



FINANCIAL RESILIENCE OF SELECT MUTUAL FUNDS IN INDIA – A COMPARATIVE STUDY

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Abstract

This study evaluates the financial resilience of three leading Indian ESG mutual funds namely ICICI Prudential ESG Exclusionary Strategy Fund, Axis ESG Equity Fund, and SBI ESG Exclusionary Strategy Fund during the year 2019 to 2025. Using monthly NAV data, annualized return, annualized standard deviation, Sharpe ratio, and maximum drawdown were calculated. The results reveal that ICICI ESG delivered the highest annualized return (19.60%) with the lowest volatility (12.04%) and the strongest Sharpe ratio (1.13). Axis ESG and SBI ESG also demonstrated stable performance. Overall, the findings indicate that ESG mutual funds exhibit strong financial resilience and controlled downside risk.

Keywords: ESG Mutual Funds, Financial Resilience, Volatility, Sharpe Ratio, Downside Risk

Introduction

Environmental, Social, and Governance (ESG) investing has emerged as a transformative approach in global financial markets, driven by the rising awareness of sustainability and responsible business practices. In India, the relevance of ESG investing has accelerated notably in recent years, especially after the introduction of stronger regulatory frameworks such as SEBI's Business Responsibility and Sustainability Reporting (BRSR), which encourages companies to disclose their sustainability performance more transparently. As investors increasingly recognize the long-term benefits of sustainable business conduct, ESG considerations have become integral to modern portfolio strategies.

ESG mutual funds represent a structured mechanism through which investors can align financial goals with ethical and sustainability-driven priorities. These funds evaluate companies not only traditional financial metrics but also on non-financial indicators such as carbon footprint, labour practices, diversity policies, corporate transparency, and governance quality. This holistic assessment enables the construction of portfolios that aim to mitigate long-term risks while capitalizing on opportunities arising from sustainable economic development.

In the Indian context, the rise of ESG investing is also influenced by macroeconomic factors including climate-related challenges, increased stakeholder activism, and greater emphasis on corporate accountability. As a result, ESG mutual funds are gradually becoming a preferred choice for investors seeking stable returns along with positive societal and environmental impact. Furthermore, with growing empirical evidence suggesting that companies with strong ESG credentials often demonstrate resilience during market downturns, ESG funds hold promise as durable investment vehicles.

Therefore, understanding the evolution, performance, and financial resilience of ESG mutual funds in India is crucial. It helps investors, policymakers, and market participants evaluate how sustainability-oriented strategies perform relative to traditional investment approaches, particularly across varied economic conditions.

Need for the Study

The heightened market volatility witnessed in recent years—driven by events such as the COVID-19 pandemic, geopolitical tensions, and persistent inflationary pressures—has significantly reshaped investor priorities. As traditional equity markets experienced sharp drawdowns during these periods, the importance of downside risk protection has become more pronounced. Investors are increasingly seeking investment avenues that not only generate returns but also demonstrate stability during financial stress.



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In this context, ESG mutual funds have gained attention for their potential to deliver more resilient performance, owing to their emphasis on responsible governance, environmental sustainability, and socially conscious business practices. However, despite their growing popularity, empirical evidence on whether ESG funds truly offer superior financial resilience compared to conventional investment strategies remains limited in the Indian market. Therefore, a systematic evaluation of ESG mutual funds is essential to understand their effectiveness in managing risk and protecting investor capital during periods of heightened uncertainty.

Review of Literature

Sharma (2025): This study finds that ESG funds in India show comparable performance but slightly lower risk-adjusted returns than traditional funds over 2022–2025.

Bhattacharya (2025): This empirical study finds that ESG branding alone does not guarantee superior risk-adjusted performance, based on quarterly NAV and AUM data.

Joshi & Madireddy (2025): Using Treynor, Jensen's Alpha, Sharpe, and Sortino, this study identifies Quant ESG Fund as the top performer, followed by ICICI ESG and Axis ESG.

Kamble et al. (2024): This study shows ESG funds hold heavily in financial and technology sectors, contributing to moderate returns but lower participation in high-growth mid/small caps.

Arockia Jerold (2024): Findings indicate that ESG funds can offer superior returns compared to traditional funds when measured using Sharpe and Sortino ratios.

Gianfrate et al. (2024): This global study finds that ESG resilience is geography-dependent, with strong ESG firms outperforming primarily in North America.

Nafa & Dudás (2024): Contrary to mainstream belief, this study finds that higher ESG scores were linked to lower crisis resilience in emerging markets during COVID-19.

Jyothi & Rathod (2023): The study analyses ESG fund trends, highlighting growing investor interest but also noting challenges in measuring ESG impact.

Research Gap

Although ESG investing has gained increasing prominence in India, existing research largely focuses on broad comparisons between ESG and traditional mutual funds, often relying on short-term datasets, selective risk metrics, or generalized performance evaluations. Most studies lack a consistent methodological framework for assessing long-term financial resilience, particularly during periods of heightened volatility such as the COVID-19 crisis, inflation-driven corrections, and other macroeconomic disruptions. This has resulted in fragmented findings, making it difficult to determine how ESG funds behave across multiple market cycles.

Moreover, there is limited evidence using uniform monthly NAV data to analyse key resilience indicators such as annualized volatility, Sharpe ratio stability, and maximum drawdown across India's leading ESG funds. Since the Indian ESG mutual fund segment is relatively young, many existing evaluations rely on short observation windows or mixed datasets that do not capture sustained market fluctuations. Therefore, a structured, multi-period, NAV-based analysis is essential to fill this empirical gap and provide clearer insights into the true financial resilience of Indian ESG mutual funds.

Objectives

- 1) To measure annualized return and volatility of selected ESG funds.



- 2) To evaluate risk-adjusted performance using the Sharpe ratio.
- 3) To analyse downside risk using maximum drawdown.

Hypothesis

H₀: There is no significant difference in financial resilience among the selected ESG mutual funds.

Research Methodology

1. Research Design

This study adopts a descriptive and quantitative research design, aimed at evaluating the financial resilience of selected ESG mutual funds in India. A descriptive framework allows for systematic measurement of performance metrics, while the quantitative approach enables numerical comparison across funds using objective financial indicators. The methodology focuses on quantifying return behaviour, volatility patterns, risk-adjusted performance, and downside vulnerability through statistically derived measures.

2. Data Sources

The study relies exclusively on secondary data, primarily monthly Net Asset Value (NAV) figures obtained from publicly available sources such as:

- Mutual fund fact sheets
- Asset Management Company (AMC) reports
- AMFI (Association of Mutual Funds in India) NAV disclosures
- Other publicly accessible financial databases
- Secondary data ensures accuracy, authenticity, and replicability of results across established datasets.

3. Sample Selection

Three ESG mutual funds were selected using purposive sampling, based on the following criteria:

- Funds must follow a clearly stated ESG investment mandate
- Minimum multi-year NAV history must be available
- Funds should represent leading AMCs in the ESG category

Accordingly, the sample includes:

- ICICI Prudential ESG Exclusionary Strategy Fund
- Axis ESG Equity / Integration Strategy Fund
- SBI ESG Exclusionary Strategy Fund

4. Period of Study

January 2019 to December 2025 (based on respective fund inception dates). The analysis is conducted using monthly NAV data covering a multi-year period that includes episodes of market volatility, enabling robust assessment of resilience. The selected period captures fluctuations such as pandemic-related disruptions, inflation phases, and recovery cycles, offering a realistic view of fund behaviour across different market conditions.

5. Tools Used

All computations were performed using:



- Microsoft Excel for return calculations, volatility estimation, Sharpe ratio computation, and maximum drawdown analysis
- Built-in spreadsheet statistical functions to ensure accuracy, reproducibility, and consistency

These tools facilitate transparent and audit-ready quantitative analysis.

6. Statistical Tools

The following statistical and financial techniques were used:

Monthly return calculation using NAV differentials

- Annualized return derived through geometric compounding
- Annualized volatility (standard deviation) scaled by $\sqrt{12}$
- Sharpe ratio for evaluating risk-adjusted performance
- Maximum Drawdown (MDD) for assessing downside risk and vulnerability to peak-to-trough declines

These techniques collectively measure both return potential and resilience under adverse conditions.

Results and Discussions

The summary statistics for the three funds are shown below. These metrics directly address the study's objectives by quantifying reward (annualized return), total risk (annualized volatility), risk-adjusted performance (Sharpe), and downside risk (maximum drawdown).

Fund	Annual Return	Annual Volatility	Sharpe Ratio	Max Drawdown
ICICI ESG	19.60%	12.04%	1.13	-15.71%
Axis ESG	17.12%	15.01%	0.74	-19.38%
SBI ESG	16.54%	16.77%	0.63	-28.26%

Source: Compiled by the researcher using monthly NAV data from AMFI and respective AMC factsheets.

ICICI ESG delivered the highest return (19.60%) while maintaining the lowest volatility (12.04%), yielding the highest Sharpe (1.13) and the mildest drawdown (-15.71%) an unusually strong combination that signals superior financial resilience. Axis ESG sits in the middle on all four metrics (return, volatility, Sharpe, drawdown), indicating reasonable stability with moderate risk. SBI ESG shows the lowest risk-adjusted performance (Sharpe 0.63) and the deepest drawdown (-28.26%), pointing to greater downside sensitivity during stress periods.

1. Fund wise Interpretation and Comparative Discussion

ICICI ESG: The simultaneous achievement of top-quartile returns, and bottom-quartile volatility suggests efficient portfolio construction and consistent risk controls. A Sharpe ratio of 1.13 implies that excess return per unit of risk is meaningfully higher than its peers, and the -15.71% drawdown indicates effective downside containment during adverse phases. In practical terms, an investor in ICICI ESG would have experienced both better compounding and smoother ride over the sample period.

Axis ESG: With 17.12% return and 15.01% volatility, the fund's 0.74 Sharpe reflects adequate risk-adjusted performance, albeit below ICICI's efficiency. The -19.38% drawdown remains in a manageable zone for an equity-oriented ESG strategy, implying that Axis ESG's downside protection mechanisms (e.g., diversification or sector tilts) were partially effective, though not best-in-class.



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SBI ESG: Despite a respectable return (16.54%), the combination of higher volatility (16.77%), lower Sharpe (0.63), and deeper drawdown (-28.26%) reveals greater vulnerability to market stress relative to peers. The magnitude of the drawdown suggests that portfolio composition and risk controls may have allowed sharper troughs during crisis windows, which dampens the fund's resilience profile even if long-run returns remain competitive.

2. Cross Fund Comparison

On the classic risk–return frontier, ICICI ESG dominates by delivering higher return at lower risk. Axis ESG offers a balanced middle ground, while SBI ESG's drawdown profile underscores the importance of downside risk management in ESG mandates. Taken together, the evidence suggests that ESG funds can deliver favourable risk–return outcomes, but resilience is manager- and portfolio-dependent, rather than uniform across the category. This aligns with emerging academic evidence that ESG performance and crisis resilience are heterogeneous across strategies, geographies, and time windows.

Conclusion

The evaluation of the three selected ESG mutual funds reveals clear differences in their financial resilience across multiple market conditions. ICICI Prudential ESG Exclusionary Strategy Fund consistently outperformed its peers by delivering the highest annualized returns, lowest volatility, and strongest risk-adjusted performance through its superior Sharpe ratio. Its relatively mild maximum drawdown further confirms its ability to protect investor capital during market downturns. Axis ESG demonstrated moderate yet stable performance, indicating balanced risk-taking and reasonable resilience, while SBI ESG showed weaker resilience due to higher volatility and more severe drawdowns.

These findings collectively suggest that ESG funds, despite belonging to the same thematic category, do not exhibit uniform resilience or performance characteristics. Instead, their outcomes depend significantly on portfolio strategy, sector allocation, and the fund manager's risk-management approach. The variation among ICICI, Axis, and SBI ESG funds underscores the importance of fund-specific analysis rather than assuming that the ESG label alone guarantees stability. Nonetheless, the overall risk-return profiles of the sample funds indicate that ESG-oriented investing in India can provide competitive returns while aligning with sustainability considerations.

In the broader context of responsible investing, this study adds evidence that ESG funds can behave differently across volatility cycles, emphasizing the need for investors to examine both return metrics and downside-risk indicators. By analysing annualized returns, volatility, Sharpe ratios, and maximum drawdown using consistent monthly NAV data, the study fills a methodological gap in existing Indian ESG literature. The results highlight that ESG funds have the potential to deliver both financial performance and resilience, but careful fund selection remains crucial. Future research can extend these insights by incorporating larger samples, applying inferential statistical tests, and exploring how varying ESG scores influence long-term performance and crisis-period behaviour.

Limitations

Despite its robustness, the study has certain limitations:

- The analysis focuses on three funds, limiting the breadth of generalization.
- NAV-based analysis does not incorporate portfolio holdings, sector exposures, or ESG scoring methodologies.
- Different fund inception dates may affect comparability across the entire period.
- The assumed risk-free rate of 6% may not fully capture short-term fluctuations in government security yields.
- The study uses monthly data, which may smooth out intra-month volatility spikes.

These limitations provide context for interpreting the findings and offer scope for future research extensions.



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