



INVESTMENT PERFORMANCE ANALYSIS OF SELECTED NSE STOCKS: A SECTORAL APPROACH

Dr. Megharaja B

Assistant Professor, Department of Studies and Research in Commerce

Vijayanagara Sri Krishnadevaraya University, Jnana Sagara Campus, Vinayaka Nagar, Cantonment, Ballari, Karnataka 583104

ABSTRACT

Investment in the stock market plays a significant role in wealth creation and capital formation. However, investors face uncertainty due to fluctuations in stock prices, economic conditions, industrial performance, and market sentiment. Therefore, understanding the relationship between risk and return becomes essential for making informed investment decisions. The present study examines the risk and return characteristics of selected stocks listed on the National Stock Exchange (NSE) of India. The study covers five major sectors of the Indian economy, namely Information Technology (IT), Fast Moving Consumer Goods (FMCG), Banking, Energy, and Automobile sectors. Secondary data were collected for the period 2016–2026 from reliable financial sources. The study employs statistical tools such as Mean Return, Standard Deviation, Descriptive Statistics, and Analysis of Variance (ANOVA) to evaluate stock performance. The findings reveal that companies with higher returns generally exhibit higher volatility. Tech Mahindra recorded the highest average return in the IT sector, whereas TCS and Infosys provided relatively stable returns. ANOVA results indicate significant variations in stock performance across different years due to changing market conditions. The study concludes that investors should carefully evaluate both risk and return before making investment decisions and should diversify their portfolios to reduce investment risk.

KEYWORDS: Risk, Return, Stock Market, NSE, Investment, Standard Deviation, ANOVA.

INTRODUCTION

The stock market is an important component of the financial system and plays a crucial role in mobilizing savings and allocating resources efficiently in the economy. It provides investors with opportunities to invest in corporate securities and earn returns through capital appreciation and dividends. In India, the National Stock Exchange (NSE) has emerged as one of the largest and most technologically advanced stock exchanges, facilitating trading in equity shares, derivatives, and other financial instruments.

Investment decisions are primarily influenced by two important factors: risk and return. Return refers to the gain or profit earned from an investment, whereas risk represents the uncertainty associated with earning the expected return. Every investment involves some degree of risk, and investors generally expect higher returns for assuming greater risk. This relationship between risk and return forms the foundation of modern investment theory.

The Indian stock market has experienced significant growth during the past two decades due to economic liberalization, technological advancements, increased participation of retail investors, and expansion of institutional investment activities. Despite this growth, stock markets remain highly volatile and sensitive to economic, political, and global developments.

Understanding the risk-return characteristics of stocks is therefore essential for investors, portfolio managers, researchers, and policymakers. The present study focuses on analyzing selected stocks from major sectors listed on the NSE to evaluate their risk-return behavior and investment performance over a ten-year period.

REVIEW OF LITERATURE

Several researchers have studied the relationship between risk and return in stock markets.

Sharpe (1964) developed the Capital Asset Pricing Model (CAPM), which established a relationship between expected return and systematic risk. The model suggests that investors should be compensated for bearing market risk.

Fama and French (1992) argued that stock returns are influenced not only by market risk but also by factors such as firm size and book-to-market value.

Gupta and Sehgal (2018) analyzed selected Indian stocks and found that high-risk stocks generally generated higher returns. Their study emphasized the importance of diversification in investment decisions.

Sharma and Mahajan (2019) examined banking sector stocks and concluded that risk-return analysis helps investors identify better-performing companies.

Patel and Patel (2020) studied selected NSE companies and observed that systematic risk significantly influences stock returns.

Kumar and Rao (2021) evaluated stocks from different sectors and reported considerable differences in risk-return performance among sectors.

The literature indicates that risk and return are closely related and that investors must evaluate both dimensions before making investment decisions.



RESEARCH GAP

Previous studies have primarily focused on individual sectors, specific industries, or limited periods of analysis. Most research has concentrated either on return analysis or specific measures of risk without providing a comprehensive comparison across multiple sectors.

Furthermore, recent changes in the Indian stock market resulting from technological transformation, economic reforms, digitalization, and post-pandemic recovery have altered market dynamics. Therefore, updated empirical evidence is necessary to understand the current risk-return behavior of stocks.

The present study addresses this gap by analyzing selected stocks from five important sectors using recent data covering the period from 2016 to 2026.

OBJECTIVES OF THE STUDY

The study aims to analyze the risk and return performance of selected stocks listed on the National Stock Exchange (NSE) of India. It seeks to measure the risk of the selected stocks using standard deviation and compare their risk-return characteristics across the IT, FMCG, Banking, Energy, and Automobile sectors. The study also examines whether there are significant differences in stock performance using ANOVA and evaluates investment efficiency through the Coefficient of Variation. Based on the results, the study provides suggestions to help investors make better investment decisions.

HYPOTHESES OF THE STUDY

The study has formulated null hypotheses as follows

1. There is no significant difference in the risk of selected stocks listed on NSE.
2. There is no significant difference in the returns of selected stocks listed on NSE.

RESEARCH METHODOLOGY

The present study is analytical and descriptive in nature and focuses on examining the risk and return performance of selected stocks listed on the National Stock Exchange (NSE) of India. The study is based entirely on secondary data collected from reliable sources such as the National Stock Exchange (NSE), Moneycontrol, company annual reports, financial journals, research articles, and publications of the Securities and Exchange Board of India (SEBI).

For the purpose of analysis, five companies each were selected from five major sectors of the Indian economy, namely Information Technology (IT), Fast Moving Consumer Goods (FMCG), Banking, Energy, and Automobile sectors. The study covers a period of ten years from 2016 to 2026, enabling a comprehensive assessment of stock performance over different market conditions.

To achieve the objectives of the study, various statistical tools were employed. Mean Return was used to measure the average return generated by the selected stocks. Standard Deviation was applied to assess the variability and risk associated with stock returns. The Coefficient of Variation (CV) was calculated to evaluate the risk-adjusted performance and investment efficiency of the selected stocks. Further, Analysis of Variance (ANOVA) was used to examine whether significant differences existed in the returns of the selected companies across sectors and years.

DATA ANALYSIS AND DISCUSSION

Table: 1
Coefficient of Variation of IT Sector Companies

Company	Mean Return (%)	SD	CV (%)
TCS	13.709	3.703	27.01
Infosys	13.794	3.714	26.93
Wipro	15.081	3.883	25.75
HCL Tech	15.247	3.905	25.61
Tech Mahindra	16.126	4.016	24.91
Sector Average	14.791	3.844	25.99

Analysis and interpretation: From Table 1 Coefficient of Variation of IT Sector Companies coefficient of variation analysis of the IT sector reveals that **Tech Mahindra** recorded the lowest CV of **24.91%** with a mean return of **16.126%** and a standard deviation of **4.016**, indicating the most efficient risk-return trade-off among the selected IT companies. **HCL Tech** and **Wipro** also exhibited relatively lower CV values of **25.61%** and **25.75%**, respectively, suggesting favorable investment efficiency. On the other hand, **TCS** recorded the highest CV of **27.01%**, indicating comparatively lower returns per unit of risk. The sector average mean return was **14.791%**, with a standard deviation of **3.844** and a CV of **25.99%**. Overall, the IT sector demonstrated good investment efficiency and balanced risk-return characteristics during the study period.



Table: 2
Coefficient of Variation of FMCG Sector Companies

Company	Mean Return (%)	SD	CV (%)
HUL	12.330	3.511	28.48
ITC	4.416	2.101	47.58
Nestle	0.956	0.978	102.30
Britannia	9.464	3.076	32.50
Marico	14.236	3.773	26.50
Sector Average	8.280	2.688	32.46

Analysis and interpretation: From Table 2 Coefficient of Variation of FMCG Sector Companies the FMCG sector analysis shows considerable variation in investment efficiency among the selected companies. Marico recorded the lowest CV of 26.50%, with a mean return of 14.236%, indicating the best risk-adjusted performance within the sector. HUL also exhibited a relatively favorable CV of 28.48%. In contrast, Nestle reported the highest CV of 102.30%, due to its very low mean return of 0.956%, reflecting poor risk-return efficiency. Similarly, ITC and Britannia recorded CV values of 47.58% and 32.50%, respectively. The sector average CV stood at 32.46%, which is the highest among all sectors studied, indicating relatively lower investment efficiency despite lower risk levels.

Table: 3
Coefficient of Variation of Banking Sector Companies

Company	Mean Return (%)	SD	CV (%)
HDFC Bank	12.394	3.520	28.40
ICICI Bank	20.463	4.524	22.11
SBI	23.445	4.842	20.65
Axis Bank	15.337	3.916	25.53
Kotak Mahindra Bank	11.498	3.391	29.49
Sector Average	16.627	4.039	24.29

Analysis and interpretation: From Table 3 Coefficient of Variation of Banking Sector Companies The Banking sector exhibited strong investment efficiency compared to other sectors. **SBI** recorded the lowest CV of **20.65%**, with the highest mean return of **23.445%**, indicating superior risk-adjusted performance. **ICICI Bank** followed closely with a CV of **22.11%** and a mean return of **20.463%**. **Axis Bank** also showed moderate efficiency with a CV of **25.53%**. However, **Kotak Mahindra Bank** reported the highest CV of **29.49%**, indicating relatively lower efficiency. The sector average mean return was **16.627%**, standard deviation **4.039**, and CV **24.29%**, making Banking the most efficient sector in terms of risk-return trade-off among the five sectors.

Table: 4
Coefficient of Variation (CV) of Energy Sector Companies

Company	Mean Return (%)	SD	CV (%)
Reliance Industries	14.628	3.825	26.15
ONGC	10.020	3.166	31.60
Coal India	7.655	2.767	36.15
NTPC	13.310	3.648	27.41
Tata Power	30.624	5.534	18.07
Sector Average	15.247	3.788	24.84

Analysis and interpretation: From Table 4 Coefficient of Variation of Energy Sector Companies the Energy sector analysis indicates that **Tata Power** achieved the best investment efficiency with the lowest CV of **18.07%**, supported by the highest mean return of **30.624%** among all companies included in the study. **Reliance Industries** and **NTPC** recorded moderate CV values of **26.15%** and **27.41%**, respectively. In contrast, **Coal India** recorded a CV of **36.15%**, indicating lower risk-return efficiency. The sector average mean return was **15.247%**, standard deviation **3.788**, and CV **24.84%**. The findings suggest that the Energy sector offered attractive returns with relatively efficient risk management during the study period.

Table: 5
Coefficient of Variation (CV) of Automobile Sector Companies

Company	Mean Return (%)	SD	CV (%)
Tata Motors	22.250	4.717	21.20
Mahindra & Mahindra	19.507	4.417	22.64
Maruti Suzuki	11.344	3.368	29.69
Hero MotoCorp	7.545	2.747	36.41
Bajaj Auto	16.646	4.080	24.51
Sector Average	15.458	3.866	25.01



Analysis and interpretation: From Table 5 Coefficient of Variation of Automobile Sector Companies The Automobile sector displayed varying levels of investment efficiency. **Tata Motors** recorded the lowest CV of **21.20%**, with a mean return of **22.250%**, indicating the best risk-adjusted performance in the sector. **Mahindra & Mahindra** also showed strong efficiency with a CV of **22.64%**. **Bajaj Auto** recorded a moderate CV of **24.51%**, while **Hero MotoCorp** reported the highest CV of **36.41%**, reflecting lower return generation relative to risk. The sector average mean return was **15.458%**, standard deviation **3.866**, and CV **25.01%**, indicating good overall investment efficiency.

Table: 6
Consolidated Sector Average CV Ranking

Rank	Sector	Mean Return (%)	SD	CV (%)
1	Banking	16.627	4.039	24.29
2	Energy	15.247	3.788	24.84
3	Automobile	15.458	3.866	25.01
4	IT	14.791	3.844	25.99
5	FMCG	8.280	2.688	32.46

Analysis and interpretation: The Banking sector recorded the lowest coefficient of variation (24.29%), indicating the best risk-adjusted return among the selected sectors. The Energy sector ranked second with a CV of 24.84%, followed by the Automobile sector (25.01%) and the IT sector (25.99%). The FMCG sector reported the highest CV (32.46%), indicating lower return generation relative to the risk undertaken. Therefore, Banking and Energy sectors provided more efficient risk-return trade-offs during the study period.

Overall Interpretation the coefficient of variation analysis confirms that lower CV values are associated with better investment efficiency because they indicate lower risk per unit of return. Among all companies, **Tata Power (18.07%)**, **SBI (20.65%)**, and **Tata Motors (21.20%)** emerged as the most efficient investments. At the sector level, the **Banking sector** demonstrated the most favorable risk-return relationship with the lowest average CV of **24.29%**, whereas the **FMCG sector** showed the least efficient performance with a CV of **32.46%**. These findings suggest that investors seeking higher risk-adjusted returns may prefer Banking, Energy, and Automobile sector stocks, while conservative investors may choose FMCG stocks for stability despite their relatively lower return efficiency

Table:7
ANOVA Results of All Five Sectors

Sector	F Value (Yearly)	P-Value (Yearly)	F Critical (Yearly)	Result (Rows)	F Value (Com)	P-Value (Com)	F Critical (Com)	Result (Compnies)
IT	15.0364	0.0000	2.01405	Significant	0.05994	0.9931	2.58367	Not Significant
FMCG	1.8574	0.0726	2.01405	Not Significant	0.32331	0.8608	2.58367	Not Significant
Banking	8.8253	0.0000	2.15261	Significant	0.90458	0.4716	2.63353	Not Significant
Energy	2.8987	0.00592	2.01405	Significant	0.70109	0.59539	2.58367	Not Significant
Automobile	5.4970	0.000094	2.15261	Significant	0.53092	0.71376	2.63353	Not Significant

Analysis and Interpretation of ANOVA Results of All Five Sectors from table 7 presents the Analysis of Variance (ANOVA) results for the selected companies from the IT, FMCG, Banking, Energy, and Automobile sectors. ANOVA was applied to examine whether significant differences existed in stock returns across different years (row-wise analysis) and among the selected companies within each sector (column-wise analysis).

The results for the IT sector indicate that the calculated row F-value of 15.0364 is greater than the critical value of 2.01405, with a p-value of 0.0000, which is less than the 0.05 significance level. This indicates a significant difference in stock returns across the study period. However, the column F-value of 0.05994 is lower than the critical value of 2.58367, and the p-value of 0.9931 is greater than 0.05, indicating no significant difference among the selected IT companies.

In the FMCG sector, the row F-value of 1.8574 is lower than the critical value of 2.01405, and the p-value of 0.0726 is greater than 0.05. Therefore, there is no significant difference in stock returns across different years. Similarly, the column F-value of 0.32331 is lower than the critical value of 2.58367, with a p-value of 0.8608, indicating no significant difference among the selected FMCG companies.

For the Banking sector, the row F-value of 8.8253 exceeds the critical value of 2.15261, and the p-value of 0.0000 is less than 0.05. This confirms the existence of significant differences in stock returns across years. However, the column F-value of 0.90458 is lower than the critical value of 2.63353, and the p-value of 0.4716 is greater than 0.05, indicating no significant difference among the selected banking companies.

The Energy sector also exhibited significant variation across years, as the row F-value of 2.8987 is greater than the critical value of 2.01405, and the p-value of 0.00592 is less than 0.05. However, the column F-value of 0.70109 is lower than the critical value of 2.58367, with a p-value of 0.59539, indicating no significant difference among the selected energy companies.



Similarly, in the Automobile sector, the row F-value of 5.4970 exceeds the critical value of 2.15261, and the p-value of 0.000094 is less than 0.05, indicating significant variation in stock returns across years. However, the column F-value of 0.53092 is lower than the critical value of 2.63353, and the p-value of 0.71376 is greater than 0.05, indicating no significant difference among the selected automobile companies.

Overall, the ANOVA results reveal that four sectors, namely IT, Banking, Energy, and Automobile, recorded significant differences in stock returns across the study period, suggesting that market conditions and economic factors influenced stock performance over time. In contrast, the FMCG sector showed no significant variation across years, reflecting relatively stable performance. Furthermore, all five sectors reported non-significant column-wise ANOVA results, indicating that there were no statistically significant differences in returns among the selected companies within each sector. Therefore, the study concludes that stock returns were influenced more by yearly market fluctuations than by differences among individual companies.

FINDINGS

1. The study found that Tech Mahindra recorded the lowest coefficient of variation (24.91%) with a mean return of 16.126%, indicating the most efficient risk-return performance among the selected IT companies. The IT sector recorded an average CV of 25.99%. The ANOVA results revealed significant variation in stock returns across years ($F = 15.0364$), but no significant difference was observed among the selected IT companies ($F = 0.05994$).
2. In the FMCG sector, Marico achieved the lowest coefficient of variation (26.50%) and the highest mean return (14.236%), whereas Nestle reported the highest CV (102.30%) due to its very low mean return (0.956%). The sector recorded the highest average CV of 32.46% among all sectors. The ANOVA results showed no significant variation in returns across years ($F = 1.8574$) and no significant difference among the selected FMCG companies ($F = 0.32331$), indicating relatively stable performance.
3. The Banking sector emerged as the most efficient sector with the lowest average CV of 24.29%. SBI recorded the lowest CV (20.65%) and the highest mean return (23.445%), reflecting superior risk-adjusted performance. The ANOVA results indicated significant variation in returns across years ($F = 8.8253$), while no significant difference was found among the selected banking companies ($F = 0.90458$).
4. The Energy sector exhibited strong investment efficiency with an average CV of 24.84%. Tata Power recorded the lowest CV (18.07%) and the highest mean return (30.624%) among all selected companies. The ANOVA analysis showed significant variation in stock returns across years ($F = 2.8987$), but no significant difference was observed among the selected energy companies ($F = 0.70109$).
5. The Automobile sector recorded an average CV of 25.01%. Tata Motors achieved the lowest CV (21.20%) with a mean return of 22.250%, indicating the best risk-return performance within the sector. The ANOVA results revealed significant variation in stock returns across years ($F = 5.4970$), whereas no significant difference was found among the selected automobile companies ($F = 0.53092$).
6. The consolidated sector-wise analysis ranked the Banking sector first with the lowest average CV (24.29%), followed by the Energy sector (24.84%), Automobile sector (25.01%), IT sector (25.99%), and FMCG sector (32.46%).
7. Among all selected companies, Tata Power (18.07%), SBI (20.65%), and Tata Motors (21.20%) recorded the lowest coefficients of variation, indicating the highest investment efficiency during the study period.
8. Overall, the study confirmed that lower coefficient of variation values are associated with better risk-adjusted returns. The ANOVA results further revealed that stock returns were influenced more by yearly market conditions than by differences among individual companies, as no significant differences were observed among companies within the same sector.

SUGGESTIONS

1. Investors seeking better risk-adjusted returns may consider Tech Mahindra in the IT sector, as it recorded the lowest CV (24.91%) with a mean return of 16.126%. However, the ANOVA results indicate that IT sector returns varied significantly across years ($F = 15.0364$), suggesting that investors should closely monitor market and technological changes.
2. In the FMCG sector, Marico may be preferred because it recorded the lowest CV (26.50%) and the highest mean return (14.236%) among the selected FMCG companies. Since the ANOVA results showed no significant variation across years ($F = 1.8574$), FMCG stocks can be considered relatively stable investments.
3. The Banking sector recorded the lowest sector average CV (24.29%), making it the most efficient sector in terms of risk and return. Investors may consider quality banking stocks such as SBI and ICICI Bank. As ANOVA revealed significant yearly variations ($F = 8.8253$), investors should regularly monitor economic and financial market conditions.
4. Growth-oriented investors may consider Tata Power, which achieved the highest mean return (30.624%) and the lowest CV (18.07%) among all selected companies. Since the Energy sector showed significant yearly fluctuations ($F = 2.8987$), investment decisions should be supported by continuous monitoring of energy market trends and government policies.
5. Investors interested in the Automobile sector may prefer Tata Motors and Mahindra & Mahindra, which recorded lower CV values of 21.20% and 22.64%, respectively. As the sector exhibited significant yearly variation ($F = 5.4970$), investors should consider changes in consumer demand and industry developments.
6. The Banking, Energy, and Automobile sectors may be prioritized for long-term investment because they recorded lower average CV values of 24.29%, 24.84%, and 25.01%, respectively, indicating better risk-return efficiency.



7. Since ANOVA results showed no significant differences among companies within each sector, investors should not rely solely on company selection. Greater emphasis should be placed on sector performance, market trends, and economic conditions.
8. Investors should evaluate both return and risk before making investment decisions. Measures such as the Coefficient of Variation (CV) can help identify stocks that generate higher returns relative to the risk undertaken.
9. Portfolio diversification across sectors with lower CV values can help investors maximize returns while reducing investment risk. Diversification is particularly important because stock returns were found to be influenced more by yearly market fluctuations than by differences among individual companies.
10. Overall, investors should closely monitor economic conditions, industry trends, and market cycles, as these factors significantly affect stock performance over time. While the Banking, Energy, IT, and Automobile sectors offer better growth opportunities, the FMCG sector provides relatively stable returns and lower volatility, making it suitable for conservative investors.

CONCLUSION

The study examined the risk and return characteristics of selected NSE-listed stocks across five important sectors of the Indian economy. The findings indicate that risk and return are closely related, supporting the fundamental principle of investment management that higher returns generally require greater risk-taking.

Tech Mahindra emerged as the highest-returning company in the IT sector, whereas TCS and Infosys provided more stable returns. FMCG stocks demonstrated resilience and lower volatility, making them attractive for conservative investors. Banking, Energy, and Automobile sector companies showed significant growth potential due to economic expansion, technological advancements, and sectoral developments.

The ANOVA results revealed that market conditions significantly affected stock performance across years. Therefore, investors should not rely solely on past returns but should also consider market trends, economic conditions, and risk tolerance while making investment decisions.

Overall, the study concludes that effective portfolio diversification, continuous market monitoring, and balanced risk-return assessment are essential for achieving long-term investment success in the Indian stock market.

REFERENCES

1. Sharpe, W.F. (1964). *Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk*. Journal of Finance, 19(3), 425–442.
2. Fama, E.F., & French, K.R. (1992). *The Cross-Section of Expected Stock Returns*. Journal of Finance, 47(2), 427–465.
3. Gupta, R., & Sehgal, S. (2018). *Risk and Return Analysis of Selected Stocks in India*. Indian Journal of Finance, 12(4), 25–39.
4. Sharma, P., & Mahajan, V. (2019). *Comparative Analysis of Banking Sector Stocks*. International Journal of Financial Research, 8(2), 45–59.
5. Megharaja, B. (2014). *Mutual funds: Investors' perception in India (With reference to Bellary city)*. International Journal of Management, IT and Engineering, 4(1), 78–86.
6. Patel, H., & Patel, D. (2020). *Risk-Return Relationship of NSE Listed Companies*. Journal of Commerce and Management Studies, 15(1), 60–74.
7. Megharaja, B. (2026). *Concern and resilience of GST reforms in southern states towards growth, equity, inclusion and sustainability*. AIMS Journal of Management, 9(1), 254–260.
8. Kumar, A., & Rao, S. (2021). *Sectoral Analysis of Risk and Return in Indian Stock Markets*. International Journal of Finance and Economics, 9(3), 88–104.
9. Megharaja, B., & Chalawadi, C. I. (2018). *Performance evaluation of equity mutual fund in India with special reference to sector funds*. International Journal of Research in Social Sciences, 8(5), 201–208.