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A Comparative Study of Selected Small - Cap Mutual Funds in India

Akshay Shitole

Student, MITCOM, MIT ADT University

Abstract: ***This study examines the performance of selected small - cap mutual fund schemes in India over a five - year period (2019–2024), employing statistical measures such as Alpha, Beta, Standard Deviation, Sharpe Ratio, and Treynor's Ratio to assess their risk - return profiles. The analysis reveals that certain small - cap funds outperform their benchmarks, albeit with greater volatility compared to mid - cap counterparts. These findings offer practical insights for investors navigating the dynamic small - cap segment of India's mutual fund market, aiding in informed decision - making based on risk tolerance and return expectations.***

Keywords: Small - Cap Mutual Funds, Beta, Volatility, Performance Evaluation

1. Introduction

Small - cap mutual funds are equity - oriented investment vehicles that allocate at least 65% of their assets to small - cap companies, typically those ranked beyond the top 250 firms in terms of market capitalization. These funds offer investors the potential for substantial returns due to the growth prospects of smaller companies. However, they also come with increased volatility and risk, as smaller firms may be more susceptible to market fluctuations and economic downturns.

In recent years, the Indian mutual fund industry has witnessed significant growth, with small - cap funds playing a pivotal role in attracting investors seeking higher returns. Studies have been conducted to evaluate the performance and risk characteristics of small - cap mutual funds in India. For instance, research focusing on the comparative analysis of small - cap and mid - cap mutual funds has provided insights into their performance metrics and risk profiles.

Additionally, studies have assessed the performance of large - cap, mid - cap, and small - cap mutual fund schemes, offering a comprehensive view of the mutual fund landscape in India.

Despite the potential for higher returns, small - cap funds are known for their higher volatility compared to large - cap and mid - cap funds. This volatility underscores the importance of thorough research and careful selection when investing in small - cap mutual funds. Investors are advised to consider their risk tolerance and investment horizon before committing to these funds.

This study aims to provide a comparative analysis of selected small - cap mutual fund schemes in India, evaluating their performance using various financial metrics. The goal is to offer insights that can assist investors in making informed decisions within the small - cap segment of the mutual fund market.

2. Literature Review

Several studies have been conducted on mutual fund performance evaluation.

- Yadav and Hemanth (2014) used Sharpe and Treynor measures to evaluate equity growth mutual funds.
- Kaur (2014) examined risk and return components of mutual funds, showing that debt funds underperformed relative to benchmarks.
- Prajapati and Patel (2012) used various performance measures to analyse Indian mutual funds, concluding that most funds provided positive returns
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3. Research Problem

Research Gap

While numerous studies have evaluated the performance of small - cap mutual funds in India, there remains a need for updated analyses that incorporate recent market data and

consider the evolving economic landscape. existing research often focuses on historical performance metrics without integrating the latest market developments or assessing the impact of recent economic events on fund performance. Additionally, there is a scarcity of studies that compare small - cap mutual funds across different fund houses, considering factors such as fund management strategies and expense ratios. His gap highlights the necessity for contemporary research that provides investors with relevant and timely insights into small - cap mutual fund performance.

Research Problem Statement

This study aims to address the existing research gap by conducting a comprehensive comparative analysis of selected small - cap mutual fund schemes in India. This research will evaluate the performance of these funds using various financial metrics, including Alpha, Beta, Standard Deviation, Sharpe Ratio, and Treynor's Ratio. while analysing these parameters, the study seeks to provide a nuanced understanding of the risk - return profiles of small - cap mutual funds, thereby assisting investors in making informed investment decisions.

Need and Relevance of Research

Investing in small - cap mutual funds offers the potential for significant returns due to the growth prospects of smaller companies. However, these investments are often accompanied by higher volatility and risk. Iven the dynamic nature of financial markets and the continuous introduction of new mutual fund schemes, it is imperative to conduct ongoing performance evaluations. This research is particularly relevant for investors seeking to diversify their portfolios with small - cap funds, as it provides updated insights into fund performance and risk characteristics furthermore the study contributes to the academic literature by filling the identified research gap and offering a foundation for future studies in this domain.

Research Objectives

1) To evaluate the performance of selected small - cap mutual fund schemes in India using financial metrics such as Alpha, Beta, Standard Deviation, Sharpe Ratio, and Treynor's Ratio.
2) To compare the risk - return profiles of these small - cap mutual funds to determine their relative performance.
3) To provide recommendations for investors based on the findings of the performance analysis.

4. Research Methodology

Type of Study

This research employs a **quantitative** approach, focusing on the numerical analysis of performance metrics of selected small - cap mutual fund schemes in India. This study is **observational**, as it analyzes existing data without manipulating any variables.

Research Methodology

The research assesses using statistical measures like Alpha, Beta, Standard Deviation, Sharpe Ratio to evaluate and contrast the performance of various small - cap mutual funds. His involves assessing each fund's performance using specific financial metrics and comparing the results to identify patterns and draw conclusions.

Source of Data

This study relies on **secondary data** sourced from reputable financial databases, mutual fund fact sheets, and official websites of asset management companies (AMCs). his data includes historical net asset values (NAVs), expense ratios, and other relevant financial information of the selected small - cap mutual funds.

Data Collection

Secondary data from sources such as AMFI, Money control, and fund houses' websites are used. The study covers five years (2019 - 2024) of historical performance data for the following funds:

- Nippon India Small Cap Fund
- Kotak Small Cap Fund
- SBI Small Cap Fund
- HDFC Small Cap Fund
- HSBC Small Cap Fund

Tools of Data Analysis

The following financial metrics are used for evaluation:

- **Average Return**: Measures the profitability of the fund.
- **Standard Deviation**: Indicates volatility and risk.
- **Sharpe Ratio**: Assesses risk - adjusted returns.
- **Beta**: Measures the fund's sensitivity to market movements.
- **Expense Ratio**: Evaluates fund management costs.

Data Collection

Type of Data

This study utilizes **ratio - level data**, which includes continuous numerical values with a true zero nonexamples of such data in this context are Net Asset Values (NAVs), returns, expense ratios, and performance metrics like Alpha, Beta, Standard Deviation, Sharpe Ratio, and Treynor's Ratio.

Given that the research relies on **secondary data**, there is no need for instruments like questionnaires or interviews. Stead, data will be collected through systematic extraction from reputable financial databases, mutual fund fact sheets, and official websites of asset management companies (AMCs). his process involves compiling historical NAVs, returns, and other relevant financial information of the selected small - cap mutual funds.

- **Independent Variables:** hose include fund - specific characteristics such as expense ratios, fund age, and asset under management (AUM).
- **Dependent Variables:** performance metrics of the mutual funds, including Alpha, Beta, Standard Deviation, Sharpe Ratio, and Treynor's Ratio.

Hence the study involves secondary data collection, traditional testing methods for instruments like validity and reliability assessments are not applicable. Wever, to ensure **data validity**, data will be sourced from reputable and authoritative financial databases and official AMC websites maintain **reliability**, data extraction procedures will be standardized, and cross - verification will be performed to ensure consistency and accuracy.

Administration of the Instrument

The data collection will be **researcher - administered**, involving the systematic extraction and compilation of data from online sources. He processes will be conducted **online**, utilizing digital financial databases and official AMC websites to gather the necessary secondary data. his approach ensures a structured and efficient collection of relevant financial data, facilitating a comprehensive analysis of the performance of selected small - cap mutual funds.

Data Analysis

The data analysis aims to evaluate the performance of five selected small - cap mutual fund schemes over the past five years using key financial metrics, including return, expense ratio, standard deviation, beta, PE ratio, and Sharpe ratio. The funds analysed include:

1) Nippon India Small Cap Fund
2) Quant Small Cap Fund
3) HSBC Small Cap Fund
4) HDFC Small Cap Fund
5) SBI Small Cap Fund

1) Performance Comparison Based on Returns

The five - year return of the selected funds is compared to assess their historical performance.

Fund Name	5 Years Return
QUANT SMALL CAP FUND	**47.86%**
NIPPON INDIA SMALL CAP FUND	36.88%
HSBC SMALL CAP FUND	31.44%
HDFC SMALL CAP FUND	29.28%
SBI SMALL CAP FUND	29.13%

Interpretation:

Quant Small Cap Fund outperformed the others with the highest 5 - year return of 47.86%, followed by Nippon India Small Cap Fund at 36.88%. SBI Small Cap Fund delivered the lowest return at 29.13%.

2) Expense Ratio Comparison

Expense ratio reflects the cost of managing the mutual fund, impacting net returns.

Fund Name	Expense Ratio
QUANT SMALL CAP FUND	1.59
NIPPON INDIA SMALL CAP FUND	**1.42**
HSBC SMALL CAP FUND	1.67
HDFC SMALL CAP FUND	1.57
SBI SMALL CAP FUND	1.56

Interpretation:

Nippon India Small Cap Fund has the lowest expense ratio at 1.42%, making it cost - efficient. HSBC Small Cap Fund has the highest expense ratio at 1.67%, which may reduce investor returns.

3) Volatility Analysis Using Standard Deviation

Standard deviation measures the volatility of fund returns, with lower values indicating more stability.

Fund Name	Standard Deviation
QUANT SMALL CAP FUND	17.88
NIPPON INDIA SMALL CAP FUND	14.46
HSBC SMALL CAP FUND	14.57
HDFC SMALL CAP FUND	14.73
SBI SMALL CAP FUND	**12.14**

Interpretation:

SBI Small Cap Fund has the lowest standard deviation (12.14%), making it the least volatile. Quant Small Cap Fund is the most volatile (17.88%), indicating higher risk but also higher return potential.

4) Risk Analysis Using Beta

Beta measures a fund's sensitivity to market movements. A beta >1 indicates high market dependence, while <1 suggests stability.

Beta was calculated using the covariance of the fund's returns with the market returns divided by the variance of the market. For instance, using five periods of monthly data, the beta of the mutual fund was computed as:

β= Covariance (Ri, Rm) / Variance (Rm)

.5825/0.9250. =0.63

This implies the fund is 37% less volatile than the overall market.

Fund Name	BETA
QUANT SMALL CAP FUND	0.94
NIPPON INDIA SMALL CAP FUND	0.80
HSBC SMALL CAP FUND	0.64
HDFC SMALL CAP FUND	0.84
SBI SMALL CAP FUND	**0.63**

Interpretation:

SBI Small Cap Fund (0.63) and HSBC Small Cap Fund (0.64) are more stable, meaning they tend to move less than the market, making them lower - risk options. On the other hand, Quant Small Cap Fund (0.94) and HDFC Small Cap Fund (0.84) are more volatile, carrying higher risk but also greater return potential.

5) Price - Earnings (PE) Ratio Comparison

The PE ratio indicates the valuation of the fund's underlying assets.

Fund Name	PE Ratio
QUANT SMALL CAP FUND	**41.00**
NIPPON INDIA SMALL CAP FUND	38.35
HSBC SMALL CAP FUND	34.91
HDFC SMALL CAP FUND	35.67
SBI SMALL CAP FUND	31.12

Interpretation:

Quant Small Cap Fund has the highest PE ratio (41.00), indicating growth - oriented investments. SBI Small Cap Fund has the lowest PE ratio (31.12), suggesting a more value - conscious approach.

6) Sharpe Ratio Comparison (Risk - Adjusted Returns)

The Sharpe ratio measures return per unit of risk taken.

Fund Name	Sharp Ratio
QUANT SMALL CAP FUND	**1.40**
NIPPON INDIA SMALL CAP FUND	1.25
HSBC SMALL CAP FUND	1.15
HDFC SMALL CAP FUND	1.10
SBI SMALL CAP FUND	1.05

Interpretation:
Quant Small Cap Fund has the highest Sharpe ratio (1.40), implying the best risk - adjusted returns. SBI Small Cap Fund has the lowest ratio (1.05), indicating lower efficiency in generating returns relative to risk.

5. Conclusion

This analysis reveals that the Quant Small Cap Fund delivers superior risk - adjusted returns, driven by its growth - oriented strategy, while the SBI Small Cap Fund stands out for its stability and lower volatility. Nippon India Small Cap Fund offers a cost - efficient option with the lowest expense ratio. These insights guide investors in balancing risk, return, and costs within India's small - cap mutual fund market.

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