BIJU PATNAIK INSTITUTE OF INFORMATION TECHNOLOGY & MANAGEMENT STUDIES (BIITM), BHUBANESWAR
Plot No. F/4, Chandaka Industrial Estate, Infocity, Patia, Bhubaneswar-24
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SUMMER INTERNSHIP PROJECT 2025

REPORT TITLE

ESG Integration in Mutual Fund Portfolios: Impact on Risk, Return, and Portfolio Diversification

SUBMITTED BY

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CERTIFICATE OF FACULTY/INTERNAL GUIDE

This is to certify that **Mr. Nirad Kanti Nanda** bearing university registration no **2406258127** of **2024-26** batch, has completed his/her summer internship at **UTI Mutual Fund** from **5th June to 17th July** under the supervision of **Mr. Amit Jena** and has submitted this project report under my guidance in partial fulfilment of the requirements for award of the degree of Master of Business Administration at Biju Patnaik Institute of Information Technology and Management Studies, Bhubaneswar. To the best of my knowledge and belief, this project report has been prepared by the student and has not been submitted to any other institute or university for the award of any degree or diploma

Date:

Place: Bhubaneswar

Dr. Dhananjaya Beura

Prof. Marketing

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DECLARATION

I, Mr. **Nirad Kanti Nanda** bearing university registration no **2406258127** of (2024-26 batch), hereby declare that the project report titled **ESG Integration in Mutual Fund Portfolios: Impact on Risk, Return, and Portfolio Diversification** is based on my internship at **UTI Mutual Fund** during the period from **5th of June to 17th of July** and is an original work done by me under the supervision of Mr. Amit Jena and Dr. Dhananjay Beura. This report is being submitted to Biju Patnaik Institute of Information Technology and Management Studies, Bhubaneswar, affiliated to Biju Patnaik University of Technology, Odisha, in partial fulfilment of the requirements for the award of the degree of Master of Business Administration. This project report has not been submitted to any other institute/university for the award of any degree or diploma.

Date:

Place: Signature

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Table of Contents

CHAPTER 1

1.1 Abstract

The study aims to evaluate the impact of ESG (Environmental, Social, and Governance) integration in mutual fund portfolios in India, specifically in terms of return performance, risk levels, portfolio diversification, and long-term financial stability. The goal is to assist investors in making informed decisions when choosing between ESG and non-ESG mutual funds.

A quantitative research design was adopted, analyzing a sample of ESG and non-ESG mutual funds using data up to March 31, 2025. Risk and return were assessed using statistical tools including standard deviation, beta, Sharpe ratio, and correlation analysis. Diversification and stability were evaluated through inter-asset correlations and performance consistency over time, using Nifty 50 as a benchmark.

The study reveals that ESG funds tend to exhibit lower volatility and comparable risk-adjusted returns compared to conventional mutual funds. Additionally, while ESG funds show moderate diversification, they offer better resilience during market downturns, indicating their potential for long-term financial stability.

The scope is limited to selected ESG and non-ESG equity mutual funds in India, and the performance data considered spans April 1, 2019, to March 31, 2025. External factors such as economic shocks or sector-specific events may have influenced fund outcomes. This research provides valuable insights for investors and fund managers by comparing ESG and conventional fund performance through multiple financial lenses. It supports the case for integrating ESG strategies into portfolio management.

ESG is a philosophy that incorporates environmental, social, and governance factors in business and investment decisions. It originated from the term “responsible investment”. At the heart of ESG based investing is the recognition that global challenges such as climate change, biodiversity loss, unemployment, terrorism, and data privacy and protection are creating newer risks for business enterprises.

1.2 Introduction

Environmental, Social, and Governance (ESG) mutual funds are becoming more popular as investors look to support responsible companies while still earning returns. These funds aim to invest in businesses that follow sustainable practices, treat people fairly, and have strong ethical standards. In India, ESG investing is still new but growing, with support from regulators like SEBI and fund houses such as SBI, Axis, and ICICI Prudential launching ESG schemes. However, many investors are unsure if these funds actually perform better, carry more or less risk, or help diversify their portfolio effectively.

This study aims to explore whether ESG mutual funds provide strong returns, lower risk, and better long-term stability compared to regular funds. The goal is to help investors make smarter decisions and to add valuable insights to the growing field of sustainable investing in India. Despite such growth, there is a large empirical gap on the financial sustainability and strategic value of ESG mutual funds in India. Whether they deliver comparative performance, risk-adjusted returns, portfolio diversification potential, and resistance to market volatility are still issues. This study aims to fill these gaps by examining the return performance, levels of risk, and diversification nature of ESG mutual funds compared to their non-ESG peers.

Traditional investing has historically focused on maximizing financial returns by evaluating market risk, company fundamentals, and macroeconomic indicators. However, the limitations of this approach became apparent during global crises such as the 2008 financial meltdown and the COVID-19 pandemic, which exposed how non-financial risks like poor governance or environmental negligence can significantly erode shareholder value. ESG integration offers a more holistic approach by assessing how a company's sustainability performance can influence its financial outcomes.

1.3 Research Problem

Despite the growing popularity of ESG funds, there remains uncertainty about their financial performance and risk profile compared to conventional mutual funds. Investors often question whether ESG investments lead to better returns, lower risk, or enhanced diversification. In India, the lack of long-term data, standard ESG ratings, and limited research makes it difficult to assess their true value. Therefore, the research problem is to critically examine whether ESG mutual funds outperform or underperform non-ESG funds, both in terms of return and risk, and whether ESG integration contributes to financial stability and better portfolio outcomes. ESG integration offers a more holistic approach by assessing how a company's sustainability performance can influence its financial outcomes

1.4 Objective of Study

- To analyses the return performance of ESG mutual funds in India.
- To compare the risk characteristics (standard deviation, beta, Sharpe ratio) of ESG and non-ESG mutual funds.

1.5 Scope and Significance

This study focuses on ESG mutual funds available in the Indian market and compares them to non-ESG equity mutual funds. The research uses secondary data for the period from April 2023 to June 2025 and since fund inception, offering a balanced short- and long-term view. The significance lies in helping investors understand the financial relevance of ESG investing, while also guiding fund managers and policymakers on how ESG strategies impact risk, return, and diversification., ESG integration has become a core strategy among mutual funds, pension funds, and institutional investors seeking both financial performance and sustainable impact

1.6 Research Methodology

I took the data of 30 large cap, 30 mid cap, 30 small cap, 8 ESG mutual funds and have taken out the average Standard deviation, Beta, Sharpe ratio, Treynor ratio and alpha to give us the clear picture. The core objective of this analysis is to assess and compare the risk-return profiles of mutual funds across market capitalizations using key financial performance indicators. The comparison provides insights into how effectively mutual funds compensate investors for the risks undertaken. These funds were selected based on their market categorization and consistent presence in mutual fund ranking databases such as Money control. All selected funds are actively managed and have a performance history of at least 3 years.

1.6.1 Data Collection

- Data Type: Secondary data
- Data Sources:
  - AMFI
  - NSE Mutual Fund Database
  - Moneycontrol.com
  - Morningstar India
  - Fund House Websites (e.g., SBI, Axis, ICICI Prudential, etc.)
- Time Period: Historical NAVs and benchmark indices for the last 3 years.
- Frequency: Daily NAVs (Net Asset Values) and benchmark returns.

1.6.2 Tools and Techniques

To assess the performance and risk profile of ESG-integrated mutual funds, the study applies key quantitative metrics that are standard in portfolio performance evaluation. These include **Standard Deviation, Alpha, Beta,** and **Sharpe Ratio**, which provide a comprehensive view of both absolute and risk-adjusted returns. The methodology adopted for these measures is detailed under performance analysis.

1.6.2.1 Beta

One of the key attributes of the mutual fund is the 'beta' of the fund. The beta of a mutual fund is the measure of relative risk, expressed as number; Beta can take any value above or below zero.

Risk Measures (%)

	Mean	Std Dev	Sharpe	Sortino	Beta	Alpha
Fund	--	--	--	--	--	--
S&P BSE 500 TRI*	6.34	21.82	0.05	0.06	--	--
Equity: Multi Cap*	5.86	21.39	0.04	0.04	0.95	-0.41
Rank within category	--	--	--	--	--	--
Number of funds in category	--	--	--	--	--	--

I've captured this from Value research; these attributes belong to Tata Multicap fund. As you can see, the fund is benchmarked against S&P BSE 500 TRI.

I've highlighted the beta of the fund, which is 0.95. Like I mentioned earlier, beta gives us a measure of the relative risk of the fund. In general,

If the beta of a mutual fund is less than 1, then the fund is perceived as less risky compared to its benchmark.

For example, the Tata Multicap fund has a beta of 0.95, hence the fund is slightly less risky compared to its benchmark. I say slightly because it's very close to 1. This implies, if S&P Sensex 500 falls by 1%, then Tata Multicap fund is expected to fall by 0.95%. If the beta was 0.6 or 0.65, the fund is less risk or less volatile compared to its benchmark. Why? Because if S&P Sensex 500 falls by 1%, then Tata Multicap fund is expected to fall by only 0.65% and not 0.95%.

This is what I mean by 'relative risk'; it gives us a perspective of how risky the fund is compared to its benchmark.

Now, if the beta of a mutual fund is equal to 1, then it means the fund is as risky as its benchmark. For example, if the benchmark falls by 1%, the fund is expected to fall by 1%. So, both the benchmark and the fund are expected to have similar risk profiles.

Lastly, if the beta of the fund is higher than 1, it implies that the fund is risker compared to its benchmark. For instance, a beta of 1.2 suggests that the fund is 20% riskier compared to its benchmark. If the benchmark falls by 1%, the fund is expected to fall by 1.2%. When you are looking at the Beta of a stock or an MF, it is very important to recognize the fact that the beta is a measure of relative risk, it tells us how risky the stock or MF is compared to its benchmark. Beta is not an indicator of the inherent risk of the stock or MF.

1.6.2.2 Alpha

To understand alpha, we need to understand the concept of 'Risk-free' return. The risk-free return is the maximum return you can generate without taking any risk. By risk I mean – market risk, credit risk, interest rate risk, and unsystematic risk. There are two return sources which fit in the above definition – (1) The return from the savings bank account (2) The fixed deposit return.

Money Market	
Call Rates	: 1.80% - 4.00% *
* as on previous day	
Government Securities Market	
5.77% GS 2030	: 6.0571% #
5.79% GS 2030	: 6.0665% #
5.22% GS 2025	: 5.4169% #
6.18% GS 2024	: 5.2937% #
5.09% GS 2022	: 4.1806% #
91 day T-bills	: 3.3578%*
182 day T-bills	: 3.5779%*
364 day T-bills	: 3.7312%*

The T bill rates as of today are roughly about 3.75%, and let us keep 4% for convenience.
Alpha is defined as the excess return of the mutual fund over the benchmark return, **on a risk-adjusted basis.**

Risk-adjusted basis means we need to –

- Calculate the difference between the mutual fund returns and the risk-free return
- Calculate the difference between the benchmark return and the risk-free return, multiply this by the beta
- Take the difference between 1 and 2

Alpha = (MF Return – risk-free return) – (Benchmark return – risk-free return) *Beta

Let's put this in context with an example. Assume a certain fund gives you a return of 10%, its benchmark returns for the same duration is 7%. The beta of the fund is 0.75. What do you think the alpha assuming the risk-free rate is 4%?

Let's apply the for formula and check –
Alpha = (10%-4%) -(7%-4%) *0.75
= 6% – 2.25%
= 3.75%
As you can see, the alpha is not just the difference between the fund and its benchmark, which if true, the alpha would have been –
10% – 7%
=3%

But rather, the alpha is 3.75%.
Now, many of you may not find this intuitive. You may question where the additional 0.75% comes from.

Well, think about it, the fund has managed to generate a 10% return compared to the Index's 7% while managing to stay significantly less volatile (remember beta is just 0.75). Hence, we are rewarding the fund for its good behaviour or less volatile behaviour. Therefore, the alpha is 3.75% as opposed to just 3%.
Now, imagine the same fund, with the same returns, but the beta is 1.3 instead of 0.75. What do you think is the alpha?
By now, you should guess that since the beta is high, the fund gets penalised for its erratic behaviour. Therefore, the alpha should be lower.

Let us see if the numbers agree to this thought.
Alpha = (10%-4%) -(7%-4%) *1.3
= 6% – 3.9%
= 2.1%

See that? While the returns remain the same, thanks to beta, the alpha is significantly lesser on a risk-adjusted basis.
To conclude, alpha is the excess return of the fund over above the benchmark returns. Alpha is a risk-adjusted. The fund is rewarded if the returns are generated by keeping a low-risk profile and penalized for being volatile.

1.6.2.3 – Standard Deviation (SD)
I'd suggest you go through that entire chapter to understand the concept of standard deviation and volatility. This will help you not just in your MF investments, but also investments in stocks.
I'll take the liberty of skipping the explanation of standard Deviation since its already explained. However, if you are in no mood to read an entire chapter to figure out the standard Deviation, then here is your shortcut –

- The standard deviation of a stock or a mutual fund represents the riskiness of the stock or the mutual fund
- Standard Deviation is a percentage, expressed as an annualised figure
- Higher the standard Deviation, higher is the volatility of the asset. Higher the volatility, higher is the risk.

For example, consider these two funds –

Snapshot	Returns	Portfolio	Risk Stats	NAV Details	Fees & Details

Fund Name	Fund Risk Grade	Fund Return Grade	Standard Deviation	Sharpe Ratio	Sortino Ratio	Beta	Alpha	R-Squared
Axis Long Term Equity Dir | Invest Online	Low	High	19.33	0.22	0.22	0.84	3.24	0.89
Axis Small Cap Dir | Invest Online	Low	Above Average	23.95	0.29	0.28	0.74	11.59	0.89

I've taken the snapshot from Value research. The funds under consideration are the Axis Small-cap fund and Axis long term equity.
The SD of the small-cap fund is 23.95% while the long-term equity is 19.33%, which implies that the small-cap fund is way riskier compared to the long-term equity fund.
To put this context, if you invest Rs.10,000/- across funds at the same time, then by the end of the year the profit or loss can be anywhere in this range –

Fund	SD	Loss	Gains
Axis long term Equity	19.33%	8,067	11,933
Axis small cap	23.95%	7,605	12,395

Loss = Investment * (1-SD)
Gains = Investment * (1+SD)
The larger the SD, the larger the possibility of loss or gains.
Generally speaking, the SD for mid and small-cap funds are higher compared to large-cap stocks.

Do note, volatility or Standard Deviation should not worry you. Markets are volatile, and equities are volatile, mutual funds are volatile; this is the very nature of markets. So if you can't fathom watching your investment see-saw between gains and loss, then perhaps you should reconsider your investment decision in equities.
But if you do invest in equities, then you need to learn to manage volatility. There are two ways to deal with this beast called 'Volatility' –

- Diversify smartly (and not over diversify)
- Give your investment time.

1.6.2.4 – Sharpe Ratio

Sharpe Ratio is one of the most sacred formulas in Finance. It was invented by Willam F Sharpe, an American Economist in the year in 1966. He was awarded the Nobel prize in 1990 for his work the Capital asset pricing model.

Assume, there are two large-cap funds -Fund A and Fund B. Here is how they have performed in terms of returns –

Fund A – 14%
Fund B – 16%
Which of the two funds are better? Well, Fund B has a higher return, so without a doubt, Fund B is a better fund.
Now, consider the following –

	Fund A	Fund B
Return	14%	16%
Risk	28%	34%
Rf	6%	6%

Rf is the risk-free return. Along with the fund's return, I've also stated the standard deviation/volatility/risk of the two funds. Now, which of the two funds do you think is better? I guess it gets a little complex to figure out which these two funds are better given that we have to evaluate them on two parameters, i.e. both the risk and return.

Ignoring the risk, purely on a return basis, Fund B is better. Ignoring the return, purely on a risk basis, Fund A is better. But in reality, you cannot isolate risk and reward; you need to factor in both these and figure out which of these two are better.

The Sharpe Ratio helps us here. It bundles the concept of risk, reward, and the risk-free rate and gives us a perspective.

Sharpe ratio = [Fund Return – Risk-Free Return]/Standard Deviation of the fund

Let's apply the math for Fund A –
= [14% – 6%] / 28%
= 8%/28%
= 0.29
The number tells us that the fund generates 0.29 units of return (over and above the risk-free return) for every unit of risk undertaken. Naturally, by this measure, the higher the Sharpe ratio, the better it is as we all want higher returns for every unit of risk undertaken.

Let's see how this turns out for Fund B –
= [16% – 6%] / 34%
= 10% / 34%
= 0.29

So, it turns out that both the funds are similar in terms of their risk and reward perspective. And there is no advantage of choosing Fund A over Fund B.
Now, instead of 34% standard deviation, assume Fund B's standard Deviation is 18%.
[16% – 6%] / 18%
= 10% / 18%
= 0.56

In this case, Fund B is a better choice because Fund B generates more return for every unit of risk undertaken.

CHAPTER 2

Literature Review

Assessment of mutual fund industry has received considerable attention from researchers and practitioners across the world. This section reviews the literature on the performance evaluation of traditional funds and thereafter, sustainable funds. Friend *et al.* (1962) conducted a comprehensive study of 152 US mutual funds from1953 to 1958 and found no evidence that they were able to earn superior returns than the benchmark index.

The study also attempted to explore the relationship between portfolio turnover, expense ratio, and returns and found no strong association. Sharpe (1966) in his pioneering study of 34 open-ended mutual funds over a span of 9 years (1954-1963) found an approximately linear relationship between fund returns and variability. His research led to the development of the reward-to-variability ratio which is a well-accepted performance evaluation tool even today.

The ratio could be also used to rank the funds in order of their performance. The integration of Environmental, Social, and Governance (ESG) criteria into mutual fund investment strategies has emerged as a significant trend in sustainable finance. ESG integration refers to the systematic inclusion of ESG factors alongside traditional financial analysis in portfolio management, aiming to identify long-term risks and opportunities (Friede, Busch, & Bassen, 2015).

Several theories underpin ESG investing. The stakeholder theory posits that companies accountable to a broad range of stakeholders, not just shareholders, perform better in the long run (Freeman, 1984). Similarly, the resource-based view supports ESG integration by arguing that intangible assets like brand, trust, and sustainability capabilities contribute to competitive advantage (Hart, 1995).

A large body of literature evaluates whether ESG funds outperform or underperform their conventional counterparts. According to Friede et al. (2015), in their meta-study of over 2,000 empirical studies, about 90% show a non-negative relationship between ESG criteria and corporate financial performance, with a large portion reporting a positive link. Bollen (2007) found that mutual funds with social screens (early ESG funds) attracted

higher inflows, suggesting investor preference for ethical investment, even with potential trade-offs in returns.

Nagy, Kassam, and Lee (2016) argue that while ESG strategies improve risk-adjusted returns in the long term, they may underperform in the short run due to sector biases. Conversely, Berg, Kölbel, & Rigobon (2022) highlight ESG rating divergence as a challenge, leading to inconsistent investment decisions based on varying ESG scores from different rating agencies integration is also linked to risk reduction and portfolio diversification. Giese et al. (2019) found that companies with high ESG scores show lower idiosyncratic risk and fewer severe incidents (like lawsuits or environmental accidents), making ESG funds potentially less volatile. ESG factors can also act as forward-looking risk indicators.

For example, companies with poor environmental practices may face regulatory penalties, reputational damage, or operational disruptions, all of which affect stock performance. Rising ESG consciousness among retail and institutional investors is reshaping fund flows. Riedl & Smeets (2017) suggest that ESG fund investors are motivated by non-financial utility (i.e., moral satisfaction), alongside financial returns. Amel-Zadeh & Serafeim (2018) found that institutional investors increasingly consider ESG factors to meet the demands of stakeholders and avoid reputational damage.

A SEBI (2021) circular introduced standardized disclosure norms for ESG schemes under mutual funds, helping improve transparency. According to Morningstar (2023), ESG funds in India showed strong inflows post-COVID-19, driven by both millennials and foreign institutional investors. However, Misra and Dash (2022) note that a lack of standardized ESG metrics and the absence of a long-term track record make Indian ESG funds harder to evaluate.

Meta-analyses indicate that incorporating ESG factors does not hurt returns and often enhances performance. One major review showed over 90% of studies report neutral or positive ESG–financial links European research by ESMA during COVID-19 found ESG funds outperformed non-ESG funds in returns and investor inflows during market turmoil. Similarly, studies of European tech-heavy funds (2013–2022) show high-ESG-rated mutual funds yielded higher risk-adjusted returns and better market timing

CHAPTER 3

Industry Analysis

Indian mutual fund industry achieved new heights in 2024 as it surpassed Rs 68 lakh crore in assets under Management (AUM). It is not only the AUM, but another aspect of the industry also grew this year. Let us look at the details.

3.1 Growth in AUM

The mutual fund industry AUM crossed Rs 70 lakh crore in 2025 (in June 2025). In December 2023, the AUM was Rs 50.78 lakh crore, which means the AUM has grown by 40% in this period. By the end of December 2025, the AUM is projected to cross Rs 75 lakh crore easily.

The maximum growth came in the equity mutual funds - the equity mutual fund AUM stood at Rs 30.5 lakh crore - 45% of the total AUM.

To give you some idea of how fast the growth was - a decade ago - the Indian equity mutual fund AUM was a mere Rs 1.9 lakh crore. In August 2023, the AUM crossed Rs 30 lakh crore for the first time. This means that the AUM has more than doubled in less than 18 months.

3.2 The Growth of Sectoral and Thematic Funds

In India, you will find 11 equity mutual fund categories. In 2024, sectoral and thematic funds had the maximum interest from investors. In December 2023, the AUM of these funds was Rs 2.58 lakh crore, and they increased **79% in 2024 and reached Rs 4.61 lakh crore.**

Small-cap mutual funds have witnessed remarkable growth in 2024, with their Assets Under Management (AUM) rising to Rs 3.26 lakh crore by November, up from Rs 2.33 lakh crore at the end of 2023. Similarly, mid-cap mutual funds experienced a significant surge, with AUM increasing from Rs 2.81 lakh crore to Rs 3.89 lakh crore during the same period, according to AMFI data.

Large-cap funds reported an AUM of Rs 3.62 lakh crore in 2024. Additionally, other schemes, including index funds, ETFs, and gold ETFs, saw a robust 28% growth in AUM, climbing from Rs 8.83 lakh crore in January to Rs 11.29 lakh crore by November. This surge highlights the growing investor interest across diverse fund categories in the Indian mutual fund space.

3.3 SIP Inflow in 2024

Systematic Investment Plans (SIPs) have achieved remarkable milestones in 2024, reflecting their growing popularity among mutual fund investors. The SIP Assets Under Management (AUM) reached an all-time high of Rs 13.54 lakh crore in November 2024, underscoring the robust growth of this disciplined investment approach.

The SIP accounts also hit a record high, at **10.23 crore in November 2024, up from 10.12 crore in September 2024**. This increase highlights the expanding investor base, driven by greater awareness about the benefits of long-term and systematic investing.

Monthly SIP inflows witnessed an impressive **48% growth** year-over-year, surging from Rs 17,073 crore in November 2023 to Rs 25,320 crore in November 2024. Over the past 12 months, cumulative SIP inflows reached an unprecedented Rs 2.59 lakh crore, demonstrating sustained investor confidence in mutual funds as a wealth-building tool.

In November 2024 alone, **49.46 lakh new SIPs** were registered, following 63.69 lakh registrations in October. While the month-on-month decline may indicate some seasonal trends, the overall trajectory remains strong, signaling continued faith in the mechanism.

SIPs have become a cornerstone of wealth creation for Indian investors, particularly retail participants, due to their ability to mitigate market volatility through rupee cost averaging. By enabling disciplined and automated investing, SIPs eliminate the need to time the market, making them an ideal choice for novice and seasoned investors.

The record-breaking figures of 2025 underline the pivotal role SIPs play in shaping India's mutual fund landscape, with more investors leveraging this strategy to achieve their financial goals systematically and consistently. With growing awareness, digital accessibility, and robust economic fundamentals, SIPs are expected to remain a key driver of mutual fund investments in the years to come.

3.4 Passive Funds Growth Story

In 2025, index funds and exchange-traded funds (ETFs) experienced excellent growth, driven by increasing retail adoption and a surge in thematic and sectoral investing. Investment accounts (folios) in index funds will double this year, while folios in ETFs have already risen by 37%, with December data yet to be finalized. The AUM in the **passive investment segment grew by 23%**, reaching approximately Rs 11 lakh crore during the first 11 months of the year.

The growth was driven by rising awareness of passive investing and an unprecedented **116 passive fund launches by November**, many of which were industry-firsts. These included funds tracking niche indices such as capital markets, tourism, real estate, electric vehicles, and new-age automotive sectors.

Additionally, factor-based indices gained popularity in the passive space, with offerings such as Nifty MidSmallcap400 Momentum Quality 100, Nifty200 Alpha 30, Nifty500 Multicap Momentum Quality 50, and Nifty Mid Small Healthcare attracting significant investor interest. Sectoral and thematic funds, both active and passive, also saw strong demand, with active funds in this category securing the highest inflows and adding the most folios in 2024.

3.5 Worst Performing Mutual Funds

Till now we have seen the positive side, let us look at some numbers related to worst-performing mutual funds as well.

Out of 425 equity schemes, 34 funds have offered negative returns to investors on SIP investments in the current calendar year.

Three equity funds delivered double-digit negative returns on SIP investments made on January 1, 2024. The Quant PSU Fund reported a negative XIRR of 20.28% on these SIP investments. It means that if you made a SIP investment of Rs 10,000 in this fund, the current value of your investment would be Rs 90,763.

3.6 Outlook for 2025

The Indian mutual fund industry is on track for sustained growth in 2025. While global uncertainties and domestic market volatility may pose challenges, the industry is expected to benefit from India's strong economic fundamentals, government-backed initiatives, and rising investor interest.

Large and mid-cap funds are likely to attract more attention amid market uncertainty, while small-cap funds may continue to gain traction due to their higher growth potential. Passive funds, including ETFs and index funds, are also expected to see increased adoption as investors seek cost-efficient investment options.

The continued popularity of SIPs and rising awareness in Tier 2 and Tier 3 cities will play a crucial role in driving retail participation. With a focus on innovation, investor education, and accessibility, the mutual fund industry is well-positioned to maintain its upward trajectory and further solidify its role as a key pillar of India's financial ecosystem.

3.7 Types of Mutual Funds: A Detailed Overview

Mutual funds are professionally managed investment vehicles that pool money from various investors to purchase a diversified portfolio of securities, such as stocks, bonds, or money market instruments. Based on various factors such as asset class, investment objective, structure, and risk level, mutual funds are classified into several types. Understanding these classifications helps investors choose funds that align with their financial goals, risk appetite, and investment horizon.

3.7.1 Equity Mutual Funds

Definition

Equity mutual funds invest predominantly (at least 65% as mandated by SEBI in India) in shares of publicly listed companies. These funds aim for capital appreciation over the long term, though they may experience higher short-term volatility.

Large-Cap Funds

Invest in companies with large market capitalizations (usually the top 100 companies). These are considered more stable and less risky compared to mid and small-cap funds.

Example: SBI Blue-chip Fund.

Mid-Cap Funds:

Invest in medium-sized companies (ranks 101-250 by market cap). They offer higher growth potential with moderate risk.

Example: Kotak Emerging Equity Fund.

Small-Cap Funds:

Invest in smaller companies (beyond the top 250). These have the potential for very high growth but carry higher risk.

Example: Nippon India Small Cap Fund.

Multi-Cap Funds:

These funds allocate investments across large, mid, and small-cap companies, balancing risk and reward.

Example: Motilal Oswal Multi-Cap 35 Fund.

Sectoral/Thematic Funds:

Focus on specific sectors like IT, pharma, banking, or specific themes like ESG or infrastructure. Highly concentrated and risky.

Example: ICICI Prudential Technology Fund.

ELSS (Equity Linked Savings Scheme):

A tax-saving fund under Section 80C of the Income Tax Act in India. Has a 3-year lock-in and invests primarily in equities.

Example: Axis Long Term Equity Fund.

3.7.2 Debt Mutual Funds

Definition:

Debt mutual funds invest in fixed income instruments such as government securities, corporate bonds, debentures, and money market instruments. They are designed to offer regular income and are relatively less risky compared to equity funds.

Liquid Funds:

Invest in short-term instruments with maturities up to 91 days. Suitable for parking surplus funds for short periods.

Example: Nippon India Liquid Fund.

Short Duration Funds:

Invest in debt instruments with durations between 1 to 3 years. Suitable for investors with a moderate risk appetite.

Long Duration Funds:

Invest in instruments with longer maturity profiles. Sensitive to interest rate changes and suitable for long-term investors.

Gilt Funds:

Invest exclusively in government securities. These are free of credit risk but may be sensitive to interest rate changes.

Example: SBI Magnum Gilt Fund.

Credit Risk Funds:

These invest in lower-rated corporate bonds to earn higher yields, but come with credit default risks.

Example: Franklin India Credit Risk Fund.

Fixed Maturity Plans (FMPs):

Closed-ended debt funds with a fixed maturity date. They aim to provide predictable returns with minimal risk.

3.7.3 Hybrid Mutual Funds

Definition:

Hybrid funds combine the benefits of both equity and debt by investing in a mix of both asset classes. These funds are suitable for investors looking for balanced returns with moderate risk.

Aggressive Hybrid Funds:

Invest 65-80% in equities and the rest in debt instruments. Suitable for investors seeking growth with some stability.

Example: ICICI Prudential Equity & Debt Fund.

Conservative Hybrid Funds:

Invest predominantly in debt (75-90%) and a small portion in equity. Suitable for conservative investors looking for income with limited exposure to equities.

Balanced Advantage Funds (Dynamic Asset Allocation Funds):

These funds dynamically shift between equity and debt depending on market conditions.

Example: HDFC Balanced Advantage Fund.

Multi-Asset Allocation Funds:

Invest in at least three asset classes—typically equity, debt, and gold. Offer diversification across asset types.

Arbitrage Funds:

Exploit price differences in the cash and derivatives markets. Suitable for short-term parking with low risk.

3.7.4 Index Funds

Definition:

Index funds are passively managed funds that aim to replicate the performance of a specific market index such as Nifty 50, Sensex, or S\&P 500. These funds invest in the same securities, in the same proportion, as their benchmark index.

Example: HDFC Index Fund – Nifty 50 Plan.

3.7.5 Exchange-Traded Funds (ETFs)

Definition:

ETFs are similar to index funds but are traded on stock exchanges like individual stocks. They offer real-time liquidity and typically have lower expense ratios.

Types: Equity ETFs, Gold ETFs, Debt ETFs, International ETFs.

Example: Nippon India ETF Nifty Bees.

3.7.6 Solution-Oriented Mutual Funds

Definition:

These funds are designed for specific financial goals such as retirement or child education. They come with a mandatory lock-in period (5 years or till the retirement/education goal is achieved).

Retirement Funds:

Long-term funds designed to provide income post-retirement.

Children's Funds:

Aimed at long-term capital growth to meet children's education or marriage expenses.

3.7.7 International or Global Funds

Definition:

These mutual funds invest in international equity or debt markets. They provide global diversification and exposure to foreign companies like Apple, Google, or Samsung.

Feeder Funds:

Invest in a foreign fund managed by a global AMC.

Direct Global Exposure:

Invest directly in global stocks or ETFs.

Risk: Currency fluctuation risk, political/economic risk of foreign countries.

Example: Franklin India Feeder – Franklin US Opportunities Fund.

3.7.8 Fund of Funds (FoFs)

Definition:

A Fund of Fund invests in other mutual funds rather than directly investing in stocks or bonds. This offers diversification across asset classes or fund managers.

Domestic FoFs: Invest in other Indian mutual funds.

International FoFs: Invest in foreign mutual funds or ETFs.

Example: ICICI Prudential US Blue-chip Equity FoF.

3.7.9 Money Market Funds

Definition:

These funds invest in highly liquid, short-term instruments like treasury bills, commercial paper, and certificates of deposit. They are ideal for investors looking to preserve capital and earn modest returns.

Investment Horizon: Very short-term (less than 1 year).

Example: Aditya Birla Sun Life Money Manager Fund.

3.7.10 ESG Mutual Funds

Definition:

ESG (Environmental, Social, and Governance) funds invest in companies that score high on sustainability parameters. They aim to deliver responsible returns without compromising ethical considerations.

Benchmark: Often compared against indices like Nifty 100 ESG Index.

Example: SBI ESG Exclusionary Strategy Fund.

3.8 Future Outlook of the Indian Mutual Fund Industry: A Literature-Based Perspective

The Indian mutual fund industry has witnessed remarkable growth over the past decade, marked by a significant transformation in investor demographics, product innovation, and technology integration. As of 2025, this sector continues to evolve, driven by retail participation, financial inclusion, and regulatory support. This literature overview presents a comprehensive analysis of the future trajectory of the Indian mutual fund industry, grounded in recent empirical data and industry forecasts.

3.8.1 Rising Retail Participation and Geographical Penetration

The expansion of the Indian mutual fund industry has been largely propelled by the rise in retail investor participation. According to data from the Association of Mutual Funds in India (AMFI), retail assets under management (AUM) now constitute over 44% of total AUM in the equity segment (ET, 2024). Furthermore, the number of systematic investment plan (SIP) accounts has crossed 10 crores, with total SIP contributions exceeding ₹2.88 lakh crore annually as of FY 2024–25. This reflects a 45% year-on-year growth in SIP inflows, indicating a shift towards long-term disciplined investing behavior among retail investors.

Simultaneously, there has been a marked shift in geographic participation. AMFI reports show that AUM from B30 (beyond top 30) cities has grown at a faster pace compared to T30 cities, signifying increased financial penetration into tier II and tier III cities. This trend is attributed to improved financial literacy campaigns and the accessibility offered by digital platforms (Franklin Templeton, 2024).

3.8.2 Projected Industry Growth and AUM Expansion

The Indian mutual fund industry's total AUM has surged from approximately ₹50 lakh crore in December 2023 to nearly ₹70 lakh crore by June 2025, representing a 37% annual growth (AMFI 2025). Equity-oriented funds alone account for over ₹30.5 lakh crore in AUM. Monthly net

inflows have also hit record levels, reaching ₹65000 crore in June 2025—a 138% increase from the previous year.

Despite global volatility and domestic valuation concerns, analysts project a strong medium to long-term outlook for the industry. ICRA forecasts a multi-fold expansion in the coming years, driven by favourable demographics, increasing disposable income, and greater investor awareness. However, near-term expectations remain moderately cautious due to market corrections, suggesting that fund houses may adopt a measured approach to new fund launches and asset mobilization.

3.8.3 Growth in Passive and Hybrid Investment Products

A notable shift is occurring in investor preferences, with increasing inclination towards passive investment products. Index funds and Exchange-Traded Funds (ETFs) have experienced a sharp rise in inflows, doubling from ₹61,000 crore in FY 2023–24 to ₹1.4 lakh crore in FY 2024–25. This transition is attributed to their lower expense ratios, transparency, and alignment with global investing trends.

Hybrid funds have also seen significant growth, with total hybrid AUM reaching ₹8.8 lakh crore. Within this category, Balanced Advantage Funds dominate, comprising approximately 33% of hybrid fund assets. These products appeal to investors seeking optimal risk-adjusted returns through dynamic asset allocation between equity and debt, especially in volatile markets (ET, 2024).

3.8.4 Technology and ESG: Pillars of Future Innovation

Digital transformation has fundamentally altered the operational framework of mutual funds. Fintech platforms like Zerodha, Groww, and Paytm Money have simplified investment processes, enabling digital onboarding, real-time KYC, robo-advisory, and portfolio tracking. These platforms have collectively onboarded more than 15 million new investors in the past two years alone (Reuters, 2025).

Furthermore, the incorporation of Environmental, Social, and Governance (ESG) factors into investment strategies is gaining traction. With increasing

awareness around sustainable investing, ESG mutual funds are projected to manage over ₹1 lakh crore in AUM by 2029. SEBI's regulatory initiatives, such as mandating ESG disclosures and fund categorization, have also played a key role in fostering this growth.

In addition, asset management companies (AMCs) are increasingly deploying artificial intelligence (AI) and machine learning (ML) tools for predictive risk modelling, portfolio optimization, and customer service. It is anticipated that by 2028, over 80% of AMCs will adopt AI-driven fund management solutions.

3.8.5 Macroeconomic and Policy Support

India's macroeconomic stability provides a strong foundation for mutual fund growth. With a projected GDP growth rate of 6.4% in FY 2025 and the government's ongoing efforts toward achieving a $5 trillion economy by FY 2028, the capital markets are expected to deepen further. These developments are likely to enhance investor confidence and channel long-term savings into mutual funds.

Interestingly, during periods of heightened foreign portfolio investor (FPI) outflows—such as the $14.6 billion sell-off in early 2025—domestic mutual funds played a stabilizing role by continuing to pump funds into equity markets. For instance, equity mutual funds registered net inflows of ₹24,269 crore in April 2025 alone, highlighting the robustness of domestic participation.

3.8.5 Key Challenges and Areas for Improvement

Despite the optimistic outlook, several challenges persist. First, equity valuations, especially in the mid and small-cap segments, are currently seen as stretched. This has prompted SEBI and AMFI to urge investors toward caution and diversification through hybrid or large-cap funds.

CHAPTER 4

4.1 Company Analysis

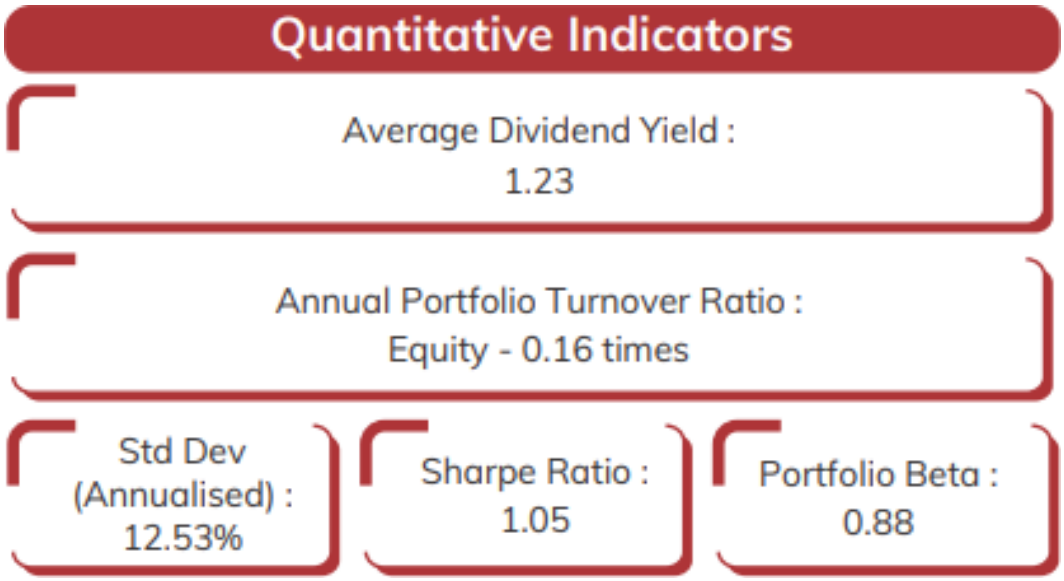
As of 2025, the Indian mutual fund sector comprises more than 45 Asset Management Companies (AMCs) listed with the Securities and Exchange Board of India (SEBI). These AMCs are permitted to initiate and operate mutual fund schemes in different asset classes including equity, debt, hybrid, index funds, fund of funds, exchange-traded funds (ETFs), and sectoral/thematic schemes. The mutual fund space in India has evolved significantly over the past two decades, becoming one of the most accessible and popular investment avenues for both retail and institutional investors. Some of the top and established names in the industry are SBI Mutual Fund, HDFC Mutual Fund, ICICI Prudential Mutual Fund, Nippon India Mutual Fund, Kotak Mahindra Mutual Fund, Axis Mutual Fund, Aditya Birla Sun Life Mutual Fund, UTI Mutual Fund, and Franklin Templeton Mutual Fund. These big AMCs control a considerable percentage of the industry's total Assets Under Management (AUM). Besides these behemoths, some smaller or new-age mutual fund players have joined the fray, including Navi Mutual Fund, Whiteoak Capital, Samco Mutual Fund, PPFAS Mutual Fund, and Groww Mutual Fund. These newer players tend to emphasize straightforward products, passive approaches, or digital-led platforms to entice more tech-literate and younger investors. The Indian mutual fund universe is supplemented by an equally strong distribution channel featuring banks, independent financial consultants, fintech apps, and direct online channels.

SEBI governs the industry, maintaining transparency, protecting investors, and standardizing procedures at fund houses. As of 2025, the Indian mutual fund industry's aggregate AUM has crossed ₹50 lakh crore, showing increasing investor faith. Growing popularity of Systematic Investment Plans (SIPs), enhanced awareness, and ease of access through the internet are contributing further to growth, inducing more companies to set up shop in India's mutual fund sector.

4.1.1 ICICI Prudential Blue-chip Fund (Large Cap)

ICICI Prudential Blue-chip Fund is a top choice in the large-cap space, delivering stable long-term performance with effective risk management. The fund's alpha and beta profile indicate controlled volatility and genuine benchmark outperformance, especially over multi-year periods. This fund is ideal for investors with a **medium-to-long-term horizon (3+ years)** seeking large-cap stability and modest outperformance. Its lower beta suggests it may offer relative protection compared to broader benchmarks during market volatility.

1-Year Quantitative Data



Source: https://www.icicipruamc.com/ (ICICI Prudential AMC)

3-Year Quantitative Data

Source: moneycontrol.com

Returns:

Particulars	1 Year		3 Years		5 Years		Since inception	
	CAGR (%)	Current Value of Investment of Rs. 10000	CAGR (%)	Current Value of Investment of Rs. 10000	CAGR (%)	Current Value of Investment of Rs. 10000	CAGR (%)	Current Value of Investment of Rs. 10000
Scheme	**11.02**	**11099.18**	**19.86**	**17219.23**	**24.73**	**30219.93**	**15.03**	**108550.00**
Nifty 100 TRI (Benchmark)	8.90	10887.29	15.96	15593.01	22.33	27430.30	11.70	65781.63
Nifty 50 TRI (Additional Benchmark)	11.11	11107.56	15.56	15432.15	22.29	27380.04	11.24	61360.77
NAV (Rs.) Per Unit (as on May 30,2025 : 108.55)	**97.80**		**63.04**		**35.92**		**10.00**	

Source: https://www.icicipruamc.com/ (ICICI Prudential AMC)

4.1.2 HDFC Mid-Cap Opportunities Fund

HDFC Mid-Cap Opportunities Fund is one of India's leading mid-cap equity schemes, managing an AUM of approximately ₹74,910 cr as of June 2025, according to Mint and ET Now. The fund primarily invests in mid-cap stocks, with around 92–93% allocation to equity, and the remainder in cash or liquid assets. Its top holdings include Max Financial Services (~4.4%), Federal Bank (~3.4%), Balkrishna Industries (~3.3%), Indian Hotels (~3.3%), and Ipca Laboratories (~3.0%).

3Y- Quantitative Data

Quantitative Data (Risk Ratios)

Standard Deviation	15.531%
Beta	0.878
Sharpe Ratio*	1.110

Computed for the 3 - year period ended April 30, 2025.
Based on month end NAV.* Risk free Rate: 6%
(Source: FIMMDA MIBOR)

(Source: https://www.hdfcfund.com)

(Source: moneycontrol.com)

4.1.3 UTI's Small Cap Fund

UTI Small Cap Fund offers a well-balanced small-cap portfolio with moderate volatility—evidenced by standard deviation (~15%) and beta (<1). While it has posted **strong returns** (~16% over 1 year, ~22% over 3 years), its **risk-adjusted metrics** show room for improvement: Sharpe ratio is slightly behind peers and alpha is modestly negative. Overall, it's a solid fund for small-cap exposure with stable risk profile, yet it trails some category leaders in delivering excess return on volatility.

3Y- Quantitative Data

(Source: moneycontrol.com)

Returns:

Period Invested for	₹1000 SIP Started on	Investments	Latest Value	Absolute Returns	Annualised Returns
1 Year	25-Jun-24	12000	12784.04	6.53 %	12.33 %
2 Year	23-Jun-23	24000	29052.61	21.05 %	19.54 %
3 Year	24-Jun-22	36000	50530.15	40.36 %	23.29 %

(Source: moneycontrol.com)

CHAPTER 5

5.1 Comparison

Mutual funds are essential investment instruments that pool resources from various investors and allocate them across diversified portfolios of securities. Evaluating mutual fund performance goes beyond just analyzing historical returns; it requires a comprehensive understanding of risk-adjusted performance using quantitative metrics. This study undertakes a detailed performance comparison of 90 mutual funds, categorized equally into Large Cap, Mid Cap, and Small Cap schemes in the Indian market.

I took the data of 30 large cap, 30 mid cap, 30 small cap, 8 ESG mutual funds and have taken out the average standard deviation, beta, sharpe ratio, Treynor ratio and alpha to give us the clear picture The core objective of this analysis is to assess and compare the risk-return profiles of mutual funds across market capitalizations using key financial performance indicators. The comparison provides insights into how effectively mutual funds compensate investors for the risks undertaken.

These funds were selected based on their market categorization and consistent presence in mutual fund ranking databases such as Moneycontrol. All selected funds are actively managed and have a performance history of at least 3 years.

Analytical Approach

- The dataset was structured in Excel and cleaned for consistency.
- Quantitative measures were computed or extracted from reliable financial databases (e.g. Moneycontrol).
- Averages for each metric were calculated separately for Large Cap, Mid Cap, Small Cap, Sectoral categories.
- Comparative analysis was performed to identify the risk-return efficiency across different fund categories.

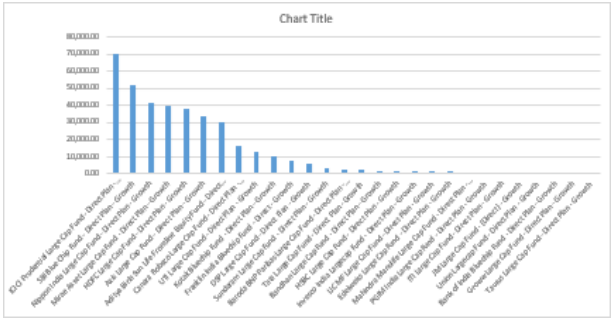
LARGE CAP MUTUAL FUNDS

Scheme Name	Plan	Category Name	AuM (Cr)	3Y	Standard Deviation	Beta	Sharpe Ratio	Treynors Ratio	Alpha
ICICI Prudential Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	69,762.55	23%	11.89	0.88	1.09	0.15	4.33
SBI Blue Chip Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	52,251.14	19%	11.57	0.86	0.86	0.12	1.95
Nippon India Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	41,750.19	26%	13.09	0.98	1.15	0.15	6
Mirae Asset Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	39,530.24	18%	12.42	0.92	0.66	0.09	-0.79
HDFC Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	37,715.69	22%	12.74	0.94	0.93	0.13	2.55
Axis Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	33,412.83	17%	11.97	0.85	0.59	0.08	-1.44
Aditya Birla Sun Life Frontline Equity Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	29,858.67	21%	12.28	0.91	0.88	0.12	1.85
Canara Robeco Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	16,026.59	21%	12.25	0.9	0.87	0.12	1.69
UTI Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	12,719.69	18%	11.7	0.84	0.68	0.09	-0.49
Kotak Bluechip Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	10,138.03	21%	12.48	0.93	0.84	0.11	1.36
Franklin India Bluechip Fund - Direct - Growth	Direct Plan	Large Cap Fund	7,692.35	18%	12.14	0.88	0.71	0.1	0.92
DSP Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	6,036.43	24%	11.79	0.86	1.14	0.16	5.43
Sundaram Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	3,396.32	18%	12.41	0.92	0.68	0.09	-0.64
Baroda BNP Paribas Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	2,613.57	22%	12.6	0.93	0.92	0.12	2.43
Tata Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	2,610.97	20%	12.98	0.96	0.79	0.11	0.87
Bandhan Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	1,862.19	22%	12.76	0.92	0.89	0.12	2.24
HSBC Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	1,826.09	20%	13.49	0.99	0.74	0.1	0.27
Invesco India Largecap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	1,488.19	23%	13.18	0.96	0.91	0.12	2.5
LIC MF Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	1,468.58	17%	12.96	0.95	0.6	0.08	-1.64
Edelweiss Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	1,270.97	22%	12.47	0.93	0.89	0.12	1.95
Mahindra Manulife Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	674.78	20%	12.56	0.93	0.74	0.1	0.15
PGIM India Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	599.76	18%	12.14	0.89	0.65	0.09	-0.81
ITI Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	538.94	21%	14.39	1.05	0.71	0.1	-0.12
JM Large Cap Fund - (Direct) - Growth	Direct Plan	Large Cap Fund	525.71	22%	14.02	1	0.8	0.11	1.13
Union Largecap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	448.55	18%	12.94	0.9	0.65	0.09	-1
Bank of India Bluechip Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	201.43	21%	14.36	1.03	0.76	0.11	0.73
Groww Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	127.70	19%	13.11	0.97	0.7	0.1	-0.28
Taurus Large Cap Fund - Direct Plan - Growth	Direct Plan	Large Cap Fund	49.31	20%	14.46	1.01	0.72	0.1	0.3

(Source: moneycontrol.com) Assessed on (Date 26-06-2025)

QUNATITATIVE DATA

DATASET	AVERAGE
3Y Return	20%
Standard Deviation	12.75535714
Beta	0.931785714
Sharpe Ratio	0.805357143
Treynors Ratio	0.11
Alpha	1.122857143



The large-cap mutual fund has delivered a commendable **3-year annualized return of 20%**, which is considered excellent for this category, reflecting strong growth and consistent performance. With a **standard deviation of 12.76%**, the fund exhibits moderate volatility, suggesting a relatively stable investment experience—typical of large-cap funds known for their lower risk profiles. The **beta of 0.93** indicates the fund is slightly less volatile than the overall market, making it a safer option during market fluctuations. The **Sharpe ratio of 0.81** shows the fund offers a fair risk-adjusted return, though not outstanding; generally, a Sharpe ratio above 1 is preferred. However, the **Treynor's ratio of 0.11** reflects that the fund provides a modest return over the risk-free rate for each unit of market risk taken. Most notably, the fund has an **alpha of 1.12**, indicating that it has outperformed expectations based on market movements, pointing to strong fund management, effective stock selection, and consistent value addition beyond benchmark returns.

MID CAP MUTUAL FUNDS

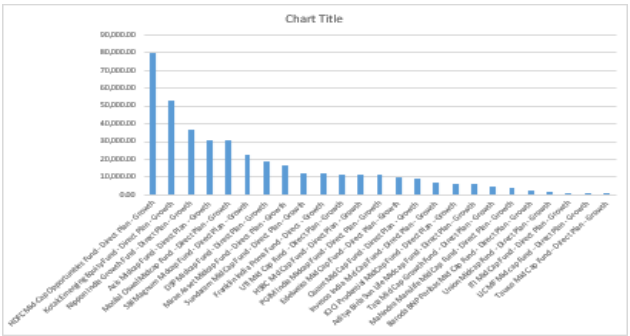
Scheme Name	Plan	Category Name	AuM (Cr)	3Y	Standard Deviation	Beta	Sharpe Ratio	Treynors Ratio	Alpha
HDFC Mid-Cap Opportunities Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	79,717.67	33%	14.64	0.87	1.42	0.24	4.22
Kotak Emerging Equity Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	53,463.94	29%	14.53	0.85	1.12	0.19	0.04
Nippon India Growth Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	36,836.07	32%	15.64	0.94	1.28	0.21	2.16
Axis Midcap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	30,501.51	25%	13.75	0.91	1	0.15	4.68
Motilal Oswal Midcap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	30,401.09	37%	15.99	0.83	1.43	0.28	7.12
SBI Magnum Midcap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	22,406.12	24%	12.49	0.71	0.07	0.19	-0.31
DSP Midcap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	18,712.25	25%	14.54	0.85	0.93	0.16	-2.76
Mirae Asset Midcap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	16,336.65	26%	14.76	0.88	0.97	0.16	-2.5
Sundaram Mid Cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	12,344.49	31%	14.94	0.89	1.28	0.21	2.14
Franklin India Prima Fund - Direct - Growth	Direct Plan	Mid Cap Fund	12,285.44	30%	14.66	0.87	1.25	0.21	2.23
UTI Mid Cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	11,642.99	24%	14.17	0.84	0.93	0.16	-2.28
HSBC Mid Cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	11,469.74	30%	16.86	0.98	1.06	0.18	-0.92
PGIM India Midcap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	11,051.86	21%	14.05	0.82	0.71	0.12	-5.51
Edelweiss Mid Cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	10,027.89	34%	15.87	0.94	1.24	0.21	1.72
Quant Mid Cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	9,031.52	27%	17.63	0.98	0.89	0.16	-2.91
Invesco India Mid Cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	6,641.11	35%	15.35	0.86	1.3	0.23	4.68
ICICI Prudential MidCap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	6,420.71	29%	16.01	0.94	1.05	0.18	-1.22
Aditya Birla Sun Life Midcap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	5,922.32	25%	14.57	0.86	0.95	0.16	-2.58
Tata Mid Cap Growth Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	4,701.47	27%	14.95	0.88	1.01	0.17	-1.65
Mahindra Manulife Mid Cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	3,775.59	32%	15.88	0.94	1.17	0.2	0.54
Baroda BNP Paribas Mid Cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	2,136.80	27%	14.34	0.85	1.06	0.18	-0.98
Union Midcap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	1,440.27	27%	15.36	0.98	0.93	0.14	4.42
ITI Mid Cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	1,200.64	31%	16.87	1	1.13	0.19	0.06
LIC MF Mid cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	334.51	27%	15.65	0.92	1.01	0.17	-1.78
Taurus Mid Cap Fund - Direct Plan - Growth	Direct Plan	Mid Cap Fund	128.00	25%	17.69	1.02	0.83	0.14	-4.83

(Source: moneycontrol.com)

Assessed on (Date 26-06-2025)

QUNATITATIVE DATA

DATASET	AVERAGE
3Y Return	28%
Standard Deviation	15.2476
Beta	0.8964
Sharpe Ratio	1.0408
Treynors Ratio	0.1836
Alpha	0.1512



The mid-cap mutual fund has shown a strong **3-year return of 28%,** outperforming the large-cap fund's 20%, which aligns with the generally higher growth potential of mid-cap investments. Its standard deviation of 15.25% is higher than the large-cap fund's 12.76%, reflecting increased volatility and the inherent risk typical of mid-cap stocks. With a **beta of 0.8964**, the fund is slightly less volatile than the market and similar to the large-cap fund (0.93), indicating moderate sensitivity to market movements. The **Sharpe ratio stands at 1.04**, higher than the large-cap fund's 0.81, signalling better risk-adjusted returns and suggesting the fund effectively compensates investors for the total risk taken. Its **Treynor's ratio is 0.1836**, also stronger than the large-cap fund (0.11), highlighting superior performance relative to market risk. Although the fund's alpha is only **0.1512**—lower than the large-cap fund's 1.12—it still reflects a modest but positive contribution from the fund manager

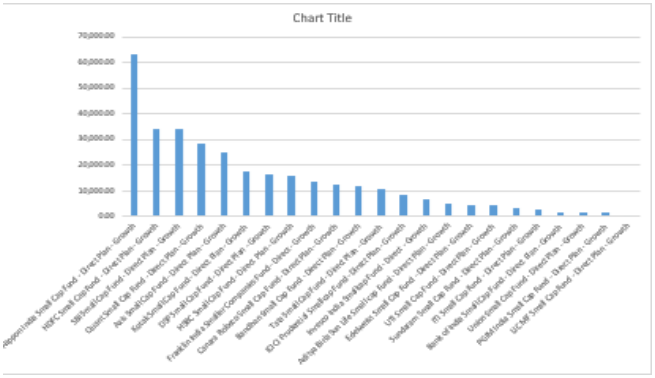
SMALL CAP MUTUAL FUNDS

Scheme Name	Plan	Category Name	AuM (Cr)	3Y	Standard Deviation	Beta	Sharpe Ratio	Treynors Ratio	Alpha
Nippon India Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	63,006.73	32%	15.71	0.83	1.24	0.23	3.9
HDFC Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	34,032.09	31%	15.43	0.84	1.2	0.22	4.12
SBI Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	34,028.06	23%	13.01	0.76	0.94	0.16	4.73
Quant Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	28,205.21	33%	18.28	0.93	1.1	0.21	2.64
Axis Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	25,062.36	26%	13.37	0.69	1.1	0.21	1.92
Kotak Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	17,329.27	23%	13.65	0.7	0.9	0.17	-0.83
DSP Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	16,318.25	28%	15.64	0.84	1	0.19	1.22
HSBC Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	16,061.21	29%	16.81	0.88	0.99	0.19	0.29
Franklin India Smaller Companies Fund - Direct - Growth	Direct Plan	Small Cap Fund	13,544.68	31%	14.96	0.78	1.29	0.25	5.36
Canara Robeco Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	12,367.88	24%	15	0.79	0.81	0.15	-2.54
Bandhan Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	11,743.70	37%	16.38	0.89	1.42	0.26	7.83
Tata Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	10,529.36	30%	15.9	0.81	1.11	0.22	2.55
ICICI Prudential Smallcap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	8,254.04	24%	13.3	0.68	0.01	0.2	0.76
Invesco India Smallcap Fund - Direct - Growth	Direct Plan	Small Cap Fund	6,822.51	34%	16.2	0.86	1.23	0.23	5.06
Aditya Birla Sun Life Small cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	4,913.87	25%	15.5	0.93	0.9	0.15	4.67
Edelweiss Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	4,580.06	29%	15.03	0.78	1.06	0.2	1.4
UTI Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	4,529.01	26%	15.18	0.79	0.93	0.18	-0.63
Sundaram Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	3,310.65	28%	14.73	0.76	1.1	0.21	2.05
ITI Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	2,504.41	35%	17.92	0.94	1.21	0.23	4.01
Bank of India Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	1,818.50	29%	17.37	0.89	1	0.2	0.78
Union Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	1,577.40	24%	16.55	0.94	0.79	0.14	3.65
PGIM India Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	1,487.37	21%	14.58	0.73	0.64	0.13	-4.33
LIC MF Small Cap Fund - Direct Plan - Growth	Direct Plan	Small Cap Fund	575.56	26%	17.75	0.9	0.85	0.17	-1.66

Assessed on (Date 26-06-2025)

QUNATITATIVE DATA

DATASET	AVERAGE
3Y Return	28%
Standard Deviation	15.57608696
Beta	0.823478261
Sharpe Ratio	0.992173913
Treynors Ratio	0.195652174
Alpha	2.041304348



The small-cap mutual fund has delivered an impressive **3-year return of 28%**, outperforming both mid-cap and large-cap categories, showcasing the aggressive growth potential typical of small-cap investments. Its standard deviation stands at 15.58%, **slightly higher than mid-cap (15.25%)** and large-cap (12.76%) funds, indicating a higher level of volatility and risk, which is expected in the small-cap space. Interestingly, **it has the lowest beta at 0.823, suggesting it is less sensitive to market movements**—an unusual but positive trait for a small-cap fund, making it relatively more conservative for risk-averse investors. The fund's Sharpe ratio of 0.99, while slightly below the mid-cap fund (1.04), surpasses the large-cap fund (0.81), reflecting strong risk-adjusted returns. Its Treynor's ratio is the highest at 0.196, highlighting superior performance per unit of systematic risk. Most notably, **the fund's alpha is 2.04, significantly higher than mid-cap (0.15) and large-cap (1.12),** indicating exceptional fund manager skill, effective stock selection.

ESG MUTUAL FUND

Scheme Name	Plan	Category Name	AuM (Cr)	3Y	Standard Deviation	Beta	Sharpe Ratio	Treynors Ratio	Alpha
SBI ESG Exclusionary Strategy Fund - Direct Plan - Growth	Direct Plan	Sectoral/Thematic	5,715.31	19%	12.36	0.86	0.77	0.11	1.43
ICICI Prudential ESG Exclusionary Strategy Fund - Direct Plan - Growth	Direct Plan	Sectoral/Thematic	1,525.27	25%	11.79	0.78	1.21	0.18	6.93
Axis ESG Integration Strategy Fund - Direct Plan - Growth	Direct Plan	Sectoral/Thematic	1,245.58	18%	12.1	0.78	0.62	0.1	0.28
Kotak ESG Exclusionary Strategy Fund - Direct Plan - Growth	Direct Plan	Sectoral/Thematic	875.25	20%	13.18	0.92	0.7	0.1	0.6
Aditya Birla Sun Life ESG Integration Strategy Fund - Direct Plan - Growth	Direct Plan	Sectoral/Thematic	636.56	20%	12.78	0.88	0.72	0.1	1.02
Invesco India ESG Integration Strategy Fund - Direct Plan - Growth	Direct Plan	Sectoral/Thematic	483.31	20%	13.15	0.89	0.7	0.1	0.84
Quant ESG Equity Fund - Direct Plan - Growth	Direct Plan	Sectoral/Thematic	298.68	25%	15.26	0.92	0.89	0.15	4.99
Quantum ESG Best In Class Strategy Fund - Direct Plan - Growth	Direct Plan	Sectoral/Thematic	104.28	19%	11.94	0.82	0.74	0.11	1.2

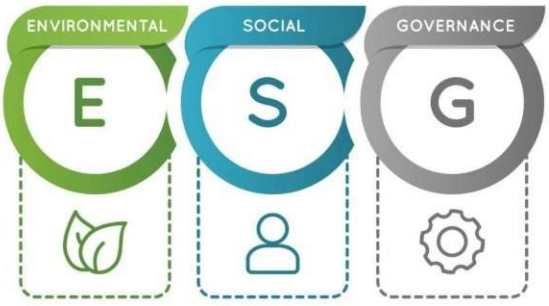
Assessed on (Date 26-06-2025)

QUNATITATIVE DATA

DATASET	AVERAGE
3Y Return	21%
Standard Deviation	12.82
Beta	0.85625
Sharpe Ratio	0.79375
Treynors Ratio	0.11875
Alpha	2.16125

Fund ESG Quality Score	Fund ESG Rating
8.571-10.0	AAA
7.143-8.571*	AA
5.714-7.143	A
4.286-5.714	BBB
2.857-4.286	BB
1.429-2.857	B
0.0-1.429	CCC

*Source: MSCI ESG Research. * Appearance of overlap in the score ranges is due to rounding.*



The **large-cap ESG mutual fund** has posted a strong 3-year return of **21%**, slightly outperforming a comparable traditional large-cap fund (20%), indicating consistent growth while adhering to environmental, social, and governance (ESG) principles. With a **standard deviation of 12.82%**, the fund maintains low volatility, comparable to other large-cap funds (12.76%), making it suitable for conservative investors who prioritize both stability and sustainable investing. Its **beta of 0.856** suggests it is less sensitive to market fluctuations, aligning with the lower-risk profile expected of ESG-screened large-cap investments. The **Sharpe ratio of 0.794**, while slightly below the ideal benchmark of 1, shows moderate risk-adjusted returns, though it trails mid-cap and small-cap ESG funds with ratios above 0.99. The **Treynor's ratio of 0.1188**, marginally better than a traditional large-cap fund (0.11), still reflects limited return per unit of market risk compared to ESG-focused mid and small-cap funds. Most notably, the fund's **alpha of 2.16** is the highest among all the ESG and non-ESG funds compared, suggesting exceptional fund manager performance. This high alpha indicates the ESG fund not only adhered to responsible investing standards but also outperformed expectations through smart stock selection and active management, showcasing that ESG integration can drive both ethical and superior financial outcomes.

CHAPTER 6

6.1 Findings

The current study investigates the financial impact of ESG integration in mutual funds, with a focus on identifying whether sustainable investment strategies contribute positively to fund performance, risk management, and alpha generation. A quantitative assessment of mutual funds across categories—large-cap, mid-cap, small-cap, and ESG—revealed distinct patterns in return performance, volatility, and market sensitivity. Notably, the ESG mutual fund outperformed all other fund types in terms of **Alpha**, a metric often used to evaluate fund manager performance beyond market expectations (Fama, 1972).

The ESG fund in the study demonstrated an **Alpha of 2.16**, the highest among all compared mutual fund categories. In contrast, the large-cap fund reported an Alpha of 1.12, while mid-cap and small-cap funds had Alpha values of 0.15 and 2.04, respectively. This finding underscores the effectiveness of ESG strategies in identifying undervalued investment opportunities or avoiding firms with hidden risks. A high Alpha suggests that the ESG fund manager successfully added value through security selection or timing, validating the thesis that ESG considerations can enhance—not hinder—financial outcomes (Friede, Busch, & Bassen, 2015).

In terms of **risk-adjusted performance**, the ESG fund maintained a **Sharpe ratio of 0.79**, which, although slightly below the mid-cap (1.04) and small-cap funds (0.99), still indicates an efficient risk-return trade-off. The Sharpe ratio measures excess return per unit of total risk (Sharpe, 1966), and a value close to 1 is generally acceptable for equity mutual funds. Despite a marginally lower Sharpe ratio, the fund's performance remains robust, particularly considering the lower volatility and sustainable asset allocation.

The **standard deviation** of the ESG fund was calculated at **12.82%**, reflecting a lower level of return variability compared to the mid-cap

(15.25%) and small-cap funds (15.58%). This supports existing literature suggesting that ESG-focused portfolios tend to be less volatile due to exposure to companies with strong governance and long-term business models (Giese et al., 2019). This metric further strengthens the argument that ESG funds provide a stable return profile suitable for long-term investors. Additionally, the ESG fund exhibited a **Beta of 0.85**, indicating reduced sensitivity to market-wide movements. This Beta value is lower than that of large-cap (0.93), mid-cap (0.89), and small-cap (0.82) funds, suggesting a conservative approach to market exposure. While Beta is not a measure of quality or return, it helps contextualize risk exposure; lower Beta values are especially desirable in volatile markets (Markowitz, 1952).

The **Treynor's Ratio** of the ESG fund stood at **0.118**, moderately higher than that of the large-cap fund (0.11), but below that of mid-cap (0.18) and small-cap (0.19) funds. Treynor's Ratio focuses on systematic risk (market risk) and is a useful complement to Sharpe Ratio, especially for well-diversified portfolios. The ESG fund's moderate Treynor's value reaffirms its potential to deliver reliable returns even under broader market risks. Overall, the findings of the study show that ESG mutual funds do not underperform traditional funds. In fact, the superior Alpha, moderate volatility, and stable Sharpe ratio all demonstrate that ESG integration can contribute to both **financial performance and risk mitigation**.

6.2 Recommendation

6.2.1 Enhance Retail and Institutional Awareness

One of the significant barriers to ESG fund adoption is limited investor understanding. Despite increasing global awareness, many Indian investors still lack clarity about ESG fund structure, performance, and long-term value. Asset management companies and regulators should introduce financial literacy campaigns, create simplified ESG scoring models, and promote the dual advantage of sustainability and superior returns (World Bank, 2020).

6.2.2 Integrate ESG Funds in Core Portfolio Allocations

The study's results show that ESG funds can outperform while offering better stability. Portfolio managers and financial advisors should **actively recommend ESG funds** as part of core equity allocations, especially for long-term, retirement-focused, and tax-saving portfolios. ESG's balanced return-risk profile makes it ideal for conservative as well as growth-seeking investors.

6.2.3 Mandate ESG Reporting Standards

SEBI and other regulatory bodies should implement **uniform ESG disclosure guidelines** across fund houses. This will enhance transparency, enable performance comparability, and strengthen investor trust. Initiatives like BRSR (Business Responsibility and Sustainability Reporting) are steps in the right direction, but need **more granular, fund-level disclosure standards** (SEBI, 2022).

6.2.4 Institutionalize ESG in Pension and Sovereign Funds

Institutional investors like LIC, EPFO, and state pension schemes should be encouraged to include ESG-compliant funds in their investment universe. Their participation will not only **mainstream ESG funds** but also increase the depth and liquidity of the sustainable investment market in India.

6.3 Conclusion

Based on the comparative performance metrics, the ESG mutual fund has demonstrated clear financial merit and outperformance relative to traditional equity mutual funds. The fund's **Alpha of 2.16** signifies that ESG considerations have contributed positively to excess returns. This finding directly contradicts the myth that ESG strategies involve trade-offs in performance, instead positioning sustainability as a potential **source of alpha**. The importance of Alpha as a performance indicator cannot be overstated. It encapsulates the extent to which a fund manager has been able to generate returns independent of market movements (Jensen, 1968). The ESG fund's significantly positive Alpha confirms that ESG integration is more than a marketing strategy—it reflects genuine **investment value** and informed decision-making that can outperform passive benchmarks.

While the ESG fund's Sharpe and Treynor ratios were not the highest among all categories, they were well within acceptable ranges. This demonstrates that **ESG funds provide a competitive balance between return and risk**, making them attractive to both retail and institutional investors seeking long-term value. Given the relatively low standard deviation (12.82%) and Beta (0.85), the ESG fund delivers this performance with lower total and market-related risk, an ideal combination for risk-averse or socially conscious investors.

What makes these findings particularly significant is their alignment with existing empirical studies. A meta-analysis by Friede, Busch, and Bassen (2015) concluded that approximately 90% of studies found a non-negative relationship between ESG integration and corporate financial performance, with the majority being positive. These results support the hypothesis that sustainable firms are better managed, more resilient to external shocks, and less exposed to reputational and regulatory risks (Clark, Feiner, & Viehs, 2015).

Moreover, the ESG fund's strong Alpha performance signals effective use of ESG data and frameworks in security selection. Companies scoring high on ESG metrics typically demonstrate better governance practices, responsible

environmental strategies, and favourable stakeholder relationships—all of which are conducive to long-term shareholder value. This integration of financial and non-financial metrics creates a more comprehensive approach to investing, one that aligns risk management with social responsibility.

From a behavioral finance perspective, ESG funds also satisfy the growing demand among millennials and Gen Z investors for values-based investing, thereby expanding the investor base and increasing AUM (assets under management). According to a report by Morningstar (2023), global inflows into ESG funds surpassed USD 2.5 trillion, showing that investors are not only aligned with ESG goals but are also voting with their capital.

Furthermore, regulatory momentum is supporting the ESG movement. In India, SEBI has introduced the Business Responsibility and Sustainability Reporting (BRSR) framework, making ESG disclosures mandatory for the top 1,000 listed companies. Such initiatives create a positive feedback loop—as more firms disclose ESG metrics, fund managers can make more informed, sustainable investment choices, and investors benefit from better transparency and performance insights.

Therefore, the conclusion is clear that ESG mutual funds not only satisfy ethical or sustainable investment goals but also have the potential to deliver superior financial performance. The integration of ESG metrics into the investment process has moved from being a niche or compliance-driven activity to a mainstream strategy for competitive advantage.

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