Analysis on Risk and Return of Selected Equity on Banking and FMCG Sectors

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Abstract- ***This research investigates the relationship between risk and return for selected equities in the Indian banking and fast-moving consumer goods (FMCG) sectors from January 2022 to December 2024. Using secondary data from company reports, market indices, and stock prices, the study evaluates performance metrics such as beta, alpha, standard deviation, and correlation to assess volatility and expected returns. The findings reveal varying risk-return dynamics across sectors. While FMCG stocks like HUL and Britannia provide stable and defensive returns, banking stocks such as SBI and ICICI offer higher growth potential with increased volatility. The study highlights the significance of portfolio diversification and provides actionable insights for investors based on risk tolerance and investment objectives.***

Keywords: Risk, Return, FMCG, Banking, Volatility, Beta, Alpha, Portfolio Diversification

I. INTRODUCTION

Investing in equities is a widely adopted strategy for wealth creation, but it comes with inherent risks. Risk refers to the uncertainty in achieving expected returns, while return signifies the reward for bearing that risk. Understanding the interplay between these factors is essential for informed investment decisions. This research focuses on selected banking and FMCG stocks in India, two critical sectors of the economy. Banking represents a cyclical sector highly sensitive to market fluctuations, while FMCG exhibits defensive characteristics, maintaining stable demand even during downturns. By analyzing risk-return metrics, this study seeks to provide insights into optimal portfolio allocation for investors with varying risk appetites.

II. LITERATURE REVIEW

The study of risk and return has evolved significantly over the years, with early theories introducing the concept of portfolio diversification to minimize risk while maximizing returns. Initial models highlighted how combining assets with low or negative correlations allows investors to achieve an optimal trade-off between risk and reward. Later frameworks established a direct relationship between expected returns and market-related risks, distinguishing between systematic risks, which cannot be diversified away, and unsystematic risks , which can be reduced through proper asset allocation. These models introduced the idea that investors are compensated only for bearing unavoidable market risks, forming the foundation for portfolio management and asset pricing strategies.

Over time, empirical evidence revealed several limitations in traditional single-factor models. Researchers observed that factors such as firm size, valuation ratios, and momentum patterns also significantly influence returns, leading to the development of multi-factor pricing models. Studies found that companies with smaller market capitalizations and lower price-to-earnings ratios tend to deliver higher risk-adjusted returns than predicted by earlier theories. Similarly, the discovery of momentum effects showed that stocks performing well in the recent past are more likely to continue performing well in the short term, challenging the assumption that markets always price assets efficiently.

Subsequent models expanded asset pricing frameworks by integrating additional drivers of returns, such as profitability, investment patterns, and idiosyncratic volatility. Research revealed that stocks with high idiosyncratic volatility often deliver lower future returns, while portfolios composed of low-volatility stocks tend to outperform riskier portfolios on a risk-adjusted basis. These findings contradicted the conventional belief that higher risk guarantees higher returns , highlighting the complex and sometimes counterintuitive nature of financial markets.

Further refinements incorporated behavioral factors and leverage constraints, demonstrating that investor

preferences, borrowing limitations, and psychological biases significantly shape risk-return dynamics. Advanced models introduced concepts like betting against beta, where stocks with lower sensitivity to market movement
The literature on risk and return spans several decades, evolving from single-factor models to multi-factor frameworks data.

III. THEORETICAL FRAMEWORK

This study is anchored on CAPM and Modern Portfolio Theory (MPT). The CAPM equation is given by:

$R_i = Rf + \beta_i(Rm - Rf)$

where R_i = expected return of stock i, Rf = risk-free rate, β_i = stock sensitivity to market, Rm = expected market return.

MPT emphasizes diversification to reduce unsystematic risk and uses correlation between assets to build efficient portfolios.

IV. RESEARCH METHODOLOGY

Research Design: A descriptive and analytical research design has been adopted using secondary data to assess the risk-return relationship.

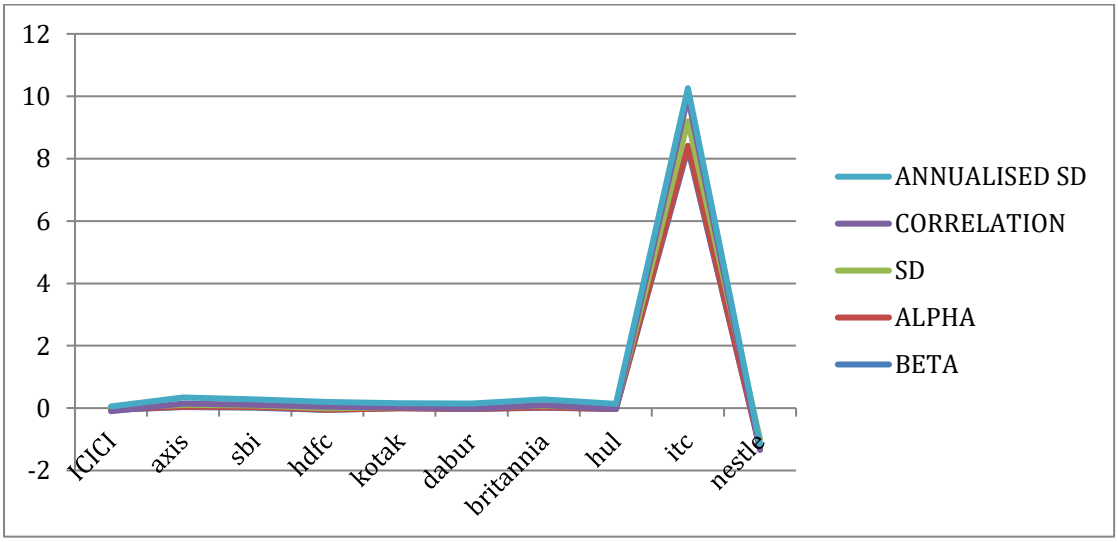
Data Collection: NSE stock prices, Nifty indices, company financial reports, and RBI publications were considered for the period January 2022 to December 2024.

Sample: FMCG – HUL, Britannia, ITC, Nestlé, Dabur; Banking – ICICI, HDFC, SBI, Axis, Kotak.

Tools and Techniques: Returns were calculated using Ri = (Pt - Pt-1)/Pt-1. Risk metrics include Beta, Alpha, Standard Deviation, and Correlation to Nifty index.

V. ANALYSIS AND INTERPRETATION

Stock	Beta	Alpha	SD	Correlation	Risk Profile
ICICI	-0.0591	0.0156	4.40%	-0.10	Defensive, positive
Axis	0.0331	0.0136	5.57%	0.04	Moderate risk, alpha-driven
SBI	0.0138	0.0157	5.25%	0.02	Growth-oriented, higher volatility
HDFC	-0.0561	0.0066	4.48%	0.04	Defensive, consistent performer
Kotak	-0.0021	-0.0014	3.65%	≈0	Stable but underperforming
Nestlé	-1.2857	0.0006	28.1%	-0.34	Highly volatile, speculative
ITC	8.3215	0.0920	78.7%	0.79	Aggressive, high-risk high-reward
HUL	-0.0329	0.0018	4.87%	-0.05	Defensive, stable
Britannia	0.0114	0.0094	5.45%	0.02	Stable, moderate alpha
Dabur	-0.0271	-0.0015	4.94%	-0.04	Conservative, slight underperformance



Banking Sector: ICICI and SBI deliver high alpha with moderate risk, making them suitable for growth investors. Kotak is stable but underperforms.

FMCG Sector: HUL and Britannia are low-risk defensive stocks, while ITC offers high returns but extreme volatility.

Portfolio Implications: Combining FMCG (defensive) with banking stocks (growth-oriented) enables risk diversification.

CONCLUSION

Banking stocks (SBI, ICICI, HDFC, Axis, and Kotak) provide stability and a moderate amount of positive alpha, making them comparatively low-risk, low-beta investments. Long-term, risk-averse investors can use them.

The behaviour of FMCG stocks is inconsistent: Although they have limited alpha, defensive plays like HUL, Dabur, and Britannia reduce risk.

ITC has an abnormally high beta, which suggests speculative qualities and makes it extremely risky.

Nestlé is not a good choice for conservative investors due to its extreme volatility and inverse market movement.

While FMCG offers hedging opportunities but carries uneven risk profiles, the banking industry seems safer and more dependable overall.

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