure.

3. Leverage Forecast Period): Analysis (

The forecast results show higher operating leverage in 2026, indicating greater sensitivity of earnings to sales changes, while later years show improved stability. Negative financial leverage in some years reflects higher interest burden and financial risk, which also affects combined leverage.

4. EVA Analysis:

The Economic Value Added (EVA) remained negative during the study period due to high capital investment and cost of capital. This suggests that returns were not sufficient to cover the overall cost of capital in the short term, although future improvements in profitability may lead to value creation.

5. Z-Score Analysis:

The Altman Z-Score places the company in the Grey Zone during the study period, indicating moderate financial risk. However, the score improved from 1.513 in 2022 to 2.407 in 2025, showing gradual progress toward stronger financial stability.

7.1 SUGGESTIONS

To enhance financial performance, Tata Steel should focus on reducing finance costs through better debt management and refinancing strategies. Improving operational efficiency through cost control, better capacity utilization, and technological advancement can stabilize earnings and reduce business risk.

The company should also aim to achieve positive EVA by improving returns on invested capital and reducing the cost of capital. Efficient working capital management, including better inventory and receivable control, can further strengthen liquidity.

In addition, reducing excessive leverage, retaining profits, and improving asset productivity can help the company move from the Grey Zone toward the Safe Zone under the Altman Z-Score model. Diversification and expansion into value-added products may also reduce long-term market risk.

7.2 CONCLUSION

The study concludes that Tata Steel Limited maintains a stable liquidity position supported by positive working capital and consistent operating cash flows. Although the company operates with high leverage, operating profits generally support debt obligations. Negative EVA indicates that returns have not yet exceeded the cost of capital, mainly due to large capital investments. However, the improving Altman Z-Score reflects strengthening financial stability and reduced bankruptcy risk. Overall, with effective debt management, improved operational efficiency, and strategic financial planning, Tata Steel Limited has strong potential to achieve sustainable growth and long-term shareholder value.

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