MUTUAL FUND INVESTMENTS IN INDIA DURING COVID-19 PANDEMIC

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ABSTRACT

This research delves into the influence of sustainability scores and ranks on the returns of ESG (Environmental, Social, and Governance) mutual funds in the context of India, while also making a comparative analysis with the Nifty 100 index. Additionally, it examines the factors contributing to the increased adoption of ESG funds amidst the Covid-19 pandemic, revealing a robust positive correlation and substantial impact of sustainability scores and ranks on mutual fund returns. The findings underscore the exceptional performance of ESG-based indices and propose that enterprises embracing ESG principles represent the forthcoming paradigm for sustainable and economically advantageous models.

Key words: ***Environmental, Social, Governance, Sustainable Investing, Responsible Investing, Nifty 100 index, ESG Index, Sharpe ratio, Treynor ratio***

Introduction

The imperative to preserve the environment has gained increasing recognition in recent years, driven by the irreversible consequences of climate change that are affecting various aspects of our lives. This heightened sense of accountability has significantly influenced responsible investing, where companies are actively ensuring the sustainability of their operations. Presently, sustainable impact investing is not only regarded as an ethical choice but also as a pathway to unlocking numerous opportunities for long-term returns.

ESG investing, which involves integrating Environmental, Social, and Governance principles into investment decisions, has experienced a surge in popularity in recent years. While most mutual funds and ETFs worldwide suffered asset losses during the first two quarters of 2020,

funds focused on investing in companies committed to ESG principles showcased higher returns. This shift in investor focus toward ethical and sustainable investment philosophies has spurred increased interest in environmental, social, and governance issues. As a result, sustainable funds in India attracted Rs 3,686 crore in 2020-21, representing a substantial increase of 76 percent compared to Rs 2,094 crore in 2019-20. Notably, the Covid-19 crisis has further accelerated the demand for sustainable investing, leading to a significant influx of sustainable funds.

According to data published by EPFR, socially responsible investing (SRI) or ESG investments received record inflows of $168.74 billion in 2020, compared to $63.34 billion in 2019. An analysis report by S&P's Global Market Intelligence reveals that out of 17 exchange-traded and mutual funds, 14 ESG funds outperformed the S&P 500 in 2020. Although the concept of ESG funds is relatively new in India, it has gained widespread acceptance and experienced rapid growth during the COVID-19 crisis. This is evident in the emergence of several ESG thematic funds in recent years, with a total of 10 ESG funds currently operating in India.

According to Morningstar data, ESG funds in India witnessed a net inflow of Rs 3,749 crore in the quarter ending December 2020, followed by a net inflow of Rs 576 crore in the quarter ending March 2021. As of April 30, 2021, ESG funds in India manage assets worth Rs 10,377 crore. Globally, ESG assets are projected to surpass $53 trillion (approximately ₹ 4,028 lakh crore) by 2025, out of a total projected assets under management worth $140.5 trillion (approximately ₹ 10,678 lakh crore), as reported by Bloomberg.

While ESG investing is still in its nascent stage in India compared to international markets like the US, China, and the European Union (EU), fund managers assert that the ESG index not only outperforms the traditional equity index in India but also provides downside risk protection. According to the NSE Indexogram, as of April 30, annual returns for companies listed on the Nifty100 ESG Index reached 54.08 percent, surpassing the 49.23 percent returns of the Nifty100. Furthermore, the five-year total returns stood at 16.3 percent for the ESG Index and 14.64 percent for the Nifty100.

Overview of ESG Funds

The following provides an overview of ESG funds:

Sustainable Investing: Sustainable investing, also known as ESG investing, involves investing in companies that adopt a sustainable and comprehensive approach to their business operations.

Environmental (E): This factor focuses on the impact of a company's activities on the environment. It encompasses initiatives to reduce carbon emissions, effective water and

waste management, energy and water conservation efforts, and other environmental considerations, with a strong emphasis on creating a greener environment.

Social (S): The social factor emphasizes the welfare of a company's employees and society at large. A socially responsible organization takes into account factors such as employee well-being, gender equality, pay equity, and regular contributions towards relevant social causes.

Governance (G): Corporate governance is at the core of this factor, highlighting regulatory compliance, tax transparency, effective whistleblower practices, grievance redressal mechanisms, ethical conduct, board composition and diversity, management involvement in mitigating ESG risks, and robust internal controls to prevent wrongdoing.

ESG Funds: ESG mutual funds are thematic mutual funds that invest in socially responsible companies, basing their investment process on environmental (E), social (S), and governance (G) practices. These funds invest in companies that are ESG compliant and prioritize sustainable growth.

Background of ESG Funds in India:

The framework for ESG investing originated in 2006 with the launch of the UN Principles for Responsible Investment (PRI). Currently, there are over 3,000 such schemes globally. In India, ESG-focused regulations have a relatively shorter history. The Companies Act 2013 made corporate social responsibility (CSR) mandatory for businesses, requiring them to spend 2 percent of their average net profit from the previous three years on CSR activities. In 2020, SEBI (Securities and Exchange Board of India) mandated that the top 1000 listed entities (by market capitalization) include a business responsibility report in their annual reports. The first ESG fund in India was launched in May 2018, and currently, there are 10 ESG funds in the country.

Need for the Study:

In light of the Covid-19 pandemic, natural disasters, and unpredictable weather events, it is crucial for institutional investors to consider ESG criteria when making investments. Companies, too, must integrate ESG practices into their business operations. ESG encompasses more than just climate change and aligns with the broader term of Socially Responsible Investing (SRI). While there is substantial literature on what ESG is, there is relatively less information on how it is linked to value creation for stakeholders and society as a whole. Therefore, it is necessary to investigate why ESG funds outperformed broader markets even during the global pandemic in 2020.

Review of Literature

The key findings from relevant studies on this topic are as follows:

Anis Akthar Sulthana Banu, Bhuvaneswari, Sajida Begum (2021): This study focuses on the SBI Magnum Equity Mutual Fund, which offers long-term capital gains to investors through investment management in a diversified portfolio of companies that meet ESG requirements. The study suggests that SBI should create a more diversified portfolio and conduct detailed analysis of ESG-compliant companies to attract more buyers to ESG funds.

Usha Kiran and Gattaiah Tadoori (2021): This study concludes that ESG indices performed on par with traditional indices during the pre-Covid period but outperformed them in the post-Covid period. The analysis also highlights that ESG indices serve as efficient portfolio risk management tools. Stocks with high ESG scores demonstrate strong resilience, low volatility, and improved long-term financial performance. The study emphasizes the rising inflow of funds into ESG-related assets as investors recognize ESG investment as a risk management tool. Post-pandemic, stakeholders will seek companies with strong ESG performance, making it crucial for companies to define, evaluate, and communicate their ESG practices effectively.

Gagan Deep Sharma, Aviral Kumar Tiwari, Gaurav Talan, Mansi Jain (2021): This study emphasizes the importance of long-term responsible investing for rational investors to fulfill their fiduciary duties and align their interests with broader societal objectives. It highlights the need for a deep understanding of integrating ESG criteria into investment processes to fully harness the value-enhancing potential of ESG factors. The study identifies areas for future research, including the interaction of different ESG criteria in portfolios and the relevance of specific ESG sub-criteria for company financial performance.

Henry Mynhardt, Inna Makarenko, and Alex Plastun (2017): This study suggests that sustainability indices should be more efficient than traditional indices, but the research findings indicate that sustainability indices are generally less efficient. However, in emerging markets, sustainability indices exhibit higher efficiency, making investments in socially responsible companies, especially in emerging markets, more attractive.

Sudha (2014): This study reveals that investors benefit from investing in socially responsible companies while aligning with their ethical values. Socially responsible companies attract domestic and foreign capital inflows at a lower cost of capital compared to companies that are not socially responsible. This study highlights the potential for investors to exert pressure on socially "irresponsible" companies and encourage them to implement strategies that perform well in ESG parameters, thereby promoting sustainable economic development.

Research Gap

Globally, many research studies have been conducted in the area of ESG funds. However, limited research that has been conducted in India, is about the framework of ESG, advantages of ESG investing, costs of socially responsible investing, socially responsible investing and its impact on company's financial performance. Sufficient research is not done about ESG mutual funds and performance of ESG indices versus Nifty index during the Covid-19 pandemic. Therefore, a research in this direction is necessary.

Objectives of the Study

The important objectives formed for this study are as follows

- To study the relationship between select ESG mutual fund returns and its sustainability score and sustainability rank during Covid-19 pandemic.
- To compare the performance of ESG indices with Nifty 100 during covid 19 pandemic.
- To find out the reasons for growing popularity of ESG funds during Covid-19 pandemic.

Hypotheses

The objectives are tested with the help of following hypotheses

- H01: There is no significant impact of sustainability score on Semi-annual returns of ESG mutual funds.
- H02: There is no significant impact of sustainability rank on Semi-annual returns of ESG mutual funds.

Research Methodology

The research methodology employed in this study is structured and can be outlined as follows:

Firstly, the data type utilized for the study is secondary data. This means that the researchers did not directly collect the data themselves but instead relied on existing information and sources.

Secondly, the data sources for this study encompassed various channels. The researchers gathered the necessary data from published annual reports of Mutual Fund companies, the National Stock Exchange (NSE), and the Morningstar website. These sources were selected due to their reliability and relevance to the study's objectives.

By utilizing secondary data from these reputable sources, the researchers were able to access a wealth of information pertaining to Mutual Fund companies. This approach provided a

comprehensive view of the subject matter, enabling a thorough analysis of the factors and variables under investigation.

The reliance on secondary data has its advantages, including accessibility and cost-effectiveness. By leveraging pre-existing data, the researchers were able to save time and resources that would have been required for primary data collection. Furthermore, the use of established sources such as annual reports and financial websites ensured the accuracy and credibility of the data utilized in the study.

Overall, the research methodology employed in this study demonstrates a thoughtful and systematic approach to data collection. The utilization of secondary data from reputable sources contributes to the validity and reliability of the findings, thereby enhancing the overall quality of the research.

Sample funds: 8 funds are used to conduct the study, they are

a) SBI Magnum Equity ESG Fund: SBI mutual fund that invests in environmentally and socially responsible companies.

b) Quantum India ESG Equity Fund: Quantum mutual fund that focuses on investing in companies with good ESG practices.

c) Axis ESG Equity Fund: Axis mutual fund that follows an ESG investment approach.

d) ICICI Prudential ESG Fund: ICICI Prudential mutual fund that invests in companies with strong ESG practices.

e) Quant ESG Equity Fund: Quant mutual fund that focuses on sustainable and responsible investments.

f) Mirae Asset ESG Sector Leader ETF: Mirae Asset ETF that tracks the performance of an ESG sector leader index.

g) Aditya Birla Sun Life ESG Fund: Aditya Birla Sun Life mutual fund that invests in sustainable and responsible companies.

h) Kotak ESG Opportunities Fund: Kotak Mahindra mutual fund that focuses on companies with strong ESG practices.

Sample justification: In the context of this study, a sample of 8 out of the total 10 ESG mutual funds existing in India was selected. The exclusion of the remaining 2 funds is attributed to their incorporation during the first quarter of 2021, subsequent to the data collection phase. As a result, it is important to note that the analysis and conclusions drawn from this sample may not provide an entirely comprehensive representation due to the absence of these recently incorporated funds.

Period of Study:

a) The study examines the relationship between the returns of selected ESG mutual funds and their sustainability score and sustainability rank, utilizing data from the first two quarters of 2021. This period is chosen to analyze recent trends and performance in the context of sustainability metrics.

b) In order to compare the returns and volatility of ESG indices with the Nifty 100 index, historical data spanning the past 5 years is employed. Additionally, quarterly returns of all indices from January 2020 to June 2021 are utilized to calculate the Sharpe and Treynor ratios, providing insights into risk-adjusted performance over a specific timeframe.

Research Tools: In this study, various research tools have been employed to analyze the data and derive meaningful insights. Correlation analysis is utilized to examine the relationships between different variables, while regression analysis is applied to assess the impact of independent variables on the dependent variable. Furthermore, ANOVA (Analysis of Variance) is employed to analyze the differences between multiple groups or categories. Additionally, percentages are utilized to present and interpret the data in a meaningful and comprehensible manner.

Financial Ratios: To evaluate and compare the performance of the indices under investigation, specific financial ratios are employed. The Sharpe ratio, a widely used measure, is utilized to assess the risk-adjusted returns of the indices. The Sharpe ratio considers the excess return earned per unit of risk taken. Additionally, the Treynor ratio is employed to evaluate the risk-adjusted returns relative to the systematic risk of the indices. These financial ratios provide valuable insights into the relative performance and risk profiles of the indices being analyzed.

Results and Discussions

The study focuses on investigating the relationship between the returns of select ESG mutual funds and their corresponding sustainability score and rank. By examining this relationship, the aim is to gain insights into how the sustainability metrics of these funds relate to their financial performance.

Table 1 :Select Mutual fund returns and Sustainability ranks and scores

Name of the fund	Quarterly Returns of 2021		Average Semi-Annual returns (Q1+Q2/2)	Historical sustainability score percent rank	Sustainability score
	Q1	Q2			
SBI Magnum Equity ESG fund may 2018	5.01	8.78	6.895	8	25.52
Quantum India ESG Equity fund July 2019	9.09	8.95	9.02	10	26.25
Axis ESG Equity Fund February 2020	1.27	8.39	4.83	3	23.31
ICICI Prudential ESG Fund October 2020	3.54	10.86	7.2	5	24.96
Quant ESG Equity Fund					
October 2020	12.51	19.82	16.165	82	34.64
Mirae Asset ESG Sector Leaders ETF November 2020	3.89	7.21	5.55	4	24.89
Aditya Birla Sun Life ESG Fund December 2020	5.18	8.33	6.755	2	22.71
Kotak ESG Opportunities Fund December 2020	3.65	9.06	6.895	15	26.79

Source: https//www.morningstar.in

Correlation Analysis

Pearson's correlation coefficient is used to study the relationship between Sustainability score, sustainability rank and Semi-annual returns. The dependent variable is semi-annual returns and independent variables are sustainability scores and sustainability rank.

The result of correlation analysis is presented as follows.

Table:2 Correlation Coefficients among the Study Variables

		Sustainability score	**Semi-annual returns**	**Sustainability rank**
Sustainability score	Pearson Correlation	1	.943**	.970**
	Sig. (2-tailed)		.000	.000
	N	8	8	8
Semi-annual returns	Pearson Correlation	.943**	1	.954**
	Sig. (2-tailed)	.000		.000
	N	8	8	8
Sustainability rank	Pearson Correlation	.970**	.954**	1
	Sig. (2-tailed)	.000	.000	
	N	8	8	8

Source: Computed values based on data taken from Morningstar

The Pearson Correlation figure which in this case is 0.943 and 0.954 shows a high positive correlation between Sustainability score, sustainability rank and Semi-annual returns. The 2-tailed significance value which is in both cases is 0.000 and is less than the standard alpha value which is 0.05, which means that our correlation is highly significant, not just a function of random sampling error, etc.

Regression Analysis

To study the impact of sustainability scores and ranks on semi-annual returns, regression analysis is conducted. ANOVA table results indicate the significance of results. And coefficients table indicate the extent of impact of independent variables on dependent variable. The results of regression analysis are presented below.

Table:3 Sustainability score and semi-annual returns: ANOVA results

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	78.512	1	78.512	47.973	.000b
	Residual	9.819	6	1.637		
	Total	88.332	7			

Source: Computed values based on data taken from Morningstar

For this study, a significance level of 5% or a confidence level of 95% is selected. Consequently, the p-value should be less than 0.05 to establish statistical significance. Upon examining the provided table, the obtained p-value is 0.000, indicating a highly significant result.

The use of the F ratio is beneficial in enhancing prediction accuracy by accounting for inherent inaccuracies. An F ratio greater than 1 indicates an efficient model. In the given scenario, the calculated F ratio is 47.973, indicating a favorable level of efficiency in the model.

Table:4 Sustainability score and semi-annual returns: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-15.745	3.446		-4.570	.004
	Sustainability score	.905	.131	.943	6.926	.000

Source: Computed values based on data taken from Morningstar

Table:5 - Sustainability rank and semi-annual returns: ANOVA results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	80.431	1	80.431	61.080	.000b
	Residual	7.901	6	1.317		
	Total	88.332	7			

Source: computed values based on the data taken from Morningstar website

F-ratio is 61.080 which says it is an efficient model. The p-value is 0.000 which indicates that the result is significant.

Table:6 Sustainability rank and semi-annual returns: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.886	.482		12.223	.000
	Sustainability rank	.126	.016	.954	7.815	.000

Source: computed values based on the data taken from Morningstar

Based on the presented table, it is observed that the t-values are significant at a level of significance of 0.000, as they are lower than 0.05. Consequently, the null hypothesis is rejected, indicating that there is a significant impact of the sustainability score on the semi-annual return of mutual funds. Specifically, a 1% increase in the sustainability score corresponds to a 0.905% increase in the semi-annual returns, as indicated by the B value.

Similarly, the significant value is 0.000, which is below the threshold of 0.05. Consequently, the null hypothesis is rejected, indicating a significant impact of the sustainability rank on the semi-annual return of mutual funds. With a 1% increase in the sustainability rank, the semi-annual returns are projected to increase by 0.126% as represented by the B value.

Comparison of Performance of ESG Indices with Nifty 100 Index

To compare the performances of Nifty 100 index and ESG indices, returns and standard deviations are collected and presented as follows.

Table: 7 Nifty 100 Index and ESG Indices: Returns

Period	Nifty 100 ESG Index	Nifty 100 Enhanced ESG index	Nifty 100 ESG sector leader index	Nifty 100
QTD	9.69	9.51	7.29	8.22
YTD	16.25	15.99	11.90	13.97
1Yr	59.90	59.88	50.74	54.02
5Yr	17.06	16.88	15.74	15.09
Since inception	13.48	13.56	15.65	17.84

Source: www1.nseindia.com

ESG indices have demonstrated a slight outperformance compared to the parent index, specifically the Nifty 100 index. As of June 30, 2021, the Nifty 100 ESG Index achieved a 10.80% return over a five-year period, while the Nifty index delivered an 8.99% return, both calculated as compound annual growth rates (CAGR). Notably, an initial investment of Rs 1 lakh in the Nifty 100 ESG Sector Leaders Index at its inception on January 1, 2014, would have nearly tripled to Rs 2.59 lakh as of May 21, 2021, with a 13.7% CAGR. In contrast, a similar investment in the general equity index would have grown to approximately Rs 2.47 lakh, reflecting a 13% CAGR. These figures indicate the potential for favorable growth and returns in the ESG sector compared to traditional equity investments.

Table: 8 Nifty 100 Index and ESG Indices: Standard Deviation

Period	Nifty 100 ESG Index	Nifty 100 ESG enhanced index	Nifty India ESG sector leader index	Nifty 100 index
One year	15.68	15.71	15.45	16.30
Five years	17.81	17.84	17.27	18.00
Since Inception	17.61	17.61	16.70	22.49

Data based on average daily rolling returns for the period ended June 30, 2021

Source: www1.nseindia.com

The ESG theme is not only outperforming general equity, but also doing so with lower volatility. Since inception, the standard deviation of ESG indices has been low compared to Nifty 100 index. This showcases the stability of the underlying stock movement compared with broad equity benchmarks.

Analysis of Sharpe and Treynor Ratio

Sharpe and Treynor ratios are calculated to further compare the performance of Nifty 100 index and ESG indices.

Sharpe ratio is the measure of risk-adjusted return of a financial portfolio. Sharpe ratio is a measure of excess portfolio return over the risk-free rate relative to its standard deviation. A portfolio with a higher Sharpe ratio is considered superior. Sharpe ratio is calculated as

({R (p) – R (f)})/(s(p)) where R (p): Portfolio return, R (f): Risk-free rate of return and s(p): Standard deviation of the portfolio.

Treynor ratio determines how much excess return is generated for each unit of risk taken. It uses systematic risk (beta). A portfolio with a higher Treynor ratio is considered superior. Treynor ratio is calculated as

({R(p)-R(f)})/(B(p)) where, R (p): Portfolio return, R (f): Risk-free rate of return and B(p) is beta of the portfolio.

The results of Sharpe and Treynor ratio are presented as follows

Table:9 Sharpe ratio and Treynor ratio

	Sharpe Ratio	Treynor Ratio
Nifty 100 index	0.3047	5.84347079
Nifty 100 ESG index	0.40219	8.04047619
Nifty 100 Enhanced ESG index	0.42054	8.71813187
Nifty 100 Sector Leader Index	0.36786	6.83037037

Source: computed values based on the data taken from Morningstar

The Sharpe ratio of the ESG based indices are better than the Nifty 100 index indicating a superior performance during Covid-19. Treynor ratio of ESG based indices are higher compared to benchmark index proving that ESG indices performed better during Covid-19.

Reasons for Growing Popularity of ESG Mutual Funds During Pandemic

The growing popularity of ESG mutual funds can be attributed to the following reasons:

1. Higher growth potential and long-term existence: Companies with high ESG scores are more likely to have a sustainable long-term existence and exhibit higher growth potential. Investors recognize the value of investing in companies that prioritize environmental, social, and governance factors.
2. Enhancement of goodwill: Companies that demonstrate social responsibility and actively contribute to the welfare of society tend to gain goodwill. Investors appreciate and value companies that prioritize social impact, which in turn contributes to their overall reputation and attractiveness.
3. Strong employee and customer relations: ESG practices play a crucial role in building robust relationships with employees and customers. Such practices enhance employee satisfaction, increase productivity, reduce unidentified costs, and ultimately lead to higher profits. Additionally, customers are more inclined to engage with companies that align with their values and prioritize sustainability.
4. Regulatory compliance: Companies that address environmental issues, such as carbon emissions, climate change, and pollution, are less likely to face regulatory compliance challenges. By proactively integrating ESG considerations into their operations, companies can mitigate regulatory risks and ensure compliance with evolving environmental standards.
5. Transparent and ethical dealings: Good corporate governance practices ensure transparency and ethical conduct in all interactions with stakeholders. Companies that uphold strong corporate governance principles gain the trust and confidence of investors, creating a favorable investment environment.

6. Risk management tool: ESG investing is recognized as a risk-management tool by fund managers. ESG funds have demonstrated lower volatility compared to their counterparts, providing more stable returns. Additionally, ESG funds often outperform benchmarks, offering the potential for higher returns while considering sustainability factors.

These factors collectively contribute to the increasing popularity of ESG mutual funds, as investors recognize the value of investing in companies that prioritize sustainability, social responsibility, and ethical practices.

Conclusion

This paper investigates the impact of sustainability scores and sustainability ranks on the returns of different ESG mutual funds in India. Additionally, it analyzes the performance of ESG-based indices and the Nifty 100 index during the Covid-19 pandemic, while also exploring the reasons for the growing popularity of ESG funds in India amidst this period.

The findings of the study indicate a strong positive correlation between sustainability scores, sustainability ranks, and mutual fund returns. Furthermore, the study reveals a significant influence of sustainability scores and sustainability ranks on semi-annual mutual fund returns. The examination of Sharpe ratios and Treynor ratios demonstrates that ESG-based indices outperform the Nifty 100 index in terms of performance.

During the Covid-19 pandemic, the reasons behind the increasing popularity of ESG mutual funds in India are identified as the longevity of businesses, enhanced goodwill, and improved customer and employee relationships. Additionally, sustainable investing is viewed as a risk-management tool.

These findings highlight that businesses are no longer solely focused on meeting legal requirements for sustainability. Instead, they recognize the potential for positive customer perceptions and higher returns associated with sustainable business models. Companies that adhere to ESG principles are seen as the future of business and wealth creation.

Limitations

The study has identified the following important limitations:

1. Limited availability of data: One significant limitation is the newness of the concept of ESG funds in India, which results in insufficient data for conducting a comprehensive study. The scarcity of relevant and extensive data poses challenges in obtaining a complete understanding of the subject matter.
2. Incomplete sample selection: Out of the 10 ESG mutual funds present in India, only 8 funds were selected for this study. Consequently, the results obtained may lack precision

and comprehensive representation due to the exclusion of the remaining 2 funds. The limited sample size may restrict the generalizability of the findings.

These limitations need to be acknowledged when interpreting the results and drawing conclusions from the study. Further research and data accumulation are necessary to overcome these limitations and provide more robust insights into the subject of ESG funds in the Indian context.

References

- Banu, A. A. S., Bhuvaneswari, T. S., & Begum, S. (2021). A Study on The Sustainable Investment Funds with Special Reference to State Bank of India ESG Mutual Fund Schemes. Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12.
- Kiran, V. U., & Tadoori, G. (2021). Market Efficiency of ESG And Traditional Indices - Pre and Post Covid Analysis of NSE Indices. International Journal of Creative Research Thoughts (IJCRT), 9. Retrieved from www.ijcrt.org
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. Journal of Sustainable Finance & Investment, 5(4), 210-233.
- Richardson, B. J. (Year). Financing Sustainability: The New Transnational Governance of Socially Responsible Investment. Yearbook of International Environmental Law.
- Sudha, S. (2014). Risk-return and volatility analysis of sustainability index in India. Environment, Development and Sustainability Journal, 17.
- Sharma, G. D., Tiwari, A. K., Talan, G., & Jain, M. (2021). Revisiting the sustainable versus conventional investment dilemma in COVID-19 times. Energy Policy, 156.
- Mynhardt, H., & I. M. (2017). Market Efficiency of Traditional Stock Market Indices and Socially Responsible Indices: The Role of Sustainability Reporting. Investment Management and Financial Innovations, 94-106.
- https://www.morningstar.in
- www1.nseindia.com
- https://www.economictimes.indiatimes.com