European Economic Letters
ISSN 2323-5233
Vol 16, Issue 1 (2026)
http://eelet.org.uk

Performance Evaluation of IT Stocks In India Using Risk Adjusted Measures

Shahid Jamal
PhD Scholar, Dept. of Management & Commerce, Maulana Azad National Urdu University
shahidafridi0547@gmail.com

Prof. Syed Khaja Safiuddin
Professor, Dept. of Management & Commerce, Maulana Azad National Urdu University
sksafiuddin@manuu.edu.in

Dr. Varisha Pervez
Assistant Professor,
parvez.varisha8737@gmail.com, Axis institute of Higher Education, Rooma, Kanpur.

Imran Khan
Research Scholar, Dept. of Management & Commerce, Maulana Azad National Urdu University,
rhimran.khan@gmail.com

Dr. Mohd Salman Siddiqui
Researcher, Maulana Azad National Urdu University, Hyderabad, msalman073@gmail.com

Abstract
The Indian Information Technology (IT) industry is among the most vibrant segments of the capital market, as it draws the attention of the investor, as it has potential of growth and its contribution to the economy. To appreciate the investment appeal of IT stocks, it would be necessary to make analyses of their performance and risks involved. The study uses several risk-adjusted measures of performance to evaluate the performance of a sample of IT firms which are listed in the National Stock Exchange (NSE). The Sharpe Ratio, Treynor Ratio, Jensen Alpha, and Sortino Ratio is applied in the study to assess the effectiveness of every business in generating excess returns relative to the risk-free rate based on total risk, systematic risk, and downside risk. Also, the comparison of the various risk-adjusted measures enables the establishment of the minor disparities between the market-related risk, the general volatility, and the downside risks, which assists in developing a more cautious and comprehensive methodology regarding making investment decisions.

Keywords: Performance Evaluation, IT Stocks, Indian IT Sector, Risk, Returns, National Stock Exchange

Introduction
The Information Technology (IT) industry is one of the pillars of the economic condition of India, contributing significantly to the expansion of the GDP, exports, creating jobs, and changing the country to the digital economy. Indian IT companies have changed the usual framework of an outsourcing company to become the world leaders in innovative fields of cloud computing, machine learning, artificial intelligence, cybersecurity, and digital transformation services. Listed companies on both the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) attract a lot of attention both among the retail and institutional investors due to their growth and robustness. Nevertheless, the industry is not

exempt as the issues facing the industry such as fluctuation in demand around the globe, currency exchange, lack of talent, geopolitical conflict, and heightened competition pose significant risk and unpredictability to IT stocks. Traditional performance measures using only absolute returns or simple measures of risk usually do not take the most important risk-reward trade-off into account and may thus deceive investors into believing their investment is efficient. More sophisticated risk-adjusted measures, which are the Sharpe Ratio, the Treynor Ratio, the Alpha of Jensen, and the Sortino Ratio, provide more detailed analysis because they estimate excess returns of total risk, systematic risk, market-expected returns and downside deviation respectively. In a time of increased market uncertainty and interest in capital preservation among investors, these measures, especially measures of downside risk, can give critical information to identify the good performers and non-performers.

The paper is a detailed performance analysis of the ten stocks of IT companies listed in Indian stock exchanges, which are Tata Consultancy Services (TCS), Infosys, HCL Technologies, Wipro, Tech Mahindra, Persistent Systems, Oracle Financial Services Software, Coforge, Mphasis and Tata Elxsi. These stocks are a diverse array of both long-established big-cap leaders and active middle-level participants in the sector. The main aim is to examine the risk-adjusted performance and downside risk parameters of these stocks throughout the study period by the metrics.

The preliminary findings indicate that mid-cap and specialization companies tend to perform better than large-cap companies in most aspects thereby demonstrating that they are in a better position to make extra profits whilst managing risks effectively. Also, a glance downside risk will tell the stocks that can cope in bad times, which can be valuable information to cautious investors who want to enjoy growth and security in the volatile IT market. The study will bring practical information to the portfolio optimization practice, stock selection techniques, and a better appreciation of the changing dynamics in the Indian IT industry.

Objective Of The Study

1. To assess IT stock performance using risk-adjusted measures.
2. To evaluate IT stocks' downside risk.

Research Methodology

Nature of the Study

The current research is descriptive and analytical in nature. It is descriptive in the sense that it outlines the historical performance patterns of the stocks of IT that have been chosen within the period of study. At the same time, it is analytical, as it uses a set of statistical and financial instruments to assess risk-adjusted returns and explore the behaviors of systematic risk over the same period.

Sources of Data

The current research is purely a secondary one. The period covered in the data set is ten financial years, beginning on April 1, 2015, up to March 31, 2025. All the necessary data has been gathered in the form of authentic secondary sources which are publicly available, that is, National Stock Exchange of India Limited (NSE), Bombay Stock Exchange Limited (BSE), Money control, Screener.

European Economic Letters
ISSN 2323-5233
Vol 16, Issue 1 (2026)
http://eelet.org.uk

Sample Selection and Sampling Technique
The samples used in the study will include NSE and BSE stocks of the IT sector. The sampling method which will be used is purposive sampling because the companies have been identified using the availability of continuous data over the 10-year period.

Period of the Study
The research will span over ten financial years: 1 April 2015 to 31 March 2025. This duration gives an in-depth review of the performance trends, volatility behaviour, and risk-adjusted returns over a long period.

Tools and Techniques
Used The following tools and techniques were utilized to analyze the performance and risk characteristics of the selected IT stocks:
Standard Deviation: Quantifies the risk of every stock by the fluctuation of returns.
Beta (β): Used in computing systematic risk, i.e. the returns responsiveness of each stock with reference to market movement.

Sharpe Ratio: Measures risk-adjusted performance using total risk using the following formula:

$$\text{Sharpe Ratio} = \frac{R_p - R_f}{\sigma_p}$$

Treynor Ratio: Assesses superfluous reimbursement per unit of systematic risk (beta):

$$\text{Treynor Ratio} = \frac{R_p - R_f}{\beta_p}$$

Jensen's Alpha: Tests the performance of a stock versus what the CAPM suggests it should have done:

$$\alpha = R_p - [R_f + \beta_p(R_m - R_f)]$$

Sortino Ratio: Measures excess returns over unit of downside risk (negative returns only):

$$\text{Sortino Ratio} = \frac{R_p - R_f}{\sigma_d}$$

ANALYSIS AND INTERPRETATION

Table-1 Performance evaluation using risk-adjusted measures

Name of the companies	SD σp	Sharpe's Ratio	Treynor's Ratio	Jense's Alpha
TCS	26.253	0.064	0.022	-0.0365
Infosys	29.666	0.030	0.043	-0.0057
HCL	29.285	0.148	0.250	0.0311
Wipro	32.291	-0.242	-0.490	-0.0893
TechM	29.214	0.202	0.069	-0.0009
Persistent	35.920	0.585	1.714	0.2016
Oracle	28.677	0.236	1.196	0.0638
Coforge	39.761	0.822	3.074	0.3192
Mphasis	27.942	0.581	1.541	0.1548

Tata Elxsi	39.622	0.423	0.328	0.1315

Interpretation:
Three major risk measures have been used to compare the performance of the chosen IT stocks, which are Sharpe Ratio, Treynor Ratio, and Alpha proposed by Jensen. The metrics give information about the returns that are earned by each stock as compared to the total risk (Sharpe), systematic risk (Treynor), and the expected return according to the Capital Asset Pricing Model (Jensen Alpha).

Sharpe Ratio
Sharpe Ratio is the surplus of money against the entire risk (standard deviation). A positive Sharpe ratio value is a good sign of a better risk-adjusted performance, whereas negative Sharpe ratio value implies that the stock did not perform at a better rate compared to its risk-free equivalent on a risk-adjusted basis. Coforage shares are the one with the best Sharpe Ratio of 3.074 as compared to Persistent Systems (1.714) and Mphasis (1.541). Such values are much higher than 1, which depicts high risk-adjusted returns and an effective payment of the overall risk that the investors undertake. The same with Oracle Financial Services (1.196), which shows a high performance of more than 1 Sharpe Ratio.

Moderate players are Tata Elxsi (0.328), Tech Mahindra (0.069), Infosys (0.043), and TCS (0.022) and they have positive but small Sharpe Ratios meaning that they have given small additional returns, in relation to their volatility. The positive ratio of HCL Technologies (0.250) is still lower than the best performing companies. Wipro on the other hand has a negative Sharpe Ratio (-0.490), which means that Wipro was unable to earn returns to cover its overall risk and as such is the worst on this measure.

Treynor Ratio
Treynor Ratio is used to measure the excess returns divided by unit systematic risk (beta). Positive values that are greater show the compensation of an exposure to market risk.

Once again Coforge has a very high Treynor Ratio (0.822) and is followed by Persistent Systems (0.585) and Mphasis (0.581) which indicates that these stocks gave high returns more than their market risk. Tata Elxsi (0.423), Oracle Financial Services (0.236), and Tech Mahindra (0.202) also have good performance on this measure.

HCL Technologies (0.250) is good and Infosys (0.043) and TCS (-0.0365) portray a near zero or slightly negative value which indicates that there is little or no systematic risk. Wipro (-0.242) has the lowest Treynor Ratio, which is an affirmation that it has not performed well despite consideration of only market risk.

Jensen's Alpha
Jensen's Alpha is used by Jensen to measure the abnormal returns that had been earned by Jensen more than those that had been predicted by the CAPM. When the alpha is positive, it means that it outperforms (ability to select stocks or favorable conditions), whereas when it is negative, it underperforms considering the assumed market risk.

European Economic Letters
ISSN 2323-5233
Vol 16, Issue 1 (2026)
http://eelet.org.uk

Seven of the top ten stocks produced positive alphas, indicating high performance on the stock level. Coforge (0.3192), Persistent Systems (0.2016), and Mphasis (0.1548) have the highest alphas followed by Tata Elxsi (0.1315), Oracle Financial Services (0.0638), and HCL Technologies (0.0311). The positive values indicate that these stocks performed better than their beta suggests perhaps because of the good firm underlying, future growth, or tail strong winds in the Indian IT industry.

Tech Mahindra has an almost zero alpha (-0.0009) suggesting that its performance is as per the CAPM expectations. The alphas of Infosys (-0.0057), TCS (-0.0365), and especially of Wipro (-0.0893) are negative, indicating that they perform poorly as compared to the market standard after removing the effects of systematic risk.

Table-:2 Calculation of Downside Risk of IT Stocks using Sortino's Ratio

Name of the Companies	SD (σp)	Sortino's Ratio
TCS	1.7473	0.9649
Infosys	2.3514	0.3785
HCL	1.8244	2.3717
Wipro	2.3843	-3.2731
TechM	1.3658	4.3286
Persistent	1.9962	10.5331
Oracle	1.2491	5.4265
Coforge	1.7329	18.8504
Mphasis	1.2943	12.5356
Tata Elxsi	2.1490	7.7954

Interpretation: The Sortino Ratio has been used to measure the downside risk of the chosen IT stocks since it is used to measure excess return relative to per unit downside deviation (harmful volatility below the risk-free rate). This index is equally advantageous to risk-averse investors because it rewards only negative volatility, unlike the Sharpe Ratio which rewards all volatility. A positive Sortino Ratio with a high value indicates greater compensation for the downside risk whereas a negative value indicates that harmful volatility prevailed over returns. Table [insert table number] below presents the results and interprets them below.

Coforge has the best Sortino Ratio (18.8504), which indicates great capability of making excess returns with very less downside risk. This is succeeded by Mphasis (12.5356) and Persistent Systems (10.5331) as they have a high resiliency to unfavorable market trends, and, they have provided high rewards.

Tata Elxsi (7.7954), Oracle Financial Services (5.4265), and Tech Mahindra (4.3286) also keep a good performance, its ratios being above 4, which means that they have good downside cover and efficient ratios of risk-sharing. HCL Technologies (2.3717) and HCL Technologies have good performance, which is quite decent excess returns considering deviation to its downside. TCS (0.9649) and Infosys (0.3785) have positive though small

ratios, implying moderate compensation of downside risk, but poor performance in this dimension. On the other hand, Wipro has a considerably negative Sortino Ratio (-3.2731) indicating a huge downside volatility that greatly outweighed any conceivable gains, making it the worst in the downside risk management.

Conclusion

The current paper compared the performance of the selected Indian IT stocks on a period of ten years (2015-2025) on various risk-adjusted measures through the following: Sharpe Ratio, Treynor Ratio, Jensen Alpha and Sortino Ratio. The result indicates that the performance of companies in the same sector is significantly heterogeneous. Coforge became the most reliable and high performer in all the measures of evaluation, next Persistent Systems and then Mphasis. These firms showed a high ability to produce excess returns as compared to the total risk, systematic risk, and downside volatility, and they also resulted in more positive abnormal returns than CAPM expectations.

Tata Elxsi and Oracle Financial Services performed steadily and satisfactorily as there were positive risk-adjusted returns. Efficiency of Tech Mahindra and HCL Technologies was moderate, and the performance of these companies was according to their market risk exposure. Despite being financially sound and fundamentally sound, TCS and Infosys registered relatively lower levels of risk-adjusted performance over the study period. Wipro was defined as the poorest performer, which is indicative of poor payment of the risk and an increased downside risk.

Overall, the research highlights the significance of using a series of risk-adjusted performance measures to assess the efficiency of a stock in detail. The results indicate that investors aiming to achieve high returns and regulated downside risk ought to consider stocks that exhibit consistently high risk-adjusted measures than basing considerations on the size of the company or its dominant positioning in the market. The study enhances the knowledge about the performance dynamics in Indian IT sector and offers practical information in construction of portfolios and investment decision making.

Reference

1. Kumar, N., & Kalyan, D. N. B. (2019). Performance Evaluation of Selected Equity Shares in It Industry, India. *India (June 21, 2019)*.
2. Rani, M. M. (2014). Performance Evaluation of Equity Shares. *International Research Journal of Management Sociology & Humanity*, *5*(3), 6-13.
3. Kumar, V. L., & Jyothi, S. A. (2021). Evaluation of Long-term Performance of Selected IT Equity Stocks with Reference to Nse. *International Journal of Innovations in Engineering Research and Technology*, *8*(07), 289-297.
4. NASSCOM. (2023). *Strategic review: The IT-BPM sector in India*. National Association of Software and Service Companies.
5. Reserve Bank of India. (2023). *Handbook of statistics on the Indian economy*. RBI Publications.
6. Sharpe, W. F. (1966). Mutual fund performance. *Journal of Business, 39*(1), 119–138.
7. Treynor, J. L. (1965). How to rate management of investment funds. *Harvard Business Review, 43*(1),63–75.

8. Jensen, M. C. (1968). The performance of mutual funds in the period 1945–1964. *Journal of Finance, 23*(2), 389–416
9. Arindam Mandal and Prasun Bhattacharje, "The Indian Stock Market and the Great Recession"- Theoretical and Applied Economics Volume XIX (2012), No. 3(568), pp. 59- 76
10. I M Pandey.,2010, "Financial Management 10th Edition" Vikas Publishing House
11. Gifford Gomez, (2008) "Financial markets, institutions and Financial services", prentice hall India ltd. New Delhi.
12. Khan, M Y and P K Jain, Financial Management, Tata McGraw-Hill Publishing Co., New Delhi, 2007.
13. Jayadev, M (1996), Mutual Fund Performance: An Analysis of Monthly Returns‖, Finance India, 10(1) March, pp 73-84

Website

https://www.nseindia.com/
https://www.moneycontrol.com/
https://www.rbi.org.in/
https://www.bseindia.com/