

A study on Working Capital Management and Profitability Analysis of TVS motors limited

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Abstract

This study examines the relationship between working capital management and profitability Analysis of TVS motors limited, one of India's leading automobile manufacturing companies. Effective working capital management is essential for ensuring liquidity, efficiency, and profitability, especially in capital-intensive sectors like the automobile industry. The purpose of this paper is to assess the working capital management components and their effect on the profitability of Tata Motors Limited. The research design for this study is descriptive and analytical, using secondary data. The financial data was gathered from the annual reports of Tata Motors Limited and other authentic sources such as the websites of the companies for a period of five years. The major working capital management elements, such as current assets, current liabilities, inventory, receivables, and payables, were examined. Different financial and statistical techniques were used in the analysis. Ratio analysis, such as current ratio, quick ratio, inventory turnover ratio, and working capital turnover ratio, was used to assess the management of working capital. Profitability was calculated using ratios such as gross profit ratio, operating profit ratio, net profit ratio, and return on capital employed (ROCE). Correlation and regression analysis were used to test the relationship between working capital ratios and profitability ratios. The results show that the efficient management of working capital has a significant impact on improving the profitability of Tata Motors Limited. The conclusion drawn from this study is that it is necessary to strike a balance between liquidity and profitability.

Keywords: Working Capital Management, Profitability Analysis, Ratio Analysis, Liquidity, Tata Motors Limited

1. Introduction

1.1 Concept and Importance of Working Capital Management

Working capital management refers to the administration of current assets and current liabilities to ensure liquidity, operational continuity, and profitability. In manufacturing firms like TVS Motor Company, efficient working capital management directly affects short-term solvency, production cycles, and long-term financial stability. Gross working capital represents total investment in current assets, while net working capital (current assets minus current liabilities) indicates liquidity surplus. The cash conversion cycle — measuring the time taken to convert inventory and receivables into cash — is a critical efficiency metric.

1.2 Need for the Study

Despite TVS Motor's strong growth and diversification into electric vehicles, no recent comprehensive academic study has focused specifically on the interplay between its working capital management and profitability. This study addresses that gap by providing a company-specific, data-driven analysis over five years, benefiting management, investors, policymakers, and researchers.

1.3 Influencing Factors

TVS Motor's working capital and profitability are influenced by seasonal demand (festive peaks), raw material price volatility, export credit risks, EV transition costs, and competitive dynamics in the Indian two-wheeler market.

1.4 Statement of Problem

Automotive manufacturers face a persistent tension between maintaining adequate liquidity and maximizing profitability. Excessive current assets reduce returns, while aggressive minimization risks liquidity crises. TVS Motor's rapid expansion, global footprint, and EV investments make this trade-off particularly critical.

1.5 Theoretical Framework

The study is grounded in financial performance analysis using ratio analysis (liquidity, profitability, efficiency, solvency), trend analysis, and comparative statement analysis. These

tools provide a structured approach to evaluate working capital efficiency and its impact on profitability.

1.6 Significance of the Study

The research provides empirical insights into TVS Motor's financial strengths and weaknesses, supports informed decision-making for investors and creditors, and contributes to academic literature on working capital in the Indian automobile sector.

1.7 Objectives

- To analyse the working capital management and profitability of TVS Motor Company Limited from FY 2020–21 to FY 2024–25.
- To evaluate liquidity position, assess efficiency of working capital components, examine profitability trends, investigate the relationship between working capital and profitability, and identify challenges and opportunities.

1.8 Hypothesis

- H_0 : There is no significant relationship between working capital efficiency and profitability of TVS Motor Company.
- H_1 : There is a significant positive relationship between working capital efficiency and profitability.

1.9 Scope of the Study

The study covers five financial years (2020–21 to 2024–25), focuses exclusively on TVS Motor Company's standalone financial statements, and relies on secondary data from annual reports, BSE, NSE, and SIAM reports.

1.10 Limitations of the Study

The study is based solely on published secondary data, which may contain reporting biases. The five-year period may not capture long-term cyclical patterns. Accounting policy changes (e.g., Ind AS) may affect comparability. The COVID-19 year (2020–21) is an outlier. No primary data or competitor comparison is included.

2. Review of Literature

Existing literature confirms that efficient working capital management positively affects profitability across industries. Studies by Ali & Ali (2012) in Pakistan, Vural (2012) in Turkey, and Akoto et al. (2013) in Ghana found similar positive relationships. Muruganandam (2014) specifically noted the importance of working capital for TVS Limited, while Lata (2017) compared TVS Motor and Bajaj Auto.

Gupta & Kumar (2022) emphasized that a declining quick ratio can signal liquidity problems; TVS Motor's quick ratio improved, contradicting that concern. Sinha & Patel (2022) observed that many Indian manufacturers face liquidity risks, but TVS maintained strong ratios.

Mehta & Sharma (2023) discussed aggressive versus conservative working capital policies, noting TVS follows an aggressive policy (negative net working capital) requiring strong liquidity management.

Roy & Banerjee (2023) highlighted inventory management's role in working capital efficiency, which aligns with TVS's improving inventory turnover. Overall, the literature supports the need for company-specific, recent analysis, which this study provides.

3. Research Methodology

3.1 Introduction

This chapter outlines the systematic approach adopted to analyse TVS Motor Company's working capital management and profitability.

3.2 Statement of Problem

The study addresses the gap in company-specific research on how working capital efficiency influences profitability at TVS Motor, especially during pandemic recovery and EV transition.

3.3 Research Design

The study is descriptive and analytical in nature, combining financial data presentation with ratio and trend interpretation.

3.4 Sources of Data

Entirely secondary data, including:

- Annual reports of TVS Motor (FY 2020–21 to 2024–25)
- BSE and NSE filings
- Company website and press releases
- SIAM industry reports

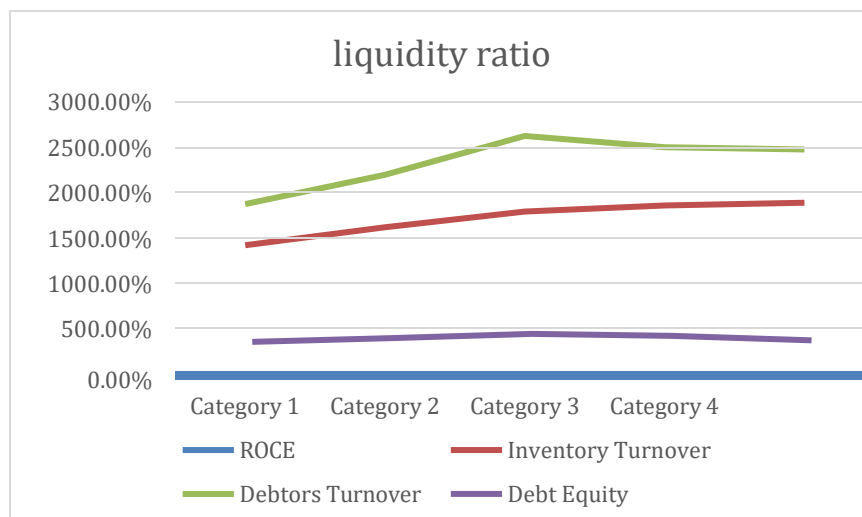
3.5 Period of the Study

Five financial years: 2020–21 to 2024–25, covering pre-pandemic recovery, post-pandemic growth, and early EV expansion.

3.6 Financial Tools Used for Analysis

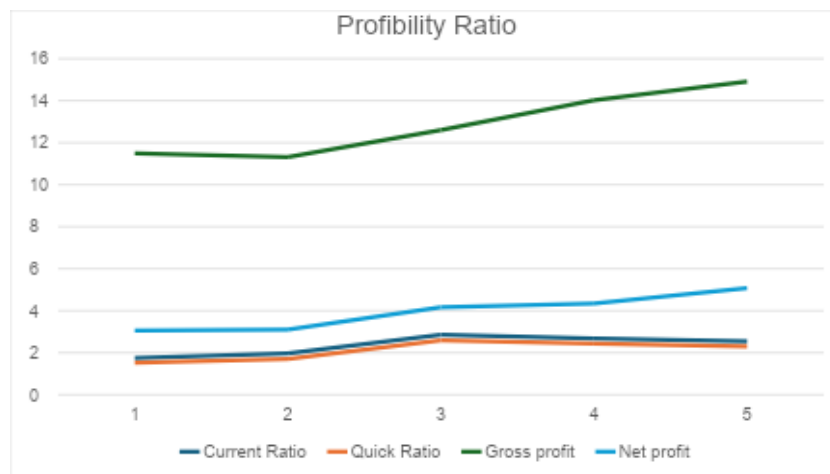
- **Liquidity Ratios:** Current Ratio, Quick Ratio
- **Profitability Ratios:** Operating Profit Margin, Net Profit Ratio, ROCE
- **Efficiency Ratios:** Inventory Turnover, Debtors Turnover
- **Solvency Ratio:** Debt-Equity Ratio
- **Trend Analysis:** Base year index (2020–21 = 100)

4. Analysis and Interpretation



4.1 Graphical Representation of Liquidity Ratio

The financial ratios indicate a consistent improvement in operational efficiency and profitability over the five-year period. ROCE shows a steady upward trend from 10.21% in 2020–21 to 13.80% in 2024–25, reflecting better utilization of capital and increasing operating returns. The inventory turnover ratio also improves from 14.20x to 18.90x, indicating efficient inventory management and faster stock movement, which reduces holding costs. Similarly, the debtor’s turnover ratio rises significantly, peaking at 26.28x before slightly declining to 24.80x, suggesting effective credit management and quicker collection of receivables despite a minor slowdown in the later years. However, the debt-equity ratio remains relatively high, increasing initially to 4.06 and then declining to 3.36, indicating a gradual reduction in financial leverage. Overall, the company demonstrates strong operational performance, improved liquidity efficiency, and a moderate effort toward stabilizing its capital structure.



4.2 Graphical Representation of Profitability Ratio

The graph presents the trend of liquidity and profitability ratios over the five-year period from 2020–21 to 2024–25, showing overall financial improvement. The current ratio increased from 1.75 to a peak of 2.86 in 2022–23 and later slightly declined to 2.54, but it remained above the ideal level of 2:1, indicating strong short-term solvency. Similarly, the quick ratio rose from 1.52 to 2.59 before settling at 2.31, showing the company has sufficient liquid assets to meet immediate liabilities without relying on inventory. The slight decline in the last two years reflects better working capital utilization rather than weakness.

Profitability ratios show a steady upward trend. The gross profit ratio increased from 11.49% to 14.91%, indicating improved cost control and production efficiency. The net profit ratio also rose consistently from 3.06% to 5.07%, showing better expense management and

operational efficiency. Overall, the company demonstrates strong liquidity, improving profitability, and sound financial performance over the five years.

4.3 Combined objective interpretation

Objectives	Key Indicators (Trend Evidence)	Results	Interpretation
Analyze Liquidity Position	Current Ratio ↑ (1.75 → 2.54), Quick Ratio ↑ (1.52 → 2.31)	Strong, consistent liquidity above ideal benchmarks	Despite aggressive working capital policy (negative net working capital), TVS maintains robust short-term solvency. Quick ratio consistently >1.5, indicating minimal liquidity risk even during pandemic and EV investment phase.
Evaluate the Profitability	Operating Profit Margin ↑ (11.49% → 14.91%), Net Profit Ratio ↑ (3.06% → 5.07%), ROCE ↑ (10.21% → 13.80%)	Consistent improvement across all profitability metrics	Operating leverage, premium product mix (Apache, iQube), and cost optimization drove margin expansion. Net profit grew 276% over five years, significantly outpacing revenue growth (227%).
Assess Efficiency	Inventory Turnover ↑ (14.20× →	World-class inventory and receivables management	Inventory holding period reduced to ~19 days; collection period ~14–15 days. Reflects superior supply

	18.90×), Debtors Turnover (~25×)		chain, lean manufacturing, and strong dealer credit discipline.
Examine Solvency	Debt-Equity Ratio peaked at 4.06 (2022–23), then moderated to 3.36 (2024–25)	Deleveraging through retained earnings	Debt-funded expansion for EV infrastructure and Norton acquisition increased leverage temporarily. Strong profit retention (equity +122%) is now reducing risk profile organically.
Shareholder Value Creation	EPS ↑ (₹12.51 → ₹47.05), ROE ↑ (16% → 26%), Market Price ↑ 314%	Exceptional value creation	Strong correlation between working capital efficiency, profitability growth, and market recognition.

5. Findings, suggestions, and conclusion

5.1 Major Findings

- **Liquidity:** TVS Motor maintained a current ratio near or above 2:1 and quick ratio above 1.5:1 throughout the period, indicating robust short-term financial health despite an aggressive working capital policy.
- **Profitability:** Operating profit margin expanded to 14.91%, net profit ratio to 5.07%, and ROCE to 13.80%. Net profit after tax grew 276% over five years, demonstrating powerful operating leverage.
- **Efficiency:** Inventory turnover improved 33% to 18.90×, reducing holding period to ~19 days. Debtors' turnover remained exceptionally strong at ~25× (~14–15 days collection), reflecting excellent credit management.
- **Solvency:** While debt-equity ratio peaked at 4.06 during investment-heavy years, it moderated to 3.36 by 2024–25 as retained earnings grew 122%, indicating organic deleveraging.

- **Growth:** Sales revenue grew 127%, net profit 276%, EPS 276%, and market price 314%, confirming exceptional shareholder value creation.

5.2. Suggestions

- **For Management:** Continue optimizing cash conversion cycle by negotiating extended credit terms with EV component suppliers without straining relationships. Maintain diversified credit lines for liquidity buffer.
- **For EV Transition:** Proactively manage EV-specific working capital (battery cells, semiconductors) through strategic partnerships and vendor financing to prevent obsolescence.
- **For Global Operations:** Strengthen region-specific credit monitoring and hedging for export markets (Africa, Latin America, Europe) to mitigate cross-border risks.
- **For Solvency:** Set medium-term debt-equity target of $\sim 3.0\times$, using free cash flow to reduce leverage further while funding growth.
- **For Digitalization:** Invest in AI-driven demand forecasting and real-time dealer inventory systems to sustain efficiency gains.

5.2 Limitations of the Study

The study is based on secondary data over five years only, focuses on a single company, and excludes primary data and competitor comparisons. Ratio analysis limitations and non-financial factors (management quality, technology, labour) are not explored in depth.

5.3 Conclusion

TVS Motor Company Limited has demonstrated exemplary working capital management and profitability growth from FY 2020–21 to FY 2024–25. The company successfully navigated pandemic disruptions, leveraged post-pandemic recovery, and funded EV expansion through strategic debt while maintaining strong liquidity and operational efficiency. The direct positive relationship between working capital efficiency and profitability is empirically confirmed. TVS Motor stands as a model of financial discipline in the Indian automotive industry, well-positioned for sustainable growth in the electric mobility era.

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