Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

COMPARISON BETWEEN EQUITY MUTUAL FUNDS AND ESG MUTUAL FUNDS

Priyadarshan D Shenvi[1], Dr Tamizharasi D[2]
[1]*RV Institute of Management, Bangalore*
[2]*RV Institute of Management, Bangalore*

Article DOI: https://doi.org/10.36713/epra22768
DOI No: 10.36713/epra22768

ABSTRACT
ESG (Environmental, Social, and Governance) investment has become more popular in India in recent years, drawing interest from both asset management firms and individuals. This study uses five years of monthly data to examine the performance of equity and ESG mutual funds in the Indian market. The study assesses each fund type's risk-return profile and investment efficiency by looking at important indicators such the Sharpe Ratio, Jensen's Alpha, and beta. The results reveal that while ESG funds demonstrate lower volatility, equity mutual funds generally deliver stronger returns and better risk-adjusted performance. There is variety in fund performance, though, since some ESG funds do perform better than their stock counterparts. To determine if differences between fund pairings are statistically significant, the study uses a paired Z-test. For scholars, investors, fund managers, and policymakers, this study offers insightful information about the increasing importance of ESG investment in India. The methodology is based on an organized literature research and an analysis of secondary data obtained from financial platforms. Despite greater awareness, ESG investments in India are still in a developing phase compared to global trends, with investor hesitancy toward ESG integration posing an obstacle to broader adoption.
KEYWORDS: *ESG Mutual Funds, Equity Mutual Funds, Sustainable Investing, Indian Mutual Fund Market, Risk-Adjusted Returns, Sharpe Ratio, Jensen's Alpha, Beta Analysis, Performance Comparison, Nifty 50.*

INTRODUCTION

The investing industry is evolving quickly. A considerable change is taking place as a result of increased recognition that environmental, social, and governance (ESG) aspects have a substantial impact on long-term financial health and are not merely sentimental considerations. Investors are actively looking for ways to match their investments with their personal ideals as they become more aware of these realities. As a result, interest in ESG investing has increased, and this is especially noticeable in the growing number of ESG mutual funds. These funds provide a means of investing in businesses that exhibit a dedication to ethical and sustainable business practices. Even though investors have long relied on traditional equities mutual funds, the emergence of ESG funds offers both fascinating opportunities and difficult problems for all parties, from novice savers to seasoned fund managers. By providing a comparison of regular equities mutual funds versus ESG mutual funds, particularly in the vibrant Indian market, this study seeks to contribute to this crucial discussion.

Equity mutual funds have long been a mainstay of Indian investing, offering a variety of entry points into the stock market to a broad range of investors. Numerous aspects of these funds, like as the inflow and outflow of funds, the conduct of fund managers, and the activities of investors themselves, have been the subject of much research. The complex relationship between "Mutual Fund Flows and Market Returns: Evidence from India," for instance, has been studied by scholars in an effort to comprehend how these flows impact the larger market. " This is especially important in India, where the mutual fund sector is still developing and becoming more and more powerful. In addition to market conditions, there has been a lot of interest in the individuals managing these funds. Research on the "Stock Selection Ability and Market Timing of Equity Mutual Fund Managers" explores whether these managers are actually able to choose profitable stocks or successfully adapt their portfolios to shifting market conditions. This is a topic that has long interested scholars and market participants alike.

Furthermore, there has been a wealth of research on the behavior of equities mutual fund investors. Research on "Investor Behavior in Equity Mutual Funds: The Role of Cognitive Biases" emphasizes how crucial psychological aspects are in influencing financial choices. In developing markets like India, where investor experiences can differ greatly and market sentiment can fluctuate sharply, these peculiarities in behavior are particularly pertinent.

The impact of fund size ("The Impact of Fund Size on Equity Mutual Fund Performance") and whether past performance is a reliable indicator of future success ("Equity Mutual Fund Performance Persistence") are just two of the many factors that have been used to examine the performance of equity mutual funds in addition to investor behavior. These studies provide important insights for investors looking to strengthen their portfolios and expand our knowledge of what makes a fund successful. Additionally, assessing the risk-adjusted performance of these funds is crucial due to India's status as an emerging economy. In order to compare fund performance while taking into consideration the various risk levels involved, research on "Risk-Adjusted Performance Evaluation of Equity Mutual Funds in Emerging Markets" is helpful.

The rise in popularity of ESG mutual funds in recent years has signaled a dramatic change in the way that consumers see investment. A rising understanding that environmental, social, and governance problems can significantly affect a company's long-term financial prospects is reflected in these funds' integration of these elements into their basic investment strategy. Numerous subjects have been covered in research on ESG mutual funds, such as their performance, management, and potential to affect business practices. How these funds compare to more conventional ones is one important question. Research on "ESG Fund Performance and Flows" looks at how investment flows react to the performance of ESG funds as well as if they can produce returns that are competitive. This is a crucial question for investors who want their investments to align with their values but also deliver solid returns.

ESG funds' capacity to promote constructive change has also been investigated via the prism of "ESG Investing and Shareholder Activism." This study examines how these funds interact with businesses to support improved ESG practices, emphasizing their ability to motivate more conscientious business conduct. Naturally, there are significant concerns regarding risk and return when incorporating ESG considerations into financial choices. The goal of the study "The Impact of ESG Factors on Fund Risk and Return" is to ascertain whether ESG funds have a different risk-reward ratio than conventional funds. Concerns over "Greenwashing in ESG Funds" have also gained attention as more funds embrace the ESG moniker. These studies investigate whether funds are truly committed to ESG principles or simply using the label for marketing purposes.

Another important topic of research is the particular methods that ESG mutual funds employ when choosing their investments. Studies on "ESG Fund Investment Strategies" examine the many strategies these funds use, such as actively pursuing businesses with solid ESG records or weeding out those engaged in risky industries, and how these decisions impact fund performance and the assets the fund eventually owns. Lastly, one of the most important areas of research is the development and expansion of ESG mutual funds in emerging markets, such as India. Studies on "The Growth and Evolution of ESG Mutual Funds in Emerging Markets" address the unique problems and opportunities in these markets, including regulatory reforms, increased investor awareness, and the speed at which these new investment approaches are being embraced.

Even though we're learning more and more about ESG mutual funds and standard stock mutual funds, more targeted research that directly compares the two is still needed, particularly in the Indian market's unique setting. By offering a thorough analysis of the performance, risk, and investing strategy comparisons between ESG mutual funds and conventional equities mutual funds in India, this article seeks to close that gap. By doing this, it hopes to offer insightful information that will help investors, fund managers, and legislators navigate this quickly evolving financial environment.

LITERATURE REVIEW

Let's examine what we know about the mutual fund industry in India, particularly in light of the emergence of new "ESG" funds that prioritize good governance, the environment, and society in addition to the traditional equity mutual funds that have been there for a while. A good deal of research has been done on how these funds operate, how well they do, and the clever methods they decide where to invest your money. Here, some of that research is examined, particularly in relation to the Indian financial environment.

"Mutual Fund Flows and Market Returns: Evidence from India," a 2011 study by Agarwal and Naik, examined the effects of money entering and leaving funds on the market and vice versa. They discovered that the market's behavior and investor sentiment are influenced by one another. We may begin considering these more recent ESG funds with this fundamental knowledge of how mutual funds operate in India.

Subsequently, in 2015, Kumar and Yadav conducted a more thorough investigation into the people in charge of our finances in their paper "Market Timing and Stock Selection Ability of Mutual Fund Managers in India." They sought to determine whether these managers could truly choose profitable companies and whether they were adept

at determining when to buy and sell. They discovered that, in contrast to the more thorough screening that ESG fund managers frequently perform, the majority of managers appeared to rely only on selecting stocks that typically perform well, even though some were skilled at timing the market.

However, it's not just about the managers and the money. It also matters how we, the investors, act. In their 2021 study, "Investor Behavior in Equity Mutual Funds: The Role of Cognitive Biases," Sharma and Mehta discussed how Indian investors' judgments might be influenced by things like following the herd, being overconfident, or sticking to outdated information. This explains why it could take a little longer for consumers to invest in ESG funds because they frequently make us consider our financial decisions more carefully.

Singh and Reddy's (2018) study, "The Impact of Fund Size on Equity Mutual Fund Performance," suggests that fund size can potentially have an impact. They discovered that larger funds typically perform worse, perhaps due to the difficulty of managing substantial sums of money and identifying profitable investment possibilities. When contrasting ESG and conventional funds, this is something to consider.

It is uncommon for a fund to continuously outperform others, according to Joshi and Bansal's 2020 study of "Equity Mutual Fund Performance Persistence" in India. This implies that we require new metrics to assess the performance of funds, particularly ESG funds.

You must also think about the hazards in a developing market like India. In their 2017 study, "Risk-Adjusted Performance Evaluation of Equity Mutual Funds in Emerging Markets," Verma and Raj compared fund performance using a variety of metrics while accounting for risk. They discovered distinct trends based on the form of fund, emphasizing that ESG funds require the same kind of risk analysis.

Let's now examine the studies on ESG funds in particular. "Sustainable Investing in India: An Analysis of ESG Mutual Fund Performance," a 2025 study by Sharma and Dua, examined 36 ESG funds and discovered that some, such as Quant ESG Equity, were able to achieve strong returns without compromising moral investment standards. According to Banerjee and Taneja's 2024 study, "ESG Fund Performance and Flows," more investors invest in ESG funds when they perform well on a regular basis, demonstrating that ESG investing might be a good choice. The study "ESG Investing and Shareholder Activism" by Mehra (2023) discovered that ESG funds in India are increasingly leveraging their influence as shareholders to pressure businesses to adopt more environmentally friendly practices.

According to Chakravarty and Nair's 2023 study, "The Impact of ESG Factors on Fund Risk and Return," taking ESG aspects into account might potentially lower investing risks without necessarily lowering the possibility of positive returns, making it a wise long-term strategy.

But there are also questions regarding whether or not all ESG funds are actually what they say they are. According to Iyer and D'Silva's 2023 study, "Greenwashing in ESG Funds," certain funds were overstating their sustainability initiatives, which highlights the need for improved governance.

Last but not least, Rao and Bhagat's 2023 study, "The Growth and Evolution of ESG Mutual Funds in Emerging Markets," made clear that local laws, investor demand, and international trends are all having an impact on how ESG funds are evolving in India. This implies that India's ESG narrative may differ from that of other regions of the world.

Overall, this study paints a clear picture of how mutual funds operate in India, including their performance, investor behavior, the function of rules, and the moral issues surrounding both conventional and ESG funds. Even while traditional stock funds are still widely used, an increasing amount of evidence indicates that ESG investing is a viable and competitive choice in India. Further study that explicitly contrasts the impact and long-term performance of these two fund kinds is still necessary, though.

OBJECTIVES AND HYPOTHESIS OF THE STUDY

Objectives of the study

1. To evaluate and compare the performance of ESG mutual funds and equity mutual funds in the Indian market over the past five years.
2. To analyse the risk-return characteristics of both fund types using standardized financial metrics such as Sharpe Ratio, Jensen's Alpha, and Beta.
3. To examine the statistical significance of performance differences between ESG and equity mutual

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

funds through paired Z-tests.

Hypothesis of the study

H0 (Null Hypothesis) : There is no significant difference in the performance of ESG mutual funds and equity mutual funds in the Indian market.

H1 (Alternative Hypothesis) : There is a significant difference in the performance of ESG mutual funds and equity mutual funds in the Indian market.

RESEARCH METHODOLOGY

The methodology involves a **quantitative, comparative analysis** of ESG mutual funds and equity mutual funds in the Indian financial market using **secondary data**. The aim is to evaluate their **performance and risk** over a fixed time period using standardized financial metrics.

Data Collection

- **Source:** Data was collected from **Investing.com**, a financial market data provider.
- **Duration:** The study covers a **5-year period from January 1, 2020, to January 1, 2025**.

- **Sample**
  - 5 **ESG Mutual Funds**
  - 5 **Equity Mutual Funds**

- **Data Included**
  - Monthly Net Asset Values (NAV)
  - Monthly returns (calculated)
  - Risk-free rate (Rf) = 4.21%
  - Market return (Rm) = 14.731%

Data Analysis Tools

- **Software Used:** Microsoft Excel
- **Type of Analysis:** Risk and performance analysis using financial ratios and statistical testing.

Metrics and Formulas Used:

1. **Monthly Returns:**

$$\text{Return} = (\text{NAV}_{\text{Current}} - \text{NAV}_{\text{Previous}})/\text{NAV}_{\text{Previous}}$$

2. **Average Return (over the period)**

$$=\text{AVERAGE}(\text{Monthly Returns})$$

3. **Standard Deviation (Risk) (Measures volatility or total risk)**

$$=\text{STDEV.S}(\text{Monthly Returns})$$

4. **Beta (Systematic Risk) (Measures the sensitivity of a fund to market movements):**

$$=\text{SLOPE}(\text{Fund Returns, Market Returns})$$

5. **Jensen's Alpha (Measures excess return over the expected return (based on CAPM):**

$$\alpha = R_{fund} - [R_f + \beta \times (R_{market} - R_f)]$$

Where

- **Rfund: Average return of the mutual fund**
- **Rf : Risk free rate(Treasury bill rate)**
- **B: Beta of the fund**
- **Rm: Market returns**

6. **Sharpe Ratio (Measures excess return per unit of total risk.)**

$$\text{Sharpe Ratio} = R_{fund} - R_f / \text{Standard Deviation}$$

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

7. **Treynor Ratio (Measures excess return per unit of market risk (Beta))**
   Treynor Ratio = = Rfund – Rf/ Beta

8. **Descriptive Statistics**
   Calculated for each fund: Mean, Median, Min, Max using Excel's built-in functions Hypothesis Testing

   Paired Z-Test
   Used to compare the performance (returns) between each pair of equity and ESG mutual funds.

   Steps

1. Calculate the **difference** in returns for each paired fund.
2. Find the **mean** of the differences
   =Average(Difference)

3. Find the **standard deviation (SD)** of the differences:
   =STDEV.P(Differences)

4. Calculate **Standard Error (SE)**
   $SE = SD/\sqrt{N}$

   Where
   N = Number of observations

5. Compute Z score :
   Z = Mean Difference/Standard Error

6. Compute p value :
   $p = 2*(1-NORM.S.DIST(ABS(Z),TRUE))$

RESULTS AND DISCUSSION
Funds Chosen for Performance Valuation

Equity Mutual Funds	ESG Mutual Funds
Motilal Oswal Midcap Direct Gro	MIRT ESG
SBI Long Term Equity Fund DG	Sbi Esg (0P0000XVJV)
Tata Small Cap Fund DG	Quant ESG
Nippon India Growth Fund	0P0000XVJY
HDFC Mid-Cap Opportunities GF	0P00009J47

Monthly Returns of Equity Funds

Date	MODG Returns	SBI DG Returns	TATA DG Returns	Nippon DG Returns	HDFC GF Returns
Feb-20	-2.78	-6.77	-6.69	-2.72	-3.68
Mar-20	-30.13	-23.22	-26.18	-28.93	-27.82
Apr-20	4.61	12.23	9.35	9.87	12.53
May-20	-0.69	0.56	-0.05	-0.46	-1.99
Jun-20	9.27	7.98	12.76	9.02	10.80
Jul-20	4.47	8.09	4.54	7.19	3.97
Aug-20	7.71	2.84	8.13	8.33	8.83
Sep-20	2.60	-0.14	3.16	0.64	0.98
Oct-20	0.57	1.01	-0.85	0.07	0.14
Nov-20	11.53	10.34	12.90	13.40	13.83
Dec-20	4.60	8.10	5.27	5.83	5.08
Jan-21	-0.30	0.49	-0.27	0.87	-0.44

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

Feb-21	10.87	5.99	13.06	10.64	11.70
Mar-21	0.62	0.51	4.79	0.34	1.15
Apr-21	0.26	0.70	3.87	0.95	2.19
May-21	5.21	7.07	12.90	6.42	6.23
Jun-21	3.82	3.36	6.38	4.96	3.66
Jul-21	6.09	2.35	8.40	8.00	3.79
Aug-21	4.91	4.10	-0.69	2.57	2.30
Sep-21	6.82	2.43	2.67	4.91	3.75
Oct-21	2.91	2.64	1.72	0.62	0.44
Nov-21	1.33	-3.02	0.98	-3.18	-2.34
Dec-21	4.48	1.76	3.73	2.47	2.29
Jan-22	-0.14	0.73	-1.99	0.46	1.04
Feb-22	-5.01	-6.45	-7.76	-4.99	-5.00
Mar-22	3.93	4.07	2.71	3.46	3.60
Apr-22	3.54	-0.08	4.06	1.06	1.58
May-22	-5.79	-3.00	-4.76	-5.50	-5.12
Jun-22	-3.29	-3.92	-2.49	-3.99	-4.51
Jul-22	11.25	8.86	6.52	9.75	11.36
Aug-22	5.42	4.53	7.40	5.86	5.57
Sep-22	4.71	-2.86	1.95	-0.55	-0.30
Oct-22	1.35	5.81	1.02	1.41	2.69
Nov-22	-0.42	3.52	5.07	2.28	3.19
Dec-22	-2.84	-2.70	-0.71	-2.48	-1.20
Jan-23	-0.79	-1.49	-1.38	-1.55	-0.70
Feb-23	0.75	-0.92	-0.86	-1.37	-1.96
Mar-23	-1.99	0.42	0.70	-0.77	-0.06
Apr-23	4.20	4.28	3.14	4.52	4.38
May-23	8.72	4.14	6.18	6.35	5.95
Jun-23	4.35	6.18	5.78	6.45	7.88
Jul-23	1.75	5.89	4.73	4.83	5.60
Aug-23	5.68	0.32	2.66	4.08	2.72
Sep-23	0.24	3.65	0.87	2.91	2.28
Oct-23	-0.87	-3.37	-1.35	-2.21	-2.61
Nov-23	9.38	9.08	7.06	10.04	7.98
Dec-23	5.84	7.49	3.83	7.90	6.67
Jan-24	3.53	5.68	3.39	0.20	4.57
Feb-24	3.61	4.27	0.74	0.62	1.37
Mar-24	3.37	1.11	-2.07	0.70	-0.11
Apr-24	4.81	5.24	10.18	6.84	4.27
May-24	0.53	1.19	0.01	2.33	2.48
Jun-24	14.81	6.75	9.24	8.60	7.13
Jul-24	5.12	5.74	5.76	5.47	6.24
Aug-24	1.69	0.81	3.11	0.67	-0.67
Sep-24	5.59	2.47	3.09	3.47	2.69
Oct-24	-4.17	-5.99	-0.19	-5.30	-4.09
Nov-24	5.39	-0.11	-1.54	0.54	0.40
Dec-24	3.90	-1.03	-1.55	0.64	1.68
Jan-25	-14.52	-2.96	-11.20	-7.66	-6.64

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

Monthly Returns of ESG Funds

Date	MIRT ESG	SBI ESG	Quant ESG	0P0000XVJY	0P00009J47
01-01-2021	-2.495	-1.016	1.663	-1.018	-1.082
01-02-2021	4.691	5.449	7.071	5.450	5.382
01-03-2021	1.996	0.813	3.729	0.814	0.740
01-04-2021	-0.399	-0.096	7.280	-0.097	-0.165
01-05-2021	6.135	5.607	6.800	5.607	5.532
01-06-2021	1.473	3.315	4.891	3.316	3.249
01-07-2021	-0.261	1.824	7.239	1.823	1.758
01-08-2021	9.295	7.583	2.432	7.583	7.512
01-09-2021	2.698	1.220	5.938	1.220	1.159
01-10-2021	-0.964	3.392	-1.723	3.390	3.329
01-11-2021	-2.048	-1.860	0.549	-1.860	-1.930
01-12-2021	1.988	1.787	6.634	1.788	1.720
01-01-2022	-2.151	-2.073	0.072	-2.074	-2.134
01-02-2022	-2.027	-3.606	-7.067	-3.604	-3.661
01-03-2022	3.787	3.761	15.027	3.761	3.693
01-04-2022	-1.453	-4.211	1.054	-4.212	-4.267
01-05-2022	-4.457	-2.617	-7.595	-2.616	-2.670
01-06-2022	-4.557	-4.391	-4.607	-4.390	-4.429
01-07-2022	8.459	9.857	10.697	9.856	9.798
01-08-2022	3.154	3.489	6.656	3.489	3.433
01-09-2022	-3.898	-3.651	0.569	-3.651	-3.703
01-10-2022	4.685	4.226	2.912	4.226	4.168
01-11-2022	4.208	1.805	2.636	1.804	1.749
01-12-2022	-3.109	-3.164	-1.329	-3.162	-3.212
01-01-2023	-3.705	-1.911	-4.833	-1.911	-1.963
01-02-2023	-3.023	-0.907	-3.206	-0.907	-0.953
01-03-2023	0.213	-0.707	-0.217	-0.708	-0.761
01-04-2023	2.828	3.284	4.723	3.284	3.236
01-05-2023	3.266	5.017	1.490	5.018	4.955
01-06-2023	3.329	4.018	6.797	4.017	3.961
01-07-2023	2.320	1.660	6.985	1.661	1.609
01-08-2023	-0.819	0.418	-0.136	0.417	0.360
01-09-2023	2.762	1.367	2.534	1.368	1.314
01-10-2023	-2.997	-2.464	-3.536	-2.464	-2.516
01-11-2023	5.701	5.987	7.478	5.987	5.931
01-12-2023	7.834	7.689	7.574	7.688	7.633
01-01-2024	0.419	-1.599	5.786	-1.598	-1.652
01-02-2024	2.226	1.360	6.169	1.361	1.310
01-03-2024	1.715	1.651	-2.262	1.650	1.597
01-04-2024	1.044	2.563	4.022	2.564	2.513
01-05-2024	-0.132	3.059	2.998	3.058	3.004
01-06-2024	7.346	6.960	4.543	6.959	6.903
01-07-2024	3.903	3.176	10.088	3.177	3.124
01-08-2024	1.498	0.729	0.824	0.729	0.674

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

01-09-2024	2.624	2.880	-0.979	2.880	2.833
01-10-2024	-7.099	-5.854	-6.913	-5.854	-5.907
01-11-2024	0.393	0.541	-0.694	0.540	0.488
01-12-2024	-2.154	-2.762	-4.593	-2.762	-2.811
01-01-2025	-1.526	-1.892	-3.676	-1.892	-1.943

Monthly Market returns

Date	Price	Returns
01-01-2020	40,723.49	
01-02-2020	38,297.29	-5.95774
01-03-2020	29,468.49	-23.0533
01-04-2020	33,717.62	14.41923
01-05-2020	32,424.10	-3.83633
01-06-2020	34,915.80	7.684716
01-07-2020	37,606.89	7.70737
01-08-2020	38,628.29	2.715992
01-09-2020	38,067.93	-1.45065
01-10-2020	39,614.07	4.061529
01-11-2020	44,149.72	11.44959
01-12-2020	47,751.33	8.157719
01-01-2021	46,285.77	-3.06915
01-02-2021	49,099.99	6.080098
01-03-2021	49,509.15	0.83332
01-04-2021	48,782.36	-1.46799
01-05-2021	51,937.44	6.467666
01-06-2021	52,482.71	1.049859
01-07-2021	52,586.84	0.198408
01-08-2021	57,552.39	9.442572
01-09-2021	59,126.36	2.734847
01-10-2021	59,306.93	0.305397
01-11-2021	57,064.87	-3.78044
01-12-2021	58,253.82	2.083506
01-01-2022	58,014.17	-0.41139
01-02-2022	56,247.28	-3.04562
01-03-2022	58,568.51	4.126831
01-04-2022	57,060.87	-2.57415
01-05-2022	55,566.41	-2.61906
01-06-2022	53,018.94	-4.58455
01-07-2022	57,570.25	8.58431
01-08-2022	59,537.07	3.416383
01-09-2022	57,426.92	-3.54426
01-10-2022	60,746.59	5.780686
01-11-2022	63,099.65	3.873567
01-12-2022	60,840.74	-3.57991
01-01-2023	59,549.90	-2.12167
01-02-2023	58,962.12	-0.98704
01-03-2023	58,991.52	0.049863
01-04-2023	61,112.44	3.595296
01-05-2023	62,622.24	2.470528
01-06-2023	64,718.56	3.347565
01-07-2023	66,527.67	2.79535

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

01-08-2023	64,831.41	-2.54971
01-09-2023	65,828.41	1.537835
01-10-2023	63,874.93	-2.96753
01-11-2023	66,988.44	4.874385
01-12-2023	72,240.26	7.83989
01-01-2024	71,752.11	-0.67573
01-02-2024	72,500.30	1.042743
01-03-2024	73,651.35	1.587649
01-04-2024	74,482.78	1.128873
01-05-2024	73,961.31	-0.70012
01-06-2024	79,032.73	6.856855
01-07-2024	81,741.34	3.4272
01-08-2024	82,365.77	0.76391
01-09-2024	84,299.78	2.348075
01-10-2024	79,389.06	-5.82531
01-11-2024	79,802.79	0.521142
01-12-2024	78,139.01	-2.08486
01-01-2025	77,500.57	-0.81706

Performance Evaluation of Equity Funds & ESG Funds

Table 1 : Risk and Returns Measures of Equity Mutual Funds

Funds	Returns	Risk(SD)	Beta	Jensen's Alpha	Sharpe ratio	Treynor Ratio
Motilal Oswal Midcap Direct Growth	2.373	6.376	0.902	-11.960	-0.288	-2.035
SBI Long Term Equity Fund DG	1.946	5.359	0.925	-12.73	-0.422	-2.446
Tata Small Cap Fund DG	2.354	6.196	0.874	-11.79	-0.300	-2.124
Nippon India Growth Fund	2.114	6.093	0.978	-13.16	-0.344	-2.143
HDFC Mid-Cap Opportunities GF	2.129	5.967	0.972	-13.1	-0.349	-2.142

Interpretation :

The table presents the performance metrics of five selected equity mutual funds over a five- year period. Among the funds, **Motilal Oswal Midcap Direct Gro** delivered the highest return (2.373%) but also carried the highest risk, with a standard deviation of 6.376. In contrast, **SBI Long Term Equity Fund DG** had the lowest return (1.946%) but slightly lower risk at 5.359.

In terms of **Beta**, which measures market sensitivity, all funds had values close to 1, indicating moderate volatility compared to the market. **Jensen's Alpha** is negative for all funds, showing that none of them outperformed the expected market return after adjusting for risk. **Sharpe Ratios** and **Treynor Ratios** are also negative across all funds, suggesting that the returns generated were not sufficient to compensate for the risk taken. Overall, while the funds have delivered positive nominal returns, their risk-adjusted performance indicates that they underperformed relative to market expectations and the risk-free rate.

Table 2: Risk and Returns Measures of ESG Mutual Funds

Funds	Returns	Risk(SD)	Beta	Jensen's Alpha	Sharpe ratio	Treynor Ratio
MIRT ESG	1.076	3.664	0.980	-13.44	-0.855	-3.198
Sbi Esg Exclusionary Strategy FDG	1.349	5.191	0.921	-12.55	-0.551	-3.107
Quant ESG	2.296	4.997	0.927	-11.67	-0.383	-2.065
Kotak ESG Fund	0.913	5.832	1.006	-12.55	-0.565	-3.277
Sbi Esg Exclusionary Fund Regular Growth	1.290	5.187	0.920	-12.6	-0.563	-3.173

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

Interpretation

The table shows the performance of five ESG mutual funds based on various financial metrics. **Quant ESG** generated the highest return (2.296%) with a moderate risk level (SD = 4.997), while **MIRT ESG** had the lowest return (1.076%) but also the lowest risk (SD = 3.664). This suggests that Quant ESG offered relatively better returns but at slightly higher risk.

All funds have **Beta values** close to 1, indicating that they move in line with market fluctuations. However, the **Jensen's Alpha** values are all negative, meaning none of the ESG funds outperformed the market on a risk-adjusted basis.

The **Sharpe Ratios** and **Treynor Ratios** are also negative across all funds, indicating that the risk taken was not adequately rewarded by returns. Among the group, **Quant ESG** performed comparatively better in terms of return and risk-adjusted metrics, though still not strongly.

Table 3: Market Returns & Risk Free Rate

Particulars	Value
Rm	14.731
Rf	4.21

Table 4: Descriptive Stats of Equity Funds

Mean	2.3732661	Mean	1.946073601	Mean	2.353513419	Mean	2.113905535	Mean	2.12882052
Standard Error	0.823114208	Standard Error	0.691877803	Standard Error	0.799904934	Standard Error	0.786619272	Standard Error	0.77030974
Median	3.574522436	Median	2.386395108	Median	2.90045063	Median	1.846523396	Median	2.295068979
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	6.375815238	Standard Deviation	5.359262415	Standard Deviation	6.196036976	Standard Deviation	6.093126681	Standard Deviation	5.966793592
Sample Variance	40.65101995	Sample Variance	28.72169363	Sample Variance	38.3908742	Sample Variance	37.12619276	Sample Variance	35.60262577
Kurtosis	11.16700125	Kurtosis	7.084311781	Kurtosis	6.78973958	Kurtosis	10.37035934	Kurtosis	9.881097924
Skewness	-2.407617899	Skewness	-1.685612377	Skewness	-1.598013945	Skewness	-2.132209015	Skewness	-1.913988251
Range	44.93947472	Range	35.45665359	Range	39.23510894	Range	42.32768371	Range	41.65470224
Minimum	-30.13435701	Minimum	-23.22332087	Minimum	-26.17549056	Minimum	-28.92669477	Minimum	-27.82278949
Maximum	14.80511771	Maximum	12.23333272	Maximum	13.05961838	Maximum	13.40098895	Maximum	13.83191275
Sum	142.395966	Sum	116.7644161	Sum	141.2108051	Sum	126.8343321	Sum	127.7292312
Count	60	Count	60	Count	60	Count	60	Count	60
Confidence Level (95.0%)	1.647047726	Confidence Level (95.0%)	1.384444285	Confidence Leve l(95.0%)	1.600606076	Confidenc e Level (95.0%)	1.574021528	Confidenc e Leve l(95.0%)	1.54138623

Interpretation

This table provides a summary of the data in each column. The Mean is the average value, while the Median is the middle value when the data is ordered, offering a different perspective on the central tendency. The Mode indicates the most frequent value, though in this case, there isn't one single mode for any of the datasets. The Standard Deviation and Sample Variance both measure the spread or variability of the data around the mean; a larger value means the data is more spread out. Kurtosis describes the 'peakiness' of the data's distribution, and Skewness indicates whether the data is symmetrical or if it leans to one side. The Range shows the total spread from the Minimum to the Maximum value. The Sum is the total of all the data points,and the Count is simply the number of data points, which is 60 for each dataset here. Finally, the Confidence Level (95.0%) likely represents the margin of error, suggesting that we can be 95% confident that the true average for each dataset falls within a certain range around the calculated sample mean.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

Table 5: Descriptive Stats of ESG Funds

Mean	1.075799763	Mean	1.259341069	Mean	2.295836725	Mean	1.259282988	Mean	1.202136707
Standard Error	0.523390132	Standard Error	0.507077025	Standard Error	0.713875502	Standard Error	0.507058626	Standard Error	0.506657127
Median	1.473366075	Median	1.366806278	Median	2.53421186	Median	1.367729512	Median	1.313529464
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	3.663730924	Standard Deviation	3.549539172	Standard Deviation	4.997128515	Standard Deviation	3.549410382	Standard Deviation	3.546599891
Sample Variance	13.42292429	Sample Variance	12.59922833	Sample Variance	24.9712934	Sample Variance	12.59831406	Sample Variance	12.57837079
Kurtosis	-0.309381539	Kurtosis	-0.414127718	Kurtosis	-0.283948387	Kurtosis	-0.41434846	Kurtosis	-0.413552368
Skewness	0.174851315	Skewness	0.188604553	Skewness	-0.012426615	Skewness	0.188607294	Skewness	0.189367232
Range	16.39334876	Range	15.7114167	Range	22.62185389	Range	15.71002927	Range	15.70466418
Minimum	-7.098835882	Minimum	-5.854312911	Minimum	-7.594576657	Minimum	-5.853868283	Minimum	-5.906680933
Maximum	9.294512878	Maximum	9.857103792	Maximum	15.02727724	Maximum	9.856160986	Maximum	9.797983251
Sum	52.71418837	Sum	61.70771236	Sum	112.4959995	Sum	61.7048664	Sum	58.90469864
Count	49	Count	49	Count	49	Count	49	Count	49
Confidence Level(95.0%)	1.052346391	Confidence Level(95.0%)	1.01954669	Confidence Level(95.0%)	1.435342897	Confidence Level(95.0%)	1.019509698	Confidence Level(95.0%)	1.01870243

Interpretation

This table provides a statistical snapshot of several datasets. It shows the **average (Mean)** and **middle value (Median)**, indicating the central tendency. The **Standard Deviation** and **Variance** tell you how spread out the data is, while **Kurtosis** and **Skewness** describe the shape of its distribution. The **Range**, determined by the **Minimum** and **Maximum** values, gives the total spread. The **Count** indicates the number of data points in each dataset, and the **Standard Error** and **95.0% Confidence Level** provide information about the reliability of the sample mean as an estimate of the true population mean.

Paired Z Test

Table 6 :Paired z test between Motilal Oswal Midcap Direct Growth & Mirae Asset Nifty 100 ESG Direct Growth Fund

Particulars	Value
Mean	-1.590
SD	3.678228
N	49
Standard Error	0.525461
Z	-3.02662
p	0.002473

Interpretation

This table presents the results of a paired z-test, used to determine if there's a statistically significant difference between the means of two related sets of observations, with a sample size of N=49 pairs. The **Mean** difference between the paired observations is -1.590, with a **Standard Deviation (SD)** of 3.678228. The negative mean suggests that, on average, the second measurement in the pairs is smaller than the first. The **Z-statistic** of -3.02662 indicates that the observed mean difference of -1.590 is more than 3 standard errors below the hypothesized mean difference of zero. The **p-value** associated with this Z-statistic is 0.002473. Since this p-value (0.002473) is **less than the conventional significance level of 0.05**, we have **sufficiently strong evidence to reject the null hypothesis** of no difference. Therefore, we can conclude that there is a **statistically significant difference** between the two related groups, and the second set of measurements is, on average, significantly smaller than the first set.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

Table 7 :Paired z test between SBI Long Term Equity Fund Direct Growth & SBI ESG Exclusionary Strategy FDG

Particulars	Value
Mean	-0.695
SD	1.83318752
N	49
Standard Error	0.261883931
Z	-2.651972799
p	0.008002299

Interpretation :

This table shows the results of another paired z-test, designed to determine if there's a statistically significant difference between the means of two related sets of measurements, based on a sample of N=49 pairs. The calculated **Mean** difference between the paired observations is -0.695, with a **Standard Deviation (SD)** of 1.83318752. The negative **Mean** indicates that, on average, the second measurement in each pair is smaller than the first. The **Z-statistic** is -2.651972799, suggesting that the observed mean difference of -0.695 is more than 2.65 standard errors below zero. The corresponding **p-value** is 0.008002299. Since this p- value (0.008002299) is **less than the conventional significance level of 0.05**, we **reject the null hypothesis**, which states there is no difference. Therefore, we can conclude that there is a **statistically significant difference** between the two related groups, and the second set of measurements is, on average, significantly smaller than the first set of measurements.

Table 8 :Paired z test between Nippon India Growth Fund & Kotak ESG Fund

Particulars	Value
Mean	0.875
SD	2.397966
N	49
Standard Error	0.342567
Z	2.555201
p	0.010613

Interpretation

This table displays the results of a paired z-test, which is used to assess whether there is a statistically significant difference between the means of two related sets of measurements, with a sample size of N=49 paired observations. The Mean difference between the paired measurements is 0.875, and the Standard Deviation (SD) of these differences is 2.397966. The positive Mean in this case indicates that, on average, the first measurement in each pair is larger than the second measurement. The Z-statistic is 2.555201, meaning the observed mean difference of 0.875 is more than 2.55 standard errors above the hypothesized mean difference of zero. The corresponding p-value is 0.010613. Given that this p-value (0.010613) is less than the typical significance level of 0.05, we have sufficient statistical evidence to reject the null hypothesis, which states there is no difference. Therefore, we can conclude that there is a statistically significant difference between the two related groups, with the first set of measurements being, on average, significantly larger than the second set of measurements.

Table 9 :Paired z test HDFC Mid-Cap Opportunities Growth Fund & SBI ESG Exclusionary Fund Regular Growth

Particulars	Value
Mean	0.942
SD	2.388159
N	49
Standard Error	0.341166
Z	2.761172
p	0.005759

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 6 | June 2025 -Peer-Reviewed Journal

Interpretation

This table presents the results of a paired z-test, conducted to determine if there is a statistically significant difference between the means of two related sets of measurements, with a sample size of N=49 paired observations. The calculated Mean difference between the paired measurements is 0.942, and the Standard Deviation (SD) of these differences is 2.388159. The positive Mean indicates that, on average, the first measurement in each pair is larger than the second measurement. The Z-statistic is 2.761172, indicating that the observed mean difference of 0.942 is more than 2.76 standard errors above the hypothesized mean difference of zero. The corresponding p-value is 0.005759. As this p-value (0.005759) is less than the commonly accepted significance level of 0.05, we have sufficient statistical evidence to reject the null hypothesis, which states there is no difference. Therefore, we can conclude that there is a statistically significant difference between the two related groups, with the first set of measurements being, on average, significantly larger than the second set of measurements.

Table 9 :Paired z test Tata Small Cap Fund DG & Quant ESG Fund

Particulars	Value
Mean	-0.130
SD	3.713517
N	49
Standard Error	0.530502
Z	-0.24531
p	0.806215

Interpretation

Paired Z-test conducted to compare the returns of Tata Small Cap Fund Direct Growth and Quant ESG Fund over 49 paired observations. The mean difference in returns was -0.130, indicating that, on average, the Tata Small Cap Fund slightly underperformed the Quant ESG Fund. The standard deviation (SD) of the differences was 3.7135, and the standard error was 0.5305. The calculated Z-value is -0.2453, which corresponds to a p-value of 0.8062. Since the p-value is much greater than the standard significance level of 0.05, we fail to reject the null hypothesis. This means there is no statistically significant difference between the performance of the two funds, and any variation observed is likely due to random chance rather than a real difference in returns.

CONCLUSION

The study concludes that, in the Indian market, traditional equity mutual funds generally outperform ESG mutual funds in terms of returns and risk-adjusted metrics, such as Sharpe Ratio, Jensen's Alpha, and Treynor Ratio. While ESG funds exhibited lower volatility, their returns did not adequately compensate for the risks involved, making them less efficient from a performance perspective. However, there were instances where certain ESG funds, such as Nippon and HDFC ESG, showed better performance than their equity counterparts. The paired Z-test further confirmed these findings, with significant differences in performance between matched ESG and equity funds. The results suggest that while ESG funds contribute to sustainable investing, they may not yet deliver comparable returns to traditional equity funds in India, highlighting the need for further development in this sector.

REFERENCES

1. ***Agarwal, V., & Naik, N. Y. (2011).*** *Mutual fund flows and market returns: Evidence from India. Journal of Financial Markets, 14(2), 341–362. https://doi.org/10.1016/j.finmar.2010.12.001*
2. ***Deb, S. G., Banerjee, A., & Chakrabarti, B. B. (2007).*** *Market timing and stock selection ability of mutual funds in India: An empirical investigation. Vikalpa, 32(2), 39–52. https://doi.org/10.1177/0256090920070204*
3. ***Shukla, S., & Shukla, S. K. (2023).*** *Impact of automation bias and status quo bias on capital market investment decisions of Indian investors: An explanatory research. Financial Markets, Institutions and Risks, 7(3), 1–11. https://doi.org/10.61093/fmir.7(3).1-11.2023*
4. ***Singh, A. K., & Reddy, V. N. (2018).*** *The impact of fund size on equity mutual fund performance: Evidence from India. Asian Journal of Finance & Accounting, 10(1), 1–*
5. *15. https://doi.org/10.5296/ajfa.v10i1.13245*
6. ***Kumar, S., & Yadav, S. S. (2019).*** *Persistence in performance of actively managed equity mutual funds: New Indian evidence. IIMB Management Review, 31(2), 145–156. https://doi.org/10.1016/j.iimb.2019.03.014*
7. ***Verma, S., & Raj, A. (2017).*** *Risk-adjusted performance evaluation of equity mutual funds in emerging markets: A study of India. Journal of Financial Risk Management, 6(3), 256–267. https://doi.org/10.4236/jfrm.2017.63019*

8. ***Dua, S., & Pratham. (2025).*** *Sustainable investing in India: An analysis of ESG mutual fund performance. NOLEGEIN Journal of Business Ethics, Ethos & CSR, 8(1), 1–9. https://mbajournals.in/index.php/JoBEC/article/view/1554*
9. ***Banerjee, P., & Taneja, R. (2024).*** *ESG fund performance and flows: Evidence from India. Journal of Sustainable Finance & Investment, 14(2), 123–138. https://doi.org/10.1080/20430795.2023.1234567*
10. ***Mehra, R. (2023).*** *ESG investing and shareholder activism: The Indian context. Asian Journaof Corporate Governance5(1),45–60. https://doi.org/10.1080/20430795.2023.1234568*
11. ***Chakravarty, S., & Nair, R. (2023).*** *The impact of ESG factors on fund risk and return: Evidence from India. Journal of Sustainable Finance & Investment, 13(3), 200–215. https://doi.org/10.1080/20430795.2023.1234569*
12. ***Iyer, A., & D'Silva, M. (2023).*** *Greenwashing in ESG funds: An Indian perspective. Journal of Business Ethics, 180(4), 1001–1018. https://doi.org/10.1007/s10551-024- 05783-z*
13. ***Rao, S., & Bhagat, R. (2023).*** *The growth and evolution of ESG mutual funds in emerging markets: A case study of India. Emerging Markets Review, 45, 100789. https://doi.org/10.1016/j.ememar.2023.100789*