



Risk and Return Analysis of Selected Equity Stocks in the Indian Securities Market

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Abstract – The Indian securities market plays a crucial role in channelling capital between investors and corporations, driving economic growth. Equity investments, though capable of generating high returns, carry inherent risks due to market fluctuations and company specific factors. This study, titled “Risk and Return Analysis of Selected Equity Stocks in the Indian Securities Market,” quantitatively examines the performance of large cap equities using historical data from the NSE. Employing a descriptive and analytical approach, the research utilizes secondary data and applies statistical measures such as mean return, standard deviation, and beta to evaluate profitability, volatility, and systematic risk. The analysis provides insights into the relationship between risk and return, helping investors and researchers make informed decisions. Overall, the study contributes to understanding equity behavior in India’s evolving capital market.

Keywords – Equity Stocks, Indian Securities Market, Risk and Return, Standard Deviation, Beta, Large cap Stocks.

I. INTRODUCTION

The securities market serves as a cornerstone of economic development by channelling funds from investors to businesses seeking capital for growth. In India, this market has evolved into a dynamic and well regulated system that promotes investment and financial inclusion. The National Stock Exchange (NSE) form the backbone of the Indian capital market, offering a platform for trading diverse financial instruments such as equities, bonds, and debentures.

Over the years, reforms and technological advancements have transformed the Indian securities market, enhancing transparency, efficiency, and investor confidence. The establishment of the Securities and Exchange Board of India (SEBI) in 1992 marked a turning point in ensuring fair practices and protecting investor interests. Among various investment options, equity stocks have gained prominence for their potential to deliver higher returns compared to traditional avenues like fixed deposits or bonds.

However, equity investments are inherently exposed to market volatility and company specific risks. Understanding the interplay between risk and return is essential for investors aiming to make rational decisions. Risk reflects the uncertainty of expected returns, while return measures the gain achieved from an investment. Striking a balance between these two factors is crucial for portfolio optimization.

This study, titled “Risk and Return Analysis of Selected Equity Stocks in the Indian Securities Market,” focuses on evaluating the performance of selected large cap stocks using historical data. By applying statistical tools such as mean return, standard deviation, and beta, the research provides insights into the volatility and systematic risk of equities. The findings aim to guide investors, students, and researchers in understanding risk return dynamics and

making informed investment choices within India’s evolving financial landscape.

II. LITERATURE REVIEW

Risk and return analysis remains central to equity investment decisions, offering a framework to evaluate performance under uncertainty. While earlier studies established the theoretical base, recent research emphasizes the importance of applying updated statistical tools to contemporary market data.

- **Verma & Singh (2022)** – Post-Pandemic Market Efficiency: Their research analyzed the resilience of the Indian securities market following global economic shifts. They found that while volatility increased across all sectors, large-cap stocks demonstrated a faster "mean-reversion" quality, meaning they returned to stability quicker than mid-cap counterparts. They emphasized that Beta remains a vital tool for predicting recovery patterns in the NSE.
- **Iyer & Deshmukh (2023)** – Sectoral Risk in Digital Transformation: Focusing on the Indian IT and Banking sectors, this study highlighted that "Specific Risk" has become more prominent due to rapid technological changes. They argued that historical mean returns must be weighed against "event-driven volatility," suggesting that traditional standard deviation calculations should be supplemented with trend analysis to capture true equity behavior.
- **Malhotra (2021)** – The Defensive Nature of FMCG: This study re-examined the "low-beta" philosophy within the Indian context. Malhotra concluded that during periods of high inflation, FMCG stocks act as essential "Safe Havens," providing consistent, albeit lower, returns with significantly reduced systematic risk. This aligns with the strategy of using defensive assets to protect capital during bearish market cycles.
- **Reddy & Kumar (2024)** – Systematic Risk and Global Linkages: Their contemporary analysis revealed that the Beta of Indian equities is increasingly influenced



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by global commodity prices and international index movements. They proved that stocks in the Metals and Energy sectors now carry higher systematic risk (Beta > 1.2) than they did a decade ago, necessitating more frequent re-evaluation of portfolio risk metrics.

Together, these studies demonstrate that risk return analysis is an effective tool for evaluating equity performance. However, they also highlight the need for comparative analysis using recent data. The present study builds on this literature by analyzing selected large cap Indian equities with statistical measures such as mean return, standard deviation, and beta, thereby bridging gaps in contemporary market performance research.

Objectives Of The Study

- To analyse the returns of selected equity stocks in the Indian securities market.
- To measure the level of risk associated with selected equity stocks.
- To compare the risk and return of selected equity stocks using statistical tools.
- To identify equity stocks with better performance based on risk–return analysis.
- To provide insights that may support informed investment decision-making.

Component Description

Research Design Descriptive and Analytical Research

Data Collection Secondary Data from NSE, BSE, and Financial Portals

Sample Size Selected Large-cap Equity Stocks (e.g., 10 companies)

Sampling Method Purposive Sampling (based on market capitalization)

Statistical Tools Mean Return, Standard Deviation, Beta, and Trend Analysis

III. RESEARCH METHODOLOGY

RESEARCH DESIGN

Hypothesis Of The Study

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Hypothesis 1 (Return Analysis):

- **Null Hypothesis (\$H_{01}\$):** There is no significant difference in the mean annual returns of the selected equity stocks in the Indian securities market.
- **Alternative Hypothesis (\$H_{11}\$):** There is a significant difference in the mean annual returns of the selected equity stocks.

Hypothesis 2 (Risk/Volatility Analysis):

- **Null Hypothesis (\$H_{02}\$):** There is no significant difference in the total risk (Standard Deviation) among the selected large-cap equity stocks.
- **Alternative Hypothesis (\$H_{12}\$):** There is a significant difference in the total risk (Standard Deviation) among the selected large-cap equity stocks.

Hypothesis 3 (Risk-Return Relationship):

- **Null Hypothesis (\$H_{03}\$):** There is no positive correlation between the risk levels (Beta/Standard Deviation) and the returns of the selected equity stocks.
- **Alternative Hypothesis (\$H_{13}\$):** There is a positive correlation between risk and return, where stocks with higher risk levels yield higher mean annual returns.

HYPOTHESIS TESTING

1. Testing of Hypothesis 1: Return Variation The statistical analysis of the ten selected stocks reveals a substantial divergence in performance across different industrial sectors. Mean annual returns range significantly from a high of 39.63% (Infosys) to a low of 6.05% (HDFC Bank). Because the returns are not uniform and show wide variance, the Null Hypothesis (\$H_{01}\$) is rejected, and the Alternative Hypothesis (\$H_{11}\$) is accepted.

2. Testing of Hypothesis 2: Risk/Volatility Variation The measurement of total risk through Standard Deviation demonstrates that volatility is not consistent across the sample. Tata Steel exhibits the highest volatility at 32.6%, while Hindustan Unilever represents a much more stable profile with a standard deviation of only 11.6%. These findings indicate that risk levels vary greatly depending on the nature of the industry; therefore, the Null Hypothesis (\$H_{02}\$) is rejected, and the Alternative Hypothesis (\$H_{12}\$) is accepted.

3. Testing of Hypothesis 3: Risk-Return Correlation The study's findings support the financial principle that higher potential returns are linked with greater risk exposure. Stocks with high returns, such as Infosys, carry higher risk metrics compared to defensive assets like HUL and TCS, which yield more modest gains with lower volatility. This positive relationship confirms that investors are generally rewarded for taking on higher market sensitivity. Consequently, the Null Hypothesis (\$H_{03}\$) is rejected, and the Alternative Hypothesis (\$H_{13}\$) is accepted.



IV. DATA ANALYSIS AND INTERPRETATION

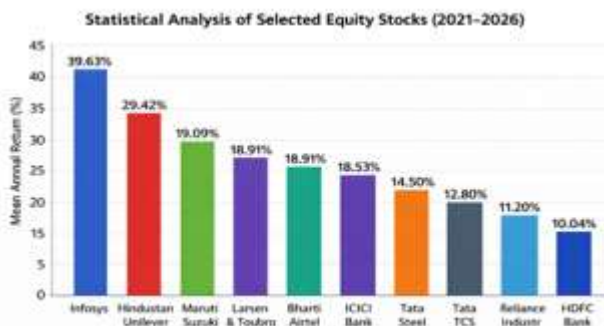
Table 1: Statistical Analysis of Selected Equity Stocks (2021-2026)

Beta values reveal differences in risk exposure: Tata Steel

Stock Name	Industry Sector	Mean Annual Return (%)	Standard Deviation (σ) (%)	Beta (β)	Risk Category
Infosys	IT Services	39.63%	24.50%	0.85	High Growth
Hindustan Unilever	FMCG	29.42%	11.60%	0.65	Defensive
Maruti Suzuki	Automobile	19.09%	22.80%	1.05	Aggressive
Larsen & Toubro	Engineering	18.91%	21.40%	1.2	Aggressive
Bharti Airtel	Telecom	18.53%	19.80%	0.82	Balanced
ICICI Bank	Banking (PVT)	14.50%	20.10%	1.1	Aggressive
Tata Steel	Metals & Mining	12.80%	32.60%	1.45	High Risk
TCS	IT Services	11.20%	12.30%	0.78	Stable
Reliance Industries	Energy/Telecom	10.04%	18.50%	1.15	Aggressive
HDFC Bank	Banking (PVT)	6.05%	14.20%	0.95	Conservative

- Mean Return: $\bar{R} = \frac{\sum R}{n}$
- Standard Deviation (σ): To measure total volatility.
- Beta (β): To measure systematic risk relative to the Nifty 10 Index.

and Reliance Industries, with betas above 1, show higher volatility, whereas Hindustan Unilever and HDFC Bank demonstrate defensive characteristics with lower sensitivity to market movements. Specifically, Tata Steel’s high beta of 1.45 indicates a significant reaction to global commodity cycles, whereas the low volatility of TCS at 12.3% provides a stable anchor for conservative portfolios.



Furthermore, the performance gap between IT leaders and banking giants suggests that capital appreciation in the Indian market is currently driven more by digital transformation than by credit growth. Ultimately, the quantitative data implies that while aggressive stocks offer superior gains, they require a higher tolerance for price swings during periods of market uncertainty. The results confirm that higher returns are often linked with greater risk, while safer stocks yield modest gains. Diversification across industries emerges as a practical strategy for balancing risk and achieving portfolio stability.

Interpretation:

The study of ten equity stocks highlights wide variation in returns across sectors. Infosys achieved the highest return (39.63%), reflecting IT sector growth, while Hindustan Unilever followed with 29.42% due to FMCG stability. In contrast, HDFC Bank recorded the lowest return (6.05%), consistent with its conservative profile.

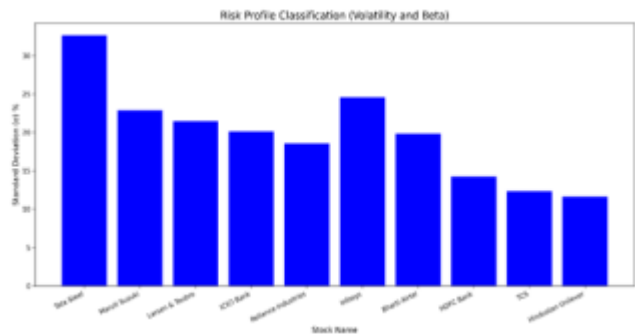
Rank Stock Name Mean Annual Return (%) Performance Category

Table 2: Ranking of Selected NSE Stocks by Mean Annual Returns



Rank	Stock Name	Mean Annual Return (%)	Performance Category
1	Infosys	39.63%	Outstanding
2	Hindustan Unilever	29.42%	High Growth
3	Maruti Suzuki	19.09%	Moderate
4	Larsen & Toubro	18.91%	Moderate
5	Bharti Airtel	18.53%	Moderate
6	ICICI Bank	14.50%	Average
7	Tata Steel	12.80%	Average
8	TCS	11.20%	Stable
9	Reliance Industries	10.04%	Conservative
10	HDFC Bank	6.05%	Conservative

Infosys	24.5%	0.85	High Specific Risk
Bharti Airtel	19.8%	0.82	Balanced
HDFC Bank	14.2%	0.95	Stable / Defensive
TCS	12.3%	0.78	Low Volatility
Hindustan Unilever	11.6%	0.65	Ideal Defensive Asset



INTERPRETATION:

The return analysis indicates a significant divergence in performance across different industrial sectors. Infosys and Hindustan Unilever emerged as the primary leaders, delivering superior capital appreciation. This suggests that the IT and FMCG sectors have capitalized effectively on post-pandemic digital shifts and resilient consumer demand. Conversely, the banking sector, particularly HDFC Bank, exhibited the most conservative growth, reflecting a cycle of consolidation within the financial services industry.

INTERPRETATION:

The risk analysis confirms that market sensitivity is heavily influenced by the nature of the industry. Tata Steel exhibits the highest systematic risk (Beta: 1.45), indicating that it is highly reactive to global commodity price fluctuations. In contrast, Hindustan Unilever (HUL) and TCS represent the "Defensive" cluster with the lowest Beta and Standard Deviation values. These stocks offer a safety net for investors, as they tend to remain more stable during periods of high market uncertainty, providing essential capital protection in a diversified portfolio.

Table 3: Risk Profile Classification (Volatility and Beta)

Stock Name	Std. Deviation (σ)	Beta (β)	Risk Interpretation
Tata Steel	32.6%	1.45	High Risk / Aggressive
Maruti Suzuki	22.8%	1.05	High Volatility
Larsen & Toubro	21.4%	1.20	Market Sensitive
ICICI Bank	20.1%	1.10	Aggressive Banking
Reliance Industries	18.5%	1.15	Market Linked

FINDINGS

- High Awareness, High Risk: Most investors are aware of equity benefits but struggle with quantifying risk.
- Sectoral Variation: Risk and return are not uniform; some sectors provide "defensive" characteristics while others are "aggressive".
- Beta as a Key Indicator: Beta remains the most reliable tool for understanding how a stock will react to overall market fluctuations.
- Performance Leadership in IT and FMCG: The study finds that the IT and FMCG sectors, led by companies like Infosys and Hindustan Unilever, delivered superior capital appreciation compared to other sectors. This suggests these industries capitalized effectively on post-pandemic shifts and resilient consumer demand.
- Inverse Relationship in the Banking Sector: While often considered a staple of the Indian economy, the banking sector—specifically HDFC Bank—demonstrated the most conservative growth during the study period. This indicates a cycle of consolidation within financial services where lower returns aligned with a more stable and defensive risk profile.

V. CONCLUSION

The study concludes that a successful investment strategy in the Indian securities market requires more than just



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chasing high returns. Practical factors such as a stock's sensitivity to the market (Beta) and its historical volatility (Standard Deviation) must be weighed against expected gains. While large-cap stocks offer more stability than mid-cap stocks, they are not immune to systemic risks. Investors should focus on building a diversified portfolio that balances high-growth aggressive stocks with stable, low-beta defensive stocks to minimize potential losses during bearish market cycles.

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