



# A STUDY ON THE PERFORMANCE EVALUATION OF SELECTED IT STOCKS LISTED ON THE NSE

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**Abstract :** This study examines the performance of selected leading IT companies in India from 2019 to 2024 to evaluate their return and associated investment risk. With increasing interest in the stock market, particularly within the IT sector, identifying stable and high-performing stocks has become essential for investors. The analysis utilizes key financial tools such as the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha to assess risk-adjusted returns, along with average return and standard deviation to measure overall performance consistency.

The study focuses on five major IT firms TCS, Infosys, HCL Technologies, Wipro, and Tech Mahindra and compares their performance with select companies in the banking and pharmaceutical sectors. The findings indicate that companies like Infosys and TCS offered superior returns with lower risk, making them favorable options for long-term investment. The research provides useful insights for investors, students, and financial analysts, highlighting the importance of sectoral comparison and risk assessment in portfolio construction.

**Keywords:** IT Stocks, NSE, Risk and Return, Sharpe Ratio, Treynor Ratio, Jensen's Alpha, Investment, Portfolio, Sectoral Analysis.

## INTRODUCTION

The Information Technology (IT) sector is a key driver of India's economic growth, attracting significant investor attention. With increasing stock market participation, especially in NSE-listed IT companies, understanding their performance is crucial. However, due to market volatility and varying company performance, selecting the right IT stock is challenging. This study evaluates five major IT firms Infosys, TCS, Wipro, HCL Technologies, and Tech Mahindra over the period 2019 to 2024 using return and risk metrics such as Sharpe Ratio, Treynor Ratio, and Jensen's Alpha. A comparison with banking and pharmaceutical sector stocks is also included to assess the relative investment potential of the IT sector.

## NEED FOR THE STUDY

The growing interest in stock market investments, particularly in the Information Technology (IT) sector, highlights the necessity for a focused evaluation of IT stocks. Despite their popularity, investors often face difficulty in selecting suitable IT stocks due to volatility and varying performance levels. This study is needed to identify which IT companies offer better returns with manageable risk and to provide a comparative framework that assists investors, students, and financial analysts in making informed decisions.

## SCOPE OF THE STUDY

This study evaluates the performance of five leading IT companies listed on the National Stock Exchange (NSE) over the period 2019-2024. It analyzes risk-return profiles using financial metrics such as average return, standard deviation, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha. Additionally, the study compares the IT sector with banking and pharmaceutical sectors, offering a broader view of investment opportunities and guiding portfolio diversification strategies.

## REVIEW OF LITERATURE

**Bantwa and Ansari (2019)** evaluated selected Indian IT firms using CAPM and highlighted that high returns often came with higher risk, emphasizing the need to assess both return and volatility.

**Sharma et al. (2023)** used GARCH models to study volatility in the Nifty IT and Nifty 50 indices pre- and post-COVID-19. They found that the IT index showed quicker recovery and greater stability, reflecting sectoral resilience.

**Verma and Gupta (2021)** examined sectoral indices during the initial COVID-19 phase and concluded that the IT sector had lower beta and volatility, making it a defensive investment choice.

**Nandan and Srivastava (2017)** used Sharpe's Single Index Model to construct an optimal portfolio of Nifty 50 stocks, contributing to methodologies for risk-adjusted performance evaluation.

**Iyer and Sharma (2023)** conducted a comparative analysis of IT, banking, and pharma stocks, noting that IT firms showed stronger growth, while pharma acted as a safer investment during downturns.

## STATEMENT OF THE PROBLEM

The Information Technology (IT) sector in India plays a significant role in economic growth and attracts substantial investor interest. However, selecting the right IT stocks remains challenging due to high market volatility, fluctuating returns, and varying risk levels across companies. Many investors lack a structured framework to evaluate risk-adjusted performance, leading to uninformed or speculative decisions. This study addresses the need for systematic analysis by evaluating the performance of selected IT stocks listed on the NSE and comparing them with banking and pharmaceutical sector stocks. The goal is to provide clarity on return potential and risk exposure to support rational investment decisions.

## OBJECTIVES OF THE STUDY

To assess the long-term performance of leading IT stocks listed in NSE using return metrics for the year 2019-2024.

To measure the volatility of IT Stocks listed on the NSE .

To compare the risk and return of the IT sector stocks with the banking sector stocks during the period 2019-2024.

To compare the risk and return of the IT sector with the pharmaceutical sector during the period 2019-2024.

## RESEARCH METHODOLOGY

This study follows a quantitative and comparative research approach to evaluate the performance of selected stocks in the Indian Information Technology (IT) sector. It aims to assess the risk-return profile of IT companies and compare their performance with firms in the banking and pharmaceutical sectors between 2019 and 2024.

**Research Design :** The study uses a descriptive and analytical research design. It focuses on measuring stock returns, volatility, and risk metrics such as beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha to evaluate the overall performance of selected stocks listed on the National Stock Exchange (NSE).

**Data Sources :** Investing.com , NSE India

### Sampling Design

A total of 15 companies were selected using purposive sampling based on market capitalization, liquidity, and sector leadership.

**IT Sector:** Infosys, TCS, Wipro, HCL Technologies, Tech Mahindra

**Banking Sector:** HDFC Bank, ICICI Bank, SBI, Kotak Mahindra Bank, Axis Bank

**Pharma Sector:** Sun Pharma, Divis Laboratories, Cipla, Dr. Reddy's Laboratories, Lupin

**Tools:**

Microsoft Excel - For analysis, return calculation, chart preparation.

**Techniques :**

**Average Return** - to calculate stock Returns.

**Standard Deviation** - to measure risk.

**Beta** - to measure how sensitive the stock is to market movements.

**Sharpe Ratio** - to find return per unit of total risk.

**Treynor Ratio** -to find return per unit of market risk (Beta).

**Jensen's Alpha** - to check if return is more than what the market expected.

**Formula:**

$$\text{Average Return} = (\text{today Price}-\text{yesterday Price})/ (\text{yesterday Price})*100$$

$$\text{Standard deviation} = \sqrt{\text{variance}}$$

$$\text{Sharpe Ratio} = (R_p - R_f) / \sigma_p$$

$$\text{Treynor Ratio} = (R_p - R_f) / \beta_p$$

$$\text{Jenson Ratio} = R_p - [R_f + \beta_p *(R_m - R_f)]$$

$$R_f = 6\% \text{ (assumed risk-free rate)}$$

Study Period : 2019 - 2024

**LIMITATIONS OF THE STUDY**

The study covers only a few selected IT stocks, which may not represent the overall IT sector performance.

Timeframe may not capture long-term or extraordinary market trends.

External macroeconomic factors are not deeply examined.

Relies on secondary data, subject to source limitations.

**DATA ANALYSIS AND INTERPRETATIONS**

**Table 9.1: Performance Comparison of Selected IT Companies Based on Return and Risk Metrics for the year 2019-2024**

| Company          | Avg. Return (%) | Risk ( $\sigma$ ) | Sharpe Ratio | Treynor Ratio | Jensen's Alpha |
|------------------|-----------------|-------------------|--------------|---------------|----------------|
| TCS              | 1.23            | 6.16              | 0.18997      | 2.05          | 0.497          |
| Infosys          | 1.60            | 7.72              | 0.1994       | 2.20          | 0.713          |
| HCL Technologies | 2.24            | 8.18              | 0.2665       | 2.56          | 1.168          |
| Wipro            | 1.43            | 8.15              | 0.1680       | 2.36          | 0.685          |
| Tech Mahindra    | 1.67            | 8.46              | 0.1900       | 1.92          | 0.618          |

**Interpretation**

HCL Technologies leads with the highest average return of 2.24%, a Sharpe Ratio of 0.2665, and the highest Jensen's Alpha of 1.168, indicating strong returns for the level of risk taken. Infosys follows with a return of 1.60%, Sharpe Ratio 0.1994, and Alpha 0.713, showing good risk-adjusted performance. TCS offers the lowest risk (6.16%) and remains a stable option with an Alpha of 0.497. While Wipro and Tech Mahindra show moderate returns (1.43% and 1.67% respectively), their risk levels are higher with relatively lower Sharpe Ratios, suggesting they carry more volatility for similar or slightly better returns.

**Table 9.2: Volatility Comparison among IT companies (Beta Values) for the year 2019 - 2024**

| Company          | Beta ( $\beta$ ) |
|------------------|------------------|
| TCS              | 0.57             |
| Infosys          | 0.70             |
| HCL Technologies | 0.85             |
| Wipro            | 0.58             |
| Tech Mahindra    | 0.84             |

**Interpretation:** TCS(0.57) and Wipro(0.58) exhibit the lowest beta values, indicating minimal sensitivity to market movements, while HCL(0.85) and Tech Mahindra(0.84) show higher volatility, suitable for aggressive investors seeking growth.

**Table9.3 :Comparison between IT, Banking, and Pharmaceutical Sectors for the year 2019–2024**

| Company             | Sector  | Avg. Return (%) | Risk ( $\sigma$ ) | Sharpe Ratio | Treynor Ratio | Jensen's Alpha |
|---------------------|---------|-----------------|-------------------|--------------|---------------|----------------|
| TCS                 | IT      | 1.23            | 6.16              | 0.18997      | 2.05          | 0.497          |
| Infosys             | IT      | 1.60            | 7.72              | 0.1994       | 2.20          | 0.713          |
| HCL Technologies    | IT      | 2.24            | 8.18              | 0.2665       | 2.564         | 1.168          |
| Wipro               | IT      | 1.43            | 8.15              | 0.1680       | 2.36          | 0.685          |
| Tech Mahindra       | IT      | 1.67            | 8.46              | 0.1900       | 1.916         | 0.618          |
| HDFC Bank           | Banking | 1.00            | 6.91              | 0.136        | 0.862         | -0.347         |
| ICICI Bank          | Banking | 2.13            | 8.00              | 0.258        | 1.642         | 0.582          |
| SBI                 | Banking | 1.98            | 10.65             | 0.574        | 3.257         | 0.0433         |
| Kotak Mahindra Bank | Banking | 0.77            | 7.44              | 0.501        | 5.5           | 0.065          |
| Axis Bank           | Banking | 1.07            | 9.62              | 0.104        | 0.673         | -0.76          |
| Sun Pharma          | Pharma  | 2.40            | 7.63              | 0.3066       | 3.162         | 1.466          |
| Divis Laboratories  | Pharma  | 1.80            | 7.52              | 0.231        | 3.866         | 1.209          |
| Cipla               | Pharma  | 2.27            | 7.59              | 0.358        | 5.23          | 2.11           |
| Dr. Reddy's Labs    | Pharma  | 0.53            | 12.17             | 0.038        | 0.796         | -0.22          |
| Lupin Ltd           | Pharma  | 1.83            | 9.44              | 0.188        | 2.49          | 0.933          |

**Interpretation:** In the IT sector, HCL Technologies has the highest average return of 2.24%, a Sharpe Ratio of 0.2665, and a Jensen's Alpha of 1.168, indicating strong performance with good risk-adjusted returns. Infosys also performs well with a return of 1.60%, Sharpe Ratio 0.1994, and Alpha 0.713. Among banks, ICICI Bank shows a solid return of 2.13%, Sharpe Ratio 0.258, and Alpha 0.582, while SBI has a higher return of 1.98% but also higher risk (10.65). In the pharma sector, Cipla stands out with a return of 2.27%, Sharpe Ratio 0.358, and the highest Jensen's Alpha of 2.11, showing excellent performance. Sun Pharma also shows strong numbers with a return of 2.40% and Alpha 1.466. Overall, HCL Technologies, Cipla, and Sun Pharma offer the best returns with strong risk-adjusted performance.

## FINDINGS

HCL Technologies demonstrated the strongest performance among the selected IT companies, offering the highest average return along with effective risk management, making it a top choice for growth-oriented investors.

Infosys provided stable returns with moderate risk, positioning it as a balanced investment option suitable for investors seeking consistent performance.

TCS recorded the lowest volatility and beta, making it ideal for conservative investors aiming for steady, low-risk growth, despite offering relatively modest returns.

Tech Mahindra delivered reasonable returns but showed the highest volatility, making it more suitable for investors with a higher risk appetite.

Wipro offered moderate returns and, despite higher total risk, maintained a controlled market-related risk (beta), making it appealing for moderately conservative investors.

During the COVID-19 period, IT companies like HCL and Infosys continued to perform well, reflecting their resilience and operational strength in uncertain market conditions.

In sectoral comparison, Infosys and HCL outperformed major banking companies like HDFC and ICICI when risk-adjusted metrics were considered.

IT stocks also outperformed pharmaceutical companies like Cipla and Dr. Reddy's Laboratories in terms of risk-return efficiency over the study period.

TCS and Wipro, with their low beta values, demonstrated lower sensitivity to market fluctuations, making them suitable for risk-averse investors.

Each IT stock presented distinct strengths, catering to different investor profiles from low-risk, stable growth to higher-risk, higher-return opportunities.

## SUGGESTIONS

Use risk-adjusted performance metrics like Sharpe Ratio, Treynor Ratio, and Jensen's Alpha for better investment evaluation instead of relying only on raw returns.

Prefer IT stocks such as HCL Technologies and Infosys for long-term investment, as they have shown strong and consistent performance relative to risk.

Choose TCS for low-risk investment strategies, given its low volatility and beta, making it suitable for conservative investors.

Diversify the portfolio across sectors like banking and pharmaceuticals along with IT to reduce overall risk and improve stability.

Align stock selection with personal risk tolerance and investment goals, and base decisions on data-driven analysis rather than recent trends.

## CONCLUSION

The study concludes that among selected IT firms, HCL Technologies delivered the best overall performance during 2019-2024. Infosys and TCS proved strong and reliable, while Tech Mahindra and Wipro offered higher returns at the cost of greater volatility. Compared to banking and pharma sectors, IT stocks provided superior growth potential, highlighting the sector's investment appeal when combined with proper risk analysis.

## ACKNOWLEDGMENT

I would like to express my sincere gratitude to my guide Mr.B. Sreekanth for his constant support and guidance in completing this research paper. I also thank my family and peers for their encouragement throughout the process

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