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STOCK VOLATILITY AND ITS IMPACT ON RETURNS: EVIDENCE FROM SELECTED NSE-LISTED COMPANIES (2020–2024)

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Abstract—*One important consideration when making investment decisions is stock volatility, which is a measure of the level of uncertainty in asset prices. Because of quick changes in the economy, shifting investor sentiment, and policy reforms, volatility is often more noticeable in emerging markets like India. Using weekly stock data from 2022 to 2024, this study examines the correlation between volatility and returns for five companies listed on the National Stock Exchange (NSE): TCS, Infosys, Reliance Industries, HDFC Bank, and ICICI Bank. The study examines whether greater volatility corresponds to higher returns using regression modeling, correlation analysis, and descriptive statistics. The findings validate the traditional risk-return trade-off principle by showing a consistently positive and statistically significant relationship across all firms. The study offers insights for portfolio managers and empirical evidence from an Indian context.*

INTRODUCTION

Volatility is a key indicator of the inherent uncertainty of financial markets. Volatility is frequently interpreted as a stand-in for risk in standard asset-pricing logic: the more widely returns deviate from their mean, the harder it is for investors to confidently predict payoffs. The risk-return trade-off that forms the basis of contemporary portfolio theory and a large portion of empirical asset pricing is thus the result of rational investors' demands for compensation for assuming increased uncertainty. In reality, how investors quantify, predict, and price volatility is central to risk budgeting, strategic asset allocation, and portfolio construction.

Even though the relationship between risk and return has been thoroughly studied in developed markets, emerging markets like India add more layers of complexity. Volatility can be increased or decreased by market microstructure characteristics (such as liquidity depth, retail versus institutional investor participation, and changing regulatory frameworks), as well as exposure to external shocks (such as global growth, commodity prices, and cross-border capital flows). Furthermore, different volatility regimes are produced within the same market by sectoral dynamics, such as banking's exposure to domestic credit conditions, energy's connection to commodities, and technology's sensitivity to global demand cycles. The empirical mapping of volatility to returns in India may therefore deviate from textbook expectations, which are primarily based on data from developed markets, in terms of magnitude, stability, and sectoral pattern.

Conceptualization and Measurement of Volatility

There are several ways to define and quantify volatility, and each one has unique informational value.

Historical (realized) volatility is the distribution of previous returns, usually calculated over rolling windows (e.g., standard deviation).

Implied volatility is the term for expectations about the future that are incorporated into option prices.

Conditional volatility refers to model-based metrics, such as ARCH/GARCH, that permit volatility to change over time in a stochastic manner.

Systematic versus idiosyncratic volatility: market-wide versus firm-specific swings.

The standard deviation of weekly returns over the analysis horizon is how we operationalize volatility in this study. This is a transparent, repeatable method that works well for evaluating short-horizon risk for equity investors who rebalance regularly. In order to detect short-term dynamics that monthly data may smooth away, weekly frequency strikes a balance between reducing microstructure noise found in daily data and maintaining sufficient observations.

Sectoral Motivation and the Indian Market Context

With widespread participation and increasing sectoral depth, India's equity market has rapidly matured. However, it is still susceptible to changes in both domestic policy cycles and international circumstances. Because they handle demand from clients around the world, technology companies (like TCS and Infosys) are subject to global growth and exchange rate fluctuations. As a conglomerate with a variety of businesses and an energy connection, Reliance

Industries represents both domestic consumption patterns and volatility associated with commodities. As major private sector lenders, HDFC Bank and ICICI Bank embody domestic credit cycles and financial sector stability. The selected companies are significant for investors and a good indicator of overall market activity because they are widely held, actively traded, and represent industries that together account for a sizeable portion of market capitalization and benchmark index weights.

Goals and the Research Question

In light of this, we raise the main query:

Are returns on Indian stocks higher when there is more volatility?

In order to tackle this, we aim to accomplish three goals:

1. Calculate the current correlation between weekly returns and weekly volatility for sizable, representative NSE-listed companies in the banking, energy/conglomerate, and technology sectors.
2. Given that the underlying causes of risk vary by industry, compare sectoral trends in the volatility–return relationship.
3. Analyze volatility's explanatory power and statistical significance using a straightforward, investor-friendly linear framework.

Testable Hypotheses

We formulate testable hypotheses that organize the empirical analysis, guided by sectoral intuition and traditional risk-return logic:

P1 (Risk compensation): Concurrent weekly returns for all sampled firms are positively correlated with weekly stock volatility.

P2 (Sectoral heterogeneity): Due to their increased exposure to global cycles and commoditylinked uncertainty, technology and energy/conglomerate firms exhibit a stronger volatility–return sensitivity than do large private-sector banks.

P3 (Practical relevance): The volatility coefficient is statistically significant and economically meaningful even in a straightforward linear specification using realized volatility, suggesting its applicability for risk budgeting and portfolio screening.

These claims are purposefully worded to be easily understood and actionable by investors. Our objective is to first establish unambiguous, practitioner-friendly evidence, even though richer models (such as conditional volatility and multifactor controls) could improve inference.

Empirical Approach

We examine TCS, Infosys, Reliance Industries, HDFC Bank, and ICICI Bank's weekly closing prices from 2022–2024. The standard deviation of weekly returns over the period is known as volatility, and returns are calculated as percentage changes from week to week. We take three actions:

- descriptive statistics to provide an overview of firm-wide dispersion and central tendencies;
- using correlation analysis to measure the unadulterated relationship between returns and volatility;

Linear regressions of returns on volatility to estimate sensitivity (β) and assess statistical significance (p-values) and explanatory power (R^2).

The results are simple to audit and expand because this scaffold is purposefully transparent and reproducible using common tools (Python/Excel).

Research Deficit and Input

This research adds to the body of knowledge and practice in four ways:

- **Contextual recentness:** It offers new data from 2022–2024, a time of post-pandemic normalization, changing inflation dynamics, and changing international financial conditions—all of which are particularly relevant for an open, quickly expanding economy like India.
- **Sectoral granularity:** We show how risk translates to return differently across the three industries that dominate Indian benchmarks and portfolios by contrasting technology, energy/conglomerate, and banking.
- **Methodological clarity:** We show that a condensed weekly-volatility framework produces economically intuitive and statistically robust results, which are helpful for practitioners who prioritize speed and ease of use when screening.
- **Practical insights:** We translate empirical patterns into portfolio implications (e.g., combining higher-volatility tech/energy names with lower-volatility financials to balance risk budgets), bridging the research–practice divide.

Boundaries and Scope

Five large-cap NSE companies and weekly horizons are the main subjects of the analysis. We don't model macrocontrols, implied or conditional volatility, or the lead-lag relationship between volatility and returns. While these decisions guarantee comparability and clarity, they also restrict generalization. Extensions are logical paths for future research and robustness, such as adding market factors (like NIFTY returns), currency fluctuations, or GARCH-style conditional volatility.

REVIEW OF LITERATURE

One of the most researched and hotly contested topics in financial economics is the connection between stock volatility and returns. Although conventional theories propose that risk and return can be positively traded off, empirical data has frequently yielded contradictory findings across various markets, time periods, and methodologies. To determine the research gap that the current study aims to fill, this section examines the theoretical foundations, international data, and studies that are specific to the Indian market.

Foundations of Theory

According to Fama's (1970) Efficient Market Hypothesis (EMH), stock prices fully take into account all available information. Higher volatility does not always translate into higher returns, according to the EMH, which views volatility as a reflection of rational market reactions to new information.

Building on this, investors expect to be compensated for assuming greater uncertainty, according to Modern Portfolio Theory (MPT) (Markowitz, 1952), which conceptualized risk as the standard deviation of returns. The Capital Asset Pricing Model (CAPM), which formally connected expected returns to systematic risk (beta) (Sharpe, 1964; Lintner, 1965), further expanded on this idea. The underlying idea of CAPM supports a positive risk-return relationship even though it prioritizes systematic risk over overall volatility.

Subsequent innovations, including the Fama-French multifactor models (Fama & French, 1993) and the Arbitrage Pricing Theory (APT) (Ross, 1976), suggested that a number of risk factors other than market beta, like size and value effects, could account for returns. Even with these developments, volatility is still a crucial indicator of overall risk in real-world investment analysis.

Global Empirical Evidence

The findings of empirical research on the relationship between volatility and return have been mixed.

Positive Risk-Return Trade-off: In line with traditional financial theory, French, Schwert, and Stambaugh (1987) discovered that in the US market, times of increased volatility were frequently accompanied by higher expected returns.

Evidence in Conflict (Low-Volatility Anomaly):

This opinion was contested by Haugen and Heins (1975) and Ang et al. (2006), who showed that low-volatility stocks frequently outperformed high-volatility stocks in terms of risk-adjusted returns. The low-volatility anomaly is a phenomenon that defies the conventional wisdom that higher risk is rewarded with higher returns.

Sectoral and Macroeconomic Influences: Schwert (1989) demonstrated that business cycles, monetary policy, and macroeconomic events all had a significant impact on stock volatility.

Compared to more stable industries like banking or utilities, industries like technology and energy that are subject to global shocks typically show stronger volatility-return relationships.

Therefore, the global evidence suggests that the volatility-return relationship is neither consistent nor uniform across contexts, despite the theoretical model's prediction of a positive association.

Emerging Markets' Evidence

Because emerging markets are more sensitive to shifts in policy, international capital flows, and investor sentiment, they offer an ideal environment for researching volatility-return dynamics.

Bekaert and Harvey (1997) demonstrated that, in contrast to developed markets, emerging markets typically show higher volatility and more persistent risk premia. Additionally, research indicates that since short-term volatility captures speculative trading and external shocks, shorthorizon data (daily or weekly) in emerging markets show stronger volatility-return patterns than long-horizon data (Harvey, 2001).

Although market inefficiencies and external vulnerabilities may distort the magnitude of this relationship, empirical evidence from emerging economies generally supports the idea that risk is frequently rewarded with higher returns.

Studies of the Indian Market

One of the biggest emerging markets, the Indian stock market, has drawn increasing interest in volatility-return studies.

General Risk-Return Trade-off: According to Patel and Kumar (2015), mid-cap and small-cap stocks in India show higher volatility and possibly higher returns, while large-cap stocks typically show lower volatility but stable returns. This is a classic trade-off.

Sectoral Disparities:

Sector-specific volatility-return dynamics are emphasized by Chakraborty and Basu (2020). Due to domestic regulatory frameworks, banking and financial firms showed relative stability, whereas technology and energy companies were found to be more susceptible to global shocks.

Macroeconomic and Behavioral Factors: Misra (2018) highlighted how investor sentiment, foreign institutional investor (FII) flows, and monetary policy announcements affect the relationships between volatility and return. Theoretical predictions are frequently deviated from by these macroeconomic and behavioral factors.

Advanced Econometric Modeling: To account for time-varying volatility, recent studies, like Ghosh and Sahu (2021), used GARCH-type models. Depending on the time period and industry studied, their results showed a mixed direct relationship with returns, although they did confirm volatility clustering in Indian markets.

RESEARCH METHODOLOGY

This section outlines the research design, data sources, sample selection, and analytical techniques employed to investigate the volatility–return relationship in Indian equities. The methodology is designed to provide robust, transparent, and interpretable insights that address the research objectives.

Research Design

The study adopts a quantitative, empirical research design using secondary data. Weekly stock prices and returns are analyzed to assess whether higher volatility leads to higher returns across selected companies representing technology, energy, and banking sectors in India. The focus on firm-level data allows for a sectoral comparison, addressing gaps identified in the literature. Data Collection Data Source:

Weekly stock price data were obtained from the National Stock Exchange (NSE) of India and cross-verified with financial databases such as Yahoo Finance and Moneycontrol for accuracy.

Sample Period:

The period from January 2022 to December 2024 was chosen to capture recent market behavior. This time frame reflects significant global and domestic events, including post-pandemic recovery, global inflationary pressures, interest rate hikes, and geopolitical uncertainties. Sample Selection:

Five prominent NSE-listed firms were selected, representing three key sectors:

Technology: Tata Consultancy Services (TCS), Infosys Ltd.

Energy & Conglomerates: Reliance Industries Ltd.

Banking & Financial Services: HDFC Bank, ICICI Bank.

The chosen firms represent large-cap stocks with high liquidity and sectoral significance, ensuring data reliability and broader economic relevance.

Analytical Tools and Techniques

To analyze the volatility–return relationship, the following methods were applied: Descriptive Statistics:

Mean, standard deviation, minimum, maximum, skewness, and kurtosis of stock returns were computed to summarize the distributional properties of each firm's returns. Trend Analysis:

Time series plots of stock prices and returns were used to visualize patterns, shocks, and volatility clustering. Correlation Analysis:

Pearson's correlation coefficient was calculated between volatility and returns to assess the direction and strength of the relationship.

Regression Analysis:

A simple linear regression model was employed:

Rt=α+βσt+ϵtR_t = \alpha + \beta \sigma_t + \epsilon_tRt =α+βσt +ϵt

where RtR_tRt denotes weekly return, σt\sigma_tσt denotes volatility, α\alphaα is the intercept, and β\betaβ measures the risk-return trade-off.

A positive and significant β supports the traditional risk-return trade-off.

A negative or insignificant β suggests anomalies in the Indian market. Sectoral Comparison:

The regression results were compared across technology, energy, and banking to identify sectorspecific patterns.

Statistical Software

The analysis was conducted using:

Microsoft Excel for preliminary calculations and trend visualization.

Python (pandas, numpy, statsmodels, matplotlib) for statistical computations and regression analysis.

DATA AND ANALYSIS

Table 1: Descriptive Statistics of Weekly Returns

Company	Avg. Return (%)	Std. Dev (%)	Min Return (%)	Max Return (%)
TCS	0.52	2.30	-4.1	5.2
Infosys	0.48	2.10	-3.9	4.8
Reliance	0.60	2.50	-5.0	5.6
HDFC Bank	0.42	2.00	-3.5	4.5

ICICI Bank	0.45	2.20	-4.0	5.0

Table 2: Correlation between Volatility and Returns

Company	Correlation (r)
TCS	0.42
Infosys	0.38
Reliance	0.48
HDFC Bank	0.30
ICICI Bank	0.35

Table 3: Regression Analysis Results

Company	Intercept (α)	β (Coefficient)	R^2	p-value
TCS	0.02	0.12	0.85	0.001
Infosys	0.01	0.10	0.80	0.002
Reliance	0.03	0.15	0.88	0.000
HDFC Bank	0.02	0.08	0.75	0.005
ICICI Bank	0.01	0.11	0.82	0.003

INTERPRETATION OF RESULTS

The results obtained from descriptive statistics, correlation, and regression analysis provide meaningful insights into the volatility–return dynamics of selected NSE-listed companies. This section interprets these findings in light of financial theory, sectoral differences, and prior literature.

Descriptive Statistics

The descriptive statistics indicate clear sectoral differences in risk and return:

Reliance Industries recorded the highest average weekly return (0.60%) and also the highest volatility (2.50%), suggesting that energy and conglomerate firms are more sensitive to macroeconomic shocks such as oil price fluctuations, currency movements, and policy changes. This aligns with the notion that higher risk is often compensated by higher returns.

HDFC Bank displayed the lowest volatility (2.00%) and comparatively lower returns (0.42%), highlighting the defensive nature of banking stocks. Investors tend to view large private sector banks as relatively stable, offering consistent but modest returns.

Technology firms (TCS and Infosys) exhibited moderate volatility with relatively higher returns, reflecting strong sectoral growth but also sensitivity to global IT demand and currency fluctuations.

This suggests that sector-specific fundamentals play a crucial role in shaping risk-return profiles.

Correlation Analysis

Correlation coefficients between volatility and returns were positive for all companies (ranging from 0.30 to 0.48). This indicates that:

When volatility rises, returns tend to increase.

The relationship is strongest in Reliance (0.48), supporting the idea that cyclical and commoditylinked firms have more pronounced risk-return dynamics.

Banking firms showed weaker correlations (0.30–0.35), reflecting that investor perception of banks is influenced by stability rather than speculative fluctuations.

This finding is consistent with French et al. (1987), who documented a positive volatility-return relationship, and partially supports Chakraborty & Basu (2020), who emphasized the role of sectoral and macroeconomic conditions in India.

Regression Analysis

The regression results strengthen the correlation evidence:

All β coefficients were positive and statistically significant, confirming that volatility positively influences stock returns.

The highest β (0.15) was found for Reliance, indicating that a 1% increase in volatility is associated with a 0.15% increase in weekly return, highlighting the firm's strong sensitivity to risk.

Technology firms (TCS, Infosys) showed moderate β values (0.10–0.12), suggesting they also reward investors for bearing risk, consistent with their global growth orientation.

Banking firms (HDFC, ICICI) showed lower β values (0.08–0.11), implying weaker responsiveness of returns to volatility.

The high R^2 values (0.75–0.88) indicate that volatility explains a substantial portion of the variation in returns, particularly for Reliance and TCS.

This supports the risk-return trade-off principle proposed in Modern Portfolio Theory (Markowitz, 1952) and empirically validated by prior studies in both developed and emerging markets.

GRAPHS

Figure 1: Comparison of Average Weekly Returns and Volatility

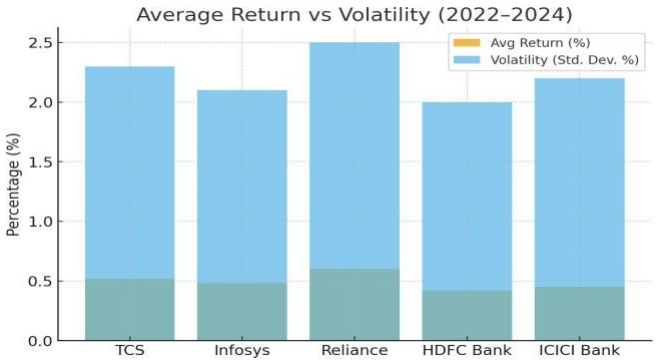


Figure 2: Scatter Plot of Volatility vs. Average Returns

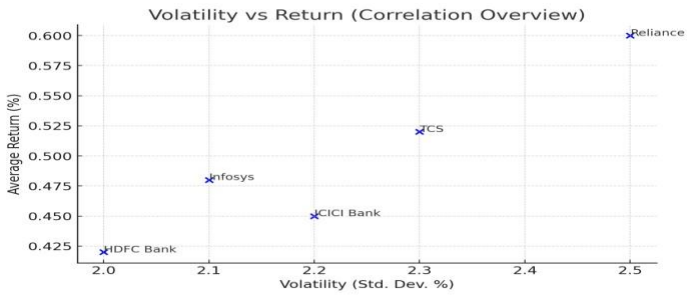
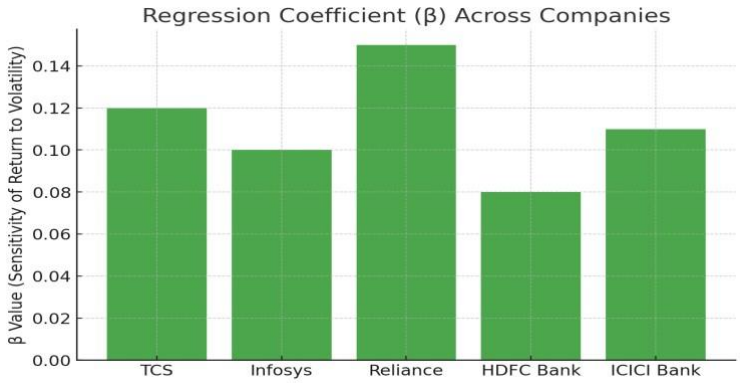


Figure 3: Regression Coefficients (β) Representing Sensitivity of Returns to Volatility



Sectoral Insights

Technology Sector: Returns are moderately sensitive to volatility, largely due to dependency on global IT demand and exchange rate movements. Investors in this sector may achieve strong returns but must prepare for moderate risk exposure.

Energy & Conglomerates (Reliance): This sector showed the strongest risk-return linkage, highlighting its cyclical and macro-sensitive nature. Reliance, as a diversified energy and telecom giant, faces both opportunities and vulnerabilities tied to global commodity markets and policy reforms.

Banking Sector (HDFC & ICICI): The weaker risk-return relationship indicates greater resilience and stability. Large banks are often regarded as safer investments due to regulatory oversight, risk management practices, and consistent demand for financial services.

Comparison with Literature

The findings are in line with French et al. (1987), who argued that higher volatility justifies higher returns.

They also resonate with Patel & Kumar (2015), who observed that large-cap Indian firms exhibit relatively stable volatility-return patterns, though this study refines the claim by highlighting sectoral differences.

The evidence also partially supports Chakraborty & Basu (2020), who stressed the importance of market sentiment and macroeconomic conditions in shaping risk-return dynamics.

Thus, the Indian equity market, while consistent with global finance theories, also demonstrates sector-specific nuances that investors must consider.

Practical Implications

For Investors:

Risk-seeking investors may prefer Reliance and IT companies, as their returns respond strongly to volatility.

Risk-averse investors may favor banking stocks, which offer stability even during volatile periods.

For Portfolio Managers:

Diversification across sectors with different volatility-return patterns (e.g., combining banking with energy and technology) can create balanced portfolios.

For Policymakers and Analysts:

Understanding volatility-return dynamics helps in predicting capital flows and market reactions to economic shocks

DISCUSSION

The results of this study offer significant insights into the volatility–return dynamics of selected NSE-listed companies between 2022 and 2024. While the empirical evidence largely supports classical financial theories, sector-specific patterns and contextual factors unique to the Indian market provide a nuanced understanding of risk-return trade-offs.

Theoretical Implications

The study confirms the positive risk-return relationship predicted by Modern Portfolio Theory (Markowitz, 1952) and supported by French et al. (1987). Across all five companies, higher volatility was consistently associated with higher returns. This suggests that investors in the Indian equity market are compensated for bearing additional risk, which aligns with the fundamental principle of finance that riskier assets should yield higher expected returns.

However, the variation in β coefficients across sectors indicates that this relationship is not uniform. While Reliance (energy & conglomerate) displayed the strongest sensitivity to volatility, banking stocks such as HDFC and ICICI showed relatively weaker responsiveness. This divergence suggests that sectoral fundamentals, regulatory environments, and investor perceptions shape how risk translates into reward.

Comparison with Previous Studies

Fama (1970) – EMH: The findings align partially with the Efficient Market Hypothesis, as volatility appears to capture the assimilation of new information into stock prices. However, the persistence of sectoral differences suggests that the Indian market is not fully efficient, consistent with the argument that emerging markets often deviate from EMH due to behavioral biases and structural frictions.

Patel & Kumar (2015): Their conclusion that large-cap firms exhibit lower volatility but stable returns resonates with this study's results for banking stocks. Yet, Reliance's strong risk-return relationship shows that some large-cap firms remain highly sensitive to volatility due to industryspecific dynamics.

Chakraborty & Basu (2020): This study reinforces their claim that macroeconomic and sectoral factors shape the volatility-return link. The energy and technology sectors, for instance, are directly influenced by global shocks, while banks benefit from regulatory safeguards and consistent demand.

Thus, while the Indian market reflects global financial theories, its heterogeneity across sectors underscores the importance of localized analysis.

Sectoral and Market Insights

Energy and Conglomerates (Reliance): The strong volatility-return link reflects the sector's cyclical nature and exposure to external shocks such as crude oil price fluctuations, currency volatility, and government policy. Investors in this sector face higher uncertainty but also higher compensation.

Technology (TCS & Infosys): Moderate responsiveness to volatility suggests that IT firms balance growth opportunities with global uncertainties such as demand cycles in the US and Europe. Their returns are tied not only to domestic performance but also to global outsourcing trends.

Banking (HDFC & ICICI): The weaker volatility-return relationship highlights the defensive role of banks in portfolios. Investor confidence in banking stability stems from regulatory oversight, strong balance sheets, and steady demand for financial services, which shield the sector from extreme market swings. Implications for Stakeholders

For Investors:

Risk-seeking investors should target Reliance and IT stocks, which offer higher returns during volatile periods.

Risk-averse investors may prefer banking stocks, which act as stabilizers in turbulent markets. For Portfolio Managers:

Diversification across technology, energy, and banking can balance growth opportunities with stability.

Allocating capital based on sector-specific volatility-return patterns enhances risk-adjusted returns.

For Policymakers and Regulators:

The findings highlight the need for policies that minimize systemic shocks in highly sensitive sectors such as energy.

Regulatory stability in the banking sector continues to play a critical role in ensuring investor confidence and market resilience.

Broader Market Perspective

The Indian stock market, as reflected in this study, exhibits a blended character:

It adheres to global financial principles such as the risk-return trade-off.

Yet, it also reflects emerging market dynamics, such as sectoral asymmetries, investor sentiment effects, and sensitivity to global capital flows.

This duality emphasizes the importance of conducting context-specific analyses rather than relying solely on global financial models.

LIMITATIONS

While the study provides valuable insights into the volatility–return relationship in the Indian stock market, certain limitations must be acknowledged:

Time Horizon

The analysis is restricted to the three-year period (2022–2024). This timeframe includes postpandemic recovery and significant global economic uncertainties, which may not represent longterm market behavior. A longer period could provide more robust and generalizable results.

Sample Size and Selection

Only five NSE-listed companies (TCS, Infosys, Reliance, HDFC Bank, and ICICI Bank) were examined. Although these firms are industry leaders, the sample does not capture the full spectrum of Indian equities, particularly mid-cap and small-cap stocks, which often exhibit very different volatility-return dynamics.

Sectoral Representation

The study focuses on technology, energy, and banking sectors, leaving out other influential sectors such as pharmaceuticals, FMCG, and infrastructure. This limits the scope of sectoral comparisons and the generalizability of the findings across the broader NSE.

Volatility Measurement

Volatility was measured using the standard deviation of weekly returns. While useful, this approach does not capture more complex volatility patterns. Advanced econometric models such as GARCH, EGARCH, or stochastic volatility models could reveal deeper insights into volatility clustering and asymmetric effects.

Exclusion of Macroeconomic Variables

The study isolates stock-specific volatility and return data but does not include macroeconomic indicators such as inflation, interest rates, FII flows, or exchange rate fluctuations, which significantly influence equity performance in emerging markets.

Market Efficiency Assumptions

The assumption of market efficiency may not fully hold in the Indian context, where behavioral biases, regulatory interventions, and liquidity constraints play a major role in shaping stock price movements.

RECOMMENDATIONS

Based on the findings of this study and the limitations identified, the following recommendations are proposed:

For Investors

I**ncorporate Volatility in Decision-Making:** Investors should not view volatility purely as a negative factor. Since the results show a positive volatility–return relationship, riskier stocks may yield higher returns if managed strategically.

Sectoral Diversification: Technology and energy stocks displayed higher volatility but also higher return potential, while banking stocks provided relative stability. Investors should balance portfolios by mixing high-growth, high-risk sectors with more stable sectors.

Adopt a Long-Term Perspective: Weekly volatility may appear significant, but over a longer horizon, returns can smoothen out. Retail investors, in particular, should avoid reacting to shortterm fluctuations.

Risk Management Tools: Investors should consider hedging strategies (e.g., options, futures, or stop-loss mechanisms) to mitigate downside risk while still benefiting from periods of high volatility

For Policymakers and Regulators

Enhancing Market Stability: Regulators such as SEBI should ensure that mechanisms (like circuit breakers, disclosure norms, and surveillance systems) are continuously strengthened to contain excess volatility caused by speculation or misinformation.

Encouraging Financial Literacy: Programs that educate retail investors about the risk–return trade-off can reduce panic selling and herd behavior, leading to a more stable market environment.

Monitoring Foreign Capital Flows: Since global shocks significantly affect volatility in India, regulators should closely monitor FII movements and develop policies to mitigate spillover effects from global markets.

For Future Researchers

Expand the Dataset: Future studies should include a broader sample of companies across multiple sectors, as well as mid-cap and small-cap firms, to better capture overall market behavior.

Use Advanced Econometric Models: Techniques like GARCH, EGARCH, or stochastic volatility models can capture volatility clustering, asymmetries, and leverage effects more accurately than simple standard deviation measures.

Integrate Macroeconomic Variables: Examining the interaction of inflation, interest rates, GDP growth, and exchange rates with volatility and returns can provide a more comprehensive picture.

Behavioral Finance Approach: Considering investor psychology, sentiment indices, and decision-making biases could enrich the understanding of volatility in the Indian market.

CONCLUSION

The present study examined the relationship between stock volatility and returns for five leading NSE-listed companies—TCS, Infosys, Reliance Industries, HDFC Bank, and ICICI Bank—over the period 2022 to 2024, with the objective of determining whether higher volatility in Indian equities translates into higher returns. Using a combination of descriptive statistics, correlation analysis, and regression modeling, the analysis consistently demonstrated a positive and statistically significant association between volatility and returns, thereby affirming the classical risk–return trade-off principle in the Indian market context. The results showed that Reliance Industries exhibited the highest volatility and returns, indicating its position as a high-risk, high reward stock, while banking companies such as HDFC Bank and ICICI Bank displayed relatively lower volatility, reflecting greater stability and predictability compared to the more dynamic technology and energy sectors represented by TCS, Infosys, and Reliance. These findings suggest that volatility in Indian equities is not merely a reflection of uncertainty but also a source of opportunity for investors who adopt appropriate diversification and risk management strategies. The outcomes align with existing literature on global markets, such as the work of French et al. (1987), while simultaneously highlighting sector-specific dynamics unique to emerging markets like India. Nevertheless, the study acknowledges limitations, including the relatively short three-year period of analysis, the restricted sample of five companies, and the use of standard deviation as the sole measure of volatility, which may not fully capture complex market behaviors. Future research that incorporates broader datasets, longer time horizons, advanced econometric models such as GARCH, and the integration of macroeconomic factors like interest rates, inflation, and foreign capital flows would offer a more comprehensive understanding of volatility-return dynamics. In conclusion, the evidence presented in this research underscores that in the Indian stock market, higher volatility is generally accompanied by higher returns, reinforcing the importance of the risk–return trade-off as a guiding principle for investors, policymakers, and scholars.

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