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LIQUIDITY AND PROFITABILITY ANALYSIS OF THE SELECTED IT COMPANIES OF INDIA

Anjali Patel

Research Scholar
Swaminarayan University
patelanjali7057@gmail.com

Jaydeep Ramanuj

Assistant Professor,
Faculty of Commerce
Kadi University
ramanujjayadip01@gmail.com

Abstract

For any organisation ratios are extremely useful tools for understanding financial statements and making decisions. For sustainability and long-term future growth, short and long-term success are critical to every company. As IT companies are becoming the major player in not only in one county but all over world. The study's major goal is to have better understand of the relationship between the liquidity ratio and profitability ratio for two selected Indian IT companies: TCS (Tata Consultancy Services) and Infosys. For the study data is collected from the selected companies' annual reports for the duration of 10-year period, from March 2014 to March 2023. For statistical analysis purpose statistical methods, arithmetic mean and regression analysis were used. The liquidity ratio shows that TCS outperformed Infosys, as does the profitability ratio. Regression analysis results shows that there is no connection between the liquidity ratio and the profitability ratio.

Keywords: *Liquidity, Profitability, IT sector, TCS – Tata Consultancy Services, Infosys*

INTRODUCTION

The IT sector is one of the fastest expanding sectors not only in India but around the world. After technological revolution IT sector has become one of the major plyer in most of all the countries market. In current era, countries those who have technological advantage has higher chance of growth and development. India is also becoming a prominent player in the global information technology sector. The performance of this company affects not only countries growth but a wide range of stakeholders, including owners, customers, directors, employees, debtors and creditors. To understand the performance of any organisations, various financial ratios are utilised, the most frequent used are the liquidity ratio and profitability ratio. Liquidity ratio demonstrates the company's ability to pay its debts over a short period of time. Current assets, cash on hand, cash at the bank, cash credit, and overdrafts are all examples of liquidity. Which are used to pay current liabilities means short term financial obligation that are due within one year ex. accounts payable, payroll due, notes payable, short-term loans etc. Money is considered as blood of any business and for any organisation making a profit is the primary goal. In simple terms profit is difference between the selling price and cost of the product. Profitability ratios can assist you understand a company's ability to generate profits. The IT sector is currently emerging as a crucial driver of Indian economic growth. Thus, the study intends to assess the impact of liquidity ratios on the profitability of chosen Indian IT enterprises. The study also attempts to determine whether there is a major impact of liquidity ratio on profitability, either good or negative.

REVIEW OF LITERATURE

Sinha Mintibahen B. and Dr. Deepika S. (2023) [1]. conducted a study on "Research Paper on Liquidity and Profitability

Analysis of Pharmaceutical Companies in India." The study's goal is to investigate the scenarios of a sample of Indian pharmaceutical companies. Seven years of data on the profit and profitability ratios of four selected organisations were used in the study. Anova test was utilised to do the analysis. The study shows that the net profit margin values among sample companies do not differ significantly.

Tripathi (2020). The study examined the merger and acquisition in FMCG industry in India. For the purpose of the study data collected for the time period of 2000 to 2010 of Hindustan Unilever Limited and Emami Limited. For the analysis purpose ratio method was used on secondary data. The study found that merger and acquisition positively affect productivity of acquiring firms of FMCG organizations in India.

Gideon T. A. and Joseph S.O. (2019). The purpose of the study was to investigate the relationship between liquidity and profitability of manufacturing enterprises in Nigeria. Secondary data on sample firms was acquired via annual reports over a ten-year period, from 2007 to 2016. For the analysis, panel data estimators were utilised. According to the study, financial liquidity has helped to improve the financial performance of selected Nigerian manufacturing enterprises.

Sylvester I. E. and Nancy C. A. (2018). The study examined the impact of operating liquidity on the profitability of pharmaceutical enterprises listed on the Nigerian Stock Exchange. For the study, a sample of 5 pharmaceutical enterprises was selected from secondary data spanning 10 years from 2002 to 2010, and Ordinary Least Squares multiple regression was employed for analysis. According to the report, operating liquidity has a considerable impact on the profitability of Nigeria's listed pharmaceutical enterprises.

K. H. I. Madushanka and M. Jathurika (2018). Their research examined the impact of liquidity ratios on profitability. The final purpose of the study was to look into the relationship between liquidity and profitability. The study included data from 15 manufacturing companies listed on the Colombo Stock Exchange over a five-year period from 2012 to 2016. For analysis, correlation and regression, as well as descriptive statistics, were used. The findings reveal that the liquidity ratio (quick ratio) is positively and significantly connected to firm profitability among Sri Lanka's listed manufacturing enterprises.

Both Mohmad M. K. and Dr. Syed K. S. (2016). The purpose of this research, titled "Liquidity & Profitability Performance Analysis of Selected Telecom Companies," is to examine how well a number of Indian telecom firms have done in these areas (Bharti Airtel, and Vodafone India). The liquidity and profitability ratio data of Bharti Airtel and Vodafone India were averaged across five years for the purpose of analysis. A favourable correlation between liquidity and profitability ratio was found in the study.

Georgeta V., & Elena A. N. (2016). Listed Romanian companies' liquidity and profitability were the focus of their examination. The study's core premise is that financial stability and profitability are major factors influencing the growth and development of businesses. Companies listed on the Bucharest stock exchange were studied throughout a 10-year period, from 2005 to 2010. A graphical technique and correlation were employed for the study's goal. The research shows that liquidity and company financial success are inversely related.

Ehiedu, Victor C. (2014) researched "The Impact of Liquidity on Profitability of Some Selected Companies: The Financial Statement Analysis (FSA) Approach." Finding a correlation between profitability and the following measures: current ratio, acid-test ratio, return on capital employed, and profitability is the primary objective of the study. The study employed a quantitative research design and took six years' worth of data from chosen companies into account. The study employed a straightforward correlation method. While the results demonstrate a positive association between profitability and the current ratio, the Asid-test ratio and return of capital employed do not show any discernible correlation with profitability.

Yousif U. R. and Qasim S. (2011). Impacts of liquidity ratio on profitability" is the subject of completed research. Every business must keep this relationship in mind while running their day-to-day operations, which is why the study set out to show how liquidity affects profitability. From 2004–2009, the research used a ratio of 26 companies listed on the Karachi Stock Exchange

annually. As liquidity rises, profitability falls, proving a negative link between the two.

RESEARCH GAP

Liquidity and profitability analysis, as well as the correlation between the two, have received scant attention in India's information technology (IT) sector. The majority of research takes place in other industrialised nations, such as the United States, Indonesia, Poland, and other European nations.

OBJECTIVES OF THE STUDY

The objectives of the study are as following:

1. To study the liquidity performance of the selected IT companies.
2. To study the profitability performance of the selected IT companies.
3. To study the relationship between the liquidity and profitability of selected IT companies.

SCOPE OF THE STUDY

Scope of the study is to confine the liquidity, profitability performance and relationship between them with reference to selected IT companies of India. The study covers period of 10 years from 2014 to 2023.

LIMITATIONS OF THE STUDY

Limitations of the study are as follow:

1. This study is taken the data of period of 10 years only from 2014 to 2023 so finding cannot be applicable for very long duration.
2. The study is taken only selected 2 companies. Hence, the sample size limitation is also applied to this study.
3. Statistical techniques and ratio analysis have their own limitations which might affect the conclusion.

METHODOLOGY

A variety of metrics for gauging the performance of a firm can be found in its financial statements and balance sheet. Accounting ratios are frequently and extensively utilised by various stakeholders to measure the performance of companies.

HYPOTHESIS

Question – is there any significant effect of liquidity ratio on profitability?
Ho: There is no statistically significant effect of liquidity ratios on profitability.
H_1: There is statistically significant effect of liquidity ratios on profitability.

DATA SET:

The data used in the study came from the annual reports of a few Indian IT firms. Specifically, TCS and Infosys. The highest market values are used to choose the companies. No primary data was collected for the study.

VARIABLES:

Several financial parameters, including liquidity, current ratio, quick ratio, profitability, return on assets, and return on equity, are employed in this research to assess the performance of the chosen IT organisations. In a nutshell, here are the variables:

LIQUIDITY RATIOS

A company's operational work is greatly impacted by its short-term financial status. Keeping the company's cash on hand is possible in a number of ways. A company's liquidity indicates its financial health over a long period of time. A company's liquidity can be measured by looking at its current ratio and its quick ratio.

Current Ratio = Current Assets/Current Liabilities
Current ratio is widely and most commonly used ratio. It gives general understanding regarding the company's liquidities. The ratio shows the proportion of the current assets against current liabilities. It shows the ability of the company to fulfil its current

(short term) liabilities.

Quick Ratio = Current Assets - Inventory/Current Liabilities
Quick ratio shows the proportion of current assets which can easily convert in to cash to current liabilities. Quick ratio provides the information regarding that against current liabilities how much current assets company has that can be easily converted to fulfil its current (short term) liabilities.

PROFITABILITY RATIOS
Return on Assets = Net Income/Total Assets × 100
Return on Assets ratios shows the relationship between total assets and the net income of the company. This ratio is helpful to understand the company's earning compare to other competitors and previous years. Return of assets is basic profitability measurement, which shows the proportion of total assets to company is earing.

Return of Equity = Net Income/Equity × 100
Return of equity ratio helps to understand the relationship between the Net Income and Equity of the company. Ratio of the net income and equity shows that compare to equity how much company is generating the profit. Higher ROE indicate the better performance of company.

DATA ANALYSIS
The arithmetic mean approach and regression analysis are used for statistical analysis after data collection from two companies.

LIQUIDITY RATIOS

Current Ratio = Current Assets/Current Liabilities

Table No. 1 Current Ratio of TCS and Infosys from March 2014 to March 2023

Year	TCS	Infosys
March – 2014	2.84	3.83
March – 2015	2.46	3.12
March – 2016	4.72	3.98
March – 2017	6.40	4.05
March – 2018	4.85	3.78
March – 2019	4.18	3.00
March – 2020	3.30	2.88
March – 2021	2.92	2.74
March – 2022	2.49	2.10
March – 2023	2.36	1.90
Mean	3.652	3.138

(Sources: Annual reports of TCS and Infosys)

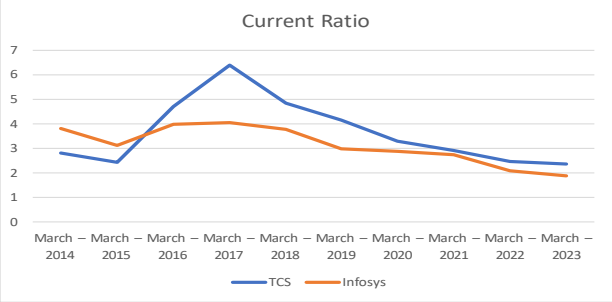

Figure 1 Line Chart Representation of Current Ratio

According to the current ratio table no. 1, Infosys has the highest ratio in March 2014 and March 2015, followed by TCS, which has the highest ratio in every year after that. When compared to Infosys following March 2015, it demonstrates a stronger capacity to meet its current obligations. In comparison to Infosys, TCS has a better total mean current ratio, indicating that TCS has maintained a better current ratio over the course of time. Both businesses have kept a healthy current ratio even during COVID-19.

Quick Ratio = Current Assets - Inventory/Current Liabilities

Table No. 2 Quick Ratio of TCS and Infosys from March 2014 to March 2023

Year	TCS	Infosys
March – 2014	2.84	3.83
March – 2015	2.45	3.12
March – 2016	4.72	3.98
March – 2017	6.39	4.05
March – 2018	4.85	3.78
March – 2019	4.18	3.00
March – 2020	3.30	2.88
March – 2021	2.92	2.74
March – 2022	2.48	2.10
March – 2023	2.36	1.90
Mean	3.649	3.138

(Sources: Annual reports of TCS and Infosys)

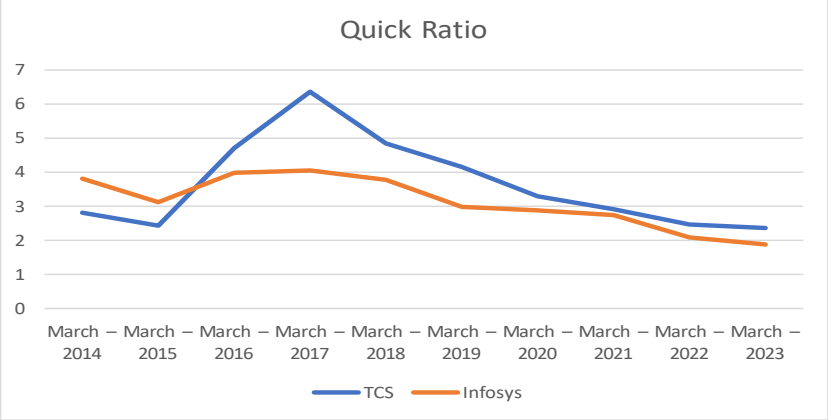

Figure 2 Line Chart Representation of Quick Ratio

With the exception of the years 2014 and 2015, TCS's current ratio is higher than Infosys's in every year shown in the quick ratio table no. 2, indicating that TCS is better able to meet its short-term obligations than Infosys through the utilisation of its liquid assets. In comparison to Infosys, TCS has a better total mean of quick ratio, indicating that TCS has maintained a better fast ratio over the course of time. Both companies have kept a healthy quick ratio even during the COVID-19 pandemic.

PROFITABILITY RATIOS

Return On Assets = Net Income/Average Total Assets × 100

Table No. 3 Return On Assets Ratio of TCS and Infosys from March 2014 to March 2023

Year	TCS	Infosys
March – 2014	32.07	19.33
March – 2015	30.53	19.67
March – 2016	29.80	17.45
March – 2017	26.35	17.29
March – 2018	27.72	21.29
March – 2019	30.21	18.62
March – 2020	31.68	19.17
March – 2021	28.30	19.21
March – 2022	31.49	21.36
March – 2023	32.63	22.96
Mean	30.078	19.635

(Sources: Annual reports of TCS and Infosys)

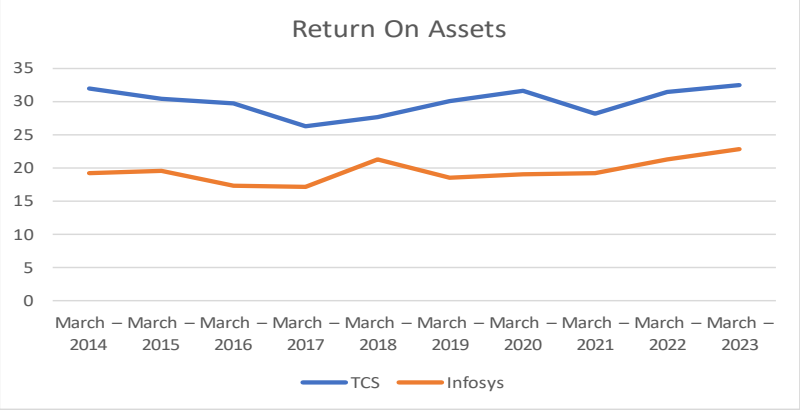

Figure 3 Line Chart Representation of Return On Assets Ratio

Comparing TCS and Infosys' return on assets ratio in table no. 3. It can be conclude that over the past decade reveals that TCS has consistently outperformed Infosys. Compared to Infosys, TCS has a better average return on assets, according to the mean of firms. The return on assets of both enterprises is unaffected by COVID-19, as shown in the preceding table. Throughout this time, both businesses have kept up their performance levels.

Return On Equity = Net Income/Equity × 100

Table No. 4 Return On Equity Ratio of TCS and Infosys from March 2014 to March 2023

Year	TCS	Infosys
March – 2014	41.93	24.21
March – 2015	42.40	25.30
March – 2016	35.49	20.78
March – 2017	30.31	20.31
March – 2018	33.27	25.44
March – 2019	38.10	23.44
March – 2020	44.72	24.97
March – 2021	41.39	25.23
March – 2022	49.48	30.63

March – 2023	52.46	34.34
Mean	40.955	25.465

(Sources: Annual reports of TCS and Infosys)

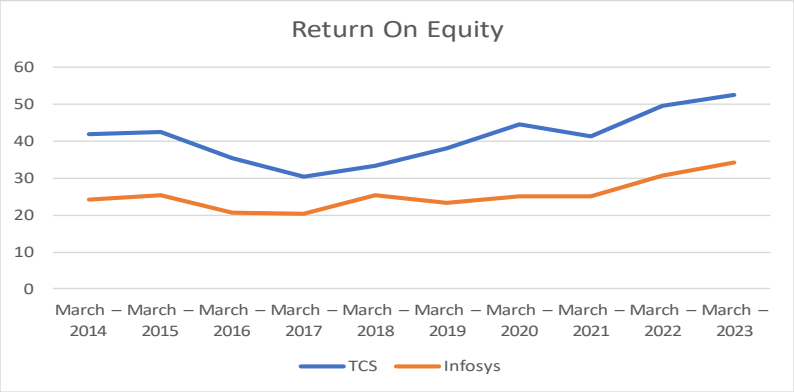

Figure 4 Line Chart Representation of Return On Equity Ratio

Both TCS and Infosys have ROEs that are displayed above. Return on equity has been strong for both businesses over the past decade. Compared to Infosys, TCS consistently has a better return on equity. On average, TCS's return on equity is greater than Infosys'. Additionally, as seen in the table above, the return on equity of two companies is unaffected by COVID-19.

REGRESSION ANALYSIS

To determine if liquidity ratios have a statistically significant impact on profitability, this study use regression analysis. Using linear regression, we can determine the nature of the link between profitability ratios and liquidity ratios.

Y = a + bx (1)
where,
Y – Dependent Variable
a – Shows intercept value
b – Shows Slope value
x – Independent Variable

Regression models could be written as Follows:
$ROA = a_0 + a_1CR + b_2QR$ \\ For model 01 (2)
$ROE = b_0 + b_1CR + b_2QR$ \\ For model 01 (3)

where,
ROA means Return on Assets,
ROE means Return on Equity,
CR means Current assets,
QR means Quick ratio.

a_0 and b_0 indicate the constant values and a_1, a_2, b_1, b_2 are regression coefficients.

Table No. 5 Model summary (Dependent variable- ROA and ROE)

Model	R	R Square	Adjusted R Square	F Statistics
ROA (Model 1)	0.356	0.126	0.024	1.231
ROE (Model 2)	0.486	0.234	0.147	2.631

From the above table no. 5 (model 1), it is observed that R_2= 0.126 and adjusted R Square is 0.024. It shows that 12.6% of ROA can be attained by selected independent variables (current ratio and quick ratio), and the remaining 87.4% of the ROA is affected by the other factors. From model 2, it is observed that R_2= 0.234 and adjusted R_2 = 0.147.
It is observed that 23.4% of ROE is obtained by selected independent variables (current ratio and quick ratio), and the remaining 76.6% of the ROE is affected by the other factors.

Table No. 6 Result of Regression Analysis (where, Dependent Variable = ROA)

Independent variable	B	Std. error	T	Sig.
(Constant)	25.200	4.182	6.026	1.36
Current Ratio	556.717	355.114	1.568	0.135
Quick Ratio	-557.065	355.294	-1.568	0.135

Table No. 7 Result of Regression Analysis (Where, Dependent Variable = ROE)

Independent variable	B	Std. error	T	Sig.
(Constant)	42.443	6.693	6.341	7.37
Current Ratio	1026.567	568.313	1.806	0.089
Quick Ratio	-1029.74	568.600	-1.811	0.088

Table no. 6 and 7 shows that current ratio, the independent variable, positively but insignificantly affects ROA and ROE. The independent variable, the quick ratio, has a negligible but unfavourable effect on ROA and ROE. At the 5% level of significance, we use the parameter estimate. A p-value greater than 0.05 indicates that the null hypothesis, which states that liquidity ratios do not significantly affect profitability ratios, is accepted.

CONCLUSION

The objective of the study was to determine the extent to which the liquidity and profitability of the selected information technology companies in India are related to one another. Taking into consideration the liquidity ratio, it is possible to draw the conclusion that TCS did better than Infosys in terms of its ability to pay off short-term commitments. It is possible to get the conclusion that TCS did better than Infosys based on the profitability ratio, which is a measure of the rate of profit that a company generates. Furthermore, the findings of the regression analysis indicate that the null hypothesis H0 is accepted, which indicates that there is no connection between the liquidity ratio and the profitability ratio respectively.

FUTURE SCOPE OF THE STUDY

The study only contained two organisations that were chosen from the information technology sector; however, there are a number of other companies that may be included to expand the scope of the study. In the analysis that can be extended further, just ten years' worth of data is taken into consideration. Depending on the needs of the researcher, the variables of the study can potentially be set to higher values. When analysing the link between the liquidity ratio and the profitability ratio, it is possible to employ a variety of other mathematical and statistical methods on the same date.

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