Original Research Paper | Commerce | Volume : 09 | Issue : 01 | January 2024 | e-ISSN : 2456-5040

IMPACT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY: A STUDY OF SELECTED IT COMPANIES IN

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ABSTRACT

This research study delves into the nuanced relationship between working capital and profitability, specifically focusing on Infosys Limited and Tata Consultancy Services Limited. The strategic importance of working capital in the dynamic landscape of the Indian IT sector cannot be overstated, serving as a critical enabler for operational efficiency, timely creditor payments, and adaptability to evolving client demands. The research objectives encompass a meticulous analysis of working capital components and their correlation with overall profitability, seeking to uncover strategic insights for future financial decision-making. The sample size, comprising industry leaders Infosys and TCS, enhances the study's relevance, representing entities with significant market influence. Spanning the latest five fiscal years from 2018-19 to 2022-23, the study ensures a comprehensive understanding of the financial dynamics, working capital trends, and long-term patterns, contributing to the evolving narrative around effective financial management in the digital era.

KEYWORDS: Working Capital, Profitability, IT Companies, Infosys Limited, Tata Consultancy Services Limited, Financial Performance

1. INTRODUCTION

Working Capital Management

Working capital management is a critical aspect of financial management that involves overseeing a company's short-term assets and liabilities to ensure efficient operation and sustainability. It focuses on optimizing the balance between current assets and liabilities to maintain liquidity and support day-to-day operational needs. Here are key components and considerations associated with working capital management:

Profitability

Profitability is a key financial metric that assesses a company's ability to generate earnings in relation to its expenses and investments. It is a critical indicator of a company's financial health and success. Here are key aspects and considerations associated with profitability:

Definition of Profitability:

- Profit: Profitability is the net income or earnings that remain after deducting all expenses, including operating costs, taxes, and interest, from a company's revenue.

Types of Profitability:

- Gross Profit Margin: Calculated as (Revenue - Cost of Goods Sold) / Revenue, it measures the percentage of revenue retained after deducting the direct costs associated with producing goods or services.
- Operating Profit Margin: Also known as operating margin, it measures the profitability of core business operations by considering operating expenses.
- Net Profit Margin: This metric represents the percentage of revenue retained as profit after deducting all expenses, including taxes and interest.

2. RESEARCH OBJECTIVES

1. To analyse the working capital and profitability of selected IT companies of India.
2. To examine the impact of working capital on profitability of selected IT companies of India.

3. LITERATURE REVIEW

Cheng et al. (2021): In their study of Czech firms, they found a positive correlation between efficient WCM (measured by inventory turnover and receivables collection period) and profitability (expressed as return on equity and return on assets). They concluded that optimizing working capital components significantly enhances firm performance.

Nwabunke et al. (2019): Their research on Nigerian manufacturing companies revealed a negative relationship between working capital components (days payable outstanding, inventory turnover, and days sales outstanding) and profitability (return on investment). This suggests that minimizing the time inventory is held, collecting receivables faster, and extending payment terms can improve profitability.

Khan and Ahmad (2018): Analyzing FMCG companies in India, they observed a mixed relationship between WCM and profitability. While efficient inventory management positively impacted return on assets, longer receivables collection periods surprisingly had a positive association with profitability, suggesting potential trade-offs in specific contexts.

Kumar et al. (2017): Focusing on inventory management, they found that lower inventory levels (higher inventory turnover) were positively correlated with profitability in Indian trading companies. This emphasizes the importance of efficient inventory control for cost reduction and improved cash flow.

Chen et al. (2015): Their research on Taiwanese firms highlighted the importance of receivables management for profitability. Faster collection periods (measured by days sales outstanding) led to higher return on assets and return on equity, indicating the benefit of effective credit policies and collection practices.

Al-Najjar and Al-Najjar (2013): Analyzing Jordanian industrial companies, they observed a positive relationship between effective payables management (longer payment terms) and profitability. This suggests that optimizing payables can improve cash flow and free up resources for investment, enhancing profitability.

Zhang et al. (2019): Comparing WCM practices across different industries in China, they found that the optimal working capital levels varied. Manufacturing and retail sectors benefitted from efficient inventory management, while construction companies showed higher profitability with longer payment terms. This emphasizes the need for industry-specific WCM strategies.

Singh et al. (2017): Their study of small and medium-sized enterprises (SMEs) in India revealed that WCM had a more significant impact on the profitability of service-oriented SMEs compared to manufacturing SMEs. This indicates the need for tailored WCM approaches based on firm characteristics.

4. RESEARCH METHODOLOGY

4.1 Sample Size

The sample size for this study consists of two leading IT companies in India.

1. Infosys Limited
2. Tata Consultancy Services Limited.

4.2 Period of Data Coverage

Data coverage for this study encompasses the latest five years of financial information. The financial data under analysis spans from the fiscal year 2018-19 to 2022-23.

5. DATA ANALYSIS

5.1 Pbt Margin (%)

PBT MARGIN (%)					
COMPANY NAME	2022-23	2021-22	2020-21	2019-20	2018-19
Infosys Limited	22.70	24.75	26.50	24.23	25.45
Tata Consultancy Services Limited	25.24	26.95	26.65	26.91	28.37

Infosys Limited:

- The Profit Before Tax (PBT) margin for Infosys Limited has experienced a gradual decline over the five-year period. Starting at 25.45% in 2018-19, the PBT margin decreased to 22.70% in 2022-23. This decline suggests that the company may have faced challenges in maintaining the same level of profitability over the years.
- The drop in PBT margin could be attributed to various factors such as increased operating expenses, changes in the competitive landscape, or shifts in the company's business strategy.
- It is essential for Infosys to assess the key drivers behind the declining PBT margin and formulate strategies to address them to sustain or improve profitability in the future.

Tata Consultancy Services Limited (TCS):

- TCS, on the other hand, exhibits a relatively stable PBT margin trend over the same five-year period. The margin has remained within a narrow range, starting from 28.37% in 2018-19 to 25.24% in 2022-23.
- While there is a slight decline in PBT margin, it is noteworthy that TCS has managed to maintain a strong and consistent profitability level over the years.
- TCS's ability to stabilize its PBT margin may be attributed to effective cost management, strategic positioning in the market, or other factors contributing to operational efficiency.

5.2 Net Profit Margin (%)

NET PROFIT MARGIN (%)					
COMPANY NAME	2022-23	2021-22	2020-21	2019-20	2018-19
Infosys Limited	16.42	18.20	19.33	18.32	18.63
Tata Consultancy Services Limited	18.76	20.05	19.83	20.67	21.54

Infosys Limited:

- The Net Profit Margin for Infosys Limited has shown a consistent decline over the five-year period, dropping from 18.63% in 2018-19 to 16.42% in 2022-23.
- This downward trend suggests that Infosys has faced challenges in maintaining the percentage of net profit relative to its total revenue, indicating potential pressures on profitability.
- It is crucial for Infosys to conduct a thorough analysis of its cost structure, operational efficiency, and revenue-generating strategies to address the decline in net profit margin.

Tata Consultancy Services Limited (TCS):

- TCS, in contrast, has also experienced a gradual decline in net profit margin but has maintained a relatively stable trend. The margin has decreased from 21.54% in 2018-19 to 18.76% in 2022-23.
- TCS's ability to sustain a higher net profit margin, even with a slight decline, suggests a certain level of resilience in managing costs and adapting to market dynamics.
- While the margin has decreased, TCS may need to assess the factors influencing this trend and take proactive measures to maintain or improve profitability.

5.3 Return on Assets (%)

RETURN ON ASSETS (%)					
COMPANY NAME	2022-23	2021-22	2020-21	2019-20	2018-19
Infosys Limited	19.15	18.75	17.85	17.88	18.17
Tata Consultancy Services Limited	29.33	27.08	24.80	26.74	27.38

Infosys Limited:
- The Return on Assets (ROA) for Infosys Limited has exhibited a relatively stable trend over the five-year period, ranging from 17.85% in 2020-21 to 19.15% in 2022-23.
- While there are fluctuations, the consistency in ROA suggests that Infosys has been effective in generating earnings in relation to its total assets.
- The stability in ROA indicates that Infosys has been able to efficiently utilize its assets to generate profits, which is a positive sign for investors and stakeholders.

Tata Consultancy Services Limited (TCS):
- TCS has shown an increasing trend in ROA over the five years, with a notable rise from 27.38% in 2018-19 to 29.33% in 2022-23.
- The increasing trend in ROA indicates that TCS has been able to improve its efficiency in utilizing assets to generate higher returns over the years.
- TCS's ability to consistently achieve a higher ROA suggests effective asset management and operational efficiency.

5.4 Current Ratio

CURRENT RATIO					
COMPANY NAME	2022-23	2021-22	2020-21	2019-20	2018-19
Infosys Limited	1.81	2.00	2.54	2.62	2.84
Tata Consultancy Services Limited	2.53	2.56	2.91	3.33	4.17

Infosys Limited:
- The Current Ratio for Infosys Limited has shown a decreasing trend over the five-year period, dropping from 2.84 in 2018-19 to 1.81 in 2022-23.
- A decreasing current ratio suggests a reduction in the company's short-term liquidity and may indicate potential challenges in meeting its short-term obligations.
- Infosys should closely examine the components of its current assets and liabilities to understand the factors contributing to the decline in the current ratio and take appropriate measures to maintain a healthy liquidity position.

Tata Consultancy Services Limited (TCS):
- TCS has also experienced a declining trend in the current ratio, decreasing from 4.17 in 2018-19 to 2.53 in 2022-23.
- While the current ratio remains relatively higher compared to Infosys, the decreasing trend suggests that TCS may be facing similar challenges in maintaining short-term liquidity.
- TCS should assess the factors influencing the decline in its current ratio and consider strategies to ensure an optimal balance between current assets and liabilities.

5.5 Impact of Current Ratio on Pbt Margin (%)

H01 : There is no impact of Current Ratio on PBT Margin (%) of selected IT Companies of India.

H11 : There is impact of Current Ratio on PBT Margin (%) of selected IT Companies of India.

SUMMARY OUTPUT						
Regression Statistics						
Multiple R	0.72628					
R Square	0.52748					
Adjusted R Square	0.36998					
Standard Error	0.90795					
Obser vations	5					
ANOVA						
	df	SS	MS	F	Signifi cance F	
Regression	1	2.7608	2.7608	3.34899	0.16467	
Residual	3	2.4731	0.82437			
Total	4	5.2339				
	Coeffi cients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	21.5919	2.32157	9.30056	0.00263	14.2037	28.9802
Current Ratio	1.53169	0.83698	1.83003	0.16467	-1.1319	4.19533

Interpretation

Multiple R = 0.72628, which indicates that there is linear relationship between Current Ratio on PBT Margin (%) of selected IT Companies of India.

From the ANOVA table, it can be seen that p-value is 0.16467, which is higher than specified α of 0.05, so there is no impact of Current Ratio on PBT Margin (%) of selected IT Companies of India.

5.6 Impact of Current Ratio on Net Profit Margin (%)

$H_0 2$: There is no impact of Current Ratio on Net Profit Margin (%) of selected IT Companies of India.

$H_1 2$: There is impact of Current Ratio on Net Profit Margin (%) of selected IT Companies of India.

SUMMARY OUTPUT						
Regression Statistics						
Multiple R	0.82087					
R Square	0.67383					
Adjusted R Square	0.56511					
Standard Error	0.62643					
Obser vations	5					
ANOVA						
	df	SS	MS	F	Signifi cance F	
Regression	1	2.43202	2.43202	6.19769	0.08852	
Residual	3	1.17723	0.39241			
Total	4	3.60925				
	Coeffi cients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	15.2489	1.60174	9.52023	0.00246	10.1515	20.3464
Current Ratio	1.4376	0.57746	2.48952	0.08852	-0.4001	3.27534

Interpretation

Multiple R = 0.82087, which indicates that there is linear relationship between Current Ratio on Net Profit Margin (%) of selected IT Companies of India.

From the ANOVA table, it can be seen that p-value is 0.08852, which is higher than specified α of 0.05, so there is no impact of Current Ratio on Net Profit Margin (%) of selected IT Companies of India.

5.7 Impact of Current Ratio On Return On Assets (%)

$H_0$3: There is no impact of Current Ratio on Return on Assets (%) of selected IT Companies of India.

$H_1$3: There is impact of Current Ratio on Return on Assets (%) of selected IT Companies of India.

SUMMARY OUTPUT						
Regression Statistics						
Multiple R	0.43178					
R Square	0.18643					
Adjusted R Square	-0.0848					
Standard Error	1.10043					
Obser vations	5					
ANOVA						
	df	SS	MS	F	Signifi cance F	
Regression	1	0.83248	0.83248	0.68746	0.46784	
Residual	3	3.63285	1.21095			
Total	4	4.46533				
	Coeffi cients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	25.01	2.81375	8.8885	0.003	16.0554	33.9646
Current Ratio	-0.8411	1.01442	-0.8291	0.46784	-4.0694	2.38725

Interpretation

Multiple R = 0.43178, which indicates that there is no linear relationship between Current Ratio on Return on Assets (%) of selected IT Companies of India.

From the ANOVA table, it can be seen that p-value is 0.46784, which is higher than specified α of 0.05, so there is no impact of Current Ratio on Return on Assets (%) of selected IT Companies of India.

6. FINDINGS AND SUGGESTIONS

6.1 Findings

- When comparing Infosys and TCS, TCS has generally maintained a higher PBT margin throughout the period under consideration.
- TCS's ability to sustain a relatively stable PBT margin may indicate a more resilient operational model or a successful adaptation to industry challenges.
- Infosys, on the other hand, may need to focus on identifying and addressing the factors contributing to the declining PBT margin to enhance its overall profitability.
- The comparative analysis highlights the importance of understanding industry dynamics, competitive positioning, and internal operational efficiency factors that can impact profitability differently for companies within the same sector.
- TCS consistently maintains a higher net profit margin compared to Infosys over the five-year period.
- Both companies have experienced a decline in net profit margin, indicating industry-wide challenges or shifts that impact profitability.
- The comparative analysis underscores the importance of understanding the unique factors influencing the financial performance of each company within the IT sector.
- TCS consistently outperforms Infosys in terms of ROA, indicating superior efficiency in utilizing assets to generate returns.
- The increasing trend in TCS's ROA suggests a positive trajectory in asset utilization and profitability over the five-year period.
- Infosys, while maintaining a stable ROA, may benefit from exploring strategies to enhance asset efficiency and improve returns.
- TCS consistently maintains a higher current ratio compared to Infosys, indicating a historically stronger short-term liquidity position.
- Both companies, however, exhibit a declining trend in the current ratio, suggesting industry-wide challenges or shifts in short-term liquidity dynamics.
- The comparative analysis emphasizes the importance of

evaluating the composition of current assets and liabilities and adopting strategies to ensure liquidity resilience.

6.2 Suggestions

- Infosys has experienced a slight decrease in its Profit Before Tax (PBT) Margin from 24.75% in 2021-22 to 22.7% in 2022-23. Similarly, its Net Profit Margin has also decreased from 18.2% to 16.42%. This suggests a potential need for cost management or revenue enhancement strategies to improve profitability.
- Tata Consultancy Services, although still maintaining a strong profitability margin, has also witnessed a slight decline in its PBT and Net Profit Margins. From 26.95% to 25.24% in PBT Margin and from 20.05% to 18.76% in Net Profit Margin. The company may need to analyze its cost structure and operational efficiency to address this decline.
- Infosys has shown consistency in its Return on Assets (ROA) over the years, hovering around the 18-19% range. This indicates efficient utilization of assets to generate profits. However, there is a slight increase in ROA from 18.75% to 19.15% in 2022-23, suggesting improved asset utilization.
- Tata Consultancy Services exhibits a significantly higher ROA compared to Infosys, indicating better asset utilization efficiency. However, it's essential to monitor the trend closely to ensure continued improvement or maintenance of ROA levels.
- Both companies demonstrate a healthy Current Ratio, indicating their ability to meet short-term obligations. Infosys' Current Ratio has been relatively stable over the years, while Tata Consultancy Services has shown a slight decrease. However, both companies' ratios are comfortably above 1, indicating a strong liquidity position.
- While a high Current Ratio is positive, it's crucial for Tata Consultancy Services to ensure that the decrease in its ratio does not compromise its ability to meet short-term obligations.

7. CONCLUSION

The comprehensive analysis of four key financial ratios—Profit Before Tax (PBT) Margin, Net Profit Margin, Return on Assets (ROA), and Current Ratio—for Infosys Limited and Tata Consultancy Services Limited (TCS) over the five-year period provides valuable insights into the financial performance and operational dynamics of these leading IT companies in India.

Both Infosys and TCS have experienced fluctuations in Profit Before Tax (PBT) Margin and Net Profit Margin. Infosys has seen a decline in both PBT and Net Profit Margins, indicating potential challenges in sustaining profitability. In contrast, TCS has demonstrated a relatively stable trend with a slight decline. This suggests that TCS has been more resilient in managing profitability, possibly through effective cost control measures.

Return on Assets (ROA) reflects how efficiently companies utilize their assets to generate profits. TCS has consistently outperformed Infosys in ROA, indicating superior efficiency in asset management and generating returns. The increasing trend in TCS's ROA suggests continuous efforts to improve operational efficiency and optimize asset utilization.

The analysis of the Current Ratio reveals a declining trend in short-term liquidity for both companies. While TCS has historically maintained a stronger liquidity position, both companies face challenges in sustaining their current ratios. A thorough examination of current assets and liabilities is crucial for Infosys and TCS to address the factors contributing to the decline and ensure short-term financial health.

Further analysis reveals intriguing insights into the relationship between the Current Ratio and key profitability metrics—Profit Before Tax (PBT) Margin, Net Profit Margin, and Return on Assets (ROA). It is noteworthy that, based on the data presented, there seems to be no discernible impact of the Current Ratio on these profitability indicators for the selected IT companies in India.

Current Ratio And Profitability: The analysis does not suggest a clear correlation between the Current Ratio and Profit Before Tax (PBT) Margin. Despite a declining trend in the Current Ratio for both Infosys and TCS, no direct impact on PBT Margin is evident. This implies that short-term liquidity, as measured by the Current Ratio, may not be the sole driver influencing profitability for these IT companies.

Current Ratio And Net Profit Margin: Similarly, the examination of the Current Ratio does not indicate a direct impact on Net Profit Margin for the selected IT companies. The declining trend in the Current Ratio does not seem to correlate with a corresponding trend in Net Profit Margin. Other operational and strategic factors may play a more significant role in determining profitability.

Current Ratio And Return On Assets (Roa): The data suggests that the Current Ratio has no apparent impact on Return on Assets (ROA) for the selected IT companies. Despite fluctuations in the Current Ratio, both Infosys and TCS have maintained their ROA trends, emphasizing that factors beyond short-term liquidity contribute to efficiency in utilizing assets to generate returns.

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