



A Study on Performance Evaluation of HDFC Mutual Fund Growth Schemes with Reference to Risk and Return Analysis

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Abstract

This study evaluates the performance of selected HDFC Mutual Fund growth schemes—HDFC Top 100 Fund, HDFC Mid-Cap Opportunities Fund, HDFC Small Cap Fund, and HDFC Balanced Advantage Fund—during the period 2019–2024. The research analyzes the risk and returns characteristics of these schemes using secondary data collected from reliable financial sources. Various performance evaluation tools, including NAV analysis, Standard Deviation, Sharpe Ratio, Treynor Ratio, and Jensen’s Alpha, were applied to assess risk-adjusted returns. The findings reveal that the HDFC Mid-Cap Opportunities Fund delivered the best risk-adjusted performance, while the HDFC Top 100 Fund exhibited strong growth and market outperformance. The HDFC Small Cap Fund offered higher return potential with greater risk, whereas the HDFC Balanced Advantage Fund provided stable returns with lower volatility. The study concludes that evaluating both risk and return is essential for making informed investment decisions and selecting suitable mutual fund schemes.

Keywords: HDFC Mutual Fund, Risk, Return, Performance Evaluation, Sharpe Ratio, Treynor Ratio, Jensen’s Alpha.



1.Introduction

Mutual funds are a popular investment option that helps investors achieve financial goals through professional fund management and diversification. Growth schemes focus on capital appreciation by investing mainly in equity securities. HDFC Mutual Fund is one of India's leading asset management companies, offering a variety of growth-oriented schemes. This study evaluates the performance of selected HDFC Mutual Fund growth schemes during 2019–2024 by analysing their risk and return characteristics using various financial performance measures. The research aims to help investors make informed investment decisions based on risk-adjusted returns.

Statement of the Problem

Mutual fund investors seek higher returns while managing investment risk. However, the performance of mutual fund schemes varies due to changing market conditions and differences in fund management strategies. Therefore, it is necessary to evaluate whether the selected HDFC Mutual Fund growth schemes have generated satisfactory returns relative to the risks undertaken. This study examines the risk and return performance of selected HDFC Mutual Fund growth schemes during the period 2019–2024 and compares their effectiveness in delivering value to investors.

Research Objectives, Questions & Hypotheses

- To evaluate the performance of selected HDFC Mutual Fund growth schemes.
- To analyse the risk and return of selected HDFC Mutual Fund schemes.
- To measure the performance of the schemes using Sharpe Ratio, Treynor Ratio, and Jensen's Alpha.
- To compare the performance of the selected mutual fund schemes.

Hypotheses

Null Hypothesis (H₀): There is no significant difference in the performance of the selected HDFC Mutual Fund growth schemes.

Significance of the Study

- This study is significant because it evaluates the performance of selected HDFC Mutual Fund growth schemes with respect to risk and return. The findings help investors understand the relationship between risk and return and make informed investment decisions. The study also highlights the usefulness of performance evaluation tools such as Sharpe Ratio, Treynor Ratio, and Jensen's Alpha in assessing mutual fund efficiency. Furthermore, the research provides valuable insights for investors, financial advisors, and researchers interested in mutual fund performance and portfolio management.

Scope of the Study

The present study focuses on evaluating the performance of selected HDFC Mutual Fund growth schemes with reference to risk and return analysis. The research covers four schemes, namely HDFC Top 100 Fund, HDFC Mid-Cap Opportunities Fund, HDFC Small Cap Fund, and HDFC Balanced Advantage Fund. The study examines their performance during the period from 2019 to 2024 using secondary data collected from reliable financial sources. It analyses various performance measures such as NAV growth, returns, risk, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha. The study is confined to the Indian mutual fund industry and aims to provide insights into the effectiveness of the selected schemes.



Limitations of the Study

The study has certain limitations that should be considered while interpreting the findings. It is restricted to only four selected HDFC Mutual Fund schemes and may not represent the performance of the entire mutual fund industry. The research is based solely on secondary data, and its accuracy depends on the reliability of the available sources. Since the analysis is based on historical data from 2019 to 2024, the results may not accurately predict future performance. Additionally, changes in market conditions, economic factors, and government policies may influence mutual fund returns beyond the scope of this study.

2. Review of literature

1.Sharma & Mehta (2023): Sharma and Mehta examined the risk-adjusted performance of equity mutual funds in India using Sharpe, Treynor, and Jensen's Alpha measures during the post-pandemic recovery period. Their study found that large-cap funds consistently delivered better risk-adjusted returns compared to mid-cap and small-cap funds during market volatility. They concluded that fund manager expertise and disciplined asset allocation played a critical role in sustaining above-benchmark performance in uncertain market conditions.

2. Patel & Krishnan (2023): Patel and Krishnan analyzed the effectiveness of diversification strategies adopted by Indian mutual funds in minimizing portfolio risk while maximizing returns between 2020 and 2023. Their findings revealed that funds with higher sectoral diversification, particularly across IT, healthcare, and FMCG sectors, demonstrated greater resilience during market downturns. The study reinforced Avadhani's diversification theory by confirming that well-spread portfolios significantly reduced volatility and improved investor confidence.

3. Gupta & Verma (2024): Gupta and Verma investigated whether actively managed mutual funds in emerging markets could consistently generate positive Jensen's Alpha over a five-year period ending in 2023. Their research indicated that only about 30% of actively managed funds produced statistically significant positive Alpha, raising questions about the long-term value of active fund management over passive index investing. They recommended that investors combine both active and passive strategies to optimize portfolio performance and cost efficiency.

4. Reddy & Nair (2024): Reddy and Nair evaluated the performance of ESG-focused mutual funds in India using the Treynor Ratio and Sharpe Ratio as primary benchmarks against conventional equity funds. Their study found that ESG funds not only matched but in several cases outperformed traditional funds on a risk-adjusted basis during 2022–2024. They concluded that sustainable investing is rapidly gaining traction among retail investors and that ESG-integrated fund management represents a promising frontier in modern mutual fund.

5.Gupta, R. K. (2015): Gupta's research revealed some mutual funds consistently exceed their benchmark indices, therefore demonstrating the need of active fund management to get greater returns. This outperformance was caused by experienced fund managers' strategic asset allocation, timely portfolio rebalancing, and wise security selection. His research motivated investors to carefully review the caliber of fund management instead of just leaning on passive investment techniques



3 Research Methodology

This study adopts a descriptive and analytical research design to evaluate the performance of selected HDFC Mutual Fund growth schemes. The research is based on secondary data collected from reliable sources such as HDFC Mutual Fund reports, AMFI, Money control, and other financial websites. Four schemes—HDFC Top 100 Fund, HDFC Mid-Cap Opportunities Fund, HDFC Small Cap Fund, and HDFC Balanced Advantage Fund—were selected for analysis. The study covers the period from 2019 to 2024. Various statistical and financial tools such as Return Analysis, Standard Deviation, Beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha were used to assess risk, return, and overall fund performance.

Data Sources

The study is based entirely on secondary data. Data related to Net Asset Value (NAV), returns, and benchmark performance for the period 2019–2024 were collected from the official website of HDFC Mutual Fund. Additional information was obtained from AMFI (Association of Mutual Funds in India), Money control, and Value Research Online. Benchmark data for the Nifty 50 Index were collected from NSE India. These sources provided reliable and relevant information for analysing the risk and return performance of the selected HDFC Mutual Fund growth schemes.

4. DATA ANALYSIS

1. Profile of Selected Mutual Fund Schemes

This section explains the category, risk level, and investment objective of the selected HDFC mutual fund schemes. It helps understand the basic features of each scheme before performance evaluation.

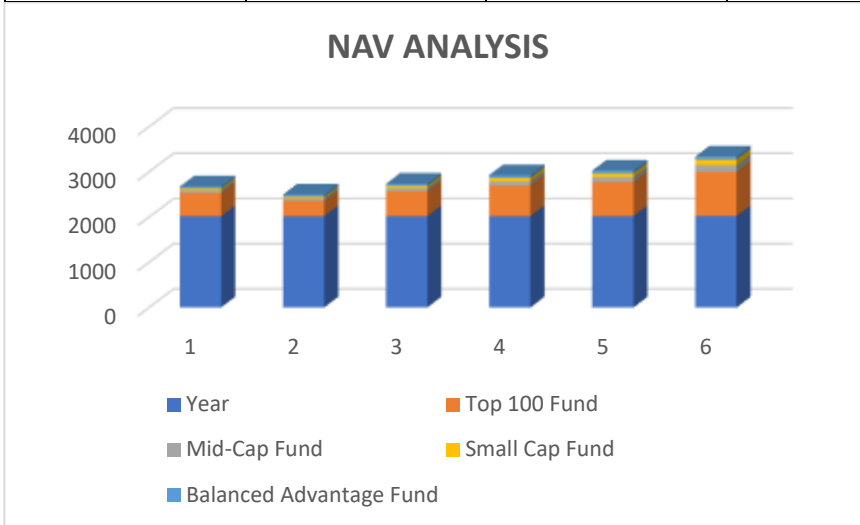
Scheme Name	Category	Risk Level	Investment Objective
HDFC Top 100 Fund	Large Cap	Low Risk	Long-term capital appreciation
HDFC Mid-Cap Opportunities Fund	Mid Cap	Moderate Risk	Growth through mid-cap stocks
HDFC Small Cap Fund	Small Cap	High Risk	High growth opportunities
HDFC Balanced Advantage Fund	Hybrid	Balanced Risk	Combination of equity and debt

2. NAV Analysis

Net Asset Value (NAV) analysis is used to study the growth of mutual fund schemes over the research period. An increasing NAV indicates positive growth and better fund performance.

Year	Top 100 Fund	Mid-Cap Fund	Small Cap Fund	Balanced Advantage Fund
2019	516.31	54.31	41.75	46.4
2020	336.71	54.22	39.33	47.74
2021	550.04	67.21	47.06	52.63
2022	676.14	92.23	77.27	59.58
2023	758.36	103.44	80.55	63.02

2024	980.14	148.54	115.94	71.72
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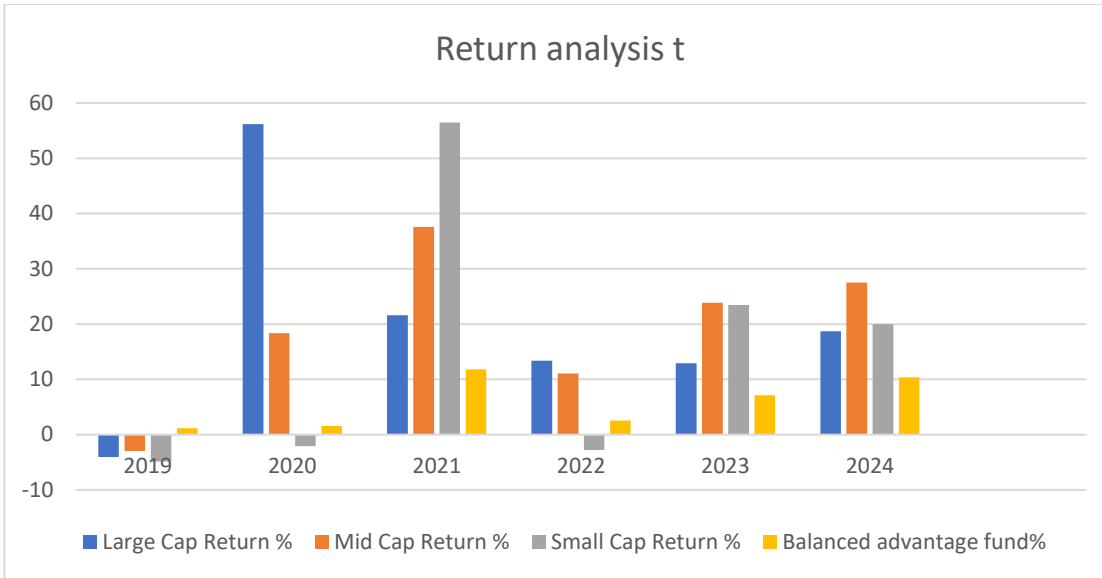
Interpretation

The NAV analysis of selected growth schemes of HDFC Asset Management Company during 2019–2024 shows an overall positive growth trend. Most schemes experienced a decline in 2020 due to market fluctuations, but all funds recovered steadily from 2021 onwards. The HDFC Top 100 Fund recorded the highest NAV growth, while the HDFC Small Cap Fund showed higher growth opportunities with greater volatility. The HDFC Balanced Advantage Fund maintained stable and balanced growth throughout the research period.

3. Return Analysis

Return analysis measures the percentage gain or loss generated by each scheme. It helps compare the profitability of the selected mutual funds during the study period.

Year	Large Cap Return %	Mid Cap Return %	Small Cap Return %	Balanced advantage fund%
2019	-4.061	-2.964	-4.886	1.142
2020	56.202	18.388	-2.110	1.550
2021	21.594	37.598	56.459	11.799
2022	13.375	11.070	-2.769	2.551
2023	12.947	23.839	23.463	7.124
2024	18.697	27.487	20.010	10.373



4. Risk Analysis

Risk analysis is conducted using Standard Deviation. It measures the volatility of returns and indicates the level of risk associated with each scheme.

Scheme	Average Return (%)	Standard Deviation (%)	Risk Level
HDFC Top 100 Fund (Large Cap)	19.79	18.20	High
HDFC Mid-Cap Opportunities Fund	19.24	12.82	Moderate
HDFC Small Cap Fund	15.03	21.68	Very High
HDFC Balanced Advantage Fund	5.76	4.26	Low

The risk analysis of selected HDFC Mutual Fund schemes reveals that the HDFC Small Cap Fund carries the highest volatility with a standard deviation of 21.68%, followed by the HDFC Top 100 Fund at 18.20%, indicating greater return fluctuations in growth-oriented schemes. In contrast, the HDFC Balanced Advantage Fund recorded the lowest standard deviation of 4.26%, confirming that balanced funds offer more stable and consistent returns with relatively lower risk compared to equity-focused schemes.

5. Beta Analysis

Beta measures the sensitivity of a mutual fund's returns to market movements. A higher beta indicates greater market risk, while a lower beta indicates lower risk.

6. Sharpe Ratio Analysis

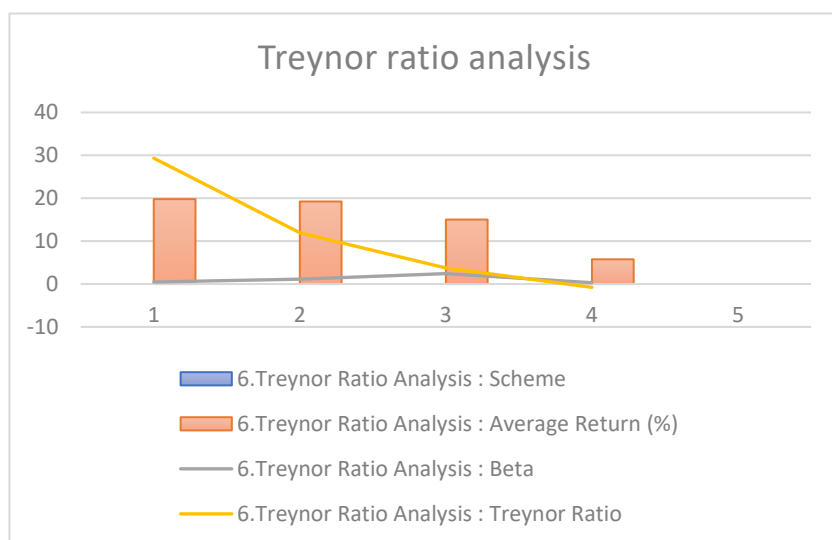
The Sharpe Ratio evaluates risk-adjusted performance by comparing excess returns with total risk. A higher Sharpe Ratio indicates better performance.

Scheme	Average Return (%)	Standard Deviation (%)
Large Cap Fund	19.79	18.20
Mid Cap Fund	19.24	12.82
Small Cap Fund	15.03	21.68
Balanced Advantage Fund	5.76	4.26

7. Treynor Ratio Analysis

The Treynor Ratio measures the return earned for each unit of systematic risk. It helps identify funds that efficiently manage market risk.

Scheme	Average Return (%)	Beta	Treynor Ratio
HDFC Top 100 Fund	19.79	0.47	29.34
HDFC Mid-Cap Opportunities Fund	19.24	1.11	11.93
HDFC Small Cap Fund	15.03	2.43	3.72
HDFC Balanced Advantage Fund	5.76	0.31	-0.77

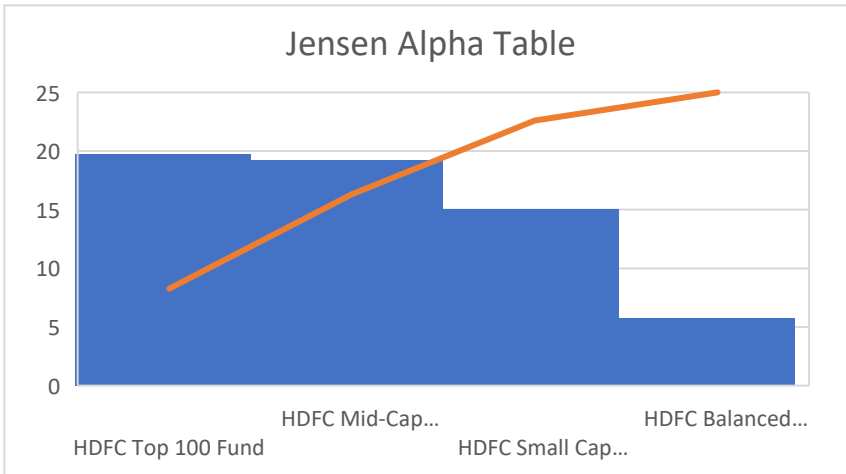


8. Jensen's Alpha Analysis

Jensen's Alpha measures the excess return generated by a fund over its expected return. A positive alpha indicates superior fund performance.

Scheme	Average Return (%)	Beta	Jensen's Alpha (%)
HDFC Top 100 Fund	19.79	0.47	10.01
HDFC Mid-Cap Opportunities Fund	19.24	1.11	4.32
HDFC Small Cap Fund	15.03	2.43	-6.49

HDFC Advantage Fund	Balance	5.76	0.31	-2.73
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9. Benchmark Comparison Analysis

This analysis compares the returns of selected mutual fund schemes with the Nifty 50 benchmark index to determine whether the funds outperformed the market.

Scheme	Average Return (%)	Nifty 50 Average Return (%)	Performance
HDFC Top 100 Fund	19.79	14.03	Outperformed
HDFC Mid-Cap Opportunities Fund	19.24	14.03	Outperformed
HDFC Small Cap Fund	15.03	14.03	Outperformed
HDFC Balance Advantage Fund	5.76	14.03	Underperformed

10. Comparative Analysis of Selected Schemes

This section compares all selected schemes based on risk, return, and performance measures to identify the best-performing mutual fund.

Scheme	Average Return (%)	Risk (SD)	Sharpe Ratio	Jensen's Alpha	Overall Performance
HDFC Top 100 Fund	19.79	18.20	0.76	10.01	Very Good
HDFC Mid-Cap Opportunities Fund	19.24	12.82	1.03	4.32	Excellent
HDFC Small Cap Fund	15.03	21.68	0.42	-6.49	Moderate
HDFC Balance Advantage Fund	5.76	4.26	-0.06	-2.73	Low

**ANOVA:**

Source Variation	SS	df	MS	F	P-value	F Critical
Between Groups	758.0838	3	252.6946	0.856262	0.479773	3.098391
Within Group	5902.2710	20	295.1135			
Total	6660.3548	23				

Interpretation

The comparative analysis indicates that the HDFC Mid-Cap Opportunities Fund achieved the best overall performance due to its highest Sharpe Ratio and strong returns with moderate risk. The HDFC Top 100 Fund also performed well by generating the highest NAV growth and positive Jensen's Alpha. The HDFC Small Cap Fund offered high growth potential but was associated with greater risk and volatility. The HDFC Balanced Advantage Fund provided stable returns with the lowest risk but underperformed compared to other schemes and the benchmark index. Therefore, the HDFC Mid-Cap Opportunities Fund emerged as the most efficient scheme among the selected funds during the research period.

5.FINDINGS, SUGGESTIONS, AND CONCLUSION

1. All selected HDFC Mutual Fund schemes showed overall growth during the period 2019–2024.
2. The HDFC Top 100 Fund recorded the highest NAV growth among the selected schemes.
3. The HDFC Mid-Cap Opportunities Fund achieved the highest Sharpe Ratio, indicating the best risk-adjusted performance.
4. The HDFC Small Cap Fund offered high return potential but was associated with greater risk and volatility.
5. The HDFC Balanced Advantage Fund provided stable returns with the lowest level of risk.
6. Most of the selected schemes outperformed the Nifty 50 benchmark during the study period.

Suggestions:

Investors should carefully select HDFC Mutual Fund schemes based on their risk tolerance, where conservative investors may prefer the Balanced Advantage Fund for stable returns, moderate risk investors may consider the Mid-Cap Opportunities Fund, and long-term growth seekers may opt for the Top 100 or Small Cap Fund for capital appreciation. Additionally, maintaining a well-diversified portfolio across multiple schemes, along with regular monitoring of fund performance and prevailing market conditions, is strongly recommended to optimize risk-adjusted returns and achieve long-term financial objectives effectively. **Conclusion:**

The study evaluated the performance of selected HDFC Mutual Fund growth schemes during the period 2019–2024 using various risk and return measures. The findings revealed that all selected schemes generated overall growth, although their performance differed based on risk levels and market conditions. The HDFC Mid-Cap Opportunities Fund emerged as the best-performing scheme in terms of risk-adjusted returns, while the HDFC Top 100 Fund demonstrated strong growth and market outperformance. The HDFC Small Cap Fund offered higher return opportunities with greater risk, whereas the HDFC Balanced Advantage Fund provided stable returns with lower volatility. Overall, the



study concludes that mutual fund performance should be evaluated based on both risk and return to make informed investment decisions.

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