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Research Paper

Sustainable Finance And Green Finance

Farhin Firdose M[1] and Nithin P
Assistant Professor, Aditya Institute of Management Studies,
Aditya Institute of Management Studies,

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Corresponding Author:
Farhin Firdose M.

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ABSTRACT

There were days when organizations only aimed towards profits. Nowadays, the urge of protecting the environment and preserving natural resources is acquiring more importance in all fields. Researchers have been conducted all over the world to find innovative ideas to attain the purpose of sustainability. Green finance and sustainable finance is defined as the advisory assistance provided for the projects that mainly deals with environmental protection, reduction the effects of climate change, financing in renewable sources of energy, increasing the green cover, and all other projects associated to sustainable development. This article evaluates the features of Green Banking, Green Insurance, and Green Bonds as a part of Green Financing. It also reflects the opportunities and challenges for Green Finance in evolving countries like India with the help of current literature and efforts to give awareness about Green Finance as an productive tool of Sustainability. This paper examines the history, philosophy, and machinery of sustainable and green finance with the focus on promoting responsible investments and promoting corporate accountability. We study the policy and market instruments that foster growth in green bonds, sustainable loans, and impact investments. In addition, this paper looks into the main roles of international organizations and financial institutions in developing best practices, curbing greenwashing, and transparency. The results indicate tremendous promise in mobilizing the significant amount of capital toward sustainable and green finance projects aimed at achieving the United Nations Sustainable Development Goals and Paris Climate Agreement. Besides demystifying the barriers, the study is informative regarding how sustainable and green finance can become a powerful tool to create a resilient and sustainable world economy.

1. Introduction

The 21st century is witnessing historic trends in environmental challenges such as climate change, loss of biodiversity, and resource depletion. As their consequences become more evident, the call for sustainable practice across all areas, especially finance, has gained momentum. Sustainable finance refers to financial services where ESG criteria are integrated into business or investment decisions. Green finance is a subset of sustainable finance targeted at projects and investments with positive impacts on the environment. The need of protecting the environment and preserving natural resources is getting more attention among all the stakeholders because of increase in the problems like ozone layer depletion, global warming, increasing pollution levels, cut-throat competition for scarce non-renewable sources of energy, and other environmental issues. Green finance intends to create a balance between nature and economics. Though there is no clear cut definition for Green finance, any monetary assistance provided for projects with the major aim of contributing to sustainability like the construction of green buildings, efficient management of energy, waste management, preservation of biodiversity, projects related to renewable sources of energy and other related projects can be termed as Green financing. Public sector investments are not sufficient to meet the requirements under these projects. Initiatives from the private sectors and cross-border investments should be encouraged to meet the rising demands. At the same time, regulatory framework and proper policy actions are required to address the problems related to fundraising and the application of those funds. Unfortunately, funding of renewable energy generation, energy efficiency management, and green investment products are not given priority because of limited awareness, subsidies given to fossil fuel in various countries, the bias of

[1]*Author can be contacted at: Assistant Professor, Aditya Institute of Management Studies*

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low returns fear of breach of trust, and mismanagement of funds invested, and other such reasons. Finance and Environment are treated as two separate domains and are no proper actions are taken to integrate this approach. The 2015 Paris agreement has considered the financial aspect as one of its three long-term goals along with others being limiting the rise of global average temperature and increasing the ability in adapting to the impacts of climate change. Measures are needed to integrate these two aspects through international agreements, policy actions, and bringing them under the proper regulatory framework. In this article, attempt has been made to evaluate the role of Green Financing as an effective tool of Sustainability and the various opportunities available and challenges that arise while integrating the approaches of Finance and Environment in India.

2. Literature review

Sustainable finance is a broad category of financial services making a point of sustainability. It ranges from investments in the respect of ESG factors, lending techniques that hold or promote sustaining projects, and developing financial products aimed at stimulating sustainable development. Relevance of Sustainable Finance Sustainable finance is said to reroute capital flows toward sustainable initiatives hence, promoting economic growth without causing further environmental destruction. Green finance is a rather more niche area of sustainable finance, in which investments are made with the purpose of supporting environmental sustainability. Thus, funding renewable energy, efficiency improvement, and conservation in agriculture, resource conservation, and other ends that support environmental concerns can be named. Obviously, they play a very significant role as it fights climate change and pushes the transition towards a low-carbon economy forward.

Importance of Sustainable and Green Finance

Such financial arrangements play an imperative role in the reduction of emission of greenhouse gases by channelling capital to low-carbon technologies and sustainable practices for climate change mitigation. Sustainable finance is said to foster economic resilience for more sustainable projects enhancing environmental sustainability, social equity, and economic stability

ESG Criteria

The implementation of ESG criteria within decision-making in finance is very crucial for sustainable finance. It enables investors to check upon sustainability and ethical impact attached to any investment.

The three constituents of ESG are:

Environmental: This refers to the issues such as carbon footprint, resource depletion, waste handling, and disposal, as well as biodiversity.
Social: It includes labor practices, community engagement, respect for human rights, and consumer protection.
Governance: This aspect encompasses practices relating to corporate governance, transparency, and accountability.
UN Sustainable Development Goals (SDGs)The United Nations Sustainable Development Goals established a framework in 2015 consisting of the 17 SDGs-the objective to address poverty, inequality, climate change, and degradations of environment and more. Sustainable finance can play an indispensable role in the attainment of such goals by aligning investments toward achieving the SDGs while promoting responsible business practices.

The Paris Agreement

The Paris Agreement of 2015 sets global commitment to limit global warming to well below 2 degrees Celsius. Sustainable finance becomes key for mobilization of capital required towards the achievement of targets developed in this framework. The institutions involved in the financial sector now realized that their portfolios should align with climate goals and, therefore started developing climate finance initiatives.

The Principles for Responsible Investment (PRI)

The PRI is a global network of investors working together to understand the investment implications of ESG factors. It provides a framework for including ESG considerations in investment decision-making and ownership practices. Signatories commit to six principles that focus on responsible investment by integrating
ESG issues into investment analysis and decision-making; active ownership; and promotion of an appropriate level of ESG disclosure among other issues.

Green Bond Principles (GBP)

GBP provides a voluntary set of principles meant to deliver transparency and integrity in the green bond market. It gives the guiding framework for issuers in developing green bonds and remains a tool that investors use in analyzing their investments' environmental exposures. In other words, it details four core elements: use of proceeds, process for project evaluation and selection, management of proceeds, and reporting.

Current landscape of sustainable finance

Market Trends

The last decade has witnessed significant growth within the sustainable finance market. As for this growth, GSIA reported an increase in global sustainable investment to reach \$35.3 trillion as of 2020, doubling 2018's increase by 15%. Movement like this is as a result of growing concern with climatic risks, ever-increasing regulatory pressure, and shifts in consumer preferences. ESG investing has fueled several financial products such as green bonds, ESG funds, and sustainable indices.

Innovating Sustainable Finance

Sustainable finance include green bonds, sustainability-linked loans, and impact investing. Green bonds represent debt purely set aside for financing environmentally friendly projects. Sustainability-linked loans will link the cost of borrowing to the borrower's sustainability performance. Impact investing seeks to generate measurable social and environmental benefits over a backdrop of financial returns. Other emerging fintech solutions further being used in sustainable finance include connecting platforms for investors with green projects.

Regulatory Frameworks

This will also be a key driver in the sustainable finance landscape-the regulations like EU Sustainable Finance Disclosure Regulation (SFDR) and Task Force on Climate-related Financial Disclosures (TCFD), for example, mandated standards for greater transparency and accountability in sustainable finance, thus fostering a culture of responsible investing through forcing financial institutions to declare their ESG practices and risks. Central banks and financial regulators are also getting more into climate-related risks in their supervisory frameworks.

Global Initiatives and Collaborations

Global initiatives and cooperation are further fostering the growth of sustainable finance. Platforms bringing together different actors to share best practices, develop standards, and mobilize capital toward sustainable development include the Climate Finance Partnership, Coalition of Finance Ministers for Climate Action, and Sustainable Banking Network. Most of these initiatives bring harmony to various regional and sectorial approaches toward sustainable finance.

3. Research methodology

The research paper is descriptive in nature. The data is collected from secondary sources collected through published sources such as reports, journals, research articles, and websites. Meaning of Green finance: Green Finance is an effective tool through which balance between the economy and the environment can be achieved. Further, it is all about funding or providing monetary assistance for projects and programs that are aimed towards sustainable development. Meaning of sustainable development: It involves all the efforts made to achieve harmony between the development and environmental aspects. This concept aims at protecting natural resources so that future generations will derive benefits from them.

4. Green finance as an effective tool to sustainability

Green financing through funding the projects which aim at achieving sustainable development helps in creating harmony between the environment, finance, and development. Thus it helps in protecting the natural resources, encourages using of renewable energy resources, and thus attempts to reduce the exploitation of the environment by the human beings. Hence it works as an effective tool to attain sustainable development goals Areas covered by Green Finance 5.1 Green Banking It deals with encouraging eco-friendly practices with the help of banking activities. Green banking helps in the protection of the environment and thus contributes to the welfare of nature and the financial sector. It operates by integrating technological improvements, changing stakeholders' expectations, and operational innovations. The Indian banks providing green banking services to their customers are State Bank of India, Punjab National Bank, Bank of Baroda, Canara Bank, ICICI Bank Ltd, DFC Bank Ltd, Kotak Mahindra Bank, Induslnd Bank, YES Bank, HSBC Group, IDBI ,etc. The various practices used as a part of green banking are listed in the below table

Sl.no	Areas covered	Explanation
1	Online Banking	Providing banking services to the customers with the help of internet. Encourages paperless and cashless transactions.
2	Green mortgage	The mortgage provided for the purchase of a green building or for renovating the already built building to green building
3	Green home equity loan	The Loan provided to purchase install energy-efficient equipment at home
4	Home office conversion loans	Loans to create working place at home and start home working
5	Green car loan	offers less interest rate for purchase of non to low emission vehicles
6	Green credit cards	Every time the cardholder makes the payment, a certain percentage of the amount is deducted and used for environment-friendly projects
7	Energy-efficient loans	Loans for efficient management of energy
8	Alternative fuel Vehicle and Fuelling Infrastructure loans.	Incentives and loans provided to the conversion of existing vehicles to cleaner and efficient fuels

Green Insurance The Insurance industry is a member of the family of Green financial sector, and thus plays a major role in attaining sustainability goals. Although the insurance industry hasn't been involved directly in environmental degradation and has nothing to do with framing regulations regarding these issues, it works as the backbone for green financing by providing information related to risk management and significantly lowers the risk involved with its various strategies and its business of underwriting.

Green bonds

Here the issuer of the bond promises to utilize the proceeds from the bond in the funding of energy-efficient products, reforestation, climate-related projects, and other assets or business activities aimed at the protection of the environment. A balanced approach is needed which considers the proper allocation of funds in eco-friendly projects and at the same time, it has to consider the risk and return involved with the bonds. Green bonds help the issuing company or financial institution in enhancing its goodwill among the stakeholders and helps in getting access to the investor base who are determined to invest only in green investment products. At the same time, it helps those investors who want to invest in socially responsible projects and thus satisfies their urge to integrate investment and social responsibility. Green bonds were first issued by the European Investment Bank and the World Bank in the year 2007. Later, private companies, banks, and financial institutions started issuing green bonds. Securities and Exchange Board of India (SEBI) has issued guidelines for listing and issuing of these debt securities in India. As per SEBI guidelines, the proceeds of such bonds should be invested in green projects including renewable energy, initiatives of climate change action, preserving biodiversity, reducing pollution levels, management of waste, etc

5. Benefits of green finance

Not only the environment but also the economy will get benefits from Green finance. It helps in bringing harmony between the monetary aspect and nature. The various benefits offered are

1) Efficient energy management: Various incentives are provided for installing and using renewable energy resources and funding is provided for projects aimed at reducing wastage of energy under Green financing. Thus efficient energy management can be achieved.

2) Environmental protection: As the major aspect of green financing is the funding of the projects aimed at sustainable development, environmental protection is an integral part of the funding. Thus this concept will help in reducing pollution levels, adapting to climate changes, mitigating depletion of the ozone layer , preserving biodiversity, etc which are very much needed for the survival of living organisms.

3) Enhances reputation: Since the increasing number of stakeholders wants to contribute to society through their investments and thus to perform their social responsibility work they will be giving priority to the companies that work towards benefiting the environment. Even the government provides incentives for eco-friendly projects. Hence green financing will help the organizations to build and enhance their reputation in the long run.

4) Helps in attracting FDI: Concerns about the protection of the environment are rising across the globe. As a result foreign investors while investing in domestic companies will evaluate the projects taking into consideration the social cost and the benefits. Thus issuing green investment products will attract foreign direct investment to our country.

Limitations of green finance

1) Ambiguity regarding definition: There is no standard uniform definition for green finance. It will become difficult for investors to choose the right green projects as there is no clarity regarding the definition, which will lead to confusion, and thus it works as a barrier for investment in green projects.

2) No proper regulatory framework: There are no specific laws, rules, and regulations related to the evaluation of green projects and there exist no particular policy actions regarding green investment. This regulatory gap acts as a hurdle for the growth and development the green investment.

3) Lack of awareness: Though certain groups of people are opening up to eco-friendly investments, there exist a large number of stakeholders who are not aware of the concept of green finance itself. The lack of information and awareness will result in less capital accumulation in green investment products than required. This will lead to an imbalance in terms of demand and supply of funds.

4) Give rise to the unhealthy competition: The market participants will take unfair advantage of the growing demand for green investment products and try to maximize their market share by using the name of green projects. This will lead to unhealthy competition and ultimately ignores the concept of sustainable development, for the sake of short term economic profit.

6. Challenges and opportunities in sustainable finance

Challenges

However, despite the growth of sustainable finance, several challenges persist:

Lack of Standardization: Lack of universal definitions and standards for sustainable finance leaves space to confusion, and greenwashing-a situation where companies exaggerate their environmental credentials.

Availability and Quality of Data: To carry out proper decision-making, the ESG data should always remain reliable and comparable. Other limitations include lack of standard reporting frameworks and inferior quality of data, which may deter investments in more sustainable projects.

Regulatory Uncertainty: The changing landscape of the rules may be seen as causing uncertainty for financial institutions and investors. Clear, consistent, and supportive regulation is also important to guide sustainable finance practices properly.

Market Fragmentation: Sustainable finance markets are typically fragmented, and different practices and standards are present in regions and sectors. This fragmentation limits the scalability of initiatives in sustainable finance and may prevent entry by new investors.

Short-term focus: most investors, that is, focus on short-term returns on finances rather than long-term sustainability objectives. This short-termism affects the sustainability impact potential of finance and thus keeps most economies far from a smooth transition toward a more sustainable economy.

Opportunities

Despite all these challenges, the future for sustainable finance growth is bright:

This, therefore, increases awareness on the environmental and social issues hence also boosting the demand for sustainable investments. Financial institutions, therefore, have a need to innovate in their product development to meet the ever-increasing demand.

Advancement in Technology: Fintech and other digital mediums increase sustainable finance accessibility by enabling investors to meet with green projects while increasing reporting transparency.

Public-Private Partnerships: Organizations within both the public and financial sectors combine to mobilize funds for sustainable projects. This can be done by combining resources and expertise toward crucial issues with potential impact.

ESG Integration into Core Finance: As the ESG consideration factors increasingly become part of mainstream decision-making in traditional finance, it is then within the category of making sustainable finance a way of life throughout the industry.

Global Initiatives and Commitments: International agreements, such as the Paris Agreement and the UN SDGs, outline a collective action plan for sustainability. Such commitments create an enabling investment environment for sustainable initiatives and facilitate cooperation among stakeholders.

7. Suggestions and recommendations

1) Creating awareness among the general public: Government, banks, financial institutions, and business organizations should come forward to create awareness about the need of protecting the environment and about the wide variety of green investment products available. Technology should be combined with finance to come up with innovative products that attract investors and at the same time contributes to the development of the environment.

2) Developing a proper regulatory framework: The proper regulatory framework is needed to evaluate the projects related to green finance and to protect the interest of the investors. The regulating authorities have to ensure that funds raised for each project are to be used for the intended purpose only.

3) Separate laws to be passed to regulate the misuse of funds: Strict laws need to be passed to punish those market participants who are taking unfair advantage of the growing demand for green projects. The law should also concentrate on the use of raised funds. In case of violation of guidelines, proper actions have to be taken.

4) Providing support to research: Initiatives to be taken to encourage research in the field of green financing which will combine the technological developments with the financial sector and thus helps in bringing out the innovative green investment products, efficient green projects, and proper policy actions needed for full development and the growth

Strengthening Regulatory Frameworks

Governments and regulatory bodies should bind themselves to a clear, well-defined consistent rules with sustainable finance. This includes harmonization with standardized definitions, reporting frameworks, and disclosure requirements so that transparency and accountability are achieved.

Education and awareness

Raising investor, financial institution, and public awareness about sustainable finance becomes essential. Education enlightens awareness; thus, the stakeholders should be informed of the importance of embedding sustainability within their financial decision-making processes.

Innovation in financial products

Promote innovation in the development of products that finance sustainability. Promote growth in the supply of green bonds, sustainability-linked loans and other impact investment opportunities.

Enhance Data Availability and Quality

Promote improvements in the availability and quality of ESG data, including through standardized reporting frameworks and cooperation among data providers, financial institutions, and regulators.

Foster Cooperation and Collaboration

All the stakeholders- governments, financial institutions, NGOs, and private sector - will thus need to harmonize actions in developing sustainable finance. This will result in knowledge and experience sharing and resource mobilization and best-practice building.

8. Conclusion

Sustainable finance and green finance are important parts of this transition towards a more sustainable and resilient global economy. These financial mechanisms can significantly contribute to investments in sustainable projects that are mitigating climate change and bringing along social equity through the integration of environmental, social, and governance components in the financial decision-making. Opportunities for growth and innovation exist in great proportions due to sustainable finance, regardless of the various challenges. This is also in regards to further tightening of regulatory frameworks, education, and collaboration amongst stakeholders. Sustainable development is the need of the day, green financing being an effective tool of sustainability is gaining more importance in the present scenario. Investors are thinking beyond risk and returns, they are becoming more and more responsible towards society. Raising awareness about the need of protecting nature and increased funding of green projects has opened a wide variety of opportunities in the area of green finance. Policymakers, researchers, environmentalists, government, investors, and financial institutions have to work together to clearly define the concept of green finance. A Proper regulatory framework has to be set to evaluate the green projects and thus to ensure that investors are not cheated in the label of green. India being a developing country should concentrate on renewable energy generation, protecting natural resources, efficient energy management, climate adoption, and other ecological issues with the help of green financing. Thus, it can be concluded that green finance if properly managed will work as an effective tool for sustainable development

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