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A Comparative Evaluation of Risk and Return in Selected Debt and Arbitrage Mutual Funds in India

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Abstract: The present study aims to analyze and compare the performance of selected mutual fund schemes on the basis of return generation, market risk, and risk-adjusted performance. The study focuses on three mutual funds namely BHARAT Bond FOF, HDFC Floating Rate Debt Fund, and Nippon India Arbitrage Fund. The research is based on secondary data collected from AMFI reports, mutual fund factsheets, Moneycontrol, Value Research Online, and other financial sources. Financial and statistical tools such as CAGR, Standard Deviation, Beta, Expense Ratio, and Sharpe Ratio were used for analysis and comparison. The findings reveal that BHARAT Bond FOF delivered the highest return with superior risk-adjusted performance and lower expense ratio, making it the best-performing scheme among the selected funds. HDFC Floating Rate Debt Fund showed moderate returns with moderate market risk, whereas Nippon India Arbitrage Fund provided lower returns with comparatively lower risk and greater stability. The study concludes that debt mutual funds generated relatively higher returns, while arbitrage funds offered greater safety and stability for conservative investors. The research also highlights that differences exist among the selected mutual funds in terms of returns, volatility, and investment efficiency.

Keywords: Mutual Funds, Debt Funds, Arbitrage Funds, Risk and Return, Sharpe Ratio, Beta.

I. Introduction

The Indian financial market has undergone significant transformation over the last two decades, with mutual funds emerging as one of the most preferred investment avenues among retail and institutional investors. Mutual funds provide investors with the benefit of professional fund management, diversification, liquidity, and accessibility, making them suitable for individuals with varying risk appetites and financial goals. By pooling money from multiple investors and investing in diversified securities such as equities, debt instruments, and money market assets, mutual funds help reduce investment risk while generating potential returns.

The growth of the mutual fund industry in India has been supported by increasing financial awareness, digital investment platforms, rising disposable income, and regulatory initiatives undertaken by the Securities and Exchange Board of India (SEBI) and the Association of Mutual Funds in India (AMFI). According to AMFI reports, the Assets Under Management (AUM) of the Indian mutual fund industry have increased substantially in recent years, reflecting growing investor confidence in mutual fund investments.Among the various categories of mutual funds, debt funds and arbitrage funds have gained considerable attention due to their relatively lower risk profile and stable return-generating capability. Debt mutual funds primarily invest in government securities, treasury bills, corporate bonds, and other fixed-income instruments, whereas arbitrage funds generate returns through price differences between cash and derivative markets. These funds are generally preferred by conservative investors seeking stability, liquidity, and tax-efficient investment options.

The performance of mutual funds is influenced by several macroeconomic and policy-related factors such as inflation, interest rates, market volatility, taxation policies, and fiscal decisions of the government. In India, the Union Budget plays a crucial role in shaping investor sentiment and financial market behavior. Budget announcements related to taxation, capital gains, government borrowing, and fiscal deficit directly impact mutual fund performance and investment strategies.

The Union Budget 2024–25 introduced significant changes in the taxation structure of debt mutual funds, particularly the removal of indexation benefits for certain debt-oriented schemes. This reform reduced the tax advantages previously enjoyed by debt fund investors and influenced investment preferences across different mutual fund categories. As a result, investors started exploring alternative investment avenues such as arbitrage funds and hybrid schemes offering relatively better tax efficiency.

In this context, analyzing the performance of selected mutual funds becomes highly relevant for understanding the impact of fiscal policy changes on investment returns, risk, and investor behavior. Therefore, the present study focuses on the comparative performance analysis of three selected mutual fund schemes, namely BHARAT Bond FOF, HDFC Floating Rate Debt Fund, and Nippon India Arbitrage Fund. These funds represent different investment approaches including target maturity debt investment, floating-rate debt investment, and arbitrage-based investment strategy.

The study aims to evaluate the returns, expense ratios, risk levels, and risk-adjusted performance of these schemes using financial tools such as CAGR, Standard Deviation, Beta, and Sharpe Ratio. It also attempts to assess how recent budgetary and taxation reforms have affected these funds and investor preferences. The findings of the study are expected to provide valuable insights to investors, researchers, and policymakers regarding the efficiency and suitability of different mutual fund categories in the changing economic environment.

II. Literature Review

Sharpe (1966) developed the Sharpe Ratio model for evaluating mutual fund performance on the basis of risk-adjusted returns. The study emphasized that investors should evaluate investments not only on returns generated but also on the level of risk undertaken. The Sharpe Ratio has become one of the most widely used measures for comparing mutual fund performance and is highly relevant for analysing debt and arbitrage mutual funds characterized by relatively lower risk.

Treynor (1965) introduced the Treynor Ratio, which measures portfolio performance by relating excess returns to systematic risk represented by beta. The study concluded that portfolios with higher returns per unit of market risk are considered superior investments. This concept is useful for evaluating the efficiency and market sensitivity of debt and arbitrage mutual fund schemes.

Jensen (1968) proposed Jensen's Alpha model to evaluate the ability of mutual fund managers to generate abnormal returns over expected market returns. The study highlighted the significance of professional portfolio management in enhancing investment performance. This model supports the comparative analysis of selected mutual fund schemes in the present study.

Saini (2016) conducted a comparative analysis of equity and debt mutual funds in India and found that debt mutual funds offer more stable and predictable returns compared to equity funds. The study observed that debt-oriented schemes are suitable for conservative investors seeking lower risk and regular income. These findings are relevant to the present study focusing on BHARAT Bond FOF and HDFC Floating Rate Debt Fund.

Maheswari (2020) analyzed the comparative performance of equity, debt, and hybrid mutual funds and concluded that debt funds perform better during periods of market uncertainty due to lower volatility. However, the study also indicated that changes in interest rates significantly affect debt fund returns. This observation is particularly relevant for floating-rate debt funds included in the present research.

Panigrahi, Jain, and Sharma (2020) examined the impact of macroeconomic variables such as inflation, interest rates, and fiscal policy changes on mutual fund performance. The study revealed that government policies and economic conditions directly influence the returns and risk profile of debt mutual funds. These findings are important in understanding the impact of Union Budget reforms on mutual fund performance.

Virparia (2022) evaluated selected mutual fund schemes using financial measures such as standard deviation, beta, and Sharpe Ratio. The study concluded that the risk-return trade-off remains a major factor affecting investor decision-making. Funds with stable returns and lower volatility were found to be more attractive to risk-averse investors.

Begum and Vepa (2022) reviewed various mutual fund performance studies and concluded that risk-adjusted performance indicators provide more reliable evaluation than absolute return measures. Their findings indicated that investors prefer schemes offering consistent returns with lower risk exposure, particularly in uncertain economic conditions.

Chaudhari and Meman (2025) analyzed debt and equity mutual funds in India and observed that only a limited number of schemes consistently outperform benchmark returns on a risk-adjusted basis. The study also highlighted that taxation reforms and policy changes significantly influence investor preferences and mutual fund performance.

Recent financial studies on the Indian mutual fund industry have also highlighted the impact of the Union Budget 2024–25, particularly the removal of indexation benefits for debt mutual funds. Researchers observed that these taxation changes reduced the post-tax attractiveness of debt funds and shifted investor preference toward arbitrage and hybrid schemes that offer comparatively better tax efficiency.

From the review of literature, it is evident that although several studies have evaluated mutual fund performance in India, limited research has specifically focused on the comparative performance of debt and arbitrage mutual funds after recent fiscal and taxation reforms. Therefore, the present study attempts to bridge this research gap by analysing the risk, return, and investment efficiency of selected debt and arbitrage mutual fund schemes in India.

III. Objectives of the Study

1. To evaluate the performance of selected mutual funds.
2. To compare the returns generated by the selected schemes.
3. To analyze the risk and return characteristics of the selected funds.
4. To evaluate risk-adjusted performance using Sharpe Ratio and Beta.

IV. Hypothesis

H1: There is no significant difference in the returns generated by the selected debt and arbitrage mutual funds in India.

H2: There is no significant difference in the risk-adjusted performance of the selected mutual funds measured through Sharpe Ratio and Beta.

V. Research Methodology

The present study is based on a descriptive and analytical research design to evaluate and compare the risk and return performance of selected debt and arbitrage mutual funds in India. The study is empirical in nature and relies entirely on secondary data collected from reliable sources such as AMFI reports, official mutual fund factsheets, Money control, Value Research Online, NSE India, annual reports, and financial journals. The study focuses on three selected mutual fund schemes, namely BHARAT Bond FOF, HDFC Floating Rate Debt Fund, and Nippon India Arbitrage Fund selected through purposive sampling based on their relevance to the research objectives. The analysis mainly covers the financial year 2024–25 with special emphasis on the post-Union Budget period.

Various financial and statistical tools such as CAGR, Standard Deviation, Beta, Expense Ratio, and Sharpe Ratio have been used to analyze fund performance, volatility, market risk, and risk-adjusted returns. Comparative analysis was conducted to evaluate the efficiency and investment suitability of the selected schemes. However, the study is limited to secondary data, a small sample size, and a limited study period, which may affect the generalization of findings. Additionally, market fluctuations and policy changes may influence mutual fund performance over time.

VI. Data Analysis & Interpretation

Table 1: Return Analysis (CAGR Calculation)

Mutual Fund	Beginning NAV	Ending NAV	Return (%)
BHARAT Bond FOF	₹ 12.90	₹ 13.90	7.75%
HDFC Floating Rate Debt Fund	₹ 48.50	₹ 52.00	7.20%
Nippon India Arbitrage Fund	₹ 27.50	₹ 29.20	6.18%

The return analysis shows that all the selected mutual funds generated positive returns during the study period. Among them, BHARAT Bond FOF recorded the highest return of 7.75%, indicating better and stable performance due to investment in government-backed bonds. HDFC Floating Rate Debt Fund generated a return of 7.20%, reflecting moderate performance influenced by changing interest rates.

On the other hand, Nippon India Arbitrage Fund recorded the lowest return of 6.18%. Although the return was comparatively lower, the fund provided stable performance with lower risk due to its arbitrage investment strategy. Overall, the analysis indicates that debt funds performed better in terms of returns compared to the arbitrage fund during the study period.

Table 2: Expense Ratio Analysis

Mutual Fund	Expense Ratio
BHARAT Bond FOF	0.09%
HDFC Floating Rate Debt Fund	0.53%
Nippon India Arbitrage Fund	0.40%

The expense ratio analysis reveals noticeable differences in the cost structure of the selected mutual funds. Among the three schemes, BHARAT Bond FOF reported the lowest expense ratio of 0.09%, indicating high cost efficiency and lower management expenses. A lower expense ratio enhances investors' net returns and makes the scheme more attractive for long-term conservative investors.

The HDFC Floating Rate Debt Fund recorded the highest expense ratio of 0.53%, reflecting comparatively higher fund management and operational costs. The Nippon India Arbitrage Fund showed a moderate expense ratio of 0.40%, which is relatively higher than BHARAT Bond FOF but lower than HDFC

Floating Rate Debt Fund. Overall, the analysis suggests that BHARAT Bond FOF is the most cost-effective investment.

Table 3: Risk Analysis

Mutual Fund	Standard Deviation	Beta
BHARAT Bond FOF	Low	0.2–0.3
HDFC Floating Rate Debt Fund	Moderate	0.4–0.6
Nippon India Arbitrage Fund	Very Low	0.1

The risk analysis based on Standard Deviation and Beta indicates variation in the risk profile of the selected mutual funds. BHARAT Bond FOF exhibited low risk with a beta value ranging between 0.2–0.3, signifying lower sensitivity to market fluctuations and stable performance due to its investment in government-backed securities.The HDFC Floating Rate Debt Fund showed moderate risk with a beta range of 0.4–0.6, indicating relatively higher volatility influenced by changes in interest rates and debt market conditions. In contrast, the Nippon India Arbitrage Fund recorded the lowest risk level with a beta value of 0.1, reflecting minimal market exposure and highly stable returns. The findings indicate that arbitrage funds are comparatively safer, while floating-rate debt funds carry moderate market and interest-rate risk.

Table 4: Sharpe Ratio Analysis

Mutual Fund	Sharpe Ratio	Interpretation
BHARAT Bond FOF	Highest (~1.0)	Best risk-adjusted return
HDFC Floating Rate Debt Fund	Moderate (~0.8)	Balanced performance
Nippon India Arbitrage Fund	Moderate (~0.7)	Stable but lower efficiency

The Sharpe Ratio analysis highlights the risk-adjusted performance efficiency of the selected mutual funds. BHARAT Bond FOF recorded the highest Sharpe Ratio of approximately 1.0, indicating superior risk-adjusted returns and efficient portfolio performance. The scheme generated better returns relative to the level of risk undertaken.

The HDFC Floating Rate Debt Fund showed a moderate Sharpe Ratio of approximately 0.8, reflecting balanced performance with moderate risk and return characteristics. Similarly, the Nippon India Arbitrage Fund recorded a Sharpe Ratio of approximately 0.7, indicating stable but comparatively lower performance efficiency. Overall, the analysis suggests that BHARAT Bond FOF delivered the most efficient risk-return trade-off among the selected mutual fund schemes.

Table 5: Comparative Statistical Analysis of Selected Mutual Funds

Mutual Fund	Return (%)	Standard Deviation (σ)	Beta (β)	Sharpe Ratio (SR)	Overall Performance
BHARAT Bond FOF	7.75%	Low	0.2–0.3	Highest (~1.0)	Best
HDFC Floating Rate Debt Fund	7.20%	Moderate	0.4–0.6	Moderate (~0.8)	Moderate
Nippon India Arbitrage Fund	6.18%	Very Low	0.1	Moderate (~0.7)	Stable

The comparative statistical analysis indicates clear differences in the return, risk, and risk-adjusted performance of the selected mutual funds. Among the selected schemes, BHARAT Bond FOF recorded the highest return of 7.75% along with the highest Sharpe Ratio of approximately 1.0, indicating superior risk-adjusted performance and efficient portfolio management. The fund also exhibited low standard deviation and lower beta value (0.2–0.3), reflecting lower market volatility and stable returns. Hence, the scheme demonstrated the best overall performance among the selected mutual funds.

The HDFC Floating Rate Debt Fund generated a return of 7.20% with moderate standard deviation and beta value ranging between 0.4–0.6, indicating moderate market risk and volatility influenced by changing interest rates. Its Sharpe Ratio of approximately 0.8 reflects balanced risk-return performance. In contrast, the Nippon India Arbitrage Fund recorded the lowest return of 6.18%, but it maintained very low standard deviation and the lowest beta value of 0.1, signifying minimal market exposure and highly stable performance. Although its Sharpe Ratio was comparatively lower at approximately 0.7, the fund remained suitable for highly risk-averse investors seeking stability and capital protection. Overall, the analysis suggests that debt funds generated comparatively higher returns, whereas the arbitrage fund provided greater safety and lower risk exposure.

The hypothesis testing based on comparative statistical analysis indicates that differences exist among the selected mutual funds in terms of returns, risk levels, and risk-adjusted performance. BHARAT Bond FOF

generated the highest return and Sharpe Ratio with lower market risk, whereas HDFC Floating Rate Debt Fund showed moderate performance and Nippon India Arbitrage Fund provided lower returns with very low risk exposure. The variations observed in return percentages, beta values, standard deviation, and Sharpe Ratio suggest that the selected mutual funds do not perform equally. Therefore, the null hypotheses are rejected and the alternative hypotheses are accepted, indicating that differences exist in the return and risk-adjusted performance of the selected debt and arbitrage mutual funds in India.

VII. Conclusion

The present study analyzed and compared the performance of selected debt and arbitrage mutual funds in India using various financial and statistical measures such as CAGR, Expense Ratio, Standard Deviation, Beta, and Sharpe Ratio. The analysis revealed that all selected schemes generated positive returns during the study period, although differences existed in terms of return generation, risk exposure, cost efficiency, and risk-adjusted performance. Among the selected schemes, BHARAT Bond FOF emerged as the best-performing mutual fund due to its highest return, lower expense ratio, low market risk, and superior Sharpe Ratio. The fund demonstrated better portfolio efficiency and stable performance for long-term conservative investors.

HDFC Floating Rate Debt Fund showed moderate returns and moderate risk due to fluctuations in interest rates and debt market conditions. On the other hand, Nippon India Arbitrage Fund generated comparatively lower returns but maintained very low market risk and stable performance, making it suitable for highly risk-averse investors seeking capital protection and liquidity. The study further concludes that debt funds provided comparatively higher returns, whereas arbitrage funds offered greater stability and lower volatility. Therefore, investors should select mutual fund schemes based on their risk tolerance, return expectations, and investment objectives.

VIII. Future Scope of the Study

The present study is limited to selected debt and arbitrage mutual funds and a specific study period; therefore, future research can be extended by including a larger sample of equity, hybrid, and other mutual fund categories for broader comparative analysis. Future studies may also cover a longer time horizon to examine the long-term consistency and sustainability of mutual fund performance under varying market conditions. Advanced statistical and financial tools such as regression analysis, correlation analysis, ANOVA, Jensen's Alpha, and Treynor Ratio can be incorporated for more comprehensive evaluation of fund efficiency and portfolio management. Further research may also analyze the impact of macroeconomic factors such as inflation, interest rates, monetary policy, and fiscal reforms on mutual fund performance. In addition, studies focusing on investor perception, behavioural finance, and comparative analysis between public and private sector mutual funds may provide deeper insights into investment preferences and decision-making behaviour in the Indian mutual fund industry.

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