Financial Examination of Nse It Index Companies Drawn from Indian Stock Market

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Abstract

The most crucial component of any corporate organization is financial analysis. Every sector and industry must evaluate its financial performance at the end of the year for a variety of reasons. Thus, the current study looks at the NSE IT Index companies' financial performance. The study's goal is to use ratio analysis to gauge the IT companies' financial performance and then compare those results using specific ratios. The study used ratio analysis and ANOVA to compare the average performance in order to accomplish the stated goal. The NSE and the corresponding firms' official websites have provided the relevant secondary data. A variety of ratio categories are computed and contrasted during the last five years. According to the study's findings, TCS, INFY, TATAELX, HCLTECH, and HEXAWARE dominate the IT industry in terms of financial standing.

Keywords: Financial Examination, IT Index Companies, NSE (National Stock Exchange), Indian Stock Market.

1. INTRODUCTION

The financial examination of NSE IT Index companies drawn from the Indian stock market represents a critical area of analysis, particularly in the context of India's rapidly evolving digital economy. As the IT sector remains crucial in propelling the nation's economic expansion, understanding the financial performance of companies listed on the NSE IT Index becomes essential for investors, policymakers, and industry stakeholders.

Figure 1: Indian Stock Market

India's largest technical companies significantly contribute to GDP and global markets. Financial analysis reveals their profitability, liquidity, solvency, and market performance. This helps identify trends, risks, and growth potential in a rapidly evolving sector, influenced by the NSE IT Index.

1.1.Significance of the NSE IT Index in India's Financial Landscape

The NSE IT Index is a pivotal benchmark in India's financial landscape, reflecting the performance of the country's prominent technology companies. As a barometer for the health and growth of the IT sector, the index captures the impact of technological advancements and economic contributions of leading firms in software, IT services, and consulting. Given the sector's substantial role in driving India's GDP and global competitiveness, the NSE IT Index provides critical insights into market dynamics and investment opportunities. By tracking these companies, stakeholders can assess their financial stability, operational success, and broader economic impact, making the index an essential tool for understanding the evolving digital economy in India.

1.2. Research Objectives

Outlined below are the objectives of this study:

1. To analyze NSE IT Index the company's profitability, liquidity, and per-share ratios.
2. To evaluate financial performance discrepancies among NSE IT Index IT businesses
3. To evaluate financial trends and patterns over 8 years to assess industry success.

2. LITERATURE REVIEW

Bhalla (2004) covered financial principles and strategies ("Financial Management and Policy") essential for business governance. Bhalla is known for his methodical approach to financial

management, highlighting the necessity of solid financial policies in long-term organization growth and sustainability. Academics and practitioners use the book to comprehend organizations' financial environments.

Bhalla, Carver and Nash (2007) offered a thorough review of data analysis methods in their book "Doing Data Analysis with SPSS," focusing specifically on utilizing SPSS. For researchers and practitioners who must handle and evaluate complicated financial datasets, their work is essential. In order to guarantee the precision and dependability of financial analysis, the authors stress the significance of employing strong statistical methods. The book is very helpful for empirical researchers since it offers helpful advice on how to properly handle and analyze data, which improves the accuracy of financial research.

Coakes, Steed, and Dzidic (2006) provided useful SPSS tips in their book "SPSS Analysis Without Anguish." Their effort aims to make data analysis more approachable for those without a strong foundation in statistics by streamlining the process. In financial analysis, where the capacity to precisely evaluate data can have a substantial impact on decision-making processes, accessibility is essential. In order to assist users in navigating the intricacies of financial data analysis and help them make more accurate and well-informed financial decisions, the authors offer step-by-step directions and examples.

Hema and Ariram (2016) concentrated exclusively on the pharmaceutical industry in their study titled "Fundamental Analysis with Special Reference to Pharmaceutical Companies Listed in NSE,". The study offers an exhaustive fundamental analysis of companies in the pharmaceutical sector, emphasizing important financial metrics which can be applied to predict the performance of the company, including profitability earnings , dividends, ratios etc. The study's industry-specific insights, which provide a sophisticated grasp of the financial dynamics inside the pharmaceutical industry, make it very important. By concentrating on a certain industry.

Kim and Han (2000) outlined a novel strategy in their study "Genetic Algorithm Approach to Feature Discretization in Artificial Neural Network for the Prediction of Stock Price Index." In order to improve feature selection in neural networks—which are then used to forecast stock price indices—the authors investigate the application of evolutionary algorithms. This work is noteworthy because it applies cutting-edge computer approaches to financial analysis and shows how artificial intelligence and conventional financial forecasting tools can work together.

3. RESEARCH METHODOLOGY

The study technique focuses on a thorough examination of the financial performance across a number of selected ratios of IT companies included on the NSE IT Index. It uses a methodical technique to analyze company performance within the industry and comprehend financial patterns.

3.1. Study Framework

A descriptive research design was used in the study in order to accomplish its goals. This architecture makes it easier to compare different firms and for a thorough analysis of the companies' financial performance.

3.2. Source of Data

Secondary data is employed in the study which is gathered from a number of sources, such as books, scholarly journals, and the Nifty Index's own website. This data offers the information required for analysis.

3.3.Sample Selection

IT companies that are listed on the NSE IT Index make up the sample. Ten businesses in all were chosen for this analysis from the S&P CNX Nifty sectorial indexes.

3.4.Study Period

The analysis includes eight years' worth of financial data, spanning from 2013 to 2020.

3.5.Data Analysis Techniques

Descriptive statistics, ratio analysis, and ANOVA were used in the analysis. MS Excel and SPSS software were used to process and analyze the data in order to produce insightful findings.

4. DATA ANALYSIS AND INTERPRETATION

4.1.Test of Normality

A one-way analysis of variance is helpful when comparing the means of multiple groups or levels of independent variables. However, we need go over the presumptions necessary for this kind of statistical test before beginning the statistical analysis. The assumptions of HOMOGENEITY and NORMALITY of variance can be properly tested. With the use of a formal statistical test, we may investigate the normalcy assumptions.

Hypothesis (H_0) (Null hypothesis) : Data is distributed normally.

Hypothesis (H_1)(Alternate hypothesis) : Data is not distributed normally.

Significance Level = 0.05

Table 1: Test of Normality

Ratio	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Basic Earnings per Share	.269	50	.004	0.959	50	.000
Dividend per Share	.345	50	.000	0.922	50	.000
Operating Profit per Share	.178	50	.300*	0.077	50	.273
Net Profit per Share	.272	50	.003	0.959	50	.000
Profit before Interest & Tax Margin	.220	50	.283	0.072	50	.085
Net Profit Margin	.237	50	.056	0.059	50	.030
Return on Net Worth	.214	50	.300*	0.079	50	.296
Return on Capital Employed	.231	50	.079	0.057	50	.035
Return on Total Assets	.230	50	.085	0.065	50	.062
Current Ratio	.191	50	.300*	0.079	50	.289
Quick Ratio	.192	50	.300*	0.079	50	.300
Dividend Payout Ratio	.239	50	.040	0.034	50	.004
Earnings Retention Ratio	.305	50	.000	0.96	50	.000

The results of normality tests are displayed in the table; the Shapiro-Wilk and Kolmogorov-Smirnov tests both demonstrate that most ratios do not fully follow a normal distribution ($p < 0.05$). The premise of normality is not consistently met, as evidenced by the significant deviations from normalcy seen for several ratios. This can compromise the validity of the ANOVA results and point to the need for additional research or different approaches.

Table 2: Homogeneity of Variance Test

Ratio	Levene Statistic	df1	df2	Sig.
Basic Earnings per Share	3.601	9	40	0.020
Dividend per Share	4.490	9	40	0.005
Operating Profit per Share	3.920	9	40	0.023
Net Profit per Share	3.871	9	40	0.034
Profit before Interest & Tax Margin	3.370	9	40	0.048
Net Profit Margin	2.622	9	40	0.288
Return on Net Worth	1.982	9	40	0.668
Return on Capital Employed	2.454	9	40	0.357
Return on Total Assets	2.239	9	40	0.477
Current Ratio	6.099	9	40	0.000
Quick Ratio	6.132	9	40	0.000
Dividend Payout Ratio	4.851	9	40	0.003
Earnings Retention Ratio	4.227	9	40	0.007

The results of the test of homogeneity of variance, another crucial presumption for doing an ANOVA, are shown in the table. The Levene's test results show that nearly all of the variables under study have probability values greater than 0.05, which prevents us from rejecting the null hypothesis and leads us to conclude that the calculated ratio data have similar variance at the 5% and even 1% significance levels. Therefore, if these two fundamental presumptions are met, we can proceed to the analysis of the ANOVA results.

4.2.Hypothesis testing

Hypothesis (H_{0a}): there is no significant mean difference among Information Technology businesses listed on NSE IT Index

Hypothesis (H_{1a}): there is significant mean difference among Information Technology businesses listed on NSE IT Index

Table 3: ANOVA Result

Variable	Sum of Squares	df	Mean Square	F	Sig.
Basic Earnings per Share					
- Between Groups	34731.74	9	4846.737	31.903	0.00
- Within Groups	8297.727	40	290.776		
- Total	41918.36	49			
Dividend per Share					
- Between Groups	21316.54	9	2244.048	24.775	0.00
- Within Groups	4420.619	40	93.099		
- Total	24635.05	49			
Operating Profit per Share					
- Between Groups	721556.0	9	78938.44	33.114	0.00
- Within Groups	234415	40	4193.7		
- Total	844860.0	49			
Net Profit per Share					
- Between Groups	33940.37	9	3882.140	21.966	0.00
- Within Groups	7233.893	40	191.93		
- Total	41173.15	49			
Profit before Interest & Tax Margin					
- Between Groups	3259.090	9	363.210	48.455	0.00
- Within Groups	306.052	40	8.750		
- Total	3565.030	49			
Net Profit Margin					
- Between Groups	2346.637	9	261.725	71.274	0.00
- Within Groups	174.382	40	5.443		
- Total	2519.908	49			
Return on Net Worth					
- Between Groups	3197.209	9	343.022	32.777	0.00
- Within Groups	530.105	40	21.86		
- Total	3637.303	49			
Return on Capital Employed					
- Between Groups	2911.612	9	323.389	19.484	0.00
- Within Groups	790.986	40	28.108		
- Total	3591.486	49			
Return on Total Assets					
- Between Groups	2586.660	9	274.06	55.243	0.00
- Within Groups	259.709	40	4.826		
- Total	2735.258	49			
Current Ratio					
- Between Groups	43.236	9	4.670	4.060	0.001
- Within Groups	47.179	40	1.013		
- Total	79.204	49			
Quick Ratio					
- Between Groups	33.176	9	3.563	3.948	0.001
- Within Groups	37.210	40	0.902		

- Total	69.274	49			
Dividend Payout Ratio					
- Between Groups	23842.55	9	2525.716	6.579	0.00
- Within Groups	9711.577	40	326.123		
- Total	32442.02	49			
Earnings Retention Ratio					
- Between Groups	26602.03	9	2843.547	4.627	0.00
- Within Groups	26087.58	40	485.523		
- Total	41679.40	49			

The table shows that the analysis of variance results for each of the variables under study, both within and between groups. The null hypothesis is rejected because the F test statistics for each variable are very high, as demonstrated by the probability values for each variable that are less than 0.05. This indicates that there is a significant mean difference among the Information Technology businesses listed on the NSE IT Index. Put otherwise, we might state that there are notable differences amongst all the organizations when it comes to their financial performance as measured by profitability, liquidity, and per-share ratios.

Hypothesis (H_{2b}) = The financial performance of IT companies listed on NSE IT Index shows no significant differences.

Table 4: Average Performance of per Share Ratios of IT Companies

Company	BEPS	DPS	OPPS	NPPS
HCLTECH	58.93	29.11	251.83	59.15
HEXAWARE	23.61	8.33	58.92	23.61
INFY	76.36	45.01	382.47	76.94
JUSTDIAL	32.96	1.51	220.59	33.26
MINDTREE	53.14	28.51	458.3	53.21
NIITTECH	44.77	10.51	373.37	44.69
TCS	220.3	51.01	535.15	220.68
TATAELX	55.91	24.21	409.9	55.91
TECHM	45.86	22.11	345.5	45.79
WIPRO	36.97	5.51	254.28	37.04

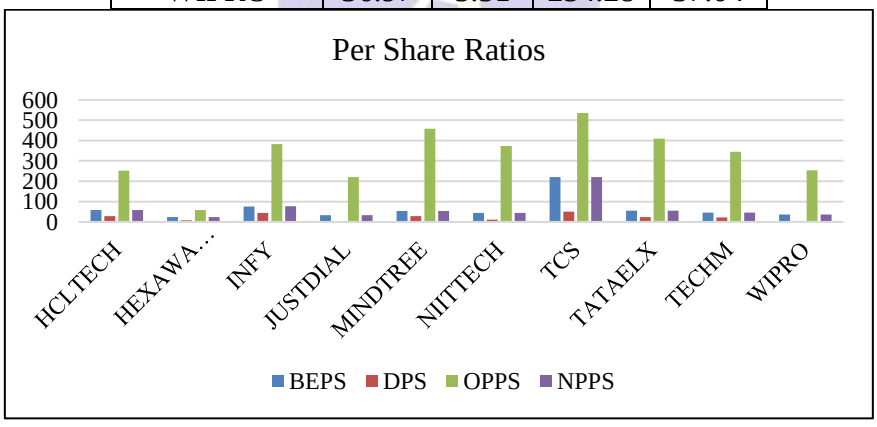

Figure 2: Graphical presentation of Average Performance of per Share Ratios of IT Companies

The average per-share ratios of IT businesses listed on the NSE IT Index are displayed in Table 4. TCS has demonstrated exceptional financial success by leading the industry in Basic Earnings Per Share (BEPS), Net Profit Per Share (NPPS) and Operating Profit Per Share (OPPS). INFY is not far behind, with notable strengths in BEPS and Dividend Per Share (DPS). Additionally, HCLTECH does well in DPS and BEPS. In general, TCS exhibits exceptional profitability and operational efficiency, whilst INFY and HCLTECH provide robust earnings and returns to shareholders.

Table 5: Average Profitability Performance of the IT Companies

Company	PBITM	NPM	RONW	ROCE	ROTA
HCLTECH	53.39	35.61	27.05	30.96	32.85
HEXAWARE	41.8	27.32	29.17	30.70	33.50
INFY	42.82	24.85	24.16	28.35	29.97
JUSTDIAL	38.76	21.37	19.20	22.19	23.56
MINDTREE	26.7	13.16	23.70	24.83	28.36
NIITTECH	26.97	13.75	16.42	18.09	23.26
TCS	44.19	26.88	36.02	42.41	39.03
TATAELX	34.12	16.33	35.32	40.22	35.71
TECHM	29.53	15.76	21.81	23.38	25.32
WIPRO	35.22	18.92	19.05	22.79	24.45

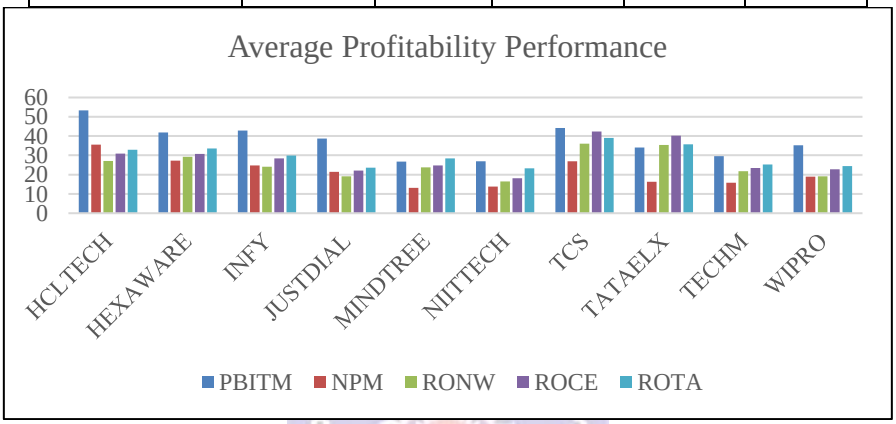

Figure 3: Graphical presentation of Average Profitability Performance of the IT Companies

The average profitability performance across five key measures for Information Technology businesses listed on the NSE IT Index is displayed in Table 5. HCLTECH is the industry leader in both Net Profit Margin (NPM) and Profit Before Interest and Tax Margin (PBITM), demonstrating its strong overall profitability. TCS is a close second, showing exceptional performance in Return on Net Worth (RONW), Return on Capital Employed (ROCE) as well as Return on Total Assets (ROTA). INFY has a high PBITM ranking, and HEXAWARE performs admirably in NPM. In ROCE, TATAELX sticks out. HCLTECH and TCS are the best performers overall, with strong profitability and efficiency. HEXAWARE and INFY also have noteworthy capabilities in particular domains.

Table 6: Average Performance of Liquidity Ratio for IT Companies

Company	CR	QR	DPR	ERR
HCLTECH	4.39	4.38	47.19	74.03
HEXAWARE	3.89	3.89	71.96	50.26
INFY	4.70	4.70	66.40	55.82
JUSTDIAL	2.41	2.41	3.14	28.08
MINDTREE	3.86	3.86	39.34	82.88
NIITTECH	3.99	3.99	45.50	76.62
TCS	5.63	5.63	55.92	66.30
TATAELX	4.74	4.74	39.09	82.13
TECHM	3.61	3.61	43.97	78.25
WIPRO	4.03	3.01	31.03	80.19

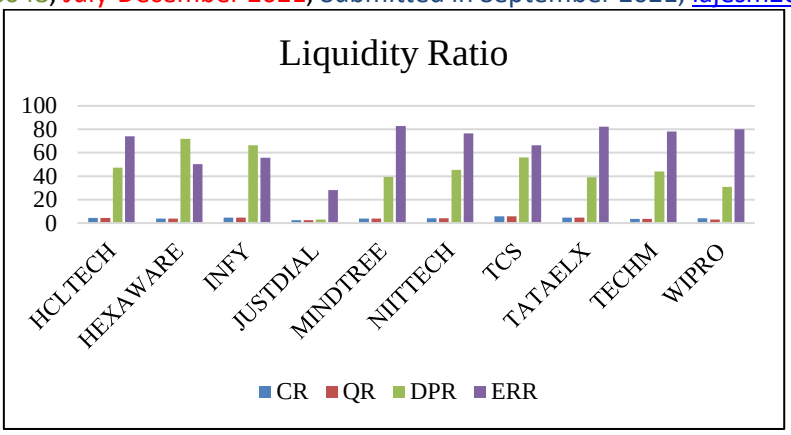

Figure 4: Graphical presentation of Average Performance of Liquidity Ratio for IT Companies

The average liquidity ratio performance for IT businesses listed on the NSE IT Index is shown in Table 6. TCS has the greatest liquidity position among the firms under analysis, as evidenced by its leads in the Current Ratio (CR) and Quick Ratio (QR). TATAELX and INFY are next in line. The company with the greatest Dividend Payout Ratio (DPR) is HEXAWARE; payout performance is also strong for TCS and INFY. Unexpectedly, WIPRO and MINDTREE have the highest Earnings Retention Ratios (ERR). In comparison to their industry rivals, TCS, INFY, and TATAELX exhibit superior liquidity management as they perform well overall across a range of liquidity metrics.

5. CONCLUSION

An analysis of the financial performance of companies that are included in the NSE IT Index reveals significant patterns of performance in terms of profitability, liquidity, and per-share allocations. In terms of profitability, liquidity, and operational efficiency, TCS stands out as the company that performs the best. This remarkable performance is a reflection of the company's healthy financial health and successful management techniques. Both INFY and HCLTECH have solid financial metrics, notably in terms of earnings and returns to shareholders. In terms of dividend payouts, HEXAWARE is a leader, while WIPRO is the leader in terms of earnings retention, illustrating the unique characteristics that are present across the industry. The findings of the investigation indicate that TCS, INFY, and HCLTECH are the most successful companies in the information technology business. Each of these companies has demonstrated strong financial capabilities and strategic advantages in a variety of domains.

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