

A STUDY ON GREEN BONDS IN INDIA AN OVERVEIW

Dr. K.S. Rajashekar Reddy

Associate Professor, KGR Institute of Technology and Management, Rampally (V), Keesara (M), Medchal
(Dist)

ABSTRACT

"A shift towards sustainable development necessitates substantial financial backing for investments. In recent years, green bonds have revolutionized the sustainable finance landscape, emerging as a vital instrument for funding eco-friendly projects. Despite the rapid growth of the green bond market, research in this area remains limited. This study delves into the evolution of green finance in India, focusing on the issuance of green bonds. To assess progress, data was gathered from reputable secondary sources, including official portals like RBI and SEBI, as well as journals, articles, and other websites. The findings reveal remarkable advancements in green finance over the past seven years (2012-2024), with India securing the fourth position globally in terms of green bond issuance as a percentage of total bond issuance among 12 countries."

Keywords: Green Finance, India, SEBI, RBI and Green Bonds.

INTRODUCTION

Addressing Environmental Concerns through Green Finance

In today's scenario, pressing issues like global warming, energy conservation, pollution control, and environmental protection require immediate attention. Both non-monetary and monetary aspects must be considered, with adequate funding allocated to address these concerns.

The Financial Market has introduced the concept of "Green Finance," which focuses on environmentally friendly funding. This includes Green Bonds, Environment, Social and Governance (ESG) initiatives, and Renewable Sources.

India, an emerging economy, needs significant investments in climate action to transition towards a Low-carbon Climate Resilient (LCR) future. To achieve this, India requires affordable fossil fuels and protection against price fluctuations. "Green Bonds" can help attract substantial investments into the economy, serving as a climate finance debt instrument that tackles environmental and climate-related challenges.

CONCEPT OF GREEN BOND

Figure 1.0



Green Bond is a specialized fixed-income instrument designed to support specific climate-related and environmental protection projects. Key characteristics of Green Bonds include:

Asset-linked: Green Bonds are typically linked to specific assets or projects. **Balance sheet-backed:** They are backed by the issuing entity's balance sheet, ensuring a high level of creditworthiness.

Credit rating: Green Bonds usually carry the same credit rating as other debt obligations issued by the same entity.

By issuing Green Bonds, organizations can raise funds for environmentally friendly initiatives while providing investors with a low-risk investment opportunity.

FEATURES OF GREEN BONDS:

1. Fixed-income instrument: Green Bonds offer a fixed return on investment, providing a predictable income stream for investors.
2. Tax incentives: To make them more appealing, Green Bonds often come with tax benefits, such as tax exemptions or deductions, which can increase their attractiveness to investors.
3. Milestone issuance: The World Bank pioneered the Green Bond market by issuing the first official Green Bond in 2008 (not 2009), marking a significant milestone in sustainable finance.
4. Growing market: Although the correct figure for 2008 is around \$1.5 billion (not \$157 billion), the Green Bond market has grown substantially since then, with a record issuance of over \$255 billion in 2023 alone, demonstrating increasing demand for sustainable investment opportunities.

SCOPE OF GREEN BONDS:

Green Bonds initiatives focus on a wide range of eco-friendly projects, including energy efficiency, pollution control, sustainable agriculture, and clean transportation. Additionally, they support conservation efforts for aquatic and terrestrial ecosystems, fisheries, and forests. The scope of Green Bonds has also been expanded to encompass the development of environmentally friendly technologies and climate change mitigation strategies, further emphasizing their commitment to a sustainable future.

STATUS OF GREEN BONDS:

To ensure the authenticity of Green Bonds, third-party verifications are often conducted by organizations such as the Climate Bonds Standard Board (CBSB). This certification process confirms that the funds raised through the bond will be allocated to projects that deliver tangible environmental benefits, providing an added layer of assurance for investors seeking to support eco-friendly initiatives."

LITERATURE REVIEW

1. Tolliver, Keeley, and Managi (2020) The authors note that Green Bonds are increasingly used to finance initiatives focused on reducing emissions, sustainable development, and other green investments. This has led institutions to incorporate Green Bonds into their financial structures to manage climate change.
2. Flammer (2019) Flammer highlights the recognition by government agencies, supranational bodies, and corporations of the importance of financial sustainability in addressing climate change. The issuance of Green Bonds is seen as crucial in mitigating the worsening of climate change.
3. Karpf and Mandel (2018) The authors observe that municipal markets have tended to penalize Green Bonds by trading them at lower prices and generating higher yields than expected. This suggests that Green Bonds may face challenges in certain markets.
4. Hachenberg and Schiereck (2018) The authors note that increased awareness of sustainability has led to the establishment of Green Bonds in financial circles. Despite existing impediments, the Green Bonds market has expanded significantly in recent years.
5. Voica, Panait, and Radulescu (2015) The authors emphasize the critical role of investments in Green Bonds, particularly in infrastructure, in achieving sustainability objectives in financial management.

NEED FOR THE STUDY

The literature review reveals that Green Bonds have emerged as a vital funding source for environmental protection, pollution control, and ecosystem sustainability. Although still in its evolutionary stage in India, Green Bonds have the potential to play a crucial role in addressing the country's environmental challenges. Given the urgent need to reduce environmental damage and protect the planet from future pandemics, it is essential to mobilize financial support through Green Bonds and harness their potential for a sustainable future.

OBJECTIVES OF THE STUDY

Based on the literature review and need for the study, the following objectives are taken.

- Analyze the initiatives and guidelines set by the Securities and Exchange Board of India (SEBI) for Green Bonds.
- Evaluate the growth and development of the Green Bonds market in India from an issuer's and investor's perspective.

RESEARCH METHODOLOGY

This study is based on a comprehensive review of secondary sources, including: Reputable academic journals and articles. Official publications and reports from the Reserve Bank of India (RBI) and the Securities and Exchange Board of India (SEBI) other credible online sources

The use of secondary sources provides a solid foundation for this study, enabling a thorough analysis of existing research and data on Green Bonds in India

GREEN BONDS IN INDIA

Need for Green Bonds in India:

India's Renewable Energy Ambitions

India has set bold targets to enhance energy access, energy security, and combat climate change by scaling up renewable energy capacity. The country aims to achieve 175 Gigawatts of solar, wind, and other renewable energy capacity by 2022, requiring a substantial investment of approximately USD 264 billion. To bridge the financing gap and meet these national objectives, innovative financial instruments like Green Bonds must be leveraged and scaled up. By doing so, India can unlock the necessary funding to drive its renewable energy growth and sustainability agenda forward.

SIGNIFICANCE OF GREEN BONDS FROM INDIAN PERSPECTIVE

The evolution of Green Finance in India:

Early Beginnings (2007) RBI's notification on Corporate Social Responsibility, Sustainable Development, and Non-Financial Reporting emphasized the role of banks in addressing global warming and climate change.

National Action Plan on Climate Change (2008) Formulated to outline a broad policy framework for mitigating the impact of climate change.

Fiscal and Financial Incentives Introduced to support India's commitment under the 2015 Paris Agreement to reduce Green House Gas Emissions. These incentives aim to encourage sustainable practices and green investments in India.

India's progressive steps towards embracing Green Finance demonstrate its dedication to addressing climate change and promoting sustainable development.

MAJOR MOVEMENT FOR GREEN BONDS IN INDIA

Key Milestones in India's Green Finance Journey

Establishment of Climate Change Finance Unit (CCFU) (2011) Formed within the Ministry of Finance to address climate change-related financial aspects

Sustainability Disclosure Requirements Implemented to enhance transparency and accountability in environmental and social aspects.

SEBI's Green Bond Guidelines (May 2017) Issued to standardize the issuance of Green Bonds, specifying disclosure requirements for: Use of proceeds Project evaluation and selection Reporting and auditing

These developments reflect India's growing commitment to green finance and sustainable development, aligning with global best practice.

STEPS TAKEN BY SEBI TO PROMOTE GREEN BONDS

The following are the steps taken by the SEBI in recent years.

- SEBI's Initiatives to Promote Green Bonds Guidelines for Green Bond Issuance (May 2017)
- Standardized disclosure requirements for Green Bond issuers Green Bond Framework (2018)
- Provided a unified framework for Green Bond issuance Recognition of Green Bond Index Encouraged the development of Green Bond indices to track market performance
- Relaxation of Listing Norms (2020) Simplified listing requirements for Green Bonds to increase market access Tax Incentives
- Considered tax benefits for Green Bond investors to enhance attractiveness
- Education and Awareness
- Conducted workshops and seminars to raise awareness about Green Bonds

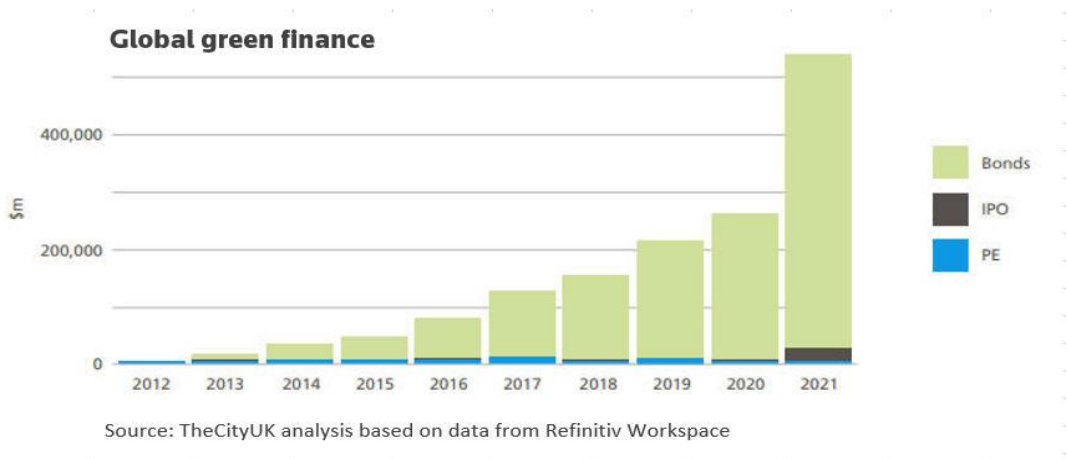
- Green Bond Certification
- Introduced certification for Green Bonds to ensure compliance with SEBI guidelines

These steps demonstrate SEBI's commitment to promoting Green Bonds and developing a sustainable finance ecosystem in India.

DATA ANALYSIS AND INTERPRETATION

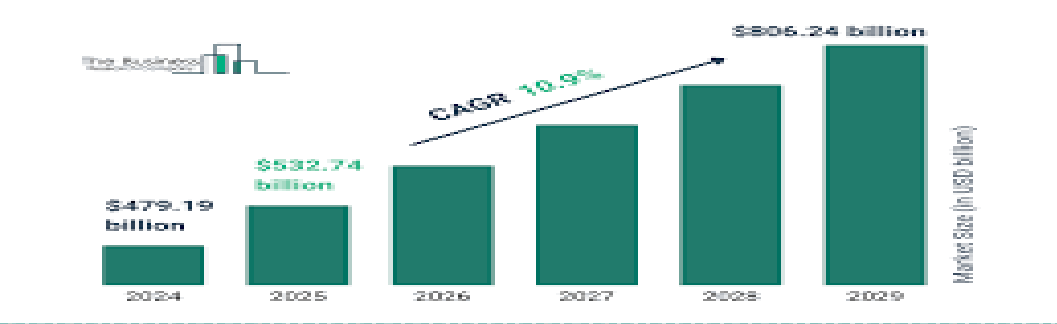
PROGRESS OF GREEN FINANCE - “GREEN BONDS” IN INDIA

Fig 2.0



Source: “Green Finance in India” – RBI Bulletin January, 2021

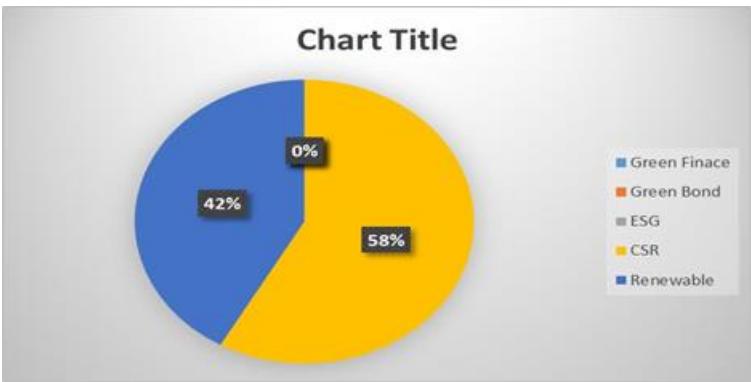
Green Bonds Global Market Report 2025



Interpretation: From the above chart, we can say that India’s comparative score is in increasing trend from yr to yr which implies green finance has made good progress from past seven years i.e. from 2012 to 2024.

Distribution of Finance in Percentages

Fig 3.0



Source: “Green Finance in India” – RBI Bulletin January, 2024

Interpretation: From the above chart, it is observed that, Green Finance is 42%, CSR is 58% and other parts/aspects of green finance are 0%.

Table No.1 Green Bonds Issuance

Country	Amount issued (\$ Millions)	No. of Bonds issued	Amount issued as per cent of all bond issuance (per cent)	Number of bonds issued as per cent of all bond issuance (per cent)
Europe	196,854	594	1.3%	0.4%
China	63,023	183	0.3%	0.2%
USA	35,421	71	0.2%	0.2%
Japan	11,815	88	0.1%	1.1%
South Korea	11,781	44	1.0%	0.4%
Central & South America	8,869	53	0.5%	1.0%
India	7,792	22	0.7%	0.3%
South-East Asia	7,208	86	0.6%	1.4%
Australia & New Zealand	5,878	15	1.1%	0.8%
UK	5,311	17	0.4%	0.5%
Hong Kong	4,781	19	0.5%	1.0%
Singapore	496	9	0.05%	1.2%

Source: "Green Finance in India" – RBI Bulletin January, 2024

Interpretation: From the above table, it is observed that, in the Indian perspective, the amount issued on Green Bonds as a percent of all bonds issuance is 0.7% and the number of Green Bonds issued as a percent of all bonds issuance is 0.3%.

RECOMMENDATIONS

Integrating Green Finance into Corporate Structures

1. To promote sustainable practices, companies should incorporate Green Finance into their financial frameworks as part of their Social Investment Responsibility (SIR). Furthermore:
2. Enhanced SEBI Guidelines: Strengthened regulations can encourage investments in Green Bonds, driving eco-friendly initiatives.
3. RBI Policy Emphasis: The Reserve Bank of India should prioritize Green Finance Schemes with Commercial Banks, amplifying their impact.
4. Integrated Policy Approach: Global experiences highlight the need for a unified policy strategy towards Green Finance, ensuring a cohesive and effective transition to sustainable practices.

CONCLUSION

In today's scenario, environmental protection is of paramount importance. Finance plays a vital role in driving eco-friendly initiatives, and green bonds are emerging as a crucial instrument in India. However, green projects often come with high upfront costs, with cost-saving benefits only materializing in the long term.

The COVID-19 pandemic has not only affected the economy but also hindered environmental efforts. Investors have been hesitant to undertake new projects, and policymakers have faced obstacles in financing green initiatives. Since March 2020, many projects have stalled.

To achieve sustainable development, it's essential to expand the green bonds market, allocating financial resources to green projects focused on power, renewable energy, pollution control, and environmental protection. India, in particular, requires decisive action in the finance sector to prioritize eco-friendly investments and drive meaningful change.

SCOPE FOR FURTHER RESEARCH

In recent years, Environmental Protection, Sustainable Development, Pollution Control, and Renewable Energy have gained significant momentum. The pandemic has further underscored the importance of environmental protection, leading to increased investments in preserving the green environment. These developments present exciting opportunities for research scholars to explore and contribute to the growing body of knowledge in this field.

Specifically, topics such as:

Green Finance: Exploring innovative financial instruments and mechanisms that support eco-friendly initiatives

Green Accounting: Developing accounting practices that integrate environmental costs and benefits into financial reporting

Green Bonds: Analyzing the role of green bonds in financing sustainable projects and promoting environmental stewardship offer fertile ground for further research, analysis, and expansion of the finance domain.

REFERENCES

1. Flammer, C. (2019). Green bonds: Effectiveness and implications for public policy. *Environmental and Energy Policy and the Economy*, 1-46.
2. Hachenberg, B., & Schiereck, D. (2018). Are green bonds priced differently from conventional bonds? *Journal of Asset Management*, 19(6), 371-383.
3. Karpf, A., & Mandel, A. (2018). The changing value of the "green" label on the US municipal bond market. *Nature Climate Change*, 8(2), 161-165.
4. Tolliver, C., Keeley, A. R., & Managi, S. (2020). Drivers of green bond market growth: The importance of nationally determined contributions to the Paris Agreement and implications for sustainability. *Journal of Cleaner Production*, 244, 118643.
5. Voica, M. C., Panait, M., & Radulescu, I. (2015). Green investments: Between necessity, fiscal constraints and profit. *Procedia Economics and Finance*, 22, 72-79.