RESEARCH PAPER

WORKING CAPITAL MANAGEMENT AND LIQUIDITY POSITION OF SELECTED PHARMACEUTICAL COMPANIES IN INDIA: A SECONDARY DATA ANALYSIS

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Abstract

Working capital management plays an important role in maintaining the financial stability and operational efficiency of pharmaceutical companies. The pharmaceutical industry requires substantial investment in raw materials, research and development, inventory, regulatory compliance, distribution networks and credit sales. Effective management of current assets and current liabilities is therefore essential for maintaining liquidity and profitability. The present study examines the working capital management and liquidity position of selected pharmaceutical companies in India using secondary financial data. The study focuses on liquidity ratios, current assets, current liabilities, inventory management, receivables management and the cash conversion cycle. Published financial information and industry benchmarking data are considered to understand the relationship between short-term financial management and corporate performance. The findings indicate that pharmaceutical companies generally maintain adequate liquidity, although differences exist in working capital efficiency and the time required to convert operating investments into cash. The study highlights the importance of balancing liquidity, operational continuity and profitability. It concludes that efficient working capital management can strengthen financial performance and improve the long-term sustainability of pharmaceutical companies.

Keywords: Working Capital Management, Liquidity, Pharmaceutical Companies, Current Ratio, Cash Conversion Cycle, Financial Performance.

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1. Introduction

Working capital management is an essential component of corporate financial management. It involves planning, controlling and monitoring current assets and current liabilities to ensure that an organisation can meet its short-term financial obligations while maintaining uninterrupted business operations. Current assets generally include cash and cash equivalents, inventories, trade receivables and other short-term assets, whereas current liabilities include trade payables, short-term borrowings and other obligations payable within one year.

The pharmaceutical industry has unique working capital requirements because of its complex production processes, regulatory requirements, inventory management practices and distribution systems. Pharmaceutical companies must maintain sufficient stocks of raw materials, active pharmaceutical ingredients, packaging materials and finished products. They must also ensure that medicines are available to distributors, hospitals, pharmacies and other customers without interruption.

The management of inventory is particularly important because pharmaceutical products may have specific storage requirements, shelf-life limitations and regulatory standards. Excessive inventory can increase storage costs and create the risk of expiry or obsolescence. On the other hand, inadequate inventory may interrupt production and affect product availability.

Trade receivables also influence the working capital position of pharmaceutical companies. Companies may provide credit facilities to distributors, stockists, hospitals and institutional buyers. Although credit sales support market expansion, delayed collections can increase the amount of capital blocked in receivables.

The cash conversion cycle provides an important measure of working capital efficiency. It represents the time taken by a company to convert investments in inventory and receivables into cash, after considering the credit period received from suppliers. A shorter cash conversion cycle generally indicates faster

recovery of working capital, although the ideal duration varies according to the nature of the business. In India, pharmaceutical companies operate in domestic and international markets. Their working capital requirements are influenced by production scale, export activities, distribution networks, regulatory compliance and market competition. Therefore, analysing their liquidity and working capital management practices is important for understanding their financial stability.

2. Statement of the Problem

Pharmaceutical companies require continuous financial resources to maintain production, distribution and research activities. A significant portion of their funds may remain invested in inventories and trade receivables. Poor working capital management can result in liquidity pressure, increased financing costs and reduced operational efficiency.

Maintaining excessive current assets may reduce the return on investment, whereas maintaining insufficient current assets may create difficulties in meeting short-term obligations. Therefore, pharmaceutical companies must maintain an appropriate balance between liquidity and profitability.

The present study examines the working capital management and liquidity position of selected pharmaceutical companies in India through secondary financial information.

3. Objectives of the Study

1. To examine the working capital management practices of selected pharmaceutical companies in India.
2. To analyse the liquidity position using current ratio and quick ratio.
3. To evaluate inventory and receivables management.
4. To examine the cash conversion cycle of the pharmaceutical industry.
5. To understand the relationship between liquidity and profitability.
6. To suggest measures for improving working capital efficiency.

4. Research Methodology

4.1 Research Design

The study follows a descriptive and analytical research design based on secondary financial data.

4.2 Sources of Data

The study uses secondary information collected from:

- Published annual reports of pharmaceutical companies.
- Audited financial statements.
- Industry benchmarking reports.
- Published research articles and academic journals.
- Official company websites and investor information.

4.3 Study Period

The proposed study period is five financial years, from 2020–21 to 2024–25, subject to the availability and comparability of company-level financial information.

4.4 Selection of Companies

The study may consider the following Indian pharmaceutical companies:

1. Sun Pharmaceutical Industries Limited
2. Dr. Reddy's Laboratories Limited
3. Cipla Limited
4. Aurobindo Pharma Limited
5. Lupin Limited
6. Divi's Laboratories Limited

The final sample should be retained only after confirming that comparable financial information is available for all selected companies throughout the study period.

4.5 Tools of Analysis

The following financial tools are proposed:

- Current Ratio
- Quick Ratio
- Inventory Turnover Ratio
- Receivables Turnover Ratio
- Working Capital Turnover Ratio
- Cash Conversion Cycle
- Comparative and trend analysis

4.6 Limitations of the Study

1. The study is based on secondary financial information.
2. Differences in accounting policies may affect comparisons.
3. The study does not independently verify the internal working capital practices of the companies.
4. Financial ratios may be influenced by company size, product mix and business models.
5. The findings are limited to the selected companies and study period.

5. Review of Literature

Sultana (2017) examined the impact of financial ratios on the profitability of selected pharmaceutical companies in India. The study highlights the usefulness of financial ratio analysis in evaluating corporate performance.

Saravanan and Suganya (2016) investigated the liquidity and profitability trade-off in selected pharmaceutical companies in India. Their work provides a relevant foundation for examining the relationship between liquidity management and profitability.

Yameen, Farhan and Tabash (2019) studied the impact of liquidity on firm performance using evidence from

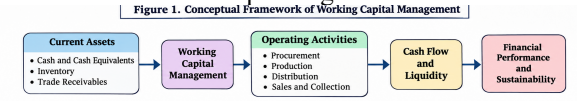
Indian pharmaceutical companies. Their research highlights the importance of liquidity-related financial indicators in evaluating company performance.

The existing literature indicates that liquidity and profitability should not be examined independently. Companies need to maintain sufficient liquidity to support operational activities while avoiding unnecessary investment in idle current assets.

6. Conceptual Framework of Working Capital Management

Working capital management can be understood through the relationship between current assets, current liabilities and operating cash flows.

Figure 1. Conceptual Framework of Working Capital Management



6.1 Gross Working Capital

Gross working capital refers to the total investment made by a company in current assets. It includes cash, inventories, trade receivables and other current assets.

6.2 Net Working Capital

Net working capital represents the difference between current assets and current liabilities.

Net Working Capital = Current Assets − Current Liabilities

Positive net working capital generally indicates that current assets exceed current liabilities. However, the quality and recoverability of current assets must also be considered.

6.3 Liquidity Management

Liquidity management refers to the ability of a company to meet its short-term financial obligations. Pharmaceutical companies require adequate liquidity to purchase raw materials, pay employees, maintain production facilities and meet distribution expenses.

7. Analysis of Liquidity Position

Liquidity ratios are important indicators of short-term financial strength. The current ratio and quick ratio are commonly used to assess the ability of a company to meet its current liabilities.

7.1 Current Ratio

The current ratio measures the relationship between current assets and current liabilities.

Current Ratio = Current Assets / Current Liabilities

A higher current ratio may indicate stronger short-term liquidity. However, an excessively high ratio may also indicate inefficient utilisation of current assets.

Table 1. Industry-level liquidity position of Indian pharmaceutical companies in FY 2024–25

Financial Ratio	Mean	Median
Current Ratio	3.34	2.95
Quick Ratio	2.56	2.00

Source: Tofler India Pharma Industry Benchmarking Report, FY 2024–25. The figures represent the 30-company benchmarking sample and not exclusively the six companies proposed for this study.

The data indicate that the benchmarking sample maintained a relatively strong liquidity position. The mean current ratio of 3.34 suggests that current assets were substantially higher than current liabilities. The median current ratio of 2.95 indicates that the central company in the sample also maintained a considerable liquidity buffer.

7.2 Quick Ratio

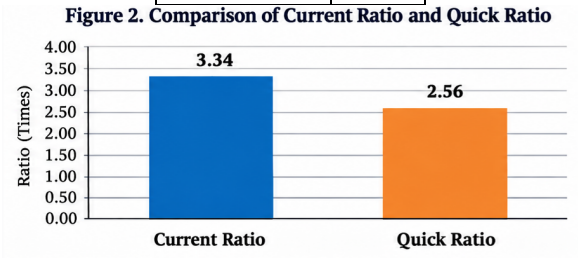
The quick ratio measures the ability of a company to meet short-term liabilities using its more liquid current assets, excluding inventory and other less-liquid items as defined in the source data.

Quick Ratio = Quick Assets / Current Liabilities

The mean quick ratio of 2.56 and median of 2.00 indicate that the benchmarking sample maintained liquid resources beyond the level of current liabilities.

Ratio	Mean
Current Ratio	3.34
Quick Ratio	2.56

Figure 2. Comparison of Current Ratio and Quick Ratio



8. Inventory Management in Pharmaceutical Companies

Inventory management is an important component of pharmaceutical working capital. Pharmaceutical manufacturers maintain different categories of inventory, including raw materials, active pharmaceutical ingredients, work-in-progress and finished products.

The pharmaceutical sector must maintain adequate inventory to avoid production interruptions and ensure timely supply. At the same time, excessive inventory can increase carrying costs and the possibility of expiry-related losses.

8.1 Inventory Turnover Ratio

The inventory turnover ratio measures how efficiently a company uses its inventory to generate sales or support production.

Inventory Turnover Ratio = Cost of Goods Sold / Average Inventory

A higher inventory turnover ratio may indicate efficient inventory utilisation. However, an

excessively high ratio may also indicate insufficient stock levels. Interpretation should therefore consider the company's production model and product characteristics.

8.2 Inventory Management Challenges

Major challenges include:

1. Maintaining appropriate stock levels of raw materials.
2. Managing the shelf life of pharmaceutical products.
3. Maintaining temperature-controlled storage where required.
4. Avoiding excess and obsolete inventory.
5. Ensuring uninterrupted supply of active pharmaceutical ingredients.
6. Coordinating inventory across manufacturing and distribution facilities.

Table 2. Major inventory management challenges in the pharmaceutical industry

Area	Major Challenge	Possible Financial Impact
Raw materials	Procurement delays	Production interruption
Active ingredients	Supplier dependency	Higher procurement costs
Work-in-progress	Production delays	Capital blockage
Finished products	Excess stock	Storage and expiry costs
Distribution	Poor stock coordination	Delayed product availability
Quality control	Rejection of batches	Additional operating costs

Source: Researcher's conceptual classification based on pharmaceutical working capital practices.

9. Receivables Management

Trade receivables represent amounts due from customers for goods sold on credit. Pharmaceutical companies may extend credit to distributors, stockists, hospitals and institutional customers.

Efficient receivables management helps companies maintain cash flow and reduce the risk of delayed collections.

9.1 Receivables Turnover Ratio

Receivables Turnover Ratio = Net Credit Sales / Average Trade Receivables

A higher ratio generally indicates faster collection of receivables. However, the ratio should be interpreted with reference to the company's customer base and credit policy.

9.2 Average Collection Period

Average Collection Period = 365 / Receivables Turnover Ratio

This measure indicates the approximate number of days required to collect outstanding receivables.

Table 3. Receivables management practices and their implications

Management Practice	Expected Benefit	Possible Risk if Poorly Managed
Customer credit assessment	Better credit quality	Bad debts
Regular payment follow-up	Faster collection	Delayed cash flow
Credit period monitoring	Better cash planning	Excessive receivables
Ageing analysis	Early identification of overdue accounts	Collection difficulties
Digital invoicing	Faster documentation	Administrative errors

10. Cash Conversion Cycle

The cash conversion cycle is an important measure of working capital efficiency. It represents the time taken to convert cash invested in inventory and receivables back into cash generated from sales, after considering the credit period received from suppliers.

Cash Conversion Cycle = Inventory Holding Period + Receivables Collection Period − Payables Payment Period

A shorter cash conversion cycle may indicate better working capital efficiency. Nevertheless, a very short cycle should not be achieved by delaying supplier

payments excessively or reducing inventory below operational requirements.

10.1 Industry-Level Cash Conversion Cycle

According to the Tofler India Pharma Industry Benchmarking Report for FY 2024–25, the 30-company sample recorded:

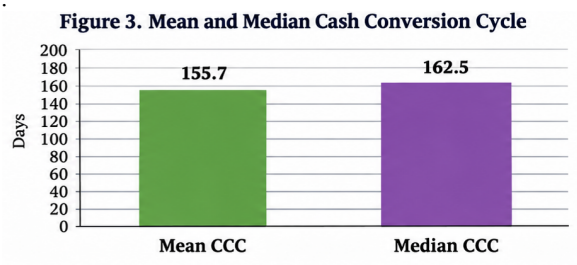
Indicator	Value
Mean Cash Conversion Cycle	155.7 days
Median Cash Conversion Cycle	162.5 days

The mean and median values indicate that working capital remains invested in operating activities for a considerable period in the benchmarking sample. This may reflect the combined effects of inventory holding, customer credit and supplier payment practices.

Figure 3. Mean and median cash conversion cycle

Indicator	Days
Mean CCC	155.7
Median CCC	162.5

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10.2 Importance of Cash Conversion Cycle Management

An efficient cash conversion cycle can provide several advantages:

- Improved cash availability.
- Reduced dependence on short-term borrowing.
- Better management of operating expenses.
- Improved ability to meet supplier obligations.
- More efficient utilisation of current assets.

11. Relationship Between Liquidity and Profitability

Liquidity and profitability are two important dimensions of corporate financial performance. Liquidity ensures that a company can meet its short-term financial commitments, whereas profitability indicates its ability to generate earnings from business activities.

Maintaining excessive liquidity may reduce the funds available for productive investment. Conversely, insufficient liquidity may increase financing costs and affect business operations.

The relationship between liquidity and profitability is influenced by inventory turnover, receivables collection, supplier credit terms, operating margins and the company's overall business model.

Table 4. Relationship between working capital indicators and financial performance

Working Capital Indicator	Potential Positive Effect	Potential Negative Effect
Higher current ratio	Improved short-term payment capacity	Idle current assets
Higher quick ratio	Stronger liquid asset position	Excess cash holdings
Faster inventory turnover	Reduced inventory blockage	Risk of stock shortages
Faster receivables collection	Improved cash flow	Possible loss of customers if credit is restrictive
Longer payables period	Improved short-term cash retention	Supplier relationship difficulties
Shorter cash conversion cycle	Faster recovery of operating cash	Excessive pressure on inventory or suppliers

Source: Researcher's conceptual analysis.

The table presents theoretical relationships and does not establish statistical causation. Company-level correlation or regression analysis would be required to test the relationship empirically.

12. Findings of the Study

Based on the available industry benchmarking information and conceptual analysis, the following observations are made:

1. The 30-company pharmaceutical benchmarking sample reported a mean current ratio of 3.34 in FY 2024–25.
2. The mean quick ratio was 2.56, indicating a relatively strong liquid asset position in the sample.
3. The median current ratio was 2.95, while the median quick ratio was 2.00.
4. The mean cash conversion cycle was 155.7 days, indicating a substantial operating cash cycle.
5. The median cash conversion cycle was 162.5 days.
6. Inventory and receivables management are important areas influencing the working capital requirements of pharmaceutical companies.
7. Liquidity and profitability need to be balanced to improve financial efficiency.
8. Company-level analysis is necessary to identify differences in working capital policies and operating models.

These findings are based on the available industry-level benchmark data. They should not be interpreted as individual results for all six proposed companies.

13. Suggestions

1. Pharmaceutical companies should strengthen inventory forecasting to avoid excessive stock accumulation.
2. Companies should regularly monitor the expiry dates and storage conditions of pharmaceutical products.
3. Digital inventory management systems may improve coordination between production, warehouses and distribution networks.
4. Receivables ageing reports should be reviewed periodically to identify overdue customer payments.
5. Companies should establish appropriate credit policies for distributors and institutional customers.
6. Supplier payment schedules should be planned to balance liquidity requirements and supplier relationships.
7. Management should regularly monitor current and quick ratios.
8. Companies should identify opportunities to reduce unnecessary working capital blockage.
9. Working capital policies should be adapted to the company's product mix, export exposure and operating structure.
10. Financial managers should evaluate liquidity and profitability together rather than relying on a single financial ratio.

14. Conclusion

Working capital management is a significant factor influencing the operational and financial stability of pharmaceutical companies in India. The industry requires continuous investment in inventories, receivables and other current assets to support manufacturing and distribution activities. Effective management of these resources is essential for maintaining adequate liquidity and improving financial efficiency.

The available FY 2024–25 industry benchmarking data indicate that the pharmaceutical sample maintained relatively strong average liquidity ratios. At the same time, the cash conversion cycle demonstrates that considerable financial resources may remain invested in operating activities for extended periods.

The study emphasises that efficient inventory control, timely collection of receivables and appropriate supplier payment management can improve working capital efficiency. Pharmaceutical companies should adopt integrated working capital strategies that support both liquidity and profitability. Further company-level research using audited annual reports over multiple financial years would provide a more detailed understanding of differences in working capital performance.

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