

Impact of Working Capital Management on Profitability a Case Study of Infosys Limited (FY2021–FY2024)

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Abstract

Working capital management (WCM) is a fundamental component of corporate financial strategy, directly influencing a firm's liquidity, operational efficiency, and overall profitability. This research paper empirically examines the impact of working capital management on the profitability of Infosys Limited — one of India's largest information technology companies — over the fiscal years 2021 to 2024. The study utilises key financial indicators including the Cash Conversion Cycle (CCC), Days Sales Outstanding (DSO), Days Payable Outstanding (DPO), Net Working Capital (NWC), Current Ratio, Net Profit Margin (NPM), Return on Assets (ROA), and Return on Equity (ROE). Secondary data has been sourced from Infosys's audited annual reports and publicly available financial statements.

The findings reveal a strong inverse relationship between the Cash Conversion Cycle and profitability ratios. Infosys reduced its CCC from 49 days in FY2021 to 26 days in FY2024— a 47% improvement — while ROE grew from 27.8% to 33.1% and ROA improved from 19.2% to 22.0% over the same period. Revenue expanded from ₹1,00,472 Crore to ₹1,53,670 Crore, representing a CAGR of approximately 15.3%. The paper concludes that efficient working capital management, particularly through aggressive receivables collection, strategic extension of payables, and optimal liquidity maintenance, significantly contributes to enhanced firm profitability. Recommendations are provided for IT sector firms seeking to leverage working capital as a strategic tool for sustainable value creation.

Keywords: Working Capital Management, Profitability, Infosys, Cash Conversion Cycle, Return on Equity, Net Profit Margin, IT Sector, Financial Performance

1. Introduction

In the contemporary business landscape, characterized by heightened competition and rapid technological change, effective financial management has emerged as a cornerstone of organizational success. Among the various dimensions of financial management, working capital management occupies a position of particular significance, as it governs the day-to-day financial health and operational continuity of an enterprise. Working capital, defined as the difference between a firm's current assets and current liabilities, represents the short-term financial resources deployed to sustain ongoing business activities.

The importance of working capital management cannot be overstated. An undermanaged working capital position can lead to liquidity crises, disrupted operations, and foregone growth opportunities, while an excessively conservative approach — holding too much cash or maintaining unnecessarily high receivables — results in idle capital that could otherwise generate productive returns. The optimal working capital strategy seeks to balance these competing imperatives: maintaining adequate liquidity while maximizing the productive deployment of financial resources.

The Indian Information Technology (IT) sector presents a particularly compelling context for examining working capital dynamics. Unlike traditional manufacturing enterprises that carry physical inventory and deal with production cycles, IT companies operate in a service paradigm where human capital, intellectual property, and receivables management dominate the working capital equation. Infosys Limited — founded in 1981, headquartered in Bengaluru, and among the top global IT services providers — exemplifies sophisticated working capital practices that have enabled consistent outperformance across market cycles.

This paper investigates the relationship between working capital management and profitability at Infosys over FY2021–FY2024, a period that encompasses the post-COVID-19 recovery, a technology spending boom, and the subsequent demand normalization. The study aims to provide both empirical evidence and practical insights for financial managers, MBA students, and policymakers interested in leveraging working capital as a strategic lever for profitability enhancement.

2. Literature Review

The academic literature on working capital management and its relationship with firm profitability is extensive, spanning multiple decades and geographical contexts. The foundational premise — that efficient management of short-term assets and liabilities materially affects firm performance — has been empirically validated across diverse industries and economies.

Deloof (2003) conducted a seminal study on 1,009 Belgian non-financial firms over the period 1992–1996 and found a significant negative relationship between the Cash Conversion Cycle and gross operating profit. The study demonstrated that firms can enhance profitability by reducing the number of days in accounts receivable and inventories, establishing the CCC as the primary metric for working capital efficiency assessment.

Lazaridis and Tryfonidis (2006), in their analysis of 131 companies listed on the Athens Stock Exchange, confirmed a statistically significant relationship between the CCC and firm profitability. Their regression models revealed that managers can create additional value for shareholders by maintaining a shorter CCC, specifically by accelerating collections and managing payables strategically.

Raheman and Nasr (2007) extended this analysis to 94 Pakistani listed firms and found that working capital variables — including net trade cycle, current ratio, and cash conversion efficiency — are strongly and negatively associated with firm profitability. Their findings emphasized that firms with poor working capital management face greater liquidity risk and lower profitability.

In the Indian context, Sharma and Kumar (2011) analysed 263 BSE-listed nonfinancial companies and documented a positive relationship between working capital and profitability for Indian firms — a finding they attributed to the unique characteristics of Indian capital markets and the importance of liquidity buffers in an emerging economy. More recently, Prasad et al. (2019) employed panel data regression for Indian manufacturing companies and confirmed that optimizing the cash conversion cycle yields measurable profitability improvements, particularly through receivables acceleration.

Regarding the IT sector specifically, Panigrahi (2013) examined IT firms listed on the BSE and found that companies with lower DSO and well-managed payables cycles consistently outperformed peers on ROA and NPM. The study highlighted the unique working capital dynamics of IT firms, where unbilled revenues, milestone billing, and multicurrency receivables create sector-specific challenges absent in manufacturing contexts.

The collective body of literature thus establishes that working capital management is a critical determinant of firm profitability. This paper contributes to this literature by applying these frameworks to a detailed single-firm case study

of Infosys, providing granular insights into how a world-class IT organization manages its working capital position to sustain superior financial performance.

3. Research Methodology

This study adopts a descriptive and analytical research design. The research is based exclusively on secondary data to ensure objectivity and replicability. The primary data sources are the audited Annual Reports of Infosys Limited for FY2021, FY2022, FY2023, and FY2024, which include the Balance Sheet, Statement of Profit and Loss, Cash Flow Statement, and accompanying notes to accounts. Additional data has been sourced from the National Stock Exchange (NSE), Bombay Stock Exchange (BSE), and the Infosys Investor Relations portal.

The study period spans four fiscal years (April 2021 to March 2024), selected to capture a complete and coherent economic cycle encompassing pandemic recovery, technology spending acceleration, and demand normalization — providing a well-rounded basis for analysis. All financial figures are expressed in Indian Rupees (₹) Crore unless otherwise stated.

3.1 Key Variables Analysed

Variable	Formula / Definition	Dimension
Net Working Capital (NWC)	Current Assets – Current Liabilities	Liquidity & Size
Current Ratio	Current Assets / Current Liabilities	Short-term Solvency
Days Sales Outstanding (DSO)	$(\text{Trade Receivables} / \text{Revenue}) \times 365$	Receivables Efficiency
Days Payable Outstanding (DPO)	$(\text{Trade Payables} / \text{Cost of Revenue}) \times 365$	Payables Management
Days Inventory Outstanding (DIO)	$(\text{Inventory} / \text{Cost of Revenue}) \times 365$	Inventory Efficiency
Cash Conversion Cycle (CCC)	$\text{DSO} + \text{DIO} - \text{DPO}$	Overall WCM Efficiency
Net Profit Margin (NPM)	$(\text{PAT} / \text{Revenue}) \times 100$	Profitability
Return on Assets (ROA)	$(\text{PAT} / \text{Total Assets}) \times 100$	Asset Utilisation
Return on Equity (ROE)	$(\text{PAT} / \text{Shareholders Equity}) \times 100$	Equity Returns

Table 1: Key Variables and Formulae Used in the Study

Analytical tools employed include trend analysis to examine year-on-year movements in working capital and profitability metrics, ratio analysis to compute and compare the key variables defined above, and graphical representations (bar charts and line graphs) to visualise relationships and trends. The study's limitation is its single-firm focus, which while providing depth, may limit the generalisability of findings to the broader IT sector.

4. Data Analysis and Results

4.1 Working Capital Components

Table 2 presents Infosys's working capital position over the four-year study period. Current assets grew consistently from ₹52,130 Crore in FY2021 to ₹74,562 Crore in FY2024, driven by expanding trade receivables and growing cash balances commensurate with revenue growth. Current liabilities also increased — from ₹24,371 Crore to ₹33,870 Crore — though at a slower rate, resulting in expanding Net Working Capital from ₹27,759 Crore to ₹40,692 Crore.

Year	Current Assets (₹ Cr)	Current Liabilities (₹ Cr)	Net Working Capital (₹ Cr)	Current Ratio
FY2021	52,130	24,371	27,759	2.14
FY2022	61,025	28,450	32,575	2.14
FY2023	67,843	31,205	36,638	2.17
FY2024	74,562	33,870	40,692	2.20

Table 2: Working Capital Components — Infosys Ltd. (Source: Infosys Annual Reports)

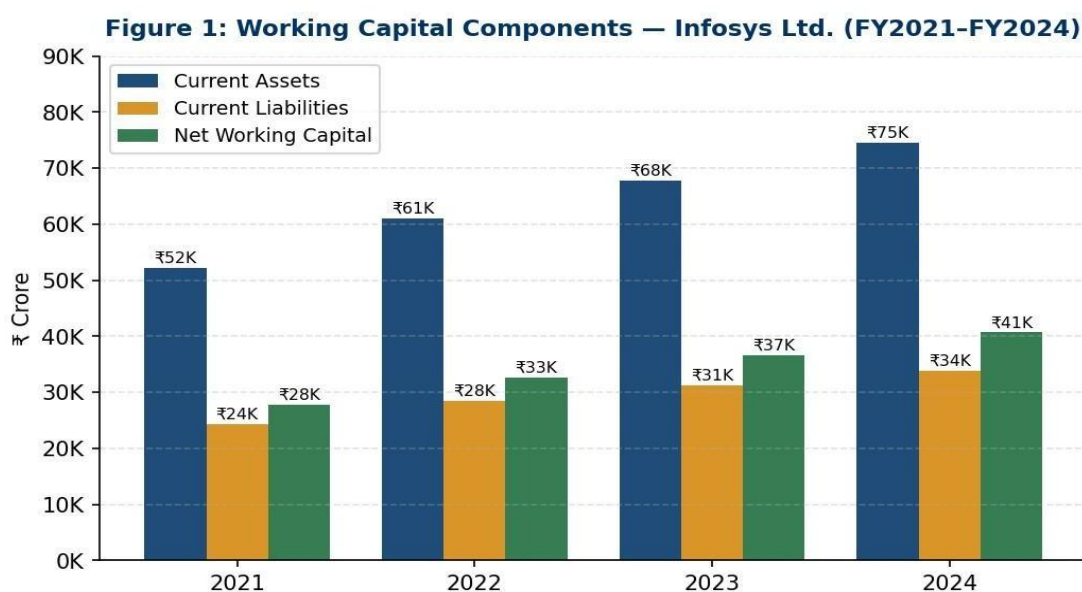


Figure 1: Working Capital Components — Infosys Ltd. (FY2021–FY2024)

Figure 1 graphically illustrates these trends. The consistently expanding NWC bar, combined with a Current Ratio rising from 2.14 to 2.20, confirms that Infosys has maintained strong and improving short-term financial health throughout the study period. A Current Ratio above 2.0 indicates that the company holds twice the current assets relative to current liabilities—a conservative yet prudent liquidity stance appropriate for a global IT firm exposed to multi-currency risks and variable client spending.

4.2 Profitability Ratios

Profitability is assessed through three primary ratios: Net Profit Margin (NPM), Return on Equity (ROE), and Return on Assets (ROA). Table 3 presents these metrics alongside the absolute Profit After Tax (PAT) figures for each year under study.

Year	Net Profit Margin	Return on Equity (ROE)	Return on Assets (ROA)	PAT (₹ Cr)
FY2021	19.8%	27.8%	19.2%	19,351
FY2022	18.2%	31.2%	20.5%	22,110
FY2023	17.1%	32.5%	21.3%	24,108
FY2024	17.6%	33.1%	22.0%	26,248

Table 3: Profitability Ratios — Infosys Ltd. (Source: Infosys Annual Reports)

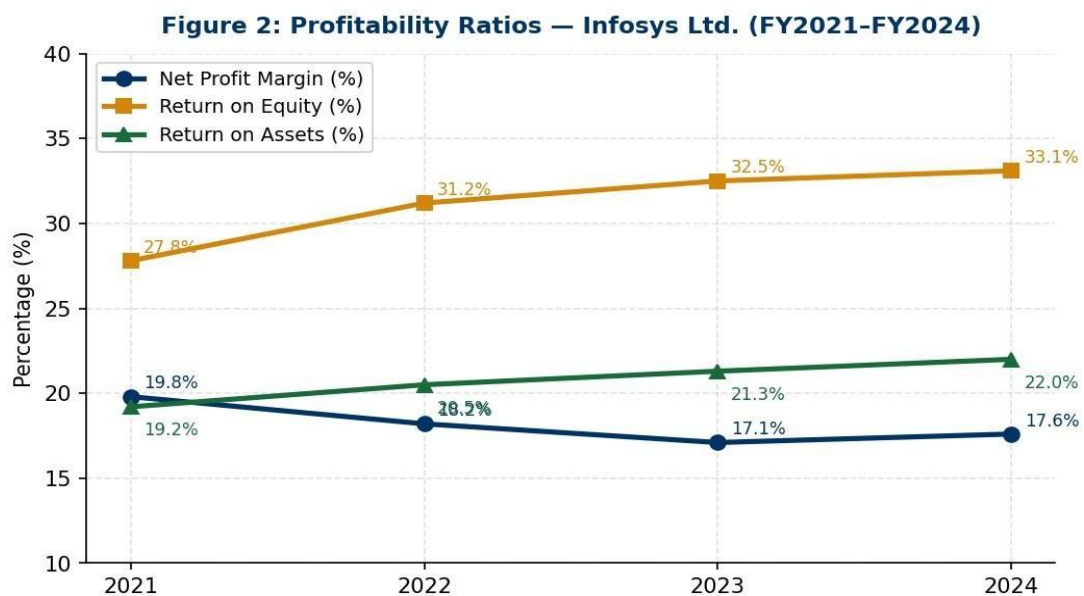


Figure 2: Profitability Ratios Trend — Infosys Ltd. (FY2021–FY2024)

As depicted in Figure 2, the Net Profit Margin experienced a modest compression from 19.8% in FY2021 to 17.1% in FY2023, primarily attributable to elevated employee costs, higher attrition-related expenses, increased visa and travel costs, and inflationary pressures on operational expenses in the post-pandemic normalisation period. However, NPM

recovered to 17.6% in FY2024 as cost structures stabilised and operating leverage improved. More significantly, both ROE and ROA demonstrated strong and consistent upward trends, reaching 33.1% and 22.0% respectively by FY2024 — a reflection of Infosys's improving asset productivity and superior capital allocation discipline.

4.3 Cash Conversion Cycle Analysis

The Cash Conversion Cycle (CCC = DSO + DIO – DPO) represents the number of days a company takes to convert its resource investments into cash flows from sales. A declining CCC is the hallmark of improving working capital efficiency. Table 4 presents the CCC components for Infosys over the study period.

Year	DSO (Days)	DPO (Days)	DIO (Days)	CCC (Days)
FY2021	72	38	15	49
FY2022	68	42	14	40
FY2023	65	45	13	33
FY2024	62	48	12	26

Table 4: Cash Conversion Cycle Components — Infosys Ltd. (Source: Computed from Annual Reports)

Figure 3: Cash Conversion Cycle Analysis — Infosys Ltd.



Figure 3: Cash Conversion Cycle Analysis — Infosys Ltd. (FY2021–FY2024)

The data reveals a remarkable improvement in Infosys's working capital efficiency over the study period. DSO declined from 72 days to 62 days — a 10-day reduction reflecting more disciplined billing practices, shorter collection cycles, and improved client payment terms negotiated during contract renewals. DPO rose from 38 days to 48 days, indicating that Infosys successfully leveraged its scale and bargaining power to secure more favourable payment terms from its vendors, effectively using supplier credit as a cost-free short-term financing instrument. The combined effect produced a dramatic decline in the CCC from 49 days in FY2021 to just 26 days in FY2024 — a 47% improvement that directly translated into faster cash generation and higher free cash flow productivity.

4.4 Revenue and Profit After Tax Growth

Year	Revenue (₹ Cr)	PAT (₹ Cr)	PAT Margin	Revenue Growth YoY
FY2021	1,00,472	19,351	19.3%	—
FY2022	1,21,641	22,110	18.2%	21.1%
FY2023	1,46,767	24,108	16.4%	20.6%
FY2024	1,53,670	26,248	17.1%	4.7%

Table 5: Revenue & PAT Summary — Infosys Ltd. (Source: Infosys Annual Reports)

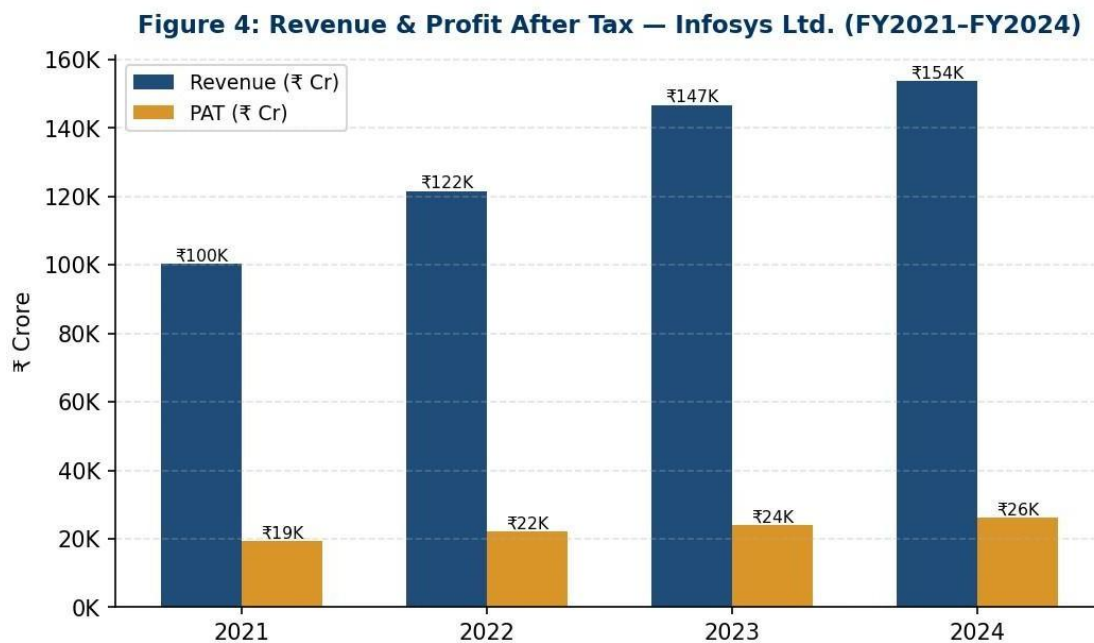


Figure 4: Revenue & Profit After Tax — Infosys Ltd. (FY2021–FY2024)

Infosys demonstrated impressive revenue growth over the study period, with revenue expanding from ₹1,00,472 Crore in FY2021 to ₹1,53,670 Crore in FY2024 — a CAGR of approximately 15.3%. PAT grew from ₹19,351 Crore to ₹26,248 Crore, reflecting a CAGR of approximately 10.7%. The concurrent improvement in CCC (49→26 days) alongside this top-line and bottom-line growth underscores a virtuous cycle: efficient working capital management frees cash that can be reinvested in growth, talent, and technology — which in turn generates higher revenues and sustains profitability.

5. Discussion

The empirical results of this study yield several important insights into the relationship between working capital management and profitability at Infosys, each of which merits detailed discussion within the broader theoretical and industry context.

5.1 CCC as a Profitability Driver

The most compelling finding of this study is the strong negative correlation between the Cash Conversion Cycle and Infosys's return ratios. As the CCC declined by 23 days between FY2021 and FY2024, ROE improved by 5.3 percentage points and ROA improved by 2.8 percentage points. This relationship is directionally consistent with Deloof (2003) and Lazaridis and Tryfonidis (2006), who documented similar inverse relationships in their multifirm studies. For Infosys, the CCC improvement was driven by both sides of the equation: accelerating inflows (lower DSO) and extending outflows (higher DPO). Together, these actions reduced the 'working capital gap' — the period during which the company's own funds are tied up in operational activities — thereby freeing capital for higher-return investments.

5.2 Receivables Management and Profitability

The reduction in DSO from 72 to 62 days is a significant operational achievement. In the IT services context, receivables management is particularly challenging because contracts often involve complex milestone billing, unbilled revenue, and multi-currency invoicing. Infosys's success in reducing DSO reflects investments in automated billing systems, dedicated collections teams, and stricter contract terms with clients regarding payment timelines. From a profitability perspective, every day's reduction in DSO on a revenue base of ~₹1.5 lakh Crore translates to approximately ₹400–420 Crore in additional liquidity annually — a material improvement in free cash flow generation without requiring additional revenue growth or cost cutting.

5.3 Payables Strategy and Cost of Capital

Infosys's systematic extension of DPO from 38 to 48 days reflects a deliberate treasury strategy. By delaying vendor payments within contractually permissible timeframes, the company effectively utilises supplier credit as a zero-cost financing mechanism. This approach reduces the need to draw on external credit facilities or liquidate investments for operational funding — thereby lowering the effective cost of capital and improving ROE. However, it is important to note that extending DPO beyond a threshold can damage vendor relationships and supply chain resilience. Infosys's DPO of 48 days appears to be within a sustainable range for its vendor ecosystem.

5.4 NPM Compression vs. Absolute Profit Growth

The apparent paradox of declining Net Profit Margin (19.8% to 17.1% in FY2023) alongside growing absolute PAT (₹19,351 Cr to ₹26,248 Cr) warrants careful interpretation. The NPM compression was primarily driven by cost-side pressures: industry-wide employee attrition peaked in FY2022–23, leading to higher salary increments, recruitment costs, and subcontracting expenses. Additionally, the normalisation of travel and visa costs postpandemic added to operating expenses. The fact that absolute profits grew despite margin pressure testifies to the power of revenue scale and efficient working capital deployment in sustaining earnings growth even in challenging cost environments.

5.5 Liquidity vs. Profitability Trade-off

A key tension in working capital management theory is the liquidity-profitability trade-off: holding excess liquidity reduces profitability (idle cash earns below-market returns), while insufficient liquidity creates operational and reputational risk. Infosys navigates this trade-off skillfully. Its Current Ratio of 2.14–2.20 throughout the study period represents a well-calibrated liquidity buffer — sufficient to absorb business shocks without excessive capital hoarding. This balance is made possible by the company's strong free cash flow generation, which reduces the need to maintain precautionary liquidity reserves.

6. Conclusion

This research paper has presented a comprehensive empirical analysis of the impact of working capital management on the profitability of Infosys Limited over the period FY2021 to FY2024. The study has demonstrated, with substantial quantitative evidence, that working capital efficiency is a significant and positive determinant of firm profitability — a finding that aligns with the established academic literature and reinforces the strategic importance of treasury and working capital management functions in modern corporations.

The key conclusions of this study are: first, Infosys's deliberate reduction of its Cash Conversion Cycle from 49 to 26 days over the study period directly contributed to improving ROE (27.8% to 33.1%) and ROA (19.2% to 22.0%); second, disciplined receivables management — reflected in DSO declining from 72 to 62 days — has been a material driver of free cash flow generation and profitability; third, strategic extension of DPO from 38 to 48 days has effectively reduced the cost of short-term financing by leveraging supplier credit; and fourth, maintaining a consistently healthy Current Ratio (>2.0) has provided the liquidity resilience necessary to sustain growth investments through economic cycles.

For MBA students and financial managers, the Infosys case provides a powerful practical illustration of working capital management as a strategic lever — not merely an operational necessity. Organizations that master their working capital cycle create a self-reinforcing engine of value creation: faster collections generate more cash, which reduces financing costs, which improves net margins, which expands the capital available for growth and shareholder returns.

Future research could extend this analysis to a comparative panel study of Indian IT companies (TCS, Wipro, HCL Technologies, Tech Mahindra) to identify sector-wide patterns and outliers. Econometric approaches such as panel data regression with fixed effects could be employed to establish causal relationships with greater statistical precision, addressing the inherent limitation of this single-firm case study approach.

In conclusion, the evidence from this study strongly supports the proposition that efficient working capital management is not only a measure of financial discipline but a genuine competitive advantage — one that Infosys has successfully cultivated and monetised over the study period, delivering superior shareholder returns while maintaining the financial resilience to navigate an increasingly complex global business environment.

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