

An Empirical Study on ESG Fund Performance and Benchmark Comparison: Evidence from the Aditya Birla Sun Life ESG Integration Strategy Fund

Kancha Keerthana

MBA Scholar (Finance), Department of Master of Business Administration, MLR Institute of Technology, Dundigal, Hyderabad – 500043, India

Dr. G. Aruna

Professor, Department of Master of Business Administration, MLR Institute of Technology, Dundigal, Hyderabad – 500043, India

Abstract

This study examines the risk-adjusted performance of Environmental, Social, and Governance (ESG) themed mutual funds relative to conventional broad-market benchmarks, using the Aditya Birla Sun Life (ABSL) ESG Integration Strategy Fund as a representative case. Monthly Net Asset Value (NAV) data spanning December 2020 to April 2026 were analysed against the Nifty 100 ESG Total Return Index (TRI) and the Nifty 50 TRI. Performance was evaluated using average return, standard deviation, the Sharpe Ratio, the Treynor Ratio, Jensen's Alpha, and Beta. The results show that the ABSL ESG Fund delivered a lower average annual return (10.8%) than the Nifty 100 ESG TRI (11.6%) and the Nifty 50 TRI (12.5%), but also exhibited the lowest volatility (standard deviation of 2.34% against 2.70% and 3.10%, respectively) and the lowest systematic risk (Beta of 0.97). The fund's Sharpe Ratio (2.05) and Treynor Ratio (4.95) were marginally below those of the benchmarks, and Jensen's Alpha was negative (– 1.50), indicating slight underperformance relative to risk-adjusted expectations. Taken together, the findings support a risk-mitigation rather than a return-maximisation rationale for ESG investing: the fund traded a modest return shortfall for materially lower volatility and stronger downside resilience. The study concludes that ESG funds, while not outperforming on raw returns, offer a viable, stability-oriented option for long-term and risk-averse investors, and recommends improved sector diversification and greater transparency in ESG scoring methodologies.

Keywords: ESG Investing; Mutual Fund Performance; Sharpe Ratio; Treynor Ratio; Jensen's Alpha; Nifty 100 ESG; Benchmark Comparison; Risk-Adjusted Returns; Sustainable Finance; India

1. Introduction

Investment management has historically been guided by the maximisation of shareholder wealth, with performance measured almost exclusively in financial terms. Over the past two decades, however, a paradigm shift has occurred: investors, regulators, and corporations increasingly recognise that long-term financial performance is inseparable from Environmental, Social, and Governance (ESG) considerations. The Environmental dimension addresses a firm's stewardship of natural resources, including carbon emissions and waste management; the Social dimension covers labour standards, diversity, and

community relations; and the Governance dimension concerns board oversight, executive accountability, and shareholder rights.

In India, this shift is reflected in the rapid growth of ESG-themed mutual fund products. The Aditya Birla Sun Life ESG Integration Strategy Fund, launched in December 2020, exemplifies this trend. The fund adopts an integration approach, combining ESG considerations with conventional financial analysis to identify companies expected to be more resilient to environmental, social, and governance-related risks. By March 2026 the fund's assets under management had grown to approximately ₹ 522 crore, mirroring the broader expansion of the Indian mutual fund industry, whose investor folio base reached 25.6 crore by October 2025.

A persistent question in the literature is whether ESG integration comes at a financial cost. Critics argue that ESG screening narrows the investable universe by excluding profitable but ethically contentious sectors, while proponents contend that ESG factors capture material, non-financial risks that eventually translate into financial outcomes. This study contributes to that debate by empirically benchmarking a flagship Indian ESG fund against both an ESG-specific index (Nifty 100 ESG TRI) and a conventional broad-market index (Nifty 50 TRI) over a multi-year horizon encompassing distinct phases of the market cycle.

2. Objectives of the Study

In line with the descriptive-analytical design of this research, the study is structured around three core objectives:

1. Objective 1: To evaluate and compare the risk-adjusted performance of the ABSL ESG Integration Strategy Fund against the Nifty 100 ESG TRI and the Nifty 50 TRI using return, standard deviation, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha.
2. Objective 2: To assess the effectiveness of ESG-based portfolio construction in reducing volatility and systematic risk (Beta) relative to conventional benchmark indices.
3. Objective 3: To determine whether ESG integration enhances downside protection and long-term portfolio stability sufficiently to offset any shortfall in absolute returns, thereby informing investor guidance on the suitability of ESG funds for different risk profiles.

A corresponding hypothesis was formulated for empirical testing:

H₀ (Null): There is no significant difference in risk-adjusted returns (Sharpe Ratio) between the ABSL ESG Fund and traditional benchmarks.

H₁ (Alternative): The ABSL ESG Fund provides significantly higher risk-adjusted returns due to its ESG-related risk mitigation.

3. Research Methodology

3.1 Research Design

The study follows a descriptive and analytical comparative research design, relying entirely on secondary data.

3.2 Data Sources and Period

Monthly Net Asset Value (NAV) data for the ABSL ESG Integration Strategy Fund were sourced from the Association of Mutual Funds in India (AMFI) and the Aditya Birla Sun Life Asset Management Company website, covering the period December 2020 to April 2026. Corresponding monthly values for the Nifty 100 ESG TRI and Nifty 50 TRI were used as benchmarks.

3.3 Analytical Tools

Monthly returns were computed from NAV data, and the following statistical and financial performance measures were applied using MS Excel and SPSS:

- Monthly Return (%) = $[(\text{Current NAV} - \text{Previous NAV}) / \text{Previous NAV}] \times 100$
- Standard Deviation (σ) – a measure of total volatility in returns
- Sharpe Ratio = $(R_p - R_f) / \sigma_p$, where R_p is portfolio return, R_f is the risk-free rate, and σ_p is the standard deviation of portfolio excess return
- Treynor Ratio = $(R_p - R_f) / \beta_p$, where β_p is the portfolio's Beta (systematic risk)
- Jensen's Alpha (α) = $R_p - [R_f + \beta(R_m - R_f)]$, where R_m is the benchmark market return

For the Sharpe, Treynor, and Alpha calculations, a risk-free rate (R_f) of 6.0% was assumed, consistent with prevailing government bond yields, and Beta values of 0.97 (ESG Fund), 1.00 (Nifty 100 ESG), and 1.10 (Nifty 50) were applied.

4. Results

4.1 NAV Trend and Growth

The fund's NAV rose from ₹ 10.00 at inception (January 2021 base) to ₹ 15.00 by December 2022, representing overall growth of 50% over the sub-period, with NAV continuing to trend toward the ₹ 13– ₹ 16 range through 2024– 2026. Temporary declines occurred in May 2021, October 2021, April 2022, and August 2022, coinciding with market corrections and interest rate adjustments, but recovery in each instance was rapid, suggesting resilient portfolio composition.

4.2 Return Analysis

Monthly returns over the analysis window averaged 1.80%, with a high of 5.00% (February 2021) and a low of – 2.86% (August 2022). The frequency distribution of monthly returns ($n = 23$) is summarised in Table 1.

Table 1: Frequency Distribution of Monthly Returns

Return Range	Frequency
Negative Returns	4
0% – 2%	8
2% – 4%	7
Above 4%	4

On an annualised basis, the ESG Fund returned 10.8%, compared with 11.6% for the Nifty 100 ESG TRI and 12.5% for the Nifty 50 TRI (Table 2).

Table 2: Average Annual Return Comparison

Investment Type	Average Annual Return (%)
ESG Fund	10.8
Nifty 100 ESG	11.6
Nifty 50	12.5

4.3 Risk Analysis

The ESG Fund recorded the lowest standard deviation among the three series at 2.34%, compared with 2.70% for the Nifty 100 ESG TRI and 3.10% for the Nifty 50 TRI, confirming that the fund experienced materially lower volatility than either benchmark (Table 3).

Table 3: Risk (Standard Deviation) Comparison

Investment Type	Standard Deviation (%)
ESG Fund	2.34
Nifty 100 ESG	2.70
Nifty 50	3.10

4.4 Risk-Adjusted Performance: Sharpe Ratio

Applying a risk-free rate of 6.0%, the Sharpe Ratio for the ESG Fund was 2.05, marginally below the Nifty 100 ESG TRI (2.07) and the Nifty 50 TRI (2.10), indicating that all three instruments delivered broadly comparable risk-adjusted returns, with the benchmarks holding a slight edge (Table 4).

Table 4: Sharpe Ratio Analysis

Investment Type	Return (%)	Risk-Free Rate (%)	Std. Deviation (%)	Sharpe Ratio
ESG Fund	10.8	6.0	2.34	2.05

Nifty 100 ESG	11.6	6.0	2.70	2.07
Nifty 50	12.5	6.0	3.10	2.10

4.5 Risk-Adjusted Performance: Treynor Ratio

Using Beta values of 0.97 (ESG Fund), 1.00 (Nifty 100 ESG), and 1.10 (Nifty 50), the Treynor Ratio was 4.95 for the ESG Fund versus 5.60 and 5.91 for the two benchmarks respectively (Table 5), indicating that the fund generated a somewhat lower return per unit of systematic risk than the benchmarks, though the gap is modest.

Table 5: Treynor Ratio Analysis

Investment Type	Return (%)	Beta	Treynor Ratio
ESG Fund	10.8	0.97	4.95
Nifty 100 ESG	11.6	1.00	5.60
Nifty 50	12.5	1.10	5.91

4.6 Jensen's Alpha

Jensen's Alpha was negative for all three series — - 1.50 for the ESG Fund, - 0.90 for the Nifty 100 ESG TRI, and - 0.65 for the Nifty 50 TRI (Table 6) — indicating that realised returns for each fell modestly short of CAPM-implied expectations over the period, with the ESG Fund showing the largest shortfall, consistent with its more conservative security selection.

Table 6: Jensen's Alpha Analysis

Investment Type	Return (%)	Beta	Alpha
ESG Fund	10.8	0.97	- 1.50
Nifty 100 ESG	11.6	1.00	- 0.90
Nifty 50	12.5	1.10	- 0.65

4.7 Summary of Key Findings

- The ESG Fund underperformed both benchmarks on raw average annual return (10.8% vs. 11.6% and 12.5%).
- The ESG Fund recorded the lowest volatility of the three series ($\sigma = 2.34\%$) and the lowest Beta (0.97), confirming reduced systematic risk.
- Sharpe and Treynor Ratios for the ESG Fund were close to, but marginally below, those of the benchmarks, indicating broadly comparable risk-adjusted efficiency.
- Jensen's Alpha was negative across all three series, with the ESG Fund showing the most negative value, suggesting a conservative rather than alpha-seeking strategy.

- NAV growth was steady and recoveries from temporary drawdowns were rapid, supporting a defensive performance profile.

5. Discussion

The empirical evidence indicates that the ABSL ESG Integration Strategy Fund did not outperform conventional benchmarks on a raw-return basis, leading to rejection of the alternative hypothesis (H_1) that the fund would generate significantly higher risk-adjusted returns. However, the consistently lower standard deviation and Beta observed for the fund support the proposition, advanced in the theoretical literature (notably Modern Portfolio Theory and the “Risk Mitigation Hypothesis”), that ESG integration functions primarily as a risk-management overlay rather than an alpha-generation tool. This is consistent with prior studies suggesting that ESG screening helps avoid “losers” — companies exposed to governance failures or environmental liabilities — rather than identifying outsized winners.

The negative Jensen's Alpha across all three series, including the conventional Nifty 50, suggests that the broader market environment during the study period delivered returns somewhat below CAPM-implied expectations, independent of ESG positioning. The ESG Fund's larger negative Alpha relative to the benchmarks is plausibly linked to its more conservative, lower-Beta security selection and sectoral concentration, particularly in financial services, which the limitations of this study identify as a confounding factor.

These findings echo the mixed results reported in the literature review: while some studies (e.g., Agarwal & Rastogi, 2025; Yadav et al., 2024) find that ESG funds offer superior downside protection during volatile periods, others (e.g., Azhar, 2025) report ESG underperformance in growth-heavy market phases. The results of this study are consistent with both strands — the ESG Fund underperformed on raw return while outperforming on stability — reinforcing the view that the value of ESG investing is best assessed through a risk-adjusted, long-horizon lens rather than a short-term return-maximisation lens.

6. Conclusion

This study set out to evaluate the comparative performance of the ABSL ESG Integration Strategy Fund against the Nifty 100 ESG TRI and Nifty 50 TRI, to assess the effectiveness of ESG filters in reducing volatility and systematic risk, and to determine whether ESG integration's downside protection offsets any return shortfall. The findings show that the fund delivered moderate, steady returns with the lowest volatility and Beta among the three series, but trailed both benchmarks on absolute return and risk-adjusted metrics (Sharpe, Treynor) by a narrow margin, while recording the most negative Jensen's Alpha.

On balance, the evidence supports ESG investing as a stability-oriented strategy rather than a

return-maximising one. The fund is best suited to long-term, risk-averse, and ethically motivated investors who are willing to accept a modest return concession in exchange for lower volatility and stronger resilience during market stress. For asset managers, the results point to scope for improving sector diversification, tightening active management to narrow the Alpha gap, and strengthening the transparency of ESG scoring methodologies to address ongoing greenwashing concerns. For regulators, continued standardisation of ESG disclosure (such as the transition to BRSR Core) is likely to improve the reliability of future performance comparisons.

References

- Agarwal, R., & Rastogi, V. (2025). Performance analysis of ESG funds in India. *Finance India Journal*.
- Azhar, M. (2025). Sharpe and Treynor based evaluation of ESG fund underperformance in growth-heavy markets. *Journal of Portfolio Studies*.
- Bantwa, A. (2024). ESG scores and cost of capital in emerging markets. *Emerging Markets Finance Review*.
- Boston Common Asset Management. (2025). Growth versus value cycle effects on ESG fund performance.
- Bolton, P., & Kacperczyk, M. (2021). Do investors care about carbon risk? *Journal of Financial Economics*.
- Chauhan, Y., & Kumar, S. (2018). An empirical analysis of ESG performance in the Indian context. *Indian Journal of Finance*.
- Clark, R., & Lalit, H. (2020). ESG improvers and alpha generation. *Journal of Sustainable Investing*.
- Gavrilakis, N., & Floros, C. (2024). Herding behaviour among European ESG portfolio managers. *European Journal of Finance*.
- Gul, S., & Altuntaş, M. (2024). Pillar-level ESG impact in developed and emerging markets. *Sustainability Accounting Journal*.
- Gupta, A., & Goswami, P. (2024). Behavioural aspects of socially responsible investing among Indian retail investors. *Indian Journal of Behavioural Finance*.
- Jain, S., & Rathore, K. (2025). Efficiency of ESG investments using the DEA model. *Journal of Sustainable Finance*.
- Morningstar Research. (2026). ESG fund performance reports.
- Reddy, K. (2026). A comparative study of ESG and non-ESG mutual funds in India.
- Reyaz, N., & Samad, K. (2026). Trends and return patterns in Indian ESG funds.

Roy, A., et al. (2025). SEBI allocation rules and investor confidence in ESG funds.

Tillu, R., et al. (2024). Sustainable transition in the Indian automotive sector.

Verheyden, T., Eccles, R. G., & Feiner, A. (2016). ESG for all? The impact of ESG screening on return, risk, and diversification. *Journal of Applied Corporate Finance*.

Yadav, A., et al. (2024). ESG funds and market volatility. *Journal of Financial Markets*.

Association of Mutual Funds in India (AMFI). Industry data reports, 2021 – 2026. www.amfiindia.com

Aditya Birla Sun Life Mutual Fund. Annual reports and ESG fund factsheets, 2021 – 2026.
www.adityabirlacapital.com

National Stock Exchange of India (NSE). Nifty 50 and Nifty 100 ESG index data. www.nseindia.com

Securities and Exchange Board of India (SEBI). ESG guidelines and BRSR reports. www.sebi.gov.in