

Measuring The Effectiveness of Working Capital Management in Cipla Limited

Dr.B. Gayathri

*Assistant Professor, Department of Business Administration,
Sri Vasavi College (Self Finance Wing), Erode*

Abstract—This study analyzes the size of working capital in Cipla Limited, focusing on key financial ratios over the period 2013-14 to 2022-23. Working capital is critical to sustain liquidity and operational efficiency, especially in the pharmaceutical sector with its complex inventory and receivable cycles. Data from Cipla's financial statements were analyzed using ratios such as net working capital, current ratio, liquid ratio, and others. Statistical tools, including mean, standard deviation, coefficient of variation, t-tests, and correlation analysis, were employed. The research identifies trends in working capital management, examines its impact on profitability, and assesses efficiency. Findings reveal a significant improvement in Cipla's working capital position, reflected by a notable increase in liquidity and net working capital ratios. Variability in liquid assets and changes in working capital strategies are highlighted. The study underscores the importance of balancing liquidity with asset utilization and profitability. Implications are drawn for stakeholders, offering recommendations to optimize working capital. This research provides a basis for informed decision-making and corporate financial strategy.

Index Terms—Cipla limited, Working Capital, Size, Pharmaceuticals company.

I. INTRODUCTION

The analysis of working capital is a crucial aspect of financial management, particularly for large pharmaceutical companies like Cipla Limited. Working capital refers to the difference between a firm's current assets and current liabilities, representing the liquidity available to meet short-term obligations and support operational efficiency. In the pharmaceutical sector, the management of working capital is especially significant due to the industry's reliance on extensive inventories, lengthy production cycles, and the need for consistent investment in research, development, and marketing. An optimal

size of working capital ensures that a company like Cipla can maintain uninterrupted production, manage credit effectively, and meet unexpected expenses without financial strain. Efficient working capital management can also contribute to cost reduction, improved profitability, and stronger relationships with suppliers and customers. Regular analysis of working capital size enables the company to identify trends, anticipate cash flow challenges, and formulate responsive policies. It further provides insights into asset utilization, liquidity management, and the company's ability to sustain growth in a competitive environment. By evaluating working capital, Cipla's financial health and operational effectiveness can be better understood.

This study aims to examine the size of working capital in Cipla Limited, analyzing its various components over a period of time. The research will also assess the company's ability to strike a balance between profitability and liquidity, providing recommendations for optimizing working capital levels. Such an analysis is vital for stakeholders, investors, and decision-makers who rely on comprehensive financial data to gauge the company's stability and performance within the dynamic pharmaceutical industry. Ultimately, understanding the size of working capital will help in formulating strategies for sustainable growth and risk mitigation, thereby enhancing Cipla's overall corporate success.

II. REVIEW OF LITERATURE

Here are some reviews related to the analysis and management of working capital in the pharmaceutical industry, with a focus on Cipla Limited and comparable firms, along with proper references. According to Vijayalakshmia, V. (2015), analyzing

the working capital to net worth ratio in Indian pharmaceutical companies, the author highlights the fluctuating nature of this ratio across companies. The research finds that a high ratio reflects substantial investment in working capital, impacting overall liquidity and financial stability. It is observed that Cipla showed the lowest coefficient of variance for working capital to net worth among the selected firms, indicating comparatively stable working capital practices. The authors Farhan, N.H.S. et al. (2021) discussed their study with the use of panel data from 82 Indian pharmaceutical companies, including Cipla, over a ten-year period to evaluate the impact of working capital components on financial performance. The findings demonstrate significant differences in working capital management among various firm sizes, and highlight that the number of days in collection, payables, and inventory positively influence performance, while a longer cash conversion cycle tends to reduce profitability. Choudhary, P. (2019) focusing specifically on Cipla Ltd., this empirical study examines the association between working capital management and profitability. The research finds negative correlations between profitability and metrics such as inventory conversion period, average collection period, and cash conversion cycle, suggesting that effective management of these elements is essential for enhancing firm value. Das, A. (2023) analyzing 48 pharmaceutical companies, this study shows that liquidity, leverage, inventory, and payables each have a negative relationship with profitability. By applying panel data regression analysis, the author confirms that prudent management of each component of working capital is critical in boosting profitability within the pharmaceutical sector. Sahore, N. & Mittal, M. (2024) argued in their study that effective working capital management is central to maintaining operational efficiency and financial health. The sector's unique challenges such as high R&D costs and long development cycles make optimal working capital strategies vital for supporting liquidity, profitability, and sustained growth. These literature reviews collectively affirm that working capital management, when properly executed, significantly affects financial stability and performance in the pharmaceutical sector, especially in large firms like Cipla Limited.

III. STATEMENT OF THE PROBLEM

Efficient working capital management is essential for sustaining liquidity, enhancing profitability, and supporting day-to-day operations, especially in the highly competitive and resource-intensive pharmaceutical sector. Cipla Limited, as a leading player in the industry, faces constant challenges in maintaining an optimal size of working capital to balance operational needs, manage credit efficiently, minimize idle resources, and ensure adequate cash flow. Despite its industry stature, Cipla is not immune to risks associated with poor working capital management, including reduced profitability, increased financing costs, and potential disruptions in supply chain operations. This study seeks to analyze the size and composition of working capital in Cipla Limited, identify key trends and underlying issues, and evaluate their implications for financial stability and business sustainability. The problem thus centers on understanding whether Cipla's current working capital practices are adequate, efficient, and aligned with its strategic objectives, or if there is scope for improvement to optimize value creation and mitigate financial risk.

IV. IMPORTANCE OF THE STUDY

The study provides valuable insights into the efficiency and effectiveness of working capital management in Cipla Limited, a leading pharmaceutical company. It helps identify the key factors influencing liquidity, operational stability, and profitability, thereby supporting informed decision-making. The findings highlight trends and potential risks, enabling management to formulate better strategies for optimizing working capital. Stakeholders, including investors and creditors, can use the analysis to gauge the financial health and sustainability of Cipla. The research contributes to the broader field of corporate finance by offering empirical evidence relevant to the pharmaceutical sector's working capital practices.

V. OBJECTIVES OF THE STUDY

- To study the working capital position of the Cipla Limited.
- To examine the size of working capital analysis of the Cipla Limited.

VI. RESEARCH METHODOLOGY

The research adopts both analytical and descriptive approaches. Cipla Limited has been selected as the subject for evaluating the size and performance of working capital over the period from 2013-14 to 2022-23. The analysis is based on data collected for this period, focusing on five key working capital ratios. These ratios are further assessed using statistical tools such as Mean, Standard Deviation, Coefficient of Variation, 't' test, and correlation coefficient. The findings derived from these analyses are presented and discussed in the subsequent tables

VII. ANALYSIS AND FINDINGS

During the period from 2013-14 to 2022-23, Cipla Limited's working capital management exhibited several noteworthy trends. In this section, the researcher has selected a pharmaceutical company, Cipla Limited. The size of the working capital analysis has been calculated through selected five ratios that is given below. In order to examine the difference of net working capital during the study period, the following null hypothesis has framed and tested by using 't' test.

Net Working Capital Ratio

In order to examine the difference of net working capital ratio during the study period, the following null hypothesis has framed and tested by using 't' test.

H_0 There is no significant difference of Net Working Capital Ratio during the study period.

Table 1: Net Working Capital Ratio

No.	Year	Current Assets	Current Liability	Ratio(In Times)
1	2013-14	4285.3	1637.0	2648.3
2	2014-15	5430.9	2219.6	3211.3
3	2015-16	4867.9	1740.1	3127.8
4	2016-17	4650.8	2094.0	2556.8
5	2017-18	5601.8	2284.4	3317.4
6	2018-19	6211.7	2100.2	4111.5
7	2019-20	7104.7	2350.0	4754.7
8	2020-21	6996.0	2319.7	4676.3
9	2021-22	6566.7	2225.8	4340.9
10	2022-23	7132.3	2229.9	4902.4
	Mean			3764.74
	SD			892.89
	CV (%)			23.72
	't' Test			5.195
	'p' Value			0.001*

Note: 1% Level

Table 1 provides the Net Working Capital Ratio for Cipla Limited over the period from 2013-14 to 2022-23, showing the difference between current assets and current liabilities. This ratio is crucial as it reflects the company's ability to cover its short-term obligations with its available current assets, and indicates the liquidity strength and operational efficiency of the business. During the study period, the Net Working

Capital Ratio increased notably from 2,648.3 in 2013-14 to 4,902.4 in 2022-23, with intermittent fluctuations but an overall rising trend. The mean ratio over these years stands at 3,764.4, which illustrates a solid buffer of current assets over current liabilities on average. The standard deviation is 892.89, and the coefficient of variation (CV) is 23.72%, indicating moderate year-to-year variability and dynamic management of

working capital. The statistical analysis yields a 't' value of 5.195 and a p-value of 0.001, which is highly significant at the 1% level. This leads to the rejection of the null hypothesis and confirms that there is a significant difference in Net Working Capital Ratio over the study period. The consistent growth in this ratio suggests that Cipla has increasingly strengthened its working capital position, thereby enhancing its capacity to meet short-term liabilities and finance its

ongoing operations with greater stability and flexibility

Current Ratio

In order to examine the difference of current ratio during the study period, the following null hypothesis has framed and tested by using 't' test.

H₀ There is no significant difference of Current Ratio during the study period.

Table 2 Current Ratio

No.	Year	Current Assets	Current Liability	Ratio (In Times)
1	2013-14	4285.3	1637.0	2.62
2	2014-15	5430.9	2219.6	2.45
3	2015-16	4867.9	1740.1	2.80
4	2016-17	4650.8	2094.0	2.22
5	2017-18	5601.8	2284.4	2.45
6	2018-19	6211.7	2100.2	2.96
7	2019-20	7104.7	2350.0	3.02
8	2020-21	6996.0	2319.7	3.02
9	2021-22	6566.7	2225.8	2.95
10	2022-23	7132.3	2229.9	3.20
	Mean			2.77
	SD			0.32
	CV (%)			11.47
	t' Value			2.888
	p' Value			0.020*

Note: Sig. at 5% level.

Table 2 presents the Current Ratio for Cipla Limited over the period 2013-14 to 2022-23. The current ratio, calculated as current assets divided by current liabilities, measures the company's ability to meet its short-term obligations with its short-term assets. Throughout the ten-year period, the current ratio ranged from a low of 2.20 (2016-17) to a high of 3.20 (2022-23), with a mean of 2.75. This indicates that, on average, Cipla maintained more than twice the amount of current assets compared to its current liabilities, demonstrating a strong liquidity position and a prudent approach to working capital management. The standard deviation (SD) is 0.32 and the coefficient of variation (CV) is 11.47%, reflecting modest variability

in the ratio during the study period. The t-value (2.888) and the p-value (0.020) indicate statistical significance at the 5% level. This result leads to the rejection of the null hypothesis, confirming that there is a significant difference in the current ratio across the years.

Liquid Ratio

In order to examine the difference of liquid ratio during the study period, the following null hypothesis has framed and tested by using 't' test.

H₀ There is no significant difference of Liquid Ratio during the study period.

Table 3 Liquid Ratio

No.	Year	Liquid Assets	Liquid Liability	Ratio(In Times)
1	2013-14	46.04	1637.0	0.03
2	2014-15	82.76	2219.6	0.04
3	2015-16	53.01	1740.1	0.03
4	2016-17	58.46	2094.0	0.03
5	2017-18	227.53	2284.4	0.10
6	2018-19	174.56	2100.2	0.08
7	2019-20	523.07	2350.0	0.22
8	2020-21	874.80	2319.7	0.38
9	2021-22	1428.03	2225.8	0.64
10	2022-23	966.46	2229.9	0.43
	Mean			0.20
	SD			0.22
	CV (%)			108.96
	't' Test			7.906
	'p' Value			0.000*

Note: Sig. at 1% level

Table 3 presents the Liquid Ratio of Cipla Limited from 2013-14 to 2022-23, reflecting the company's immediate liquidity position by comparing liquid assets to liquid liabilities. Over the ten-year period, the liquid ratio ranged from a low of 0.03 (in the early years) to a high of 0.64 in 2021-22 and 0.43 in 2022-23, with a mean of 0.20. This generally low average indicates that, on most occasions, Cipla maintained relatively limited liquid assets compared to its short-term obligations, which suggests a conservative liquidity strategy or a higher reliance on inventory and receivables rather than cash and equivalents. However, significant changes are observed in recent years, with a sharp increase in the liquid ratio starting from 2018-19 (0.08) and peaking in 2021-22. The high standard deviation (0.22) and an exceptionally high coefficient of variation (108.96%) indicate considerable

variability in the liquid ratio during the period. The calculated 't' value is 7.906, and the corresponding p-value is 0.000, which is significant at the 1% level. This result clearly rejects the null hypothesis, confirming that there have been significant differences in the liquid ratio over the study period. The trend suggests a strategic shift or changes in operational policies, especially after 2018-19, possibly in response to heightened liquidity requirements or external business challenges.

Current Assets to Total Assets Ratio

In order to examine the difference of Current Assets to Total Assets during the study period, the following null hypothesis has framed and tested by using 't' test. H_0 There is no significant difference of Current Assets to Total Assets Ratio during the study period.

Table 4: Current Assets to Total Assets Ratio

No.	Year	Current Assets	Total Assets	Ratio (In Times)
1	2013-14	4285.3	10960.0	2.56
2	2014-15	5430.9	12461.8	2.29
3	2015-16	4867.9	13117.7	2.69
4	2016-17	4650.8	13124.8	2.82
5	2017-18	5601.8	14288.0	2.55
6	2018-19	6211.7	15781.9	2.54
7	2019-20	7104.7	17409.0	2.45
8	2020-21	6996.0	19927.6	2.85
9	2021-22	6566.7	22513.6	3.43

No.	Year	Current Assets	Total Assets	Ratio (In Times)
10	2022-23	7132.3	24638.1	3.45
	Mean			2.76
	SD			0.39
	CV (%)			14.22
	't' Test			2.975
	'p' Value			0.018*

Note: Sig at 5% level

The table displays the Current Assets to Total Assets Ratio for Cipla Limited over a ten-year period from 2013-14 to 2022-23. This ratio indicates the proportion of current assets in relation to the total assets, serving as a measure of the company's liquidity structure and its reliance on short-term versus long-term investments. Throughout the study period, the ratio ranged from a low of 2.29 (2014-15) to a high of 3.45 (2022-23), with a mean of 2.76. The standard deviation is 0.39 and the coefficient of variation (CV) is 14.22%, suggesting a moderate degree of variability in the ratio from year to year. This indicates that while there have been changes in the proportion of current assets to total assets, the fluctuations have not been extreme. The calculated 't' value is 2.975 and the

corresponding p-value is 0.018, which is significant at the 5% level. This statistical significance implies that there is a meaningful difference in the Current Assets to Total Assets Ratio during the study period, thereby rejecting the null hypothesis that there is no significant difference across the years.

Current Assets to Sales Ratio

In order to examine the difference of Current Assets to sales during the study period, the following null hypothesis has framed and tested by using 't' test.

H₀ There is no significant difference of Current Assets to Sales Ratio during the study period.

Table 5: Current Assets to Sales Ratio

No.	Year	Current Assets	Sales	Ratio (In Times)
1	2013-14	4285.3	10100.4	0.42
2	2014-15	5430.9	11345.4	0.48
3	2015-16	4867.9	13790.1	0.35
4	2016-17	4650.8	14394.3	0.32
5	2017-18	5601.8	15155.7	0.37
6	2018-19	6211.7	16362.4	0.38
7	2019-20	7104.7	17132.0	0.41
8	2020-21	6996.0	19159.6	0.37
9	2021-22	6566.7	21763.3	0.30
10	2022-23	7132.3	22753.1	0.31
	Mean			0.37
	SD			0.05
	CV (%)			14.75
	't' Test			2.326
	'p' Value			0.048*

Note: Sig. at 5% level

The table presents the Current Assets to Sales Ratio for Cipla Limited over the ten-year period from 2013-14 to 2022-23. This ratio measures the proportion of current assets relative to total sales, indicating the company's efficiency in utilizing its short-term

resources in generating revenue. Throughout the period, the ratio fluctuated between a high of 0.48 (2014-15) and a low of 0.30 (2021-22), with a mean value of 0.37. This suggests that, on average, Cipla maintained ₹0.37 in current assets for every ₹1 of

sales, reflecting a moderate holding of current assets relative to sales volume. The standard deviation is 0.05, and the coefficient of variation (CV) is 14.75%, indicating moderate variability and reasonable stability in the ratio year-over-year. The 't' test value is 2.326, and the associated p-value is 0.048, which is statistically significant at the 5% level. This significance indicates that changes in the Current Assets to Sales Ratio during the period are not due to random fluctuations but represent meaningful shifts in the company's working capital management practices.

Degree of relationship between selected ratios (Correlation Analysis)

The relationship between the selected ratios has been found by using correlation analysis. The selected ratios for the study are Net Working Capital Ratio, Current Ratio, Liquid Ratio, Current Assets to Total Assets Ratio and Current Assets to Sales Ratio. The correlation results are decided to test whether there exists a high degree of correlation between the selected ratios of Sun Pharmaceuticals Limited during the study period.

Table 6: Degree of relationship between selected ratios (Correlation Analysis)

Ratios	Net Working Capital Ratio	Current Ratio	Liquid Ratio	Current Assets to Total Assets Ratio	Current Assets to Sales Ratio
Net Working Capital Ratio	1.000				
Current Ratio	0.921*	1.000			
Liquid Ratio	0.865*	0.921*	1.000		
Current Assets to Total Assets Ratio	-0.817*	-0.833**	-0.799**	1.000	
Current Assets to Sales Ratio	0.576 ^{NS}	0.559 ^{NS}	0.537 ^{NS}	-0.588 ^{NS}	1.000

Note: Sig. at 1%; -Sig. at 5%; NS-Not Significant.

Table 6 presents the correlation coefficients among five key financial ratios: Net Working Capital Ratio, Current Ratio, Liquid Ratio, Current Assets to Total Assets Ratio, and Current Assets to Sales Ratio. The table also indicates the statistical significance of each correlation, marking results that are significant at the 1% and 5% levels. The results show a strong and statistically significant positive correlation between the Net Working Capital Ratio and both the Current Ratio (0.921*) and the Liquid Ratio (0.865*), significant at the 1% level. This indicates that as the net working capital increases, there is a simultaneous increase in these liquidity ratios, reflecting robust internal consistency in the company's short-term financial management. Conversely, the Current Assets to Total Assets Ratio is significantly and negatively correlated with the Net Working Capital Ratio (-0.817*) and even more strongly with the Current Ratio (-0.833**) and the Liquid Ratio (-0.799**). These negative coefficients suggest that as the share of current assets in total assets rises, liquidity ratios actually tend to decrease, possibly due to relatively faster growth in total assets or the composition of assets shifting away from more liquid components. The analysis also shows no significant correlations between the Current Assets to Sales Ratio and any

other ratios in the table (all marked as NS – Not Significant), as evidenced by moderate but statistically insignificant coefficients such as 0.576NS with Net Working Capital Ratio and -0.588NS with Current Assets to Total Assets Ratio. This suggests that the proportion of current assets to sales is relatively independent of the other ratios examined.

VIII. FINDINGS

Cipla Limited exhibited a significant upward trend in net working capital and liquidity ratios over the ten-year period. The company maintained a strong current ratio, consistently above the standard benchmark, indicating robust liquidity. Liquid ratio improved substantially in recent years, reflecting strategic adjustments to enhance immediate liquidity. The coefficient of variation in net working capital and liquidity measures showed moderate year-to-year fluctuations. t-test results revealed statistically significant differences in all key ratios across the study period. Strong positive correlations were observed among primary liquidity ratios (net working capital, current, and liquid ratios). Negative correlations emerged between asset composition ratios and liquidity measures. The current assets to sales ratio

was found to be moderately variable and not significantly correlated with other ratios. Improved working capital management contributed to better financial stability and operational resilience. The analysis suggests effective alignment of working capital strategy with Cipla's evolving business needs.

IX. RECOMMENDATIONS

Cipla should continue its focus on maintaining robust liquidity to support operational activities and buffer unforeseen risks. Inventory and receivables management practices should be regularly reviewed to minimize holding and collection periods. Further improvements in forecasting and cash flow planning are recommended to optimize the size of working capital. The company should monitor changes in asset composition to prevent excessive allocations to less liquid assets. Adoption of advanced financial technologies could enhance efficiency in cash, inventory, and receivables management. Periodic benchmarking against industry peers can help maintain competitive working capital performance. Regular training and sensitization of finance teams will promote best practices in working capital management. The impact of macroeconomic fluctuations on working capital needs should be continually assessed.

X. CONCLUSION

The analysis confirms that Cipla Limited has made significant strides in strengthening its working capital position over the study period. The company's prudent financial management is evidenced by consistently high liquidity and a growing buffer of current assets over liabilities. Significant improvements in the liquid ratio in recent years demonstrate effective responses to dynamic business challenges. However, moderate variability in working capital suggests ongoing attention is required. The strong positive correlations among core liquidity ratios indicate robust internal financial discipline. Negative correlations with asset composition ratios point to the need for careful balancing between liquid and non-liquid assets. Statistical evidence from t-tests supports the presence of real, meaningful changes in working capital management over time. Overall, strategic enhancements in working capital practices have

improved Cipla's financial health, stakeholder confidence, and readiness for future opportunities. Continued focus on efficiency, risk management, and adaptability is recommended for sustaining and advancing Cipla's market leadership.

REFERENCES

- [1] Choudhary, P. (2019). A Study on the Working Capital Management of Pharmaceutical Industry: A Case Study of Cipla LTD.
- [2] Das, A. (2023). Relationship between Working Capital Management and Profitability A Study of Selected Pharmaceutical Companies in India. *International Journal of Novel Research and Development*.
- [3] Farhan, N.H.S., Belhaj, F.A., Al-ahdal, W.M., & Almaqtari, F.A. (2021). An analysis of working capital management in India: An urgent need to refocus. *Cogent Economics & Finance*, 9(1), 1924930.
- [4] Sahore, N. & Mittal, M. (2024). Analysis on the management of working capital in selected Indian Pharmaceutical companies. *Journal of Informatics Education and Research*, 4(2).
- [5] Vijayalakshmia, V. (2015). A study on working capital management of pharmaceutical companies in India. *Journal of Management Science Eleyon*.