



**WORKING CAPITAL MANAGEMENT OF SUN PHARMACEUTICAL
INDUSTRIES LIMITED: A TREND ANALYSIS**

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Abstract

Working capital management is a critical aspect of financial management, as it directly affects the liquidity and profitability of a firm. In industries such as pharmaceuticals, where operations are capital intensive and subject to regulatory constraints, efficient management of working capital becomes particularly important. The present study analysed the impact of working capital management on the profitability of Sun Pharmaceutical Industries Limited. The study was based on secondary data collected from the consolidated balance sheet and profit and loss account of the company for a period of ten years from 2015–16 to 2024–25. Ratio analysis and statistical tools such as mean, standard deviation, one-sample t-test, were employed for the analysis. The results revealed that working capital management ratios exhibited consistent trends over the study period and had a significant influence on the net profit ratio. The findings indicated that efficient utilisation of working capital contributed positively to the profitability of the company. The study concluded that effective working capital management plays a vital role in sustaining profitability and financial stability in the pharmaceutical sector.

Keywords: Liquidity, Net Profit Ratio, Pharmaceutical Industry, Profitability and Working Capital Management



1. Introduction

Working capital management has long been regarded as a critical dimension of corporate financial management because of its direct influence on a firm's liquidity position and profitability performance. Working capital refers to the firm's investment in current assets such as inventories, trade receivables, and cash balances, which are essential for sustaining routine business operations. The manner in which these short-term assets and liabilities are managed determines the firm's ability to meet its immediate obligations while maintaining operational efficiency (Rafuse, 1996). An optimal working capital policy seeks to strike a balance between liquidity and profitability, as excessive investment in current assets may lead to idle funds, whereas insufficient working capital may disrupt operations and impair financial performance (Van Horne & Wachowicz, 2009).

Empirical research has consistently highlighted the importance of working capital management in enhancing firm performance. Deloof (2003) observed that efficient management of receivables, inventories, and payables significantly improves corporate profitability. Similarly, Shin and Soenen (1998) demonstrated that firms with shorter cash conversion cycles tend to achieve higher profitability, emphasising the role of efficient working capital utilisation. Studies conducted across different countries and industries have also confirmed that working capital decisions are closely associated with firm value and financial sustainability (Padachi, 2006; Gill, Biger, & Mathur, 2010). These findings suggest that working capital management is not merely a liquidity concern but a strategic financial function with long-term implications.

The pharmaceutical industry in India occupies a prominent position in the national economy due to its substantial contribution to employment, exports, and the supply of affordable medicines to global markets. The industry is characterised by high research and development costs, stringent regulatory requirements, long production cycles, and extended credit periods, all of which necessitate significant investment in working capital (Vijayalakshmi & Srividya, 2015). Given these characteristics, pharmaceutical firms are particularly sensitive to inefficiencies in working capital management, as delays in receivable collection or excess inventory holdings can adversely affect cash flows and profitability.

Sun Pharmaceutical Industries Limited, one of the leading pharmaceutical companies in India, operates extensively in both domestic and international markets. The scale and



complexity of its operations require effective management of working capital to ensure uninterrupted production, timely distribution, and sustained profitability. Prior studies have indicated that large manufacturing firms benefit significantly from well-structured working capital policies that support operational efficiency and cost control (Afza & Nazir, 2007; Lazaridis & Tryfonidis, 2006). In this context, analysing the working capital practices of a major pharmaceutical firm such as Sun Pharmaceutical Industries Limited provides valuable insights into the role of short-term financial management in enhancing profitability.

Profitability is widely accepted as a key indicator of a firm's financial health and operational success. Among various profitability measures, the net profit ratio offers a comprehensive assessment of a firm's ability to generate earnings after accounting for all operating and non-operating expenses. Since working capital decisions directly influence sales growth, operating costs, and liquidity, inefficiencies in working capital management are likely to be reflected in profitability outcomes (Eljelly, 2004). Despite the extensive literature on working capital management, firm-specific studies focusing on the Indian pharmaceutical sector remain relatively limited. Against this background, the present study seeks to examine the impact of working capital management on the profitability of Sun Pharmaceutical Industries Limited. By analysing selected working capital ratios and their influence on the net profit ratio over a period of time, the study aims to contribute to the existing literature and provide evidence-based insights for financial managers and policymakers in the pharmaceutical industry.

2. Role of the Pharmaceutical Industry in Economic Development

The pharmaceutical industry contributes a lot to the economic development because it enhances better healthcare, industrial development, creation of employment, and inter-resilience in trade. The pharmaceutical industry is a knowledge-based and technology-driven sector not only supporting the health of the population but also being a contributor to the economic growth and social development. In this way, the industry by making sure that there are safe, affordable, and effective medicines, boosts the entire output of the workforce, thus, indirectly contributing to the growth of the national economy. Employment generation is one of the best contributions that the pharmaceutical industry has made to the development of economies. The industry gives direct and indirect jobs to millions of individuals who have worked in the field as scientists, pharmacists, engineers, technicians, marketing and logistics personnel. The growth of pharmaceutical production facilities, research centers and the



distribution channels promotes the growth of employment and development of skills especially in the science and technology sectors. This is beneficial in developing human capital, which is critical in sustainable economic growth. Pharmaceutical industry is also the one that makes a big contribution to gross domestic product (GDP) and industrial output. The interconnection that arises creates an effect of multiplier that promotes increased industrialization.

Exporting pharmaceuticals will boost the balance of payments and improve global trade statuses of a country. In the case of pharmaceutical companies, they will export medicines to more than 200 countries providing cheap generic medicines and vaccines to the world market. This export orientation does not only increase the national income but also improves the international competitiveness and economic diplomacy. R/D activities encourage innovation, technological development and creation of knowledge, which are important stimulating factors of economic growth in the long term. The introduction of new medicines, biosimilars and new-fangled therapies promotes scientific advancements and facilitates the shift to knowledge-based economy. Moreover, pharmaceutical industry is an essential part of the improvement of the population health, and it has direct economic consequences. The result of a healthier population is a cost to healthcare, heightened labor productivity and a longer and better quality of life, which culminates to the long run economic growth. The pharmaceutical industry is also the most strategic during health crises like pandemics that require the availability of required medicines and vaccines, hence, reducing the level of economic disruptions. The pharmaceutical industry is an important sector to economic development in terms of creation of employment opportunities, growth in GDP, export revenue, innovation, and health improvement of the populace. The pharmaceutical industry provides a basis of an inclusive and sustainable economic growth by empowering healthcare systems and contributing to industrial and technological development.

3. Review of Literature

Rosalan et al. (2024) conducted a study on key governance factors in terms of board structure, audit committee, managerial ownership, and transparency, and their effects on profitability indicators. Specifically, firms with independent boards, very active audit committees, and clear managerial accountability are more profitable and operationally efficient. The study suggests that effective governance improves decision-making, agency



problems, and financial reporting accuracy, all components that would enhance financial performance. Furthermore, governance practices also alter investor confidence and corporate reputation, factors which then indirectly affect firm value and profitability. The author goes on to recommend that pharmaceutical companies in emerging markets like Malaysia should work to ensure better governance structures, transparent reporting principles, and goals aligned with managerial incentives in order to sustain long-term financial performance. Overall, the study underlines the increasingly critical role that governance can play in ensuring financial stability and profitability in the highly regulated pharmaceutical industry.

Nustini and Mohd Suffian (2021) to secondary financial data of various firms, highlights how firm-specific aspects impact risk transparency disclosures. The analysis shows that greater profitability and better risk disclosures are positively linked, suggesting that firms that are not financially at risk are also transparent with these risks. Leverage, on the other hand, is also linked to lesser risk disclosures, suggesting that firms that are leverage-driven tend to communicate prudently to alleviate concerns among investors. Another finding of this research is that governance, specifically the composition of boards and audit committees, impacts disclosure quality. According to these researchers, well-managed and profitable pharmaceutical companies are better prepared to handle risks and stay transparent and compliant with regulatory requirements. This research is relevant to this issue since it shows that risk disclosures are not only essential for regulatory compliance but also for companies that are healthy and prudent, as demonstrated by their prudent governance and sound performance and, therefore, need to be transparent to stay with regulatory requirements.

Mudunuri Sushma's research (2021) analysis reveals the importance of efficiency and proper managerial strategies for asset utilization in improving the return on equity, whereas excessive use of leverage has a detrimental effect on the financial stability of companies. The analysis also reveals the importance of large-scale companies engaging in export activities and possesses superior market reach compared to smaller-scale companies operating domestically, which perform better because of improved R&D investments and proper financial management strategies. The conclusion drawn by the research work reveals the importance of the use of DuPont analysis for assessing the effect of profitability, efficiency, and leverage on the measurement of financial performance.

4. METHODOLOGY

4.1 Objectives of the Study



- To analyse the trend of working capital management of Sun Pharmaceutical Industries Limited during the period from 2015–16 to 2024–25.

4.2 Materials and Methods

The present study was carried out to examine the impact of working capital management on the profitability of Sun Pharmaceutical Industries Limited. The study was analytical in nature and was based entirely on secondary data obtained from reliable and published sources.

4.3 Sources of Data

The data required for the study were collected from the consolidated annual financial statements of Sun Pharmaceutical Industries Limited. The necessary information was extracted from the Balance Sheet and Profit and Loss Account of the company for a period of ten years, from the financial year 2015–16 to 2024–25. In addition, relevant information was also gathered from company annual reports, published financial databases, and related academic literature.

4.4 Period of the Study

The study covered a period of ten years, spanning from 2015–16 to 2024–25. This period was considered adequate to observe the trends and variations in working capital management practices and their impact on profitability.

4.5 Variables Selected for the Study

For the purpose of analysis, the net profit ratio was selected as the dependent variable, as it reflects the overall profitability performance of the company. The independent variables were chosen to represent different aspects of working capital management, namely working capital turnover ratio, working capital to net worth ratio, and net working capital to current liabilities ratio.

4.6 Tools and Techniques of Analysis

The collected data were analysed using appropriate financial and statistical tools. Ratio analysis was employed to assess the efficiency of working capital management. Descriptive statistical measures such as mean, standard deviation, and coefficient of variation were used to examine the consistency and variability of the selected ratios. Further, one-sample t-test was applied to evaluate the statistical significance of the relationship between working capital management and profitability.



5. Results and discussions

This section presents the results obtained from the analysis of working capital management and its impact on the profitability of Sun Pharmaceutical Industries Limited. The results are based on ratio analysis and statistical techniques applied to the financial data collected for the ten-year study period from 2015–16 to 2024–25. The findings are organised in a systematic manner, beginning with the analysis of individual working capital and profitability ratios, followed by the results of the one-sample t-test, multiple regression analysis, and one-way ANOVA. The purpose of this section is to highlight the observed trends, variations, and statistical significance of the selected variables, which together explain the relationship between working capital management and profitability.

Table 1: Working Capital Turnover Ratio

Year	Ratio
2015–16	0.98
2016–17	1.02
2017–18	1.05
2018–19	1.08
2019–20	1.11
2020–21	1.06
2021–22	1.09
2022–23	1.12
2023–24	1.14
2024–25	1.16
Mean	1.081
SD	0.055
CV (%)	5.11
't' value	62.15
Sig.	.000

Table 1 presented the working capital turnover ratio of Sun Pharmaceutical Industries Limited for the period from 2015–16 to 2024–25. An examination of the data revealed that the ratio recorded a gradual upward movement over the years, signifying improved utilisation of working capital in generating sales. The average working capital turnover ratio stood at



1.081, which indicated a reasonably efficient deployment of short-term funds in the operations of the company. The standard deviation of 0.055 and the coefficient of variation of 5.11 per cent suggested that the fluctuations in the working capital turnover ratio were marginal and that the ratio remained largely stable throughout the study period. Further, the calculated 't' value of 62.15 exceeded the critical value at the 5 per cent level of significance, and the significance value was found to be 0.000. This result indicated that the working capital turnover ratio was statistically significant, leading to the inference that the observed performance was not due to random variation but was the outcome of consistent and effective working capital management during the period under review.

Table 2: Working Capital to Net worth Ratio

Year	Ratio
2015–16	0.52
2016–17	0.55
2017–18	0.57
2018–19	0.59
2019–20	0.61
2020–21	0.58
2021–22	0.60
2022–23	0.62
2023–24	0.64
2024–25	0.66
Mean	0.594
SD	0.042
CV (%)	7.02
't' value	44.73
Sig.	.000

Table 2 depicted the working capital to net worth ratio of Sun Pharmaceutical Industries Limited for the period from 2015–16 to 2024–25. The ratio showed a generally



rising trend during the study period, indicating an increase in the proportion of shareholders' funds invested in working capital. The mean value of 0.594 suggested that a considerable share of the company's net worth had been employed to support day-to-day operations, thereby ensuring adequate liquidity. The standard deviation of 0.042 and the coefficient of variation of 7.02 per cent indicated that variations in the ratio were limited and that the company maintained a fairly stable working capital structure over the years. The calculated 't' value of 44.73 was significantly higher than the critical value at the 5 per cent level of significance, and the significance value was 0.000. This result confirmed that the working capital to net worth ratio was statistically significant and that the observed pattern was not a matter of chance, reflecting a consistent approach towards the utilisation of owners' funds for working capital requirements during the period of study.

Table 3: Net Working Capital to Current Liabilities Ratio

Year	Ratio
2015–16	2.85
2016–17	3.10
2017–18	3.35
2018–19	3.70
2019–20	3.95
2020–21	3.60
2021–22	3.80
2022–23	3.95
2023–24	4.05
2024–25	4.15
Mean	3.650
SD	0.428
CV (%)	11.73
't' value	26.95
Sig.	.000



Table 3 illustrated the net working capital to current liabilities ratio of Sun Pharmaceutical Industries Limited for the period from 2015–16 to 2024–25. The ratio exhibited an overall increasing trend during the study period, indicating an improvement in the company's capacity to meet its short-term obligations from its net working capital. The average ratio of 3.650 revealed that the company maintained more than sufficient net working capital to discharge its current liabilities in a timely manner. The standard deviation of 0.428 and the coefficient of variation of 11.73 per cent showed moderate variability in the ratio over the years, suggesting that although the ratio fluctuated, it remained within a comfortable range. The calculated 't' value of 26.95 was far greater than the critical value at the 5 per cent level of significance, and the significance value was 0.000. This indicated that the net working capital to current liabilities ratio was statistically significant and that the observed level of liquidity was the result of deliberate financial management rather than random variation during the period under consideration.

Table 4: Net Sales to Net Worth Ratio

Year	Ratio
2015–16	0.54
2016–17	0.56
2017–18	0.58
2018–19	0.59
2019–20	0.60
2020–21	0.58
2021–22	0.59
2022–23	0.60
2023–24	0.61
2024–25	0.62
Mean	0.587
SD	0.024
CV (%)	4.02
't' value	77.34



Sig.	.000
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Table 4 presented the net sales to net worth ratio of Sun Pharmaceutical Industries Limited for the period from 2015–16 to 2024–25. The ratio showed a gradual upward movement over the years, indicating an improvement in the utilisation of shareholders' funds for generating sales. The mean net sales to net worth ratio of 0.587 suggested that the company was able to convert its net worth into sales at a steady and satisfactory rate throughout the study period. The standard deviation of 0.024 and the low coefficient of variation of 4.02 per cent revealed that the ratio remained highly stable with very limited fluctuations. The calculated 't' value of 77.34 was substantially higher than the critical value at the 5 per cent level of significance, and the significance value was 0.000. This confirmed that the net sales to net worth ratio was statistically significant, implying that the efficiency in the utilisation of owners' funds for sales generation was consistent and not attributable to random factors during the period of study.

Table 5: Net Profit Ratio

Year	Ratio (%)
2015–16	21.4
2016–17	22.1
2017–18	23.0
2018–19	24.2
2019–20	25.1
2020–21	23.6
2021–22	24.4
2022–23	25.0
2023–24	25.8
2024–25	26.3
Mean	24.09
SD	1.58



CV (%)	6.55
't' value	48.28
Sig.	.000

Table 5 showed the net profit ratio of Sun Pharmaceutical Industries Limited for the period from 2015–16 to 2024–25. The ratio demonstrated a generally rising trend over the study period, reflecting an improvement in the overall profitability of the company. Although a marginal decline was observed during 2020–21, the ratio recovered in the subsequent years, indicating the company's ability to maintain profitability even during challenging periods. The mean net profit ratio of 24.09 per cent pointed to a strong and consistent profit performance throughout the period of study. The standard deviation of 1.58 and the coefficient of variation of 6.55 per cent suggested that variations in profitability were relatively low and that the net profit ratio remained fairly stable over the ten-year period. The calculated 't' value of 48.28 was considerably higher than the critical value at the 5 per cent level of significance, and the significance value was 0.000. This indicated that the net profit ratio was statistically significant and that the profitability performance of the company was not due to random fluctuations, but rather the result of sustained operational efficiency and sound financial management during the period under review.

6. Findings of the Study

The analysis of working capital management of Sun Pharmaceutical Industries Limited for the period 2015–16 to 2024–25 revealed several important findings. The working capital turnover ratio showed a steady increasing trend during the study period, indicating improved efficiency in the utilisation of working capital for generating sales. The low coefficient of variation further revealed that the ratio remained stable over the years, suggesting consistency in operational performance. The one-sample t-test results confirmed that this ratio was statistically significant, reflecting that the observed improvement was due to effective management rather than random fluctuations.

The working capital to net worth ratio also exhibited a gradual rise over the study period, showing that a larger portion of shareholders' funds was invested in working capital. The stability of this ratio indicated that the company maintained a balanced capital structure by supporting operational requirements without creating excessive liquidity. The statistical



results proved that this ratio was significant, which highlights the importance of owners' funds in supporting short-term financial needs.

The net working capital to current liabilities ratio recorded an overall upward movement, implying an improvement in the company's ability to meet its short-term obligations. The mean value of the ratio indicated that the company maintained more than adequate net working capital to cover its current liabilities. Although moderate fluctuations were observed, the ratio stayed within a comfortable range, showing prudent liquidity management. The significance of this ratio suggested that liquidity planning played a key role in ensuring smooth business operations.

The net sales to net worth ratio revealed efficient utilisation of shareholders' funds for sales generation. The ratio remained highly stable throughout the study period, indicating that the company was able to convert its net worth into sales consistently. This reflected sound financial planning and effective deployment of resources.

The net profit ratio showed a generally increasing trend over the ten-year period, indicating continuous improvement in profitability. A slight decline during 2020–21 was observed due to external challenges; however, the company recovered strongly in subsequent years. The low variability in the net profit ratio demonstrated that profitability was maintained at a stable level throughout the period.

The regression analysis revealed that the selected working capital ratios had a significant influence on the net profit ratio. This confirmed that efficient working capital management directly contributed to higher profitability. Overall, the findings clearly established that effective utilisation of working capital played a crucial role in sustaining both liquidity and profitability of the company.

7. Conclusion

The present study examined the impact of working capital management on the profitability of Sun Pharmaceutical Industries Limited over a period of ten years from 2015–16 to 2024–25. The analysis revealed that the company maintained a stable and efficient working capital structure during the study period, which contributed positively to its profitability performance. The working capital ratios showed consistent trends with relatively low variability, indicating effective utilisation of short-term resources. The present study examined the impact of working capital management on the profitability of Sun Pharmaceutical Industries Limited for a period of ten years from 2015–16 to 2024–25. The



study revealed that the company followed a stable and efficient working capital policy throughout the period, which contributed positively to its profitability performance. The working capital ratios exhibited consistent trends with relatively low variability, indicating that short-term financial resources were utilised effectively.

The results of the statistical analysis confirmed that working capital management had a significant impact on the net profit ratio of the company. The working capital turnover ratio indicated efficient conversion of working capital into sales, while the working capital to net worth ratio showed that an appropriate proportion of shareholders' funds was employed to support daily operations. The net working capital to current liabilities ratio highlighted that the company maintained adequate liquidity to meet its short-term obligations without compromising profitability. The findings emphasised that sound working capital management should be treated as a strategic financial function rather than a routine accounting activity. Proper planning, continuous monitoring, and periodic review of working capital policies can help firms avoid both excess liquidity and shortage of funds. For a capital-intensive and highly regulated industry like pharmaceuticals, efficient working capital management becomes even more critical due to long production cycles and extended credit periods. The study established that effective working capital management plays a vital role in enhancing profitability and ensuring financial stability in Sun Pharmaceutical Industries Limited. The results of the study provide useful insights for financial managers in the pharmaceutical sector and highlight the importance of maintaining an optimal balance between liquidity and profitability for long-term sustainability and growth.

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