Dynamic Working Capital Management and Firm Profitability: Evidence from Indian Manufacturing Firms

K Mounishwaran [1], Dr R Suyam Praba [2]

[1]Student, [2]Professor, School of Management Studies, Karpagam College of Engineering, Coimbatore, Tamil Nadu, India

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ABSTRACT

This study analyses the working capital management from 2020 to 2025, using descriptive research and financial ratios to evaluate how effectively the firm balances its current assets and liabilities. The research highlights that while the company is aggressively investing in fixed assets to build a capital-intensive structure, its short-term liquidity is steadily declining due to an increasing reliance on secured loans and a reduction in net current assets. By synthesizing a broad review of global literature, the study emphasizes that a shorter Cash Conversion Cycle is essential for maintaining profitability and operational stability. Ultimately, the findings suggest that the company must strengthen its credit control and inventory management to prevent financial stagnation and ensure sustainable long-term growth.

Keywords: *Working Capital Management, Liquidity Management, Cash Conversion Cycle, Financial Ratio Analysis, Inventory and Credit Management*

INTRODUCTION

Working capital is the "life-blood" of an organization, emphasizing the critical balance between gross and net assets to avoid the twin dangers of excessive stagnation or inadequate liquidity. The research framework focuses on assessing the firm's short-term financial health and operational efficiency through tools like ratio analysis, fund flow statements, and budgeting. By examining the company's historical growth, diverse product portfolio, and current industrial automation trends, the study aims to identify potential loopholes in inventory and credit management to ensure long-term solvency and sustainable growth within the competitive manufacturing sector.

REVIEW OF LITERATURE

2020 (Haritha Kumari & Andalavari): Found that improper management of inventory and receivables leads directly to liquidity crises and poor operational performance.2020 (Jahan): Proved a negative relationship between the cash conversion cycle and profitability, indicating that shorter cycles significantly improve firm performance.2020 (Kafeel et al.): Demonstrated through dynamic panel data that inefficient working capital practices hinder sustained business growth.2020 (Chalmers, Sensini & Shan): Revealed that for Indian SMEs, excessive investment in working capital actually correlates with decreased profitability.2020 (Journal of Business Research): Established that longitudinal monitoring of cash components improves a firm's long-term valuation and reduces financial risk.2021 (Mbathi, Mwambia & Makena): Identified that while the cash conversion cycle is important, the inventory holding period has the most significant impact on SME profit.2021 (Prasad et al.): Discovered that the impact of working capital components varies by sector, meaning a "one-size-fits-all" strategy fails for diverse industries like Tech vs. Steel.2021 (Mbathi - Town Study): Confirmed that optimized inventory levels and strengthened cash management are the primary drivers of financial performance for small-town enterprises.2021 (Kalu & Okafor): Used panel regression to show that manufacturing firms in Nigeria must minimize receivable days to remain competitive and profitable.2021 (Akoto et al.): Found that in emerging markets, a shorter cash conversion cycle is more critical for liquidity than the total volume of cash held.2022 (Kandukira): Proved that working capital policies only succeed when they are aligned with robust corporate governance and board oversight.2022 (Yousaf): Observed that even "excellent" firms certified under the EFQM model saw a drop in working capital efficiency during the 2020–2021 pandemic.2022 (Jaworski & Czerwonka): Identified a non-linear relationship in Polish markets, suggesting there is an "optimal" level of working capital that maximizes profit.2022 (Kušter): Linked efficient inventory turnover directly to an increase in Return on Assets (ROA) for Serbian manufacturing companies.2022 (Asman et al.): Warned that "days sales outstanding" (uncollected debt) is the biggest threat to a firm's Return on Equity (ROE).2023 (Angela, Hidayat & Eunike): Found that "Free Cash Flow" only increases a company's stock market value if the cash conversion cycle is also managed efficiently.2023 (Garg & Meentu): Utilized the GMM method to prove an "Inverted U-shaped" relationship, meaning too much investment in working capital eventually wastes money.2023 (Supiyadi): Performed a meta-analysis confirming that a negative link between slow cycles and profit is a consistent global truth across different regions.2023 (Stanić et al.): Noted that in Croatia, traditional rules like "Days Sales Outstanding" didn't always predict profit, highlighting the importance of local economic context.2023 (Journal of Research Administration): Proved that balanced working capital management reduces a company's overall financing and borrowing costs.2024 (Paul): Analyzed major Indian retailers like DMart to show that managing "Payables" (money owed to suppliers) is the key to retail dominance.2024 (Kristiana & Karnasi): Studied 127 firms to find that high inventory levels have the most damaging "negative" effect on a company's health.2024 (Mengstie, Mosisa & Mosisa): Found that for banks, the ratio of loans to total assets is the most influential working capital factor for earning capacity.2024 (Setya Wardhani): Proved that rapid company growth can actually weaken a firm's solvency if it isn't backed by a disciplined cash management plan.2024 (Chaudhary & Sharma): Used bibliometric mapping (VOSviewer) to show that the future of the field lies in digital and automated cash management systems.2025 (Chakraborty, Sharma & Basu): Found that for the automotive industry, financial resilience during market trouble is only possible with a very short cash cycle.2025 (Díaz Ortega, Cudris Niño & García Mogollón): Concluded from a study of 501 articles that India has emerged as the global hub for research in working capital and profitability.

SCOPE OF THE STUDY

The study focuses on analysing the working capital management practices with the objective of evaluating its effectiveness in managing short-term financial resources. It examines key variables such as the short-term liquidity position to assess the company's ability to meet immediate obligations, credit management efficiency to understand the handling of receivables and payables, and the long-term solvency position to evaluate financial stability. The study also analyses changes in working capital over a specific period to identify trends and performance patterns. Geographically, the scope is limited to Coimbatore and is confined to the manufacturing sector.

The study aims to identify the strengths and weaknesses in working capital management practices and provide suitable recommendations to improve liquidity, enhance credit efficiency, and support effective financial decision-making for achieving sustainable growth and operational efficiency.

STATEMENT OF THE PROBLEM

The study focuses on analysing the working capital management practices with the objective of evaluating its effectiveness in managing short-term financial resources. It examines key variables such as the short-term liquidity position to assess the company's ability to meet immediate obligations, credit management efficiency to understand the handling of receivables and payables, and the long-term solvency position to evaluate financial stability. The study also analyses changes in working capital over a specific period to identify trends and performance patterns. Geographically, the scope is limited to Coimbatore and is confined to the manufacturing sector. Additionally, the study aims to identify the strengths and weaknesses in working capital management practices and provide suitable recommendations to improve liquidity, enhance credit efficiency, and support effective financial decision-making for achieving sustainable growth and operational efficiency.

RESEARCH OBJECTIVES

- To determine whether the company has enough ready cash to pay its daily bills and keep the factory running without stops.
- To find out how fast the company collects money from its customers and if its credit rules are working well.
- To measure the company can pay off its big debts while it continues to buy new machinery and grow.
- To monitor how the balance between what the company "owns" (assets) and what it "owes" (liabilities) changes over five years.
- To spot where money is getting "stuck" (like in old stock) and suggest simple ways to make the business financially stronger.

ANALYSIS AND INTERPRETATIONS

TABLE NO: 4.1.1 WORKING CAPITAL RATIO

Year	Net working capital	Net assets	Ratio
2020-2021	22.91	117.92	0.19
2021-2022	22.72	127.80	0.18
2022-2023	11.92	124.38	0.10
2023-2024	12.46	133.73	0.09
2024-2025	1.83	132.51	0.01

Interpretation

The above table indicates that the working capital ratio is 0.19 in the year of 2020-2021. It has decreased to 0.18 in the year of 2021-2022. It has decreased to 0.10 in the year of 2022-2023. It has further decreased to 0.09 and 0.01in the year of 2023-2024 and 2024-2025 respectively.

$$\text{Working capital ratio} = \frac{\text{Net working capital}}{\text{Net assets}}$$

TABLE NO: : 4.2.4

Statement showing Changes in Working Capital (2023–2024 → 2024–2025)

Particulars	**2023-24**	**2024-25**	**Increase**	**Decrease**
CURRENT ASSETS				
Inventories	53.43	33.33		20.10
Sundry Debtors	27.98	20.46		7.52
Cash & Bank Balance	3.09	6.34	3.25	
Loans & Advances	22.78	17.10		5.68
TOTAL CURRENT ASSETS	107.28	77.23	3.25	33.30
CURRENT LIABILITIES				
Current Liabilities	91.82	73.47	18.35	
Provisions	3.00	1.93	1.07	
TOTAL CL & PROVISIONS	94.82	75.40	19.42	0

Working Capital =
2023-24 = 12.46
2024-25 = 1.83

Decrease in Working Capital = 10.63

TABLE NO: 4.3.2 : COMMON SIZE BALANCE SHEET AS ON 31st MARCH 2022AND 2023

	2022		2023	
PARTICULARS	**AMOUNT**	**PERCENTAGE**	**AMOUNT**	**PERCENTAGE**
CURRENT ASSETS				
Net current assets	22.72	17.78	40.50	32.56
Total (a)	22.72	17.78	40.50	32.56
FIXED ASSETS				
Net Block	102.71	80.36	110.48	88.82
Capital Work in Progress	0.00	0.00	0.00	0.00
Investments	2.38	1.86	1.97	1.58
Total (b)	105.09	82.22	112.45	90.41
TOTAL ASSETS (a+b)	127.81	100.00	152.95	100.00
LIABILITIES				
Networth	49.79	38.96	50.05	40.24
Total (a)	49.79	38.96	50.05	40.24
TOTAL DEBT				
Secured Loans	72.91	57.05	72.20	58.05
Unsecured Loans	5.10	3.99	2.13	1.71
Total (b)	78.01	61.04	74.33	59.76
TOTAL LIABILITIES (a+b)	127.80	100.00	124.38	100.00

Interpretation

The above table indicates that the net current assets have decreased from 17.78% to 32.56% in the year of 2022 to 2023.

FINDINGS OF THE STUDY

The ratio analysis from 2020 to 2025 reveals a company navigating significant operational volatility. While the average collection period showed a positive improvement—dropping from nearly 41 days to 34 days—the inventory turnover plummeted into negative territory by the final year, signaling a major slowdown in stock movement. Profitability remained inconsistent, with the net profit ratio experiencing a sharp decline early on, though a rising Return on Investment (ROI) suggests that the capital actually deployed is being used more effectively. Furthermore, the solvency ratio increased to 0.49, reflecting a growing reliance on long-term debt to fund the business. The gross profit ratio also dwindled to 27.34% by the end of the study, indicating a squeeze on production margins.

Shareholder ratios experienced a dramatic drop from 14.49 to 0.84, suggesting a decrease in equity-based financing. Additionally, the Return on Assets (ROA) showed high instability, crashing to 0.33 before a late recovery to 2.72. Finally, operating profit remained stagnant near 11.06%, proving that rising overhead costs continue to offset gains in collection efficiency.

SUGGESTIONS

To ensure long-term sustainability and steady performance growth, the company must prioritize a more disciplined approach to its financial operations, beginning with the implementation of contemporary management practices and enhanced internal controls. Strategic focus should be placed on maintaining a consistent liquidity position and optimizing cash flow to prevent unpredictable variations in cash balances. This requires embracing improved inventory management to avoid the dual risks of overspending or under-stocking, alongside more stringent accounts management to ensure debtors pay on time. Furthermore, the firm should aim to minimize its reliance on short-term liabilities and high-risk debt, instead seeking a balanced capital structure that utilizes existing assets more effectively. By integrating strict cost control activities with improved budgeting and financial forecasting, the company can better track fund utilization and strategize investments to avoid idle money. Ultimately, a continuous monitoring of working capital components will enable more informed decision-making, allowing the company to cover its short-term obligations with ease and secure its financial stability in a competitive market.

CONCLUSION

The analysis revealed that the liquidity position of the company is on the decline over the years with a steadily decreasing net current assets. It showed that a significant amount of funds were progressively devoted to fixed assets meaning capital-intensive structure. It discovered that reliance on borrowed sources of funds kept growing particularly via secured loans. It exposed that the net worth proportion declined, which indicates a falling equity base. It found that there was a change in the total financial structure as it occurred to a high financial risk because of increasing levels of debt. It implied that the company should work on the management of working capital and depend less on the external borrowings. The research concludes that gradually losing its short-term financial stability although increasing in the long-term investments. The rising reliance of the company on debt could affect its financial flexibility in future. The current assets and current liabilities have an imbalance, which points to the necessity of the improved liquidity planning. Sustainability requires an optimal capital structure and a strengthened internal financing. This will be done through proper management of assets and liabilities to enhance financial health. Growth and liquidity will be maintained in a balanced way which will guarantee long term stability and performance.

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