



A comparative Study of NSE & BSE with Special Reference to Risk & Return of selected Indian Bank

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Abstract: This research paper aims to conduct a comprehensive comparative analysis of the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE) with a special focus on risk and return. The study focuses on six prominent Indian banks, namely Kotak Mahindra Bank, State Bank of India (SBI), Yes Bank, Axis Bank, HDFC Bank, and ICICI Bank. The research employs average return analysis to evaluate the performance of these banks and further examines correlation and beta to assess their risk characteristics. The findings reveal variations in performance and risk profiles among the selected banks, highlighting important insights for investors and policymakers.

Keywords: NSE, BSE, risk, return, Indian banks

Introduction

The stock market is a financial exchange where buyers and sellers exchange shares of stock, which represent ownership in companies. It is an essential part of the financial system because it gives businesses a place to raise money and allows investors to buy and sell financial products.

The Indian stock market, comprising major exchanges such as the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE), plays a vital role in the country's economy. Among the various sectors represented in the market, the banking sector holds significant importance due to its pivotal role in financial intermediation and economic development. Understanding the performance and risk characteristics of banks listed on these exchanges is crucial for investors seeking optimal portfolio allocation and risk management strategies. This paper presents a comparative analysis of NSE and BSE with a specific focus on six prominent Indian banks.

NSE (NATIONAL STOCK EXCHANGE)	BSE (BOMBAY STOCK EXCHANGE)
○ NSE is the biggest stock exchange in India	○ BSE is the oldest stock exchange in India
○ NSE was established in 1992	○ BSE was established in 1875
○ The benchmark index for NSE is the nifty	○ The benchmark index for the BSE is the Sensex
○ Global rank is 7 th largest stock exchange in the world	○ Global rank is 8 th largest stock exchange in the world
○ NSE promote trading equity, equity derivatives, debt and currency derivatives segments	○ BSE promote trading in equity, debt instrument, mutual funds, currencies, derivatives
○ NSE nifty comprises of 50 companies	○ BSE Sensex comprise of 30 companies
○ The number of listed companies is 2113 in NSE	○ The number of listed companies is 5311 for BSE
○ Market capitalization for NSE is more than US\$4.5 Trillion	○ Market capitalization for BSE is around US\$4.5 Trillion
○ In case of liquidity, NSE is much higher compared with BSE	○ In case of liquidity, BSE is much lower compared with NSE

Literature Review:

The literature on stock market dynamics, risk, and return offers a rich foundation for understanding the complexities of investment decision-making, particularly in the context of the banking sector. Numerous studies have investigated the relationship between risk and return, providing valuable insights for investors, academics, and policymakers.

Risk-Return Tradeoff in Investment Decisions: The risk-return tradeoff is a fundamental concept in finance, suggesting that higher returns are typically associated with higher levels of risk. Markowitz's seminal work on portfolio theory (Markowitz, 1952) laid the groundwork for understanding how investors can optimize their portfolios by balancing risk and return. Subsequent research, such as the Capital Asset Pricing Model (CAPM) developed by Sharpe (1964), Lintner (1965), and Mossin (1966), further elucidated the relationship between systematic risk (beta) and expected return. These theoretical frameworks provide a basis for evaluating the risk-return profiles of individual securities and portfolios.

Banking Sector Performance and Risk: Studies specific to the banking sector have explored various factors influencing bank performance and risk. Rajan and Zingales (1998) investigated the relationship between bank competition and stability, highlighting the tradeoffs between efficiency and risk-taking behavior. Berger et al. (2008) examined the impact of regulatory capital requirements on bank risk-taking, emphasizing the importance of prudential regulation in mitigating systemic risk. Moreover, recent research by Acharya et al. (2019) has focused on the implications of financial sector globalization for bank risk and return, emphasizing the need for robust risk management practices in an interconnected global financial system.

Market Correlations and Beta Analysis: Understanding market correlations and beta coefficients is crucial for assessing the systematic risk exposure of individual securities or portfolios. Fama and French (1992) expanded upon the CAPM framework by introducing additional factors such as size and value, enriching our understanding of asset pricing and market dynamics. Chen et al. (1986) examined the relationship between beta and stock returns, highlighting the limitations of using beta as a sole measure of risk. Additionally, studies by Black (1972) and Scholes and Williams (1977) have contributed to the development of option pricing models, offering insights into the relationship between risk and return in derivative markets.

Research Methodology

The study employs a quantitative approach to analyze the performance and risk characteristics of the selected Indian banks. The methodology includes the following steps:

Data Collection: Historical stock price data for Kotak Mahindra Bank, SBI, Yes Bank, Axis Bank, HDFC Bank, and ICICI Bank are collected from reliable sources such as NSE and BSE databases.

Calculation of Average Returns: Average returns for each bank are calculated over a specified time period to assess their performance.

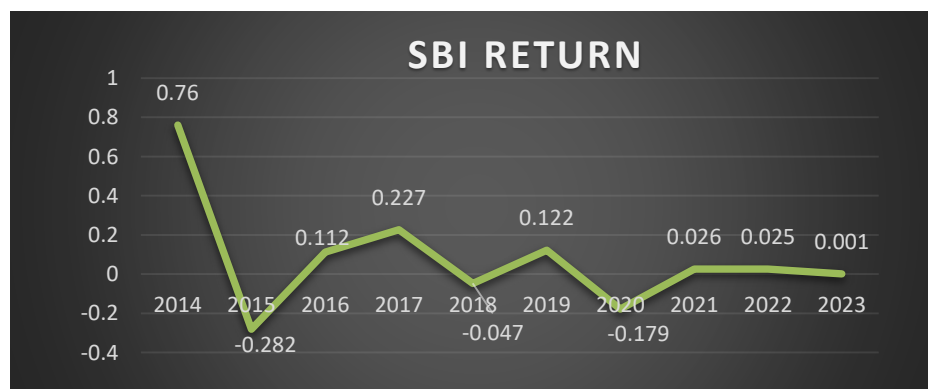
Correlation Analysis: Correlation coefficients between the banks' stock returns and market returns are computed to evaluate their relationships.

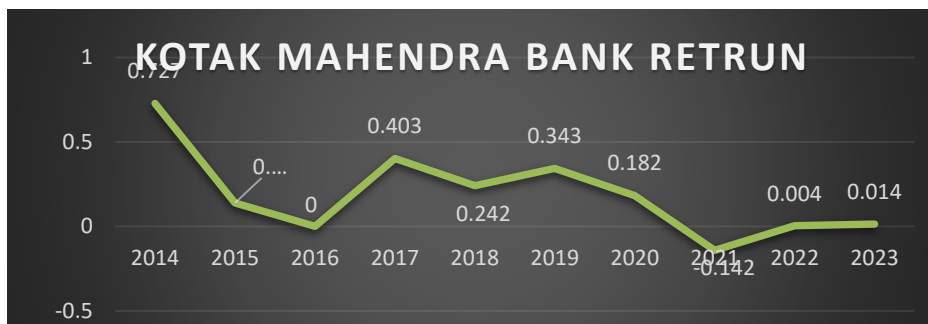
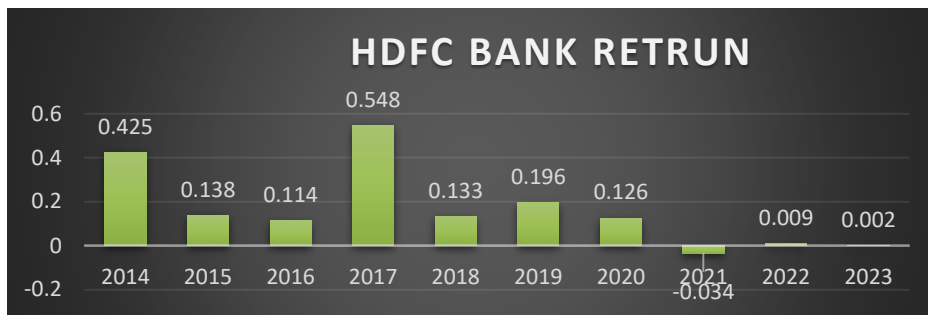
Beta Calculation: Beta coefficients are calculated to measure the systematic risk of each bank relative to the market.

OBJECTIVES OF THE STUDY:

1. This study aims to evaluate the risk and return profiles of selected Indian Banks
2. To analyze the correlation coefficients and beta coefficients of the selected banks relative to the market
3. To analyses the investment choices between the NSE & BSE.

RESULTS





❖ **AXIS BANK LTD**

Year	Returns (p1-p0)/p0	Average Returns	D(R-R'')	D ²
2014	0.926	0.134	0.792	0.627
2015	-0.105	0.134	-0.239	0.057
2016	0	0.134	-0.134	0.018
2017	0.247	0.134	0.113	0.013
2018	0.102	0.134	-0.032	0.001
2019	0.214	0.134	0.08	0.006
2020	-0.178	0.134	-0.312	0.097
2021	0.067	0.134	-0.067	0.004
2022	0.03	0.134	-0.104	0.011
2023	0.014	0.134	-0.12	0.014
TOTAL	0.138			0.848

Calculation of Standard deviation of Axis Bank

1. Calculation

$$\text{Variance} = 1/n-1(\sum d^2) = 1/9(0.848) = 0.094 \text{ (9.42\%)}$$

$$\text{Standard deviation} = \sqrt{\text{variance}} = \sqrt{0.094}$$

$$= 0.306 \text{ (30.65\%)}$$

Findings

Average Return Analysis:

Outperformance of Certain Banks: The analysis revealed that Kotak Mahindra Bank, HDFC Bank, Axis Bank, and ICICI Bank have demonstrated higher average returns compared to State Bank of India (SBI) and Yes Bank over the specified time period. This indicates that investors who allocated their funds to these banks may have experienced superior investment returns.

Correlation and Beta Analysis:

Strong Correlation with Market: State Bank of India (SBI), ICICI Bank, and Axis Bank exhibited strong positive correlations with the overall market. This suggests that these banks' stock returns tend to move in tandem with broader market movements.

High Volatility: Despite their strong correlations with the market, SBI, ICICI Bank, and Axis Bank also demonstrated high volatility, as indicated by their beta coefficients. This implies that these banks are more sensitive to market fluctuations and may experience higher levels of risk compared to other banks in the study.

Performance Comparison among Banks:

Superior Performance of Kotak Mahindra Bank, HDFC Bank, Axis Bank, and ICICI Bank: The analysis indicates that Kotak Mahindra Bank, HDFC Bank, Axis Bank, and ICICI Bank have outperformed SBI and Yes Bank in terms of average returns. Additionally, these banks have demonstrated varying levels of correlation with the market, suggesting differences in their risk exposures and market sensitivity.

Implications for Investors:

Portfolio Allocation Strategies: Investors may consider allocating their funds to banks such as Kotak Mahindra Bank, HDFC Bank, Axis Bank, and ICICI Bank, which have shown superior performance and potentially lower risk compared to SBI and Yes Bank. However, investors should also be mindful of the higher volatility associated

with certain banks, particularly SBI, ICICI Bank, and Axis Bank, and adjust their portfolio allocations accordingly to manage risk effectively.

Implications for Policymakers:

Systemic Risk Management: Policymakers and regulatory authorities should closely monitor banks demonstrating high volatility, such as SBI, ICICI Bank, and Axis Bank, to mitigate systemic risk within the banking sector. Implementing effective risk management measures and regulatory oversight can help maintain stability and resilience in the financial system.

Further Research Directions:

Exploring Additional Factors: Future research could explore additional factors influencing bank performance and risk, such as macroeconomic variables, regulatory changes, and market sentiment. Analyzing the impact of these factors on bank stock returns and risk exposures could provide deeper insights into the dynamics of the Indian banking sector.

Conclusion

In conclusion, this research contributes to a better understanding of the Indian banking sector's dynamics and offers practical implications for investors and policymakers. By considering both performance and risk factors, stakeholders can make informed decisions to optimize their investment strategies and promote financial stability in the Indian economy.

References

- Markowitz, H. (1952). Portfolio selection. *The Journal of Finance*, 7(1), 77-91.
- Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*, 19(3), 425-442.
- Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *The Review of Economics and Statistics*, 47(1), 13-37.
- Mossin, J. (1966). Equilibrium in a capital asset market. *Econometrica: Journal of the Econometric Society*, 768-783.
- Rajan, R. G., & Zingales, L. (1998). Financial dependence and growth. *American Economic Review*, 88(3), 559-586.
- Berger, A. N., Herring, R. J., & Szego, G. P. (1995). The role of capital in financial institutions. *Journal of Banking & Finance*, 19(3-4), 393-430.

Acharya, V. V., Eisert, T., Eufinger, C., & Hirsch, C. W. (2019). Real effects of financial sector globalization: A quantitative analysis. *The Review of Financial Studies*, 32(6), 2161-2205.

Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. *Journal of Finance*, 47(2), 427-465.

Chen, N. F., Roll, R., & Ross, S. A. (1986). Economic forces and the stock market. *Journal of Business*, 59(3), 383-403.

Black, F. (1972). Capital market equilibrium with restricted borrowing. *Journal of Business*, 45(3), 444-455.

Scholes, M., & Williams, J. (1977). Estimating betas from non synchronous data. *Journal of Financial Economics*, 5(3), 309-327.

