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A STUDY ON RISK AND RETURN ANALYSIS OF SELECTED STOCKS

*Dhatcnesh M, **Dr. Shalini R

dhatchneshm@gmail.com

dr.shalinir@cms.ac.in, https://orcid.org/0000-0002-3128-032X

.*MBA Student, CMS Business School, Jain (Deemed-To-Be) University

** Associate Professor, CMS Business School, Jain (Deemed-To-Be) University

ABSTRACT :

This master thesis delves into the intricate relationship between Foreign Institutional Investors (FIIs) and the volatility of the Indian Capital Market, providing a comprehensive analysis of their impact on market dynamics. Drawing on monthly data spanning from 2012 to 2024, advanced financial econometrics models are employed to explore the interactions among FIIs activities, Nifty 50 index prices, USD-INR exchange rates, and the implied volatility of the Nifty Index (India VIX).

The study commences with rigorous stationarity tests, such as the Augmented Dickey-Fuller test, to ensure the robustness of the time series data. Granger causality tests are then applied to scrutinize the dynamic interplay and causality between FIIs behaviors and market volatility. Key findings underscore a substantial correlation between FIIs flow and market volatility, challenging conventional notions of market efficiency and underscoring the dual role of FIIs as stabilizers and destabilizers of market conditions.

The implications of this study extend to policymakers, advocating for nuanced regulatory measures, and to investment managers, emphasizing the significance of advanced risk management strategies tailored to accommodate FIIs-induced volatility. By contributing empirical evidence from the Indian context, this thesis enriches the academic discourse on international finance, illuminating the interconnectedness of global financial markets and the pivotal role of institutional investors in shaping market dynamics. It bridges theoretical frameworks with practical insights, laying the groundwork for future research to delve deeper into the complexities of foreign investment in emerging markets.

Keywords: Foreign Institutional Investors (FIIs), Nifty 50, USD-INR Exchange Rates, India VIX, Granger Causality Tests

iNTRIDUCTION:

This master's thesis embarks on a comprehensive exploration of the intricate dynamics between Foreign Institutional Investors (FIIs) and market volatility within the Indian capital markets, drawing upon data spanning from 2012 to 2024. The investigation is rooted in a robust econometric analysis aimed at unraveling the complex relationship between international capital flows and fluctuations in market conditions. Central to this study is the examination of the impact of FIIs, assessed through various financial indicators including Nifty 50 index prices, USD-INR exchange rates, and the implied volatility of the Nifty Index (India VIX).

The thesis adopts a meticulous methodology incorporating advanced statistical tests such as the Augmented Dickey-Fuller (ADF) test to establish the stationarity of the time series data, essential for ensuring the reliability of subsequent econometric analyses. Furthermore, the Granger causality test is employed to discern the directional influences and potential causality between the investment behaviors of FIIs and the associated market volatility.

A fundamental hypothesis tested in the study posits that macroeconomic and global economic factors significantly influence FII flows, consequently impacting market volatility in India. The outcomes of hypothesis testing are foundational to comprehending the broader economic ramifications of FIIs and their role in the Indian equity market. This analysis not only enriches academic discourse but also furnishes insights that could inform policymakers in devising nuanced regulatory frameworks aimed at stabilizing market conditions while facilitating foreign investment.

Moreover, the thesis underscores the dual role of FIIs as both stabilizers and potential destabilizers of market conditions, challenging conventional notions of market efficiency and underscoring the need for sophisticated risk management strategies among market participants. The findings of the study underscore the substantial influence of FIIs on market volatility, offering a refined perspective on their impact critical for regulatory policy formulation and investment strategy development within emerging markets like India

Review of Literature

Hussein Abedi Shams Abadi (2012) conducted a study evaluating the relationship between risk and return, emphasizing the importance of assessing risks in various sectors to make informed investment decisions.

Sreehari. V., Ramesh. G. & Teal (2017) concluded that investors can mitigate their risk and maximize profits by constructing diversified portfolios of securities.

Gurinder Singh and Kaur Navleen (2015) highlighted the significance of understanding market dynamics for traders in the Indian stock market, particularly emphasizing the need for a robust and feasible plan to navigate market uncertainties.

John Y. Campbell and Tuomo Vallenato (2003) introduced a two-beta model to explain anomalies in stock returns, emphasizing the importance of considering both cash-flow and discount-rate news in assessing risk and return.

Vedanta Bora (2021) underscored the high-risk nature of stock market investments and emphasized the importance of understanding the relationship between returns and market risks.

Sinha. Ratna. (2013) conducted a risk and return study specific to equity investments in the banking industry, emphasizing the growth potential of the sector while cautioning against systematic risks.

Rashina Sunil, U Divya (2014) advocated for a comprehensive approach to market risk assessment, combining fundamental and technical analysis for effective investment decision-making.

S Poornima & Swathigan (2017) investigated the relationship between risk and return of selected stocks in NSE using CAPM, providing insights into the risk-return dynamics of specific companies.

Gautami. S., Kalyan Nullable (2018) conducted a comparative study of risk and return analysis of selected stocks in India, highlighting the challenges in analyzing market fluctuations and the need for a balanced approach between fundamental and technical analysis.

Prabhu Nityanand Ruchi (2018) analyzed the risk and return of Nifty stocks in India, emphasizing the volatility of the stock market and the importance of informed decision-making to maximize returns at acceptable levels of risk.

Jha Kumar Raghav (2018) explored the risk and return analysis of selected stocks listed in Nifty financial services index, providing insights into investment strategies based on risk preferences.

Methodology

- **Formulation of Research Hypothesis**

This study begins with the formulation of research hypotheses aimed at understanding the influence of Foreign Institutional Investors (FIIs) on market volatility, as well as assessing the impact of macroeconomic and global economic factors on FII flows. These hypotheses serve as guiding principles for empirical investigation and will be rigorously tested using econometric methods to validate or invalidate the theoretical propositions.

- **Research Design**

The research adopts a quantitative approach, employing financial econometrics models to dissect the relationship between FIIs, market volatility, Nifty 50 index prices, and the USD-INR exchange rate. This comprehensive study involves multiple phases, including meticulous data collection, hypothesis testing, and causality analysis, ensuring a thorough examination of the research inquiries.

- **Methods for Data Collection**

Secondary data forms the backbone of this study, sourced from the National Stock Exchange of India (NSE). The focus lies on variables such as FIIs, Nifty 50 index prices, India VIX (Volatility Index), and the USD-INR exchange rate. Monthly data spanning from 2012 to 2024 is scrutinized, providing a robust framework for uncovering the intricacies of FII impacts on market volatility. The research employs sophisticated statistical tools including the Augmented Dickey-Fuller test to assess data stationarity and the Granger causality test to investigate the directional relationships among the variables.

Research Outcome and Findings

i.   There is significant relationship between risk and return of the selected stocks.

ii.   There is significant relationship between value of individual stocks and market over theselected period.

iii.   There is significant relationship between correlation and portfolio creation.

NAME OF THE COMPANY	RISK	RETURN	BETA	SHARPE
Infosys ltd.	45.13	15.91	0.05	0.26
Tics	27.15	7.20	0.12	0.12
Wipro	54.58	15.59	0.69	0.21
Tech Mahindra ltd	46.16	23.92	0.88	0.43
Hal Tech	42.99	11.13	-0.04	0.17
Sun Pharma	27.62	15.09	0.19	0.40
Cipla	33.79	16.59	-0.48	0.37
Dr Reddy	36.45	17.22	-0.82	0.36
Alkema	24.56	9.68	-0.05	0.23
Abbott	27.60	30.71	0.02	0.97
Tata Motors	84.19	19.38	2.21	0.18
Maruti Suzuki	16.34	-0.26	-0.09	-0.26
Ashok Leyland	22.00	6.30	0.19	0.10
Bajaj Auto	14.90	3.23	-0.17	-0.05
Eicher Motors	46.20	-15.40	0.8	-0.42
Hull	14.43	13.56	-0.29	0.66
Britannia	20.40	-0.85	-0.15	-0.24
Dabur	10.72	10.09	-0.05	0.57
Nestle	13.68	21.88	-0.25	1.31
Itch	31.79	9.43	0.04	0.17

i.   It is found that the company TATA MOTORS has the highest risk of 84.19% where as it is giving the return of 19.38%. Its beta is 2.21 that means it is highly volatile. Despitethis, TATA MOTORS is outperforming other automakers in the automotive sector.

ii.   EICHER MOTORS has fared extremely poorly over the period we have chosen since it has provided the lowest return (-15.40% among selected stocks) while also carrying a significant risk (46.20%).

iii.   Comparatively, nestle has outperformed all other equities because its Sharpe ratio is thegreatest at 1.31.

Conclusion

The recommendations made may not be a perfect prediction of the future as a technical analysis is not an absolutely accurate practice. Risk and return are strongly connected in this research. The majority of the literature evaluation supported the idea that rising potential returns on investment typically come with rising risk. However, just a few research have found that high return doesn't necessarily mean high risk. The importance of risk and return analysis can be observed in a variety of areas of life, including the corporate, banking, and automotive sectors. The literature on risk and return analysis has been reviewed, including theoretical and empirical studies, in an effort to identify any gaps in the knowledge that could be filled by additional study. The study also emphasized how crucial it is for investors to evaluate various investment options using different risk- and return-based metrics like beta, standard deviation, variance, and covariance.

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