



A Study of Green Finance Expansion, ESG Investment Awareness and Sustainable Finance in India

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Abstract:

Sustainable finance has become a major part of the contemporary financial system as more emphasis is put on the issue of environmental and social responsibility by the governments, financial institutions, and investors. This paper explores the expansion of green finance in India and analyzes the extent of awareness among investors about the ESG (Environmental, Social, and Governance) investment practices and the general development of sustainable finance in the Indian financial market. The increase in environmental issues, risks of climate change, and the world commitments in sustainable development has motivated investors to avoid conventional investment practices in favor of responsible and sustainability-driven financial instruments. The research uses both the descriptive and analytical research approaches in India with the support of regulatory efforts by SEBI, the sovereign green bond, and national commitments like the net-zero emissions by 2070. The trend of green finance instruments like ESG mutual fund, green bonds and sustainability-linked investments within the period 2020-2025 is understood by analysing secondary data on the topic in the form of reports by reliable financial and institutional sources, including NSE, AMFI, RBI, and reports on sustainability-linked investments provided by SEBI. Furthermore, a structured questionnaire will also be used to collect primary data by administering it on individual investors to assess their awareness, perception, and involvement in ESG-based investments. The results indicate that there is a substantial growth in green financial products, institutionalization of interest, and slow increase in awareness among investors, yet some gaps in knowledge and trust still exist among retail investors. The research will help comprehend the changing environment of sustainable finance in India and give insights to the policymakers, financial institutions, and investors to encourage responsible investment practices and enhance the creation of ESG-oriented financial markets.

Keywords: *Green Finance, ESG Investments, Sustainable Finance, Investor Awareness, Green Bonds, Responsible Investing, Sustainable Development in India*

Introduction:

Over the last few years, the world financial market has seen a slow change in the traditional profit maximizing investment policy to more responsible and sustainable investment policy. ESG investing has become a major framework, which combines financial decision-making with consideration of sustainability. Shareholders are becoming aware of the fact that long-term financial stability correlates strongly with environmental conservation, social

responsibility, and proper corporate governance behavior. Consequently, the ESG-oriented investments are becoming increasingly prominent in the financial markets across the world, including the emerging markets like India (Green Finance and ESG Investments in India, 2026).

The increasing focus on ESG investing can be explained by such global issues as climate change, environmental degradation, a lack of resources, and the increase in social inequalities. These challenges have made sustainable

development and responsible corporate conduct significant in terms of sound economic stability in the long term. There is an increasing expectation among businesses that they strike a balance between profitability and being responsible to the environment and society. As a result, sustainability has become a new trend in financial markets where sustainability issues are being included in the investment policy and corporate policy (Green Finance and ESG Investments in India, 2026).

Within the Indian setting, development of green finance has emerged as an important part of national policy in attaining sustainable economic growth. Government of India and other regulatory agencies like the Securities and Exchange Board of India (SEBI) has launched various programs designed to ensure responsible investment practices. Among the major regulatory changes, it is possible to note the adoption of the Business Responsibility and Sustainability Reporting (BRSR) framework, according to which listed companies are required to publish their initiatives and ESG-related practices. These kinds of policy actions should enhance corporate transparency and help to promote the companies to include sustainability in the business strategies (Green Finance and ESG Investments in India, 2026).

Within India, the country has also established ambitious environmental and sustainability aims and targets, such as the aim to have a capacity of 500 GW of renewable energy capacity by 2030 and a net-zero carbon emission target by 2070. To help achieve these objectives, financial instruments in the form of green bonds, ESG funds, and sustainability-linked investments have been introduced in the financial market. These tools direct capital towards environmental-friendly projects like renewable energy, electric mobility, pollution control and sustainable infrastructure. Consequently, green finance has become a significant instrument of attracting

investment into projects that help in protecting the environment and ecologically sustainable economic development (Green Finance and ESG Investments in India, 2026).

The rise of ESG-based financial products is also indicative of the shift towards international standards of sustainability of the Indian corporations. Most companies are integrating the concept of ESG in their corporate strategies, supply chain management and operational practices. This change implies that sustainability is not perceived as a social responsibility practice in the corporation, but it is an approach to strategic level that contributes to the long-term business sustainability and competitiveness.

Although the number of green finance tools and ESG investment opportunities is increasing very fast, there is still a significant question mark concerning awareness and engagement of individual investors. As institutional investors and large corporations are becoming increasingly ESG-driven, retail investors might lack knowledge or awareness of sustainable investment products. Part of investors can view the ESG investing as solely an ethical or social project instead of a financial opportunity with possible long-term profits. Thus, the degree of awareness and perception of investors towards ESG investments turns out as a significant element of sustainable finance development in India in general (Green Finance and ESG Investments in India, 2026).

In that regard, the current study will focus on investigating the green finance growth in India, discussion of the growth in the number of ESG-based investment instruments, and the extent of awareness on sustainable finance among investors. The study is also aimed at knowing the changing trends in the green financial markets and determining the effectiveness of investors in their financial decision-making based on the ESG-based investment strategies. In this analysis,

the research tries to deliver information about the current situation and future sustainability of financial systems in the Indian economy.

Literature of Review:

The increasing significance of sustainable development and environmental responsibility has impacted the financial markets of the world significantly. Green finance and ESG (Environmental, Social, and Governance) investment have become a valuable instrument to encourage environmentally friendly economic development. Some of the scholars have discussed the evolution of green finance, integration of ESG-based investment policies, and the degree of investor awareness regarding sustainable financial instruments.

Zhang et al. (2019) examined the contribution of green finance to sustainable economic development and environmental conservation. Their study pointed out that green financial tools like green bonds and sustainable funds assist in raising capital to environmentally friendly activities and minimizing carbon emission. The research underlined the responsibility of financial markets in the realization of climate-oriented objectives and responsibility in investment.

Friede, Busch, and Bassen (2015) carried out an extensive meta-analysis of the association between ESG performance and corporate financial performance. Their results revealed that well-regarded ESG companies are likely to have improved long-term financial performance and reduced risk levels. The research proposed that the incorporation of ESG factors in investment decisions would offer financial and social advantages to investors.

Sachs et al. (2019) reviewed the history of sustainable finance in the world and its effect on the realization of the United Nations Sustainable Development Goals (SDGs). Their study highlighted that the green finance models are

necessary in financing renewable energy projects, climate reduction projects and development of sustainable infrastructure. Another point that the authors made concerns the role of government policies and regulatory frameworks that support the development of sustainable financial markets.

Kumar and Prakash (2020) examined the development of green finance programs and the implementation of ESG programs in Indian corporations. Their research discovered that regulatory frameworks, government policies and international climate promises have increased the use of green financing tools like green bonds and mutual funds that are ESG-oriented. Nevertheless, the authors also emphasized that the Indian market of sustainable finance is still immature and needs more awareness of investors and institutional involvement.

Chowdhury, Datta, and Mohajan (2013) explored the contribution of green banking and sustainable finance to sustainable development. Their results indicated that financial institutions can also play a key role in ensuring sustainable development by funding environmentally conscious projects as well as encouraging the practice of green investments. The research further highlighted that more environmental policies and financial incentives should be strengthened to facilitate green investment.

Raghuandan and Rajgopal (2021) examined the trends of ESG investment and the growing attention of international investors to sustainable financial tools. Their study revealed that ESG investments are becoming popular because of the rising consciousness of climate change, corporate governance behavior, and social responsibility. The paper also emphasized that sustainability reporting and ESG disclosures enhance transparency and enable investors to make sound investment decisions.

Objectives of the Study:

1. To estimate the increase in the green finance and ESG investments in India over the past five years.
2. To determine the new trends and development in the Indian green finance and sustainable finance industry.
3. To assess the degree of investor awareness and perception in relation to the ESG (Environmental, Social and Governance) investment opportunities in India.
4. To investigate how the green financial instruments including green bonds and ESG mutual funds may be used in encouraging sustainable investment practices.
5. To assess the correlation between sustainable finance efforts and investor engagement into ESG-based investment.

Conceptual Framework:

Green Finance: Green finance is a type of financial instrument and funds generated, intended to sustain the environmentally friendly projects and business activities. It includes loans, investments, and other financial sources that are clearly targeted at environmental protection activities and sustainable development. Green finance can be observed in such investments as renewable energy, sustainable infrastructure, pollution control technology, energy-efficient buildings, and clean transportation. The foremost interest of green finance is not to receive financial benefits but to help defend the environment and to preserve the ecological balance in the long term.

Green finance is an important instrument in ensuring the transition to a low-carbon economy through mobilizing capital to finance environmentally friendly projects. It urges financial institutions, governments and individuals who invest in projects to cut down on carbon emissions and the use of other resources in

a more sustainable manner. Green finance can help in economic development and ensure environmental sustainability through the promotion of green technologies and environmentally friendly infrastructure. As a result, green finance can contribute to the achievement of financial development and environmental responsibility balance.

ESG Investments:

ESG investments are investments in companies that practice responsible standards in the context of environmental protection, social responsibility, and corporate governance. ESG is an abbreviation that means Environmental, Social, and Governance, the three key criteria that are used to assess the sustainability and ethical implication of a firm. The ESG model consists of the following elements:

The three components of ESG include:

- **Environmental:** This dimension evaluates the manner in which an organization deals with environmental impact in terms of energy usage, carbon emissions, and waste disposal as well as natural resources use.
- **Social:** This is the social side that studies how a company treats its employees, customers, suppliers and communities such as labour practices, employee welfare, human rights and corporate social responsibility.
- **Governance:** Governance refers to the system of rules and practices that govern a company including transparency, ethical leadership, accountability, board diversity, and corruption prevention.

ESG investing will provide investors with the tools necessary to address not only financial aspects of performance but also the social and environmental impact of investments. Now investors are using ESG rules to build responsible portfolios that yield financial gain and also provide positive social and environmental impact.

Companies are also rated using ESG ratings/score, which helps investors to gauge sustainability performance.

Relationship between Green Finance and ESG Investments:

The association of green finance with ESG investments can be described as compliments in the wider context of sustainable finance. Green finance is mainly focused on financing projects that have direct benefits to the environment like the development of renewable energy, mitigation of climate change, and control of pollution. On the contrary, ESG investing considers the companies in terms of a broader array of sustainability parameters that involve environmental, social, and governance indicators. Green finance deals with environmental sustainability, whereas ESG investing deals with the overall responsibility and ethical behaviour of organisations.

In that regard, green finance could be regarded as a particular component that facilitates the environmental aspect of ESG. Together, green finance and ESG investments encourage responsible capital investments and encourage companies to be sustainable. The two approaches have a common objective of generating financial returns as they also create preferred environmental and social effects, which in turn support the long-term goal of sustainable economic development.

Research Methodology:

Research Design: The research approach embraced in this study uses both descriptive and analytical design to discuss the growth of green finance, ESG investment awareness, and sustainable finance in India.

Descriptive Research: The attempt is carried out through the descriptive approach to research to explain the present position and evolution of the

green finance and ESG investments in India. It puts emphasis on the description of the development of sustainable financial instruments such as ESG mutual funds, green bonds, and any other green financial project within an Indian market. In addition, the research obtains data on the answers of individual investors to determine their awareness, perception, and involvement in ESG-oriented investments. Primary data is collected using a structured questionnaire which is used to gather data on investors. The results are also achieved by way of convenience sampling, and the questionnaire is spread through a number of avenues like the social media platforms, on-line investor communities and stock-trading platforms.

Analytical Research: To examine the past historical financial data regarding the green financial instruments in India, analytical research method is used. The paper analyzes the performance and rises of the ESG mutual funds, green bonds, and other sustainable financial instruments that have existed over the past years. It also compares the performance of the chosen green equities with benchmark indices, e.g. the Nifty 50 to evaluate their risk-return property and the overall performance of an investment. This analysis will help the researcher to determine trends and patterns in the growth of sustainable finance in India.

Sources of Data:

Primary Data: Primary data will be gathered with a structured questionnaire, the respondents of which will be individual investors, to evaluate perceptions, awareness, and investment behaviour in reference to green financial and ESG investment opportunities.

Secondary Data: The secondary data are obtained in various reputable financial and institutional sources like reports, databases, and publications of various organisations such as the

National Stock Exchange (NSE), the Association of Mutual Funds in India (AMFI), Reserve Bank of India (RBI), SEBI reports, financial journals and research publications. This data is used to examine the growth pattern of green finance instruments and ESG investments in India.

Tools And Techniques To Be Used:

1. Comparative Analysis
2. Absolute Result
3. Compound Annual Growth Rate (CAGR)
4. Line Graph
5. Percentage Analysis

Sample Size:

The sample size of the study is 100 respondents.

Analysis and Interpretation

Important Developments and Current trends in green finance in India.

The development of green finance in India has gained momentum in the past few years because of increased environmental concerns, demand of climate change and the necessity of sustainable growth in economies. Sustainability considerations have gradually become part of financial decision-making processes among the policymakers, financial institutions, and what investors do. A flow of regulatory programs, innovative financial products and new technologies have all strengthened the green finance ecosystem in India. These are some of the notable developments and current trends in the landscape of Indian green finance that are presented below.

The Government presents Sovereign Green Bonds (2023):

As reported by the Reserve Bank of India (RBI), Government of India launched Sovereign Green Bonds (SGrBs) in the year 2023 as a specific financial instrument that aims at funding

environmentally friendly projects. The government spends specially the proceeds of these bonds on other projects like renewable energy, sustainable transport systems, and other climate-resilient infrastructure. The launch of sovereign green bonds is one of the most important milestones in the sustainable finance path of India, which provides an investor with one of the reliable investment tools, at the same time bolstering the national environmental agenda. In addition, they can rely on such bonds to set the pace at which the domestic market of green bonds will grow.

The Indian Carbon Credit Market (2023) Development:

The other major move to strengthen sustainable finance in India is the creation of the Indian Carbon Market (ICM). According to the reports of the Ministry of Power, the government has introduced Carbon Credit Trading Scheme (CCTS) that gives an incentive to industries to reduce their carbon emission. In this scheme, firms that manage to reduce energy consumption or even go a step further to lower the greenhouse gas emissions would be given the carbon credit which could later be traded or sold to other firms that are more emitting. This market-based approach offers business financial incentives to use energy-efficient technologies and practices that are environmentally friendly and sustainable and could contribute to national climate goals.

Establishment of a National Green Taxonomy Framework (2023):

To curb the speed at which green financial products are being developed and the corresponding threat of a greenwash situation, in which companies purport environmental sustainability when in fact, they are not, the Climate Finance Working Group of the Ministry of Finance has developed a Green Taxonomy

Framework. This model defines the kind of economic activity that may be termed as environmentally friendly so that there are explicit criteria and guidelines. The taxonomy helps investors and the financial institutions verify that their investments truly are helping to sustain the environment.

Growing Importance of Transition Finance (2024):

In the past, the main focus of green finance was on those industries which were already environmentally friendly, especially renewable energy and clean technologies. As of late, however, transition finance, that assists in compensating traditional carbon-intensive industries to gradually transition to cleaner technologies, has pre-empted this. The steel industry, cement industry, and the manufacturing industry are the sectors which need heavy financial support to shift to low-carbon production units. In transition finance, energy efficiency, emission reduction and adoption of sustainable production practices is enhanced without hindering the beginning of industrial

growth. This is a very important strategy in balancing the development of the economy and keeping the environment safe.

Integration of Artificial Intelligence and Digital ESG Tools (2025):

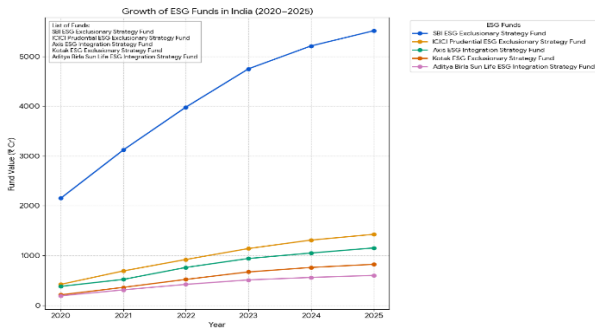
Being among the main issues in sustainable finance, the lack of quality and clear data on environmental performance of firms has been described as a major dilemma. To reduce this gap, fintech companies are progressively implementing the application of the Artificial Intelligence (AI), satellite surveillance, and advanced data analytics to trace and authenticate sustainability claims. The digital ESG technologies allow the investors to determine the reality of environmental actions presented in the ESG Disclosures of companies. These technologies would strengthen investor confidence by improving the quality of data and its tracking features as well as its transparency, reducing the likelihood of misguided sustainability claims in the market.

2 Performance Analysis of Green Mutual Funds:

Table 1: Consolidated Fund-wise AUM Growth (2020–2025)

Fund Name	2020	2021	2022	2023	2024	2025	CAGR
SBI ESG Exclusionary Strategy Fund (₹ Cr)	₹ 2150	₹ 3120	₹ 3980	₹ 4750	₹ 5210	₹ 5514	20.8%
ICICI Prudential ESG Exclusionary Strategy Fund (₹ Cr)	₹ 420	₹ 690	₹ 920	₹ 1140	₹ 1310	₹ 1425	27.7%
Axis ESG Integration Strategy Fund (₹ Cr)	₹ 380	₹ 520	₹ 760	₹ 940	₹ 1050	₹ 1152	24.8%
Kotak ESG Exclusionary Strategy Fund (₹ Cr)	₹ 210	₹ 360	₹ 520	₹ 670	₹ 760	₹ 823	31.4%
Aditya Birla Sun Life ESG Integration Strategy Fund (₹ Cr)	₹ 190	₹ 310	₹ 420	₹ 510	₹ 560	₹ 600	25.9%

$$CAGR = (Ending\ Value / Beginning\ Value)^{(1/n)} - 1$$



The chart shows that the ESG and Green Mutual Fund industry in India has been experiencing consistent and high growth rates in the years 2020-2025. The SBI ESG Exclusionary Strategy Fund is the top candidate in the ranking in terms of Assets Under Management (AUM) as it demonstrates strong investor confidence and dominance in the market. Other schemes like, the

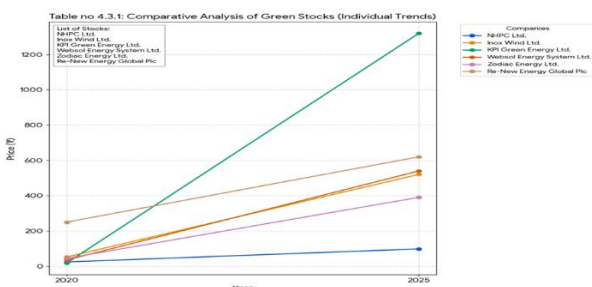
ICICI Prudential ESG Exclusionary Strategy Fund, Axis ESG Integration Strategy Fund, Kotak ESG Exclusionary Strategy Fund and Aditya Birla Sun life ESG Integration Strategy Fund have also demonstrated annual growth in AUM.

The trend of increasing across all funds is an indicator that the investors are gaining interest in sustainable and responsible investment opportunities. Increasing values of AUM and positive CAGR values suggest that investors are progressively investing in the ESG-related funds as the number of people investing in the Indian market through green finance and sustainable investment approaches continues to rise.

3 Performance Analysis of Green Equities:

Table no 2: Comparative Analysis of Green Stocks

Rank	Company	Category	Price in 2020 (₹)	Price in 2025 (₹)	Absolute Return	CAGR
1	NHPC Ltd.	Hydropower & Renewable Utility	24.50	98.40	+301%	31.90%
2	Inox Wind Ltd.	Wind Turbine Manufacturing	52.60	520.70	+890%	58.20%
3	KPI Green Energy Ltd.	Solar Power Generation	18.40	1,320.00	+7,074%	113.20%
4	Websol Energy System Ltd.	Solar Cell Manufacturing	35.10	540.00	+1,438%	71.80%
5	Zodiac Energy Ltd.	Solar EPC & Rooftop Projects	45.20	390.50	+764%	52.80%
6	Re-New Energy Global Plc	Wind & Solar Power Producer	250.00	620.00	+148%	19.90%



The comparative evaluation of the chosen stocks in green energies discloses the high percentage of expansion in the renewable energy

industry between 2020 and 2025. It is found that KPI Green Energy Ltd. reported the most growth of the companies under the analysis with the share price increasing between 18.40 in 2020 and 1,320.00 in 2025, which is a remarkable CAGR of 113.20. On the same note, both Websol Energy System Ltd and Inox Wind Ltd performed well with a CAGR of 71.80 and 58.20 respectively, a positive sign of a buildup in scores of investor confidence in the industry of solar and wind energy. Zodiac Energy Ltd. had a significant

growth with CAGR of 52.80 and NHPC Ltd. experienced reasonably steady growth due to its established presence in the API hydropower industry. By comparison, Re-New Energy Global Plc has documented relatively average growth and a CAGR of 19.90. Overall, the financial

results indicate that the renewable energy companies have produced strong returns within the last five years, and this indicates the increasing potential of the green energy sector in terms of investment in India.

Table 3: Risk vs. Reward – A Comparative Analysis of Green Asset

Asset Class	Representative Instrument	5-Year Absolute Return	CAGR (Annual Growth)	Performance Category
Green Stocks (Aggressive)	KPI Green Energy Ltd.	+7,074%	113.20%	High Wealth Creator
Green Stocks (Growth)	Websol Energy System Ltd.	+1,438%	71.80%	Strong Growth
Green Stocks (Moderate)	Inox Wind Ltd.	+890%	58.20%	Balanced Growth
Green Stocks (Stable)	NHPC Ltd.	+301%	31.90%	Stable Long-Term Growth
Green Mutual Funds (Sector Example)	SBI ESG Exclusionary Strategy Fund	—	20.8%	Suitable for Long-Term Investors
Green Mutual Funds (Diversified)	ICICI Prudential ESG Exclusionary Strategy Fund	—	27.7%	Diversified ESG Growth
Green Mutual Funds (Diversified)	Axis ESG Integration Strategy Fund	—	24.8%	Moderate ESG Growth
Green Mutual Funds (Emerging)	Kotak ESG Exclusionary Strategy Fund	—	31.4%	High ESG Growth
Green Mutual Funds (Balanced)	Aditya Birla Sun Life ESG Integration Strategy Fund	—	25.9%	Stable ESG Investment

The comparison shows that green equity will tend to pay dividends much higher as compared to green mutual funds though with a greater market risk and volatility. The stocks which have exceptionally high CAGR, which include KPI Green Energy, Websol Energy and Inox Wind, are an indication that investors are largely interested in renewable energy ventures. On the other hand, the relatively moderate, but stable growth of ESG mutual funds like SBI ESG Exclusionary Strategy Fund, ICICI Prudential ESG Fund, and Kotak ESG Fund provide diversified portfolios hence making them more acceptable to the long-term investor looking at exposure to sustainable finance with a relatively

lower rate of risk. It was analyzed that green equities are aggressive wealth-creating products, whereas ESG mutual funds are balanced investment products in the ecosystem of green finance in India.

5. Investor Awareness about ESG Investment Opportunities in India:

Table 4: Demographic Profile of Respondents (Sample Size = 100)

Particulars	Category	No. of Respondents	Percentage (%)
Age Group	18 – 25 Years	52	52%
	26 – 40 Years	30	30%
	41 – 55 Years	12	12%
	Above 55 Years	6	6%
Annual Income	Below ₹5 Lakhs	40	40%
	₹5 Lakhs – ₹10 Lakhs	28	28%
	₹10 Lakhs – ₹20 Lakhs	20	20%
	Above ₹20 Lakhs	12	12%
Occupation	Student	38	38%
	Salaried Employee	34	34%
	Business / Self-Employed	28	28%

The demographic analysis shows that most of the respondents (52%) are in the age category of 18-25, then 30 percent in the age category of 26-40, which shows that young people form a huge percentage of potential ESG investors. The percentage of respondents who are older than 55 years is low and this indicates that relatively few senior investors are engaged in discussion on sustainable investment. However, as far as annual income is concerned, the biggest segment of the respondents (40%) have incomes below 5 lakhs with 28 per cent falling in the 5-10

lakh income category. This implies that many ESG-conscious investors may fall into the middle-income bracket. In terms of occupation, students represent the biggest segment (38%) and second comes salaried employees (34%), and thirdly business or self-employed people (28%). It means that awareness regarding the ESG and sustainable opportunities in investing is increasing especially among the younger and educated population that are more likely to be responsible in investment opportunities in the future.

Table 5: Awareness Level of “Green Finance” & “ESG Investment” (Sample Size = 100)

Category	No. of Respondents	Percentage (%)
Yes, I know it well	28	28%
I have heard the name but don't know details	46	46%
No, never heard of it	26	26%
Total	100	100%

The information reveals that 28% of respondents have a clear knowledge about Green Finance and Green ESG investments, indicating the average awareness among investors. A higher percentage of 46% have heard about ESG and Green Finance but they do not know much about

it, which means that knowledge of it is not that developed. However, 26 percent of them have never heard these concepts, which indicates the need to invest more in the financial education and awareness activities related to sustainable and responsible investment in India.

Table 6: Source of Awareness Regarding ESG / Green Finance (Sample Size = 100)

Source of Information	No. of Respondents	Percentage (%)
Social media / Internet	38	38%
Newspapers / TV News	18	18%
Friends / Family	16	16%
Bank Officials / Advisors	14	14%

Never Heard of it	14	14%
Total	100	100%

It is indicated in the table that social media and internet platforms are the most common tools of creating awareness about ESG and Green Finance, and it includes 38 per cent of the respondents. Conventional media, which includes the newspapers and the television news, also gives a contribution of 18 per cent meaning that the traditional information sources are still part in creating awareness. Moreover, 16% of the

respondents acquired knowledge by way of friends or relatives whereas 14 percent informed themselves by bank officials or financial advisors. Nevertheless, 14 0-percent of the respondents stated that they have not heard about ESG or Green Finance, which reflects the necessity to conduct more educational awareness campaigns and provide educational programs to attract sustainable investment opportunities in India.

Table 7: Barriers to Investment in ESG / Green Finance (Sample Size = 100)

Barrier	No. of Respondents	Percentage (%)
Lack of Knowledge / Awareness	36	36%
Fear of "Greenwashing" (Fake Environmental Claims)	24	24%
Fear of Lower Returns	22	22%
Lock-in Period is too long	18	18%
Total	100	100%

The analysis shows that estimation of the knowledge and awareness on ESG and green finance is the biggest obstacle, with 36 % of the respondents indicating so. This indicates that sustainable investment opportunities are still unknown to many potential investors and they need to be educated on the topic of sustainable investment in an in-depth manner. The other significant issue is the fear of greenwashing, in which one-fourth of the respondents are concerned that organizations might pretend to be

environmentally responsible. Moreover, 22 per cent of the respondents worry about the lack of potential lower financial returns when using the traditional investments. Finally, 18 per cent. of the participants are of the opinion that the lack of some green investment instruments is excessive thereby holding them back to invest. The results show that the problem of increasing investment in India in relation to green finance can only be increased by improving investor education, transparency, and trust on ESG investments.

Table 8: Investor Choice (ESG Fund vs. Normal Fund) if Similar Returns are Offered (Sample Size = 100)

Preference	No. of Respondents	Percentage (%)
ESG Fund (Green Investment)	56	56%
Normal Fund	24	24%
Indifferent (Don't Care)	20	20%
Total	100	100%

The data indicates that sensitivities of the respondents are to favor ESG or green funds when financial returns are like those of normal mutual funds, and this shows willingness of the

investors to embrace environmentally friendly and sustainable investment vehicles as long as profitability is not lost. Meanwhile, 24 percent of the respondents are in favor of traditional mutual

funds perhaps because they are familiar with them as such or they perceive them as being stable. Moreover, 20 percent of the participants have no preference of ESG and normal funds and this may indicate that they base their investment choices largely on financial outcomes and not

sustainability aspects. The findings suggest that the investors have a favorable tendency towards ESG investments in India if these funds can provide the investor with good returns as compared to the traditional investing opportunities.

Table 9: Sector Potential & Investor Trust (Sample Size = 100 Respondents)

Parameter	Category / Option	No. of Respondents	Percentage (%)
High Growth Sector	Renewable Energy (Solar/Wind)	34	34%
	Electric Vehicles (EV) & Batteries	22	22%
	Waste Management & Recycling	18	18%
	Green Real Estate	8	8%
	I Don't Know / Unsure	18	18%
Most Trusted Authority	Government / SEBI Ratings	40	40%
	Independent Agencies (CRISIL, etc.)	30	30%
	Bank Manager / Advisor	18	18%
	Company's Own Annual Report	12	12%
Total		100	100%

The data shows that renewable energy (solar and wind) is considered the most promising area in green investment where 34 percent of the respondents selected it as a high-growth area. The next in line is electric cars and battery technology (22%) which is also an indication of the rising significance of green transportation solutions. Waste management and recycling (18%) are also considered significant areas of environmental sustainability as well. When it comes to investor trust, a significant proportion of respondents (40%) uses government or SEBI ratings to determine the credibility of ESG investments. Professional financial assessments are, therefore, important to the extent that independent rating agencies like CRISIL have a share of 30%. Only a smaller percentage of investors rely on bank advisors (18%) or annual reports of the company (12%) when making ESG investment decisions. The results indicate that renewable energy is the most important sector of green finance, and

regulatory bodies and independent rating agencies are important to establish investor trust in ESG investments.

Findings:

From Market Data:

1. KPI Green Energy, Inox Wind, Websol Energy Systems and NHPC Ltd. are among the stocks of green energy that have experienced substantial growth within the last 5 years. There were few companies that registered very high returns; among these was KPI Green Energy where the interest of investors in the renewable energy sector was high. Nonetheless, these stocks are very volatile and therefore they present a lot of risk to the conservative investors.
2. Some of these ESG mutual funds, including SBI ESG Exclusionary Strategy Fund, ICICI Prudential ESG Fund, Axis ESG Integration Strategy Fund, Kotak ESG Fund and Aditya

Birla Sun Life ESG Fund have been shown as being growing steadily in terms of assets under management (AUM) since 2020 to 2025. Their performance is average compared to individual green stocks, but their investment offers are more stable and diversified.

3. The comparative analysis reveals that green equities tend to produce higher returns than ESG mutual funds, however, they are also riskier. Conversely, ESG mutual funds are the investors who are more interested in long-term returns and desire more balanced development and reduced volatility.

From Investor Survey:

1. The demographic analysis includes several examples of the respondents aged 18-25, and it can be concluded that younger investors are more attracted to the opportunities of sustainable and environmentally friendly investment.
2. A big percentage of the survey respondents are aware of Green Finance, and ESG investments, yet a relatively high percentage lacks finer details concerning these ideas. This implies that there is more awareness of the same, however, with limited financial insights.
3. The primary sources of awareness regarding ESG and green finance are social media and the internet, and the traditional sources of information that include newspapers, financial advisors, and banks have a relatively lower influence.
4. Lack of in-depth information and fear of greenwashing are the key factors that discourage the investors from investing their money in ESG funds. A significant section of the investors expresses worries that companies can issue false claims of being good custodians of the environment.

5. In cases where similar returns can be achieved financially, a major percentage of the investors will use ESG mutual funds as compared to the traditional ones, hence indicating a positive attitude towards sustainable investment.
6. According to happenings mentioned in respondent data, renewable energy, in particular the solar and wind industry, is seen as having the highest growth opportunities. Besides, the respondents show the highest trust in the rating carried out by government or the Security Exchange Board of India (SEBI) and independent rating agencies, which can be used to check the authenticity of the ESG investments.

Suggestions Of The Study:

1. The study shows that many investors of familiarity between investors and green finance and ESG investment vehicles are very basic especially among the younger demographics. Therefore, there is an essential need to have financial organizations, educational institutions, and governmental agencies organize awareness, plenary meetings, webinars and digital campaigns to improve investor literacy, especially in semi-urban and rural areas.
2. Since the confidence of investors in governmental and regulatory agencies like SEBI is much greater, it would be necessary to strengthen a formal certification process and regulation systems on green funds, green bonds, and ESG investments. This kind of reinforcement will allay the concern of greenwashing and investor trust of sustainable financial products.
3. Introduction of digital technologies, such as fintech platforms and artificial intelligence, has potential of improving transparency in green finance. Such technologies help to track

the environmental performance and verify the practical implementation of sustainable practices of various firms, which enhance investor confidence.

4. The capital allocation is controlled by institutional investors (pension funds, insurance corporations, large financial institutions, etc). Policy tools and incentives by the government must hence move these parties towards investing a larger percentage of funds to be invested in sustainable and green investments thus catapulting the growth of green finance in India.
5. It is recommended that investors should diversify their sustainable investment portfolio with addition of green bonds, ESG mutual funds, carbon credit markets and renewable energy funds. As a risk management strategy, diversification is effective and at the same time, facilitates the long-term environmental and economic sustainability goals.

Conclusion Of The Study:

In India, green finance is increasingly becoming one of the central elements of financial and environmental development policy. Through market-data studies, it is shown that the returns provided by green energy firms such as KPI Green Energy, Inox Wind, Websol Energy Systems, and NHPC Limited have been quite strong in past years, a fact that shows the rising potential of green investment checkpoints. At the same time, ESG mutual funds including Zegra SBI ESG Exclusionary Strategy Fund and the ICICI Prudential ESG Fund have demonstrated high asset under management growth, which provides investors with diversified and relatively stable investment options. According to the survey data, younger investors present a strong tendency towards sustainable and environmentally conscious investments,

especially in the area of renewable energy sources and electric vehicles. However, the study also reveals large knowledge gap, many investors are very simple in their understanding of the green finance and concept of ESG investment. The issues (related to greenwashing and lack of transparency) remain significant discouraging factors that make people unwilling to be actively involved in green investment activities.

Another interesting point is that, when determining the credibility of ESG-related investments, investors will put more confidence in regulatory institutions, like the Government of India and SEBI, than in the corporate claims. This result highlights the need to have stronger regulatory systems, clear reporting rules, and secure certification systems of green financial products.

Overall, the research hypothesizes India has significant potential of developing green finance based on the increased environmental awareness, growing renewable energy markets, and growing number of investors. The sustainability of this industry in the long term, however, will be determined by the fact that investor education will be improved, regulatory tools strengthened, and transparency in ESG reporting can be guaranteed. Overcoming these issues will allow green finance to be a key factor in advancing the economy of India towards the sustainable economy alongside environmental preservation.

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