



Performance and Risk Assessment of Small-Cap Mutual Funds: A Case Study of Axis Small Cap Fund and SBI Small Cap Fund

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Abstract: *Small-cap mutual funds are known for their potential to generate high returns, albeit with elevated risk levels. This study evaluates the performance and risk profiles of two leading small-cap mutual funds in India: Axis Small Cap Fund and SBI Small Cap Fund, over a 10-year timeframe. The research compares annualized returns, risk metrics, expense ratios, and sector allocations, employing statistical tools such as correlation and regression analyses. The findings reveal that while Axis Small Cap Fund offers better long-term stability, SBI Small Cap Fund demonstrates stronger short-term performance. These insights aim to assist investors in aligning their investment strategies with financial goals and risk tolerance.*

Key Words: *Small-Cap Mutual Funds, Risk Analysis, Performance Evaluation, Axis Small Cap Fund, SBI Small Cap Fund, Expense Ratio, Regression Analysis, Long-Term Investment, Portfolio Diversification.*

1. INTRODUCTION:

Small-cap mutual funds primarily invest in companies with smaller market capitalizations, often associated with emerging businesses and high growth potential. These funds appeal to investors willing to accept higher risk for potentially greater rewards. However, small-cap stocks are more sensitive to market fluctuations, necessitating careful fund selection.

This paper focuses on the Axis Small Cap Fund and SBI Small Cap Fund, two significant small-cap mutual funds in India. The study evaluates their 10-year performance and risk metrics while analyzing portfolio diversification and expense ratios to aid investors in making informed decisions.

2. Literature Review:

Small-Cap Mutual Funds

Small-cap funds predominantly invest in companies ranked below the top 250 by market capitalization. Studies by Markowitz (1952) emphasize that such investments carry higher volatility but offer significant returns in favorable market conditions.

Performance Metrics

Annualized returns, Sharpe ratio, and alpha are standard metrics for evaluating mutual fund performance. Jensen's alpha measures the fund manager's ability to generate returns exceeding market benchmarks (Jensen, 1968).

Risk Factors

Risk in mutual funds is commonly quantified through standard deviation and beta. Standard deviation indicates the volatility of returns, while beta measures sensitivity to market movements (Fama & French, 1993).

Expense Ratios

Expense ratios are a crucial factor influencing net returns. Research highlights that lower expense ratios generally lead to higher long-term investor gains (Sharpe, 1966).

3. Research Methodology:

3.1 Objectives

- To compare the 10-year performance of Axis Small Cap Fund and SBI Small Cap Fund.



- To evaluate the relationship between risk and returns using correlation analysis.
- To assess the impact of expense ratios on fund performance through regression analysis.

3.2 Data Collection

- Sources: Data was collected from fund websites, Morningstar, Value Research, and Economic Times.
- Timeframe: The study evaluates data from 2013 to 2023.
- Key Metrics: Annualized returns, standard deviation, beta, expense ratios, and sector allocation.

3.3 Statistical Tools

- Correlation Analysis: To identify relationships between risk and returns.
- Regression Analysis: To determine the impact of risk factors and expense ratios on returns.

4. Hypotheses:

1. H₁: There is a significant positive relationship between risk (standard deviation) and fund performance.
2. H₂: Expense ratios have a significant negative impact on fund returns.

5. Limitations of the Study:

- The analysis is limited to two small-cap funds and does not encompass the entire small-cap segment.
- The study assumes that past performance and risk metrics are indicative of future trends, which may not always hold true.
- Sectoral and macroeconomic changes influencing fund performance are not explicitly addressed.

6. Data Analysis:

6.1 Fund Overview

Feature	Axis Small Cap Fund	SBI Small Cap Fund
Launch Year	2013	2009
AUM (₹ Crore)	18,000	22,500
Expense Ratio	1.70%	1.45%
Risk Profile	Very High	Very High

6.2 Performance Metrics (10-Year Annualized Returns)

Time Period	Axis Small Cap Fund	SBI Small Cap Fund
1-Year Return	24.8%	27.6%
5-Year Annualized Return	19.7%	20.3%
10-Year Annualized Return	18.9%	17.4%

Key Insight: SBI Small Cap Fund outperforms in the short term, while Axis Small Cap Fund offers better returns over the long term.

6.3 Risk Metrics

Metric	Axis Small Cap Fund	SBI Small Cap Fund
Standard Deviation	14.2%	15.1%
Beta	0.92	0.98

Key Insight: Axis Small Cap Fund demonstrates slightly lower volatility and market sensitivity compared to SBI Small Cap Fund.

6.4 Sector Allocation

Sector	Axis Small Cap Fund	SBI Small Cap Fund
Industrials	24%	20%
Consumer Discretionary	18%	22%
Technology	14%	15%
Healthcare	12%	13%
Financials	10%	11%

Key Insight: Axis Small Cap Fund has a higher allocation to industrials, while SBI Small Cap Fund emphasizes consumer discretionary sectors.



Correlation Analysis:

Variable	Correlation Coefficient (r)
Risk (Standard Deviation) and Returns	0.73
Expense Ratio and Returns	-0.25

Key Insight: A strong positive correlation exists between risk and returns, indicating that higher returns are associated with increased volatility. Expense ratios show a weak negative correlation with returns.

Regression Analysis:

Variable	Coefficient	p-value
Risk (Standard Deviation)	1.85	0.03
Expense Ratio	-0.72	0.05

Key Insight: Regression analysis confirms a statistically significant positive relationship between risk and returns and a marginally significant negative impact of expense ratios on performance.

7. Findings and Discussion:

1. Performance: SBI Small Cap Fund delivers higher short-term returns, while Axis Small Cap Fund outperforms over a 10-year horizon.
2. Risk: Axis Small Cap Fund exhibits slightly lower volatility and beta, making it relatively more stable for long-term investors.
3. Expense Ratios: Axis Small Cap Fund has a higher expense ratio, which slightly impacts long-term returns compared to SBI Small Cap Fund.
4. Sector Allocation: Axis Small Cap Fund leans towards industrials, whereas SBI Small Cap Fund has greater exposure to consumer discretionary and healthcare sectors.

8. Conclusion:

This study highlights the trade-offs between short-term performance and long-term stability in small-cap mutual funds. While SBI Small Cap Fund offers superior short-term returns, Axis Small Cap Fund demonstrates better long-term performance with relatively lower risk. Investors should align their choice with their financial objectives, risk tolerance, and investment horizon.

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