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GREEN BONDS: SUSTAINABLE FINANCING PRACTICES IN INDIA

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ABSTRACT

Preserving our planet's environment has risen to the top of today's global priority list. Each nation has begun taking deliberate steps in this direction, however large or small, and has also cooperated with others to protect the planet's temperature and environment. Corporations are shifting their attention to greening the business process as a means of providing environmental viability. The same holds true for the financial sector, where ecological concerns have become central to the role of financial administration. Green bonds have been issued by a variety of Indian institutions beginning with Yes Bank in 2015. The energy industry is the primary target of the bonds. In order to reduce its carbon footprint, India has set ambitious goals, including expanding its use of green energy and boosting its efficiency. Green bonds have many positive social impacts, including promoting climate justice and ecologically friendly development. As the Indian government commits more resources to renewable energy and environmental protection, the country's green bond issuance is expected to rise and play an increasingly important role in India's sustainable growth. The paper makes an effort to describe the features of green bonds that make them a practical option, especially in the Indian setting. Additionally, the paper examines the present policy landscape and makes suggestions for further developing India's green bond market.

Keywords: *Green Bonds, India INX, Sustainable Finance.*

Introduction

Our planet's environment is in dire need of rescue at this point. Each country has started taking active steps in this direction, no matter how big or small, and is working together with others to prevent further damage to the climate and the planet. Because of this, green bonds have emerged as a novel way to put money to work. Green bonds, as the name implies, are debt instruments issued to fund or refinance initiatives that benefit the environment and the climate. The term climate bond is another name for these financial commitments. “After the Paris Agreement in 2007, the World Bank initiated the issuance of green bonds, and by 2023, it is predicted that the global yearly issuance of green bonds will reach up to US$1 trillion”(International Finance Corporation, 2022). After China, India is the biggest developing market for environmentally friendly bond issuance. In the current economic climate, green projects enjoy a lot of attention and support, and this is proving to be a winning formula for luring foreign investors. For India in particular, achieving carbon neutrality will require massive investment in green bonds—roughly US$ 10 trillion. However, green bonds are an improvement that helps both buyers and the environment. “Sovereign green bonds will be issued as part of the government's total market borrowings in the Union Budget for 2022-23 to mobilise resources for green infrastructure”(Press Communique, 2022). In order to lower the carbon intensity of the economy, the government plans to invest the money it receives from the sale of green bonds in ecologically friendly and long-term projects. In contrast to the long history of corporate green bond issuance, sovereign green bond issuance is a more recent occurrence. Poland released the first-ever green sovereign bonds in 2016. “Sovereign green

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bonds have been issued by 25 nations as of June 2022. Singapore is the country that just recently released a sovereign green bond in 2022. By 2030, the Singaporean government plans to have issued S$35 billion in national and public sector green bonds. With USD 95 billion issued in green bonds, 2021 was a banner year for emerging economies"(International Finance Corporation, 2022). Among developing countries, India issued the second-most green bonds after China. In 2015, YES Bank issued India's first green bond, marking the country's entry into the global green bond market and paving the way for future sustainable energy financing, especially in the wind and solar sectors. Green masala bonds were used for the issue. Public sector organizations, state-owned commercial banks, state-owned financial institutions, corporations, and banks have all joined the growing green bond market. As India strives to meet its climate change obligations under the Paris Agreement, the use of green bonds is anticipated to increase. By 2030, India plans to have 40% of its power come from renewable energy sources rather than fossil fuels. Green bonds can help the nation finance the massive investment in renewable energy and energy-efficient infrastructure that is needed to meet this goal. In an effort to shed light on why green bonds are a viable option, this study focuses on the conditions present in India. The paper also provides an analysis of the present policy conditions and suggestions for expanding India's green bond market.

Theoretical Framework

A green bond is a type of debt instrument issued to raise money for the purpose of funding environmentally friendly initiatives. In the context of finance, green bonds designate a subset of fixed-income financial assets that prioritize environmental and climate change concerns. Green bonds are issued to fund large-scale, capital-intensive efforts to enhance or preserve the natural planet. "According to International Capital Market Association (ICMA) Green Bond Principle (GBP), there are four components of Green Bonds as shown in Figure 1.

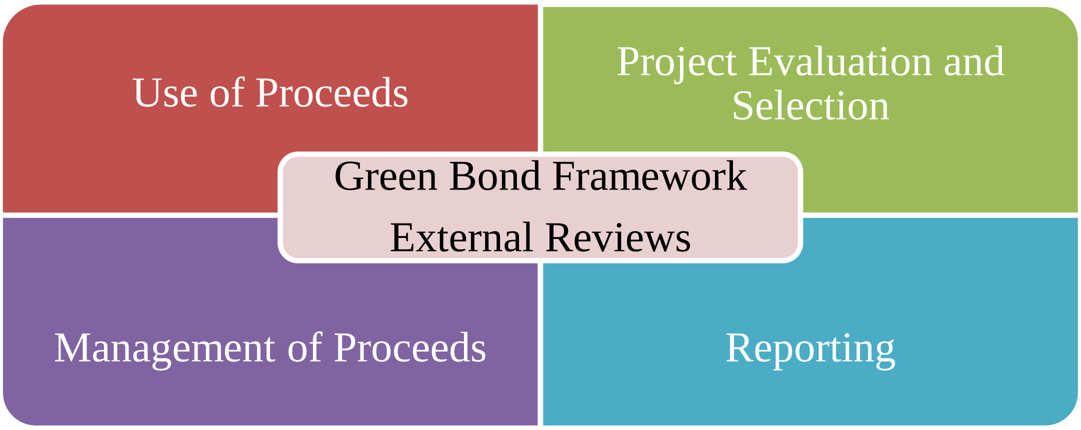

Figure 1: Components of Green Bond

The first component signifies that, to be considered a Green Bond, the security's governing documents must specify that the bond's proceeds will be used for eligible Green Projects. The issuer should evaluate and, whenever possible, quantify the environmental benefits provided by all eligible Green Projects. The eligible green projects category includes:

- Renewable Energy
- Energy Efficient
- Pollution prevention and control
- Environmentally sustainable management of living natural resources and land use
- Terrestrial and aquatic biodiversity
- Clean Transportation
- Sustainable water and wastewater management
- Climate change adaptation
- Circular economy-adapted products, production technologies, and processes
- Green buildings

The second part of this framework centers on the issuer's disclosure to investors of the project's environmental sustainability goals, the issuer's assessment of the project's eligibility, and any supplementary material regarding the identification of investors' perceived environmental risks. Thirdly, the issuer must transfer the proceeds of the bonds to a separate account and establish and maintain an internal process that formally links the issuer's lending and investment operations for eligible Green Projects to the tracking of the Green Bond's net proceeds. Finally, the annual report should detail the use of Green Bond proceeds, including a list of projects, a brief description of those projects, money allocated, and the anticipated effect of those funds. Moreover, the GBP suggests that information can be given in generic terms or on an aggregated portfolio basis when factors such as confidentiality agreements, competitive considerations, or a large number of underlying projects prevent more specific disclosure.

However, GBP reserves two key recommendations of Green Bond Frameworks and external reviews. Each issuer of a Green Bond should detail how these instruments align with the four pillars of the GBP in a Green Bond Framework or other legal paperwork. Moreover, Green Bond Framework itself should be easily approachable to potential investors. To ensure their Green Bond Framework is in line with the GBP's four pillars, issuers should hire an external review provider(s) to conduct a pre-issuance external review. Following issuance, it is suggested that an issuer employ an external auditor or another third party to verify the issuer's intrinsic tracking and distribution of the funds to eligible Green Projects. Any relevant external evaluations should be made available to the public by issuers on their websites or other easily accessible channels of communication"(International Capital Market Association).

Green bonds offer buyers a chance to do good for the world while also reaping financial rewards. These bonds have the same safety and security as regular bonds but are released for the purpose of funding environmentally positive initiatives. Furthermore, the social and environmental advantages of green bonds may sway some investors to forego a higher rate of return.

Green Bonds Issued in India

Following the Paris Agreement in 2007, the World Bank introduced green bonds, and by 2023, it is predicted that yearly global issuance of green bonds will reach up to US$1 trillion. Table 1 displayed the green bonds issued in India. In 2015, YES Bank issued India's first green bond in the form of masala bonds marking the country's official entry into the global green bond market and paving the way for future sustainable energy financing, especially in the wind and solar sectors. Slowly but surely, the public sector, state-owned commercial banks, state-owned financial institutions, corporations, and the banking industry have all joined the green bond market.

Table 1: Green Bonds Issued in India

S No.	Issuer	Issue Time	Size (in Issuance Currency)	Tenure	Sector
1	Yes Bank	Feb-15	INR 10bn	10 years	Solar Wind
2	EXIM Bank	Mar-15	USD500m	5 years	Solar Wind
3	CLP Wind Farms	Sep-15	INR6bn	3, 4 and 5 years	Solar Wind
4	IDBI Bank	Nov-15	USD350m	5 years	Solar Wind Transport Water Management
5	Hero Future Energies	Jan-16	INR 1.9bn	3 and 5 years (two tranches)	Wind
6	PNB Housing Finance	Apr-16	INR 5bn		Buildings
7	Axis Bank	May-16	USD 500m	5 years	Low Carbon Buildings (Commercial) Low Carbon Transport Solar Wind
8	Renew Power	Aug-16	INR 5bn	5 years	Wind
9	NTPC Ltd	Aug-16	INR 20bn	5 years	Solar Wind

10	Hero Future Energies	Dec-16	INR 1.75bn	6 years	Solar
11	Hero Future Energies	Dec-16	INR 1.25bn	6 years	Wind
12	Indian Renewable Energy Development Agency Ltd	Mar-17	INR 7bn	Multiple (5 and 10 years)	Solar Wind
13	Rural Electrification Corporation Limited	Jul-17	USD 450m	10 years	Solar Wind
14	Indian Renewable Energy Development Agency Ltd	Sep-17	INR 19.5bn	Multiple (5 and 10 years)	Solar Wind
15	Power Finance Corporation	Dec-17	USD 400m	10 years	Solar Wind
16	Indian Railway Finance Corporation	Dec-17	USD 500m	10 years	Low Carbon Transport
17	State Bank of India	Jul-18	USD 50m	5 years	Solar Wind
18	State Bank of India	Sep-18	USD 650m	5 years	Solar Wind
19	Indian Renewable Energy Development Agency Ltd	Jan-19	INR 19.5bn	10 years	Solar Wind
20	Renew Power	Mar-19	USD 435m	5 years	Solar Wind
21	Renew Power	Sep-19	USD 300m	3 years	Solar Wind
22	Azure Power Ltd	Sep-19	USD 350.1m	5 years	Solar
23	Renew Power	Oct-19	USD 90m		Solar Wind
24	Renew Power	Jan-20	USD 450m	7 years	Solar Wind
25	State Bank of India	Mar-20	USD 100m	-	Solar Wind
26	Renew Power	Oct-20	USD 325m	4 years	Solar Wind
27	Indian Railway Finance Corporation	Jan-21	USD 1.1 bn	10 years	Low Carbon Transport
28	Renew Power	Feb-21	USD 460m	3 years	Solar, Wind
29	Renew Power	Apr-21	USD 585m	6 years	Solar, Wind
30	India Cleantech Energy	Jul-21	USD 334m	5 years	Solar
31	Vector Green Energy	Jul-21	INR 12.37bn	3 years	Solar
32	Power Finance Corporation	Sep-21	confidential	7 years	Wind Solar
33	Indian Railway Finance Corporation	Jan-22	INR37.5bn	10 years	Low Carbon Transport
34	Fermi SolarFarms Private Limited	Feb-22	INR14.4 bn	3 years	Solar
35	Torrent Solargen Limited	May-22	INR5.5bn	17 years	Wind

Source: Climate Bonds Initiative, https://www.climatebonds.net/certification)

In recent years, green bonds, a novel form of financing, have seen explosive growth in India. These bonds were developed to assist in finance for initiatives that are beneficial for the climate, such as those that promote sustainable power, clean transportation, and waste management. The majority of Indian organizations have issued green bonds to finance renewable energy initiatives, as shown in Table 1.In the area of sustainable low-carbon emission transportation, four green bonds have been released, while only IDBI green bonds address water management. Both PNB Housing Finance and Axis Bank put money from their green bond sales into environmentally friendly construction.

By 2030, India aims to have cut the emissions intensity of its gross domestic product by 45 percent from its 2005 level, and it also plans to have generated roughly half of its total electric power installed capacity from sources other than fossil fuels. To further the goal of drastically cutting the economy's carbon footprint, the Union Budget 2022-23 proposed issuing National Green Bonds. For the purpose of raising funds for environmentally friendly projects, the government plans to tap the capital markets by issuing sovereign green bonds. The proceeds from the sale of green bonds will be used to finance government-backed initiatives that improve environmental conditions and reduce the economy's carbon footprint. Green bonds totaling₹16,000 crores will be issued by the Bank in two instalments of ₹ 8,000 crore each. The Reserve Bank of India (RBI) will issue its first ₹ 8,000 crores in green sovereign bonds at auction in January 2023.

Listing of Indian Green Bonds

In 2017, India's oldest and biggest stock exchange, the Bombay Stock Exchange (BSE), launched the India INX, the country's first International Exchange. The India International Exchange (INX) is dedicated to advancing environmental, social, and governance (ESG) standards across all companies. A significant number of Indian green bonds were listed on the London Stock Exchange prior to the launch of the India INX. This was followed by the listing of a few companies on the Singapore stock exchange and the National Stock Exchange. The classification for green bonds used by India INX is consistent with the Green Bond Principles and Climate Bonds Initiative put forth by the International Capital Market Association (ICMA).

Legal Framework

The government of India has been instrumental in spreading awareness of and demand for green bonds. The Securities and Exchange Board of India (SEBI) established rules for the distribution and trading of environmentally friendly bonds in 2017. The proceeds must be used as specified, and any environmental effects must be reported, as per these regulations. A document detailing the process for issuing sovereign green bonds was released by the Indian Government in November 2022.The ICMA Green Bond Principles served as inspiration for the structure. The principles offer voluntary best-practice advice on the allocation of funds, the evaluation, and selection of projects to fund, the administration of funds, and the dissemination of relevant information. The principles lay out a wide range of project types that could be funded via green bonds. The framework document for the government's sovereign green bonds is based on the green bond principles and outlines the types of initiatives that qualify for funding. Projects that aim to reduce pollution and increase the energy economy are examples of this type of initiative. To aid in the assessment and selection of projects, the Ministry of Finance has established the Green Finance Working Committee. Each year, the Committee will publish a report detailing how much money has been assigned to which projects, what those projects entailed, how far along they were in the implementation process, and how much money has been left over. Green bond proceeds will be added to the Consolidated Fund of India (CFI). The CFI will serve as a conduit for the distribution of these funds. Proceeds will be tracked and spent on environmentally responsible initiatives under the watchful eye of the Public Debt Management Cell (PDMC).

Challenges

The Indian green bond market has expanded, but there are still obstacles to overcome. In India, the market for green bonds is still relatively new, and few investors are conscious of its existence. Green bonds are issued to finance initiatives that have a high initial investment and long payback period. Many green bonds have a maturity of ten years or more, which may put off investors with shorter or even medium-term investments. Another factor that could discourage investment in the Indian markets is the absence of credit ratings or credit rating standards. The scarcity of green business opportunities is another problem. They simply aren't enough deserving projects to satisfy the demand. Another factor that could discourage investment in the Indian markets is the absence of credit ratings or credit rating standards.

Conclusion

To conclude green bonds are a vital resource for funding eco-friendly growth in India. To put it another way, they allow people to back initiatives that are good for the environment while also making a profit. Green bonds, which provide funding for renewable energy and sustainable infrastructure projects, are anticipated to continue to grow as the nation strives to meet its commitments under the Paris Agreement. However, some measures can be taken to enhance the Green Bonds market in India. Predominantly green bonds are used to fund initiatives related to renewable energy. There is a need to broaden the horizons and look into topics like biodiversity and water conservation for green bond investments. Green bonds could be the initial focus of the new international exchange India INX which aims to draw international investors interested in supporting climate action in developing countries. Green bond evaluation criteria need to be established at the national level. Last but not least, green bonds should be released in the domestic market to mobilize the finances from pension funds and other financial institutions.

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