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A COMPARATIVE PERFORMANCE ANALYSIS OF SELECTED LARGE - CAP MUTUAL FUNDS IN INDIA - A STUDY

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Abstract: This study investigates the comparative performance of selected large-cap mutual funds in India over the period 2021 - 2025 using monthly closing Net Asset Value (NAV) data. The analysis evaluates both return and risk-adjusted performance measures to give a comprehensive assessment of fund efficiency. Key indicators including Compound Annual Growth Rate (CAGR), standard deviation, Sharpe ratio, Beta, Treynor ratio, and Jensen's Alpha are employed within the Capital Asset Pricing Model (CAPM) framework. The NIFTY 50 index serves as the benchmark, and a 7 percent annual risk-free rate is assumed for excess return estimation. Empirical results indicate that Nippon India Large Cap Fund exhibited superior compounded growth and the highest risk-adjusted performance, followed by ICICI Prudential and HDFC Top 100, while Axis demonstrated relatively weaker performance. However, the One-Way ANOVA results reveal no statistically significant difference in mean monthly returns among the selected funds at the 5 percent level. The findings suggest that although performance efficiency varies across schemes, large-cap funds within the same category tend to generate comparable average returns over time.

Keywords: Mutual Funds, Large-Cap Mutual Funds, Equity Mutual Funds, Performance Analysis.

INTRODUCTION

Mutual funds have emerged as one of the most significant financial intermediation mechanisms in modern capital markets, enabling investors to participate in diversified portfolios managed by professional fund managers. In India, the mutual fund industry has witnessed substantial expansion over the past two decades, driven by increasing financial awareness, regulatory strengthening by the Securities and Exchange Board of India (SEBI), and growing participation through Systematic Investment Plans (SIPs). Equity-oriented schemes, particularly large-cap mutual funds, have gained prominence due to their investment in financially stable and well-established companies, making them relatively attractive for investors seeking long-term capital appreciation with moderate risk exposure.

Large - cap mutual funds occupy a central position within the equity mutual fund segment as they primarily invest in companies with strong market capitalization, established governance structures, and relatively stable earnings patterns. These funds are often perceived as comparatively less volatile than mid-cap and small - cap schemes, especially during periods of market uncertainty. However, despite their perceived stability, performance outcomes among large-cap funds may vary due to differences in portfolio allocation strategies, fund management efficiency, sectoral exposure, and market timing decisions. Such variations necessitate a systematic evaluation of their risk and return characteristics.

In an increasingly competitive investment environment, investors and financial analysts require reliable and structured performance assessments to make informed decisions. Merely observing absolute returns may not provide a complete picture of fund efficiency, as return generation must be interpreted alongside the level of risk undertaken. Therefore, a comprehensive understanding of risk-adjusted performance becomes essential in assessing the effectiveness and consistency of large-cap mutual funds within the evolving landscape of the Indian capital market.

REVIEW OF LITERATURE

A review of literature presents a summary of existing research related to the study. In the present research, it highlights earlier studies regarding the performance assessment of equity mutual funds, risk - return analysis, and the application of various risk-adjusted performance measures.

Mishra (2016) evaluated the performance of chosen Indian equity mutual funds using Sharpe, Treynor, and Sortino ratios. Using secondary NAV data, the study compared fund returns against benchmark indices. The findings indicated that performance rankings varied depending on the risk-adjusted measure applied.

Arora (2017) conducted a comparative analysis of diversified equity mutual funds by using Jensen's alpha and beta analysis. Based on five-year secondary data, the study examined managerial efficiency and market risk exposure. Results showed that only a few schemes generated statistically significant positive alpha.

Tripathy (2018) examined the risk - return dynamics of Indian equity mutual funds using standard deviation, beta, and Sharpe ratio. The study analysed NAV data across multiple schemes to evaluate consistency in performance. Findings revealed that most funds were unable to outperform benchmarks on a sustained risk-adjusted basis.

Arora and Raman (2020) conducted an empirical investigation of equity mutual funds using multiple performance indicators including Sharpe, Treynor, and Jensen's alpha. The study relied on secondary NAV data over a multi-year period. Results showed variation in performance across fund categories, with limited evidence of consistent outperformance.

Singh and Patel (2020) applied, Data Envelopment Analysis (DEA) to assess the effectiveness of selected equity mutual funds in India. Using input variables such as expense ratio and risk, the study measured relative fund efficiency. The results suggested that cost structure significantly influenced overall fund performance.

Bansal and Kaur (2021) analysed equity mutual fund performance during volatile market conditions using Sharpe and Jensen measures. Based on post - 2018 data, the study evaluated the impact of market uncertainty on fund returns. The findings indicated weakened risk-adjusted performance during periods of high volatility.

Sharma (2023) investigated post - COVID performance of Indian equity mutual funds using risk-return analysis and beta estimation. The study assessed changes in volatility patterns and benchmark comparison. Findings revealed significant variation in performance across large-cap and mid-cap funds during the recovery phase.

Verma (2024) examined the relationship between expense ratios and risk-adjusted returns of Indian equity mutual funds using regression analysis. Based on recent five-year data, the study analysed cost efficiency and portfolio turnover. The results confirmed that higher expense ratios negatively affected long-term performance stability.

RESEARCH GAP

Although several studies have assessed Indian equity mutual funds using risk-adjusted performance measures, most focus on broad fund categories, specific market conditions, and expense efficiency. Limited research has provided a recent and structured comparison of selected large-cap funds against a common benchmark, particularly incorporating return, risk, and statistical significance testing within a single analytical framework for the post-pandemic period. To fulfill this existing gap, the present study entitled **"A Comparative Performance Analysis of Selected Large Cap Mutual Funds in India - A Study"** undertakes a comprehensive and updated evaluation using standardized performance measures and hypothesis testing.

OBJECTIVES

The followings objectives are established to direct the aim and trajectory of the current study.

1. To evaluate and compare the risk - return performance of selected large-cap mutual funds.
2. To analyze the return performance of selected large-cap mutual funds.

HYPOTHESES OF THE STUDY

A hypothesis is a tentative statement formulated to test relationships and guide the direction of the research. The following hypothesis have been framed for the purpose of the present study.

1. H_{01}: There is no significant difference in the returns of selected large-cap mutual funds.

SCOPE AND METHODOLOGY

This study analyses the comparative performance of selected large-cap mutual funds, ICICI Prudential Blue-chip (Large-Cap) Fund, Axis Blue-chip (Large -Cap) Fund, HDFC Large Cap Fund, and Nippon India Large Cap Fund over the period of January, 2021 to December, 2025. The present study is quantitative and based on secondary data which, are collected from AMFI, fund house websites, and NSE sources. Monthly NAV data were used to calculate returns, with NIFTY 50 serving as the benchmark and a risk-free rate of 7 percent assumed. Statistical tools such as CAGR, Standard Deviation, Sharpe ratio, Beta, Treynor and evaluate

the returns and risk differences among the selected funds and One-Way ANOVA were applied to test the hypothesis at a 5 percent level of significance.

DATA ANALYSIS AND INTERPRETATION

In this section, the empirical findings derived from the statistical analysis of the selected large-cap mutual funds for the period 2021 - 2025. The results are interpreted in relation to the research objectives and hypotheses to evaluate comparative performance and statistical significance of return differences among the funds.

Table :1. Comprehensive 5 - Year Performance Comparison (2021 - 2025)

Name of Funds	5Y CAGR (%)	Std Dev (%)	Sharpe	Beta	Treynor	Jensen Alpha (%)
Nippon India	19.01	12.95	1.22	1.00	0.157	7.75
ICICI Prudential	17.24	11.60	1.13	0.92	0.142	5.68
HDFC Top 100	15.76	12.78	0.97	1.00	0.124	4.35
Axis	11.20	12.45	0.51	0.97	0.066	-1.39

Source: *Excel Output*

Over the five-year period (2021 - 2025), Nippon India Large Cap Fund demonstrated superior overall performance, achieving the highest compounded annual growth rate (19.01%), strongest Sharpe ratio (1.22), highest Treynor ratio (0.157), and maximum positive Jensen's Alpha (7.75%), indicating effective stock selection and efficient risk management. ICICI Prudential Large Cap Fund exhibited the lowest volatility (11.60%) with strong risk-adjusted performance, reflecting a relatively defensive portfolio structure. HDFC Top 100 delivered moderate returns with stable systematic risk characteristics. Axis Large Cap Fund recorded the lowest return and negative Jensen's Alpha (-1.39%), suggesting underperformance relative to CAPM expectations. Overall, the results confirm that Nippon India and ICICI Prudential funds generated superior risk-adjusted returns, whereas Axis demonstrated comparatively weaker efficiency within the large-cap category.

HYPOTHESIS TESTING

This section presents the hypothesis testing results based on the application of the One-Way ANOVA technique. The test is conducted to examine whether there is any statistically significant difference in the mean returns of the selected equity mutual funds. The following null hypothesis is formulated for the analysis.

Table 2: One - Way ANOVA Hypothesis Test Result

Descriptive Statistics of Monthly Returns				ANOVA Result					
Funds Name	**N**	**Mean**	**Std Dev**	**Source**	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Nippon India Large-Cap Fund	59	0.0173	0.0373	Between Groups	0.001	3	0.0003	0.372	0.774
ICICI Prudential Large-Cap Fund	59	0.0153	0.0334	Within Groups	0.300	232	0.001		
HDFC Large-Cap Fund (Top 100)	59	0.0149	0.0368	**Total**	**0.301**	**235**	-		
Axis Large - Cap	59	0.0105	0.0359						

Source: *SPSS Output*

The descriptive statistics indicate that the average monthly returns of the selected large-cap mutual funds during the study period (2021 - 2025) ranged between 0.0105 and 0.0173. Although Nippon India exhibited the highest average return, the differences across funds appear marginal.

The One-Way ANOVA results indicate that **there is no statistically significant difference** in the mean monthly returns among the selected funds ($F = 0.372$, $p = 0.774$). Since the p-value exceeds the 5 percent significance level, the null hypothesis is not rejected. Therefore, the selected equity mutual funds do not differ significantly in terms of average monthly returns during the study period.

FINDINGS OF THE STUDY

The findings of the study reveal that among the selected large-cap mutual funds, Nippon India demonstrated the highest overall performance in terms of CAGR, Sharpe ratio, Treynor ratio, and Jensen's Alpha during the period 2021 - 2025, followed by ICICI Prudential and HDFC Top 100, while Axis recorded comparatively lower returns and negative Jensen's Alpha. The risk analysis shows that ICICI Prudential exhibited the lowest volatility among the selected funds. However, the One-Way ANOVA results indicate that there is no statistically significant difference in the mean monthly returns of the selected funds at the 5 percent level of significance ($p = 0.774$). Hence, despite variations in performance indicators, the average returns of the selected large-cap mutual funds do not differ significantly during the study period.

SUGGESTIONS AND CONCLUSION

On the bases of findings of the study, investors may consider Nippon India and ICICI Prudential Large Cap Funds for relatively better risk-adjusted performance, while also evaluating individual risk tolerance and investment objectives before making decisions. Since the analysis indicates no statistically significant difference in average monthly returns among the selected funds, investors should not rely solely on return figures but also consider risk measures, consistency, and portfolio strategy. In conclusion, the study confirms that although performance indicators such as CAGR, Sharpe ratio, Treynor ratio, and Jensen's Alpha vary across funds, the overall return differences are not statistically significant during the period 2021 - 2025. This suggests that large-cap mutual funds within the same category tend to deliver comparable average returns over time, with variations primarily observed in risk-adjusted efficiency rather than absolute return performance.

LIMITATIONS

The study is subject to certain limitations. It is confined to four selected large-cap mutual funds and does not include mid-cap or small-cap schemes. The analysis covers a five-year period (2021 - 2025), and the findings may be influenced by specific market conditions prevailing during this timeframe. The study relies entirely on secondary data and does not incorporate qualitative factors such as fund management strategy or portfolio turnover. Additionally, the risk-free rate is assumed constant for the whole period.

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