



A Study On Green Bonds In India: As A Source Of Sustainable Finance

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Abstract

One of the most prominent innovations in the field of sustainable finance is Green bonds. A Green bond is a type of fixed income instrument designed to raise capital for climate and environmental projects. More specifically, Green bond finance projects aims at energy efficiency projects, renewable energy projects, pollution prevention and control projects. Since the Green bond market is in developing phase, only limited studies have been carried so far in this area.

The basic purpose of the present study is to highlight the progress of green finance in India and the issue of Green bonds as a source of sustainable finance. This study is descriptive in nature. To analyze the progress of green finance sectors in India, data was collected from secondary sources like articles, journals and websites. From the data analysis, it is clear that green finance has made tremendous progress from 2013 onwards and India is the sixth largest issuer of green, social, sustainable and transition bonds in the Asia Pacific Region.

Key words: Green Bonds, sustainable finance, green finance sectors, transition bonds.

1. INTRODUCTION

India is one of the fastest-developing countries in the world. Though still in developing phase, India has also made significant strides in terms of industrial development, basic infrastructure, and the economy. India has now emerged as a global player. This has also brought along environmental issues for India to deal with. To resolve the environmental issue, monetary and non- monetary aspects are to be considered.

The need to protect the environment and preserve natural resources is getting more significant because of the problems like ozone layer depletion, global warming, air-water-soil pollution levels, and other environmental issues. In recent times, in order to resolve these environmental issues, the capital market has come up with the idea of “green finance”—the fund for sustainable development or the protection of the environment. In simple words, it is a loan or investment that promotes environmentally friendly activities, such as the purchase of eco-friendly goods and services or the construction of green infrastructure.

CURRENT STATUS OF GREEN BONDS IN INDIA

In India, green bonds have become more popular as a vital financial tool for financing ecologically friendly initiatives including energy efficiency, clean transportation, and renewable energy. Indian Green bond issuances have reached a total of \$21 billion as of October 2024. This includes about \$1.94 billion in sovereign green bonds in 2023. The private sector was responsible for 84% of the total, and the remaining 16% was undertaken by the government. A growing commitment to environmental, social, and governance (ESG) principles is reflected in the diagram showing the percentage of green bond issuers in India. It also highlights the active participation of various sectors, including financial institutions, private corporations, and public sector undertakings. The green bond market is well-positioned to be a key player in raising money for India’s shift to a low-carbon economy, helped along by

regulatory frameworks such as SEBI's green bond rules and the country's alignment with international climate targets.

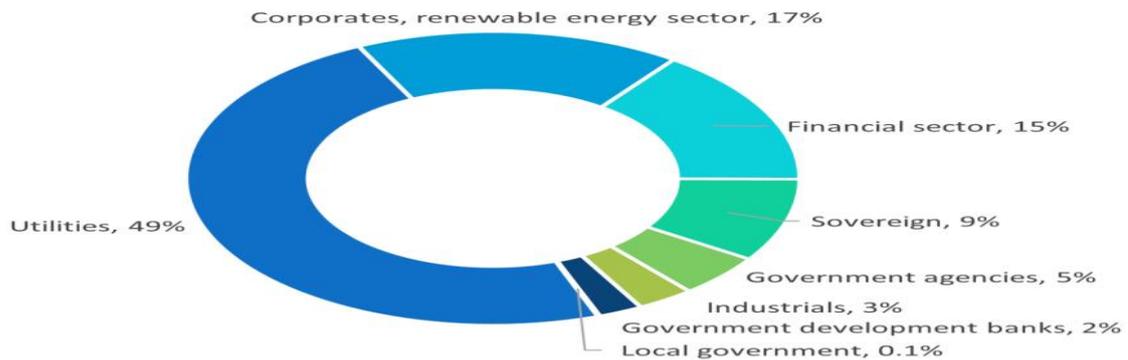


Figure 1: Green bond issuers in India.

Source: World Bank with data from Bloomberg

2. LITERATURE REVIEW

A detailed review of earlier studies so conducted in the area of Green Bonds finance in India throw lights to the direction in which the present study to be carried on effectively. Some of the studies have been presented here under.

D. Thirumala Rao and G. Santoshi (2021) the study titled “a study on Green bonds in India- need of the hour”. The purpose of the study is to identify the development of green finance sector in India and issue of Green bonds. By utilising secondary data sources, the study found that green finance sector has made remarkable progress from 2013 to 2019.

Abhishek Kumar (2021) the study titled “an evaluative study of Green bonds scenario in India”. This study discusses the issues related to Green bond markets in India and recommends developing a national strategy for the Indian bond market.

Dhaval Prajapati and Dipen Paul, et al (2021) the study titled “understanding the preference of individual retail investors on Green bonds in India: an empirical study”. The results suggest that the environmental, social and governance rating and credit rating of the Green bond issuers are the key factors that influence an individual's investment decision.

Shashank Bansal and Satya Prakash Mani, et al (2023) the study titled “sustainable development of the Green bond markets in India: challenges and strategies”. The outcome of the indicate that the lack of a clear risk profile of bond market and the legislative support involved in Green bonds are the crucial challenges for the bond markets in India followed by lack of demand for the same security.

Abhilash, Sandeep S. Shenoy, et al (2023) the study titled “Green bond as an innovative financial instrument in the Indian financial market: insights from systematic literature review approach”. This paper demonstrates that the lack of proper framework, high transaction cost, higher green washing, government involvement, unavailability of financial benefits and lack of Green bond market awareness have suppressed the rapid expansion of the Green bond market in India.

The studies conducted in the related area of Green bonds as a source of sustainable finance is shown in this area. All these studies explained the problems of Green bond markets, the development of green finance sectors and the reason for the suppression of the rapid expansion of Green bond markets in India.

3. SIGNIFICANCE OF THE STUDY

This study is undertaken to highlight the progress made by the green finance sector in India by issuing Green bonds to protect the environment and preserve our natural resources. Green bonds are a financing arrangement in which the issuer commits to utilize the proceeds to fund projects promoting the environment and sustainability. The development of the green finance sector in India and the need and importance of the issue of Green bonds as an innovative instrument for raising capital for projects aiming

for sustainable development both require proper attention from the concerned authorities. Proper directions and strategies for the development of green finance sectors will be a stepping stone for economic as well as environmental prosperity.

4. OBJECTIVES OF THE STUDY

- To study the progress of green finance in India.
- To identify the need for the issue of Green bonds in India.
- To know the control measures developed by SEBI to regulate the green finance market in India.

5. RESEARCH METHODOLOGY

This study is descriptive in nature and is an attempt to highlight the progress made by the green finance market in India by issuing Green bonds as a source of sustainable finance. For the creation of theoretical background and data analysis, data available from secondary sources like journals, articles, official SEBI and RBI websites, and other websites is utilized and the period selected for the study was 2014-2025(January).

STEPS UNDERTAKEN BY SEBI (SECURITIES AND EXCHANGE BOARD OF INDIA) TO PROMOTE GREEN BONDS

- SEBI initiated a consultation process: It contains disclosure process for issue and listing of Green bonds including issue through private placement. All the disclosures were based upon the Green bond principles, 2015.
- Concept paper: This facility is available in SEBI websites from December 03, 2015 onwards, to seek public comments.
- The brief details of the proposal made in the consultation paper are as under:
 - (a) Concept of “green”: The issuer should define and disclose their criteria for what is considered green i.e. which project or asset class is considered eligible as green projects.
 - (b) Project evaluation and selection: Details of the criteria for evaluating the projects eligible for using the Green bond proceeds and the details of the process used for the selection of green proposals.
 - (c) Management of proceeds: Details of the management process and controls imposed on the green projects.
 - (d) Reporting: Evaluation and reporting of progress of the project to which the Green bond proceeds are allocated.

In addition to these frameworks, the Ministry of Corporate Affairs imposed mandatory reporting of the progress on Corporate Social Responsibilities (CSR) under the Companies Act, 2013.

6. DATA ANALYSIS AND INTERPRETATION

6.1. ISSUE OF GREEN BONDS IN INDIA FROM 2015 TO 2021

Rise of Sustainable Bond Issuances in India

Issue Date Totals	All Sustainable Bonds		Green Bonds	
	Proceeds (\$ mln)	"Number of Issues"	Proceeds (\$ mln)	"Number of Issues"
CY2021: Jan-May 12	4958.5	12	3525.4	7
CY2020	2330.2	9	450	1
CY2019	4000.5	13	3013.7	8
CY2018	913	6	646.9	1
CY2017	4311.8	25	3168	12
CY2016	1061.1	10	806	3
CY2015	1662.6	13	847.1	2

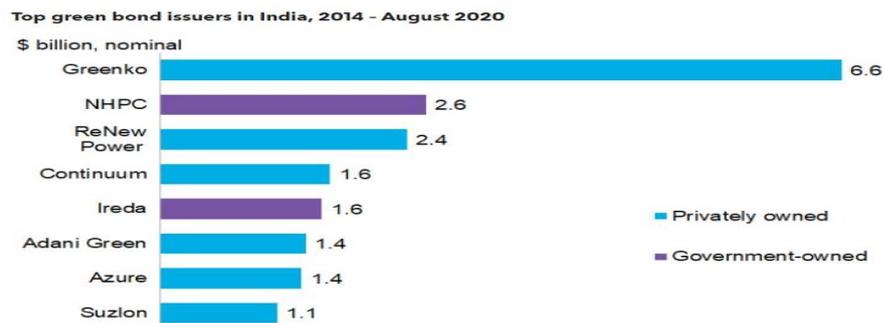
SOURCE: Refinitiv, an LSEG business

Interpretation: From the above table, it is clear that the number of Green bonds issued in India and the amount of proceeds from the Green bond issues are different for each year. The same pattern is visible in the case of total sustainable bonds issued in India (including Green bonds). It could be further inferred that the issue of Green bonds in 2021 has increased as compared to 2020.

From 2021 to January 2025, India's sustainable bond market experienced tremendous expansion. The issue of Green, social, and sustainability bonds increased six times to USD 7.5 billion in 2021, reaching USD 19.5 billion. The government raised 160 billion rupees in fiscal 2024 through the introduction of Sovereign Green Bonds. Demand, however, wanted by the end of 2024, as indicated by the Reserve Bank of India's decision to transfer 70% of a new 10 year green bonds to primary dealers because of the

lack of investor interest. Considering these barriers, India remains dedicated to green investments and sustainable financing.

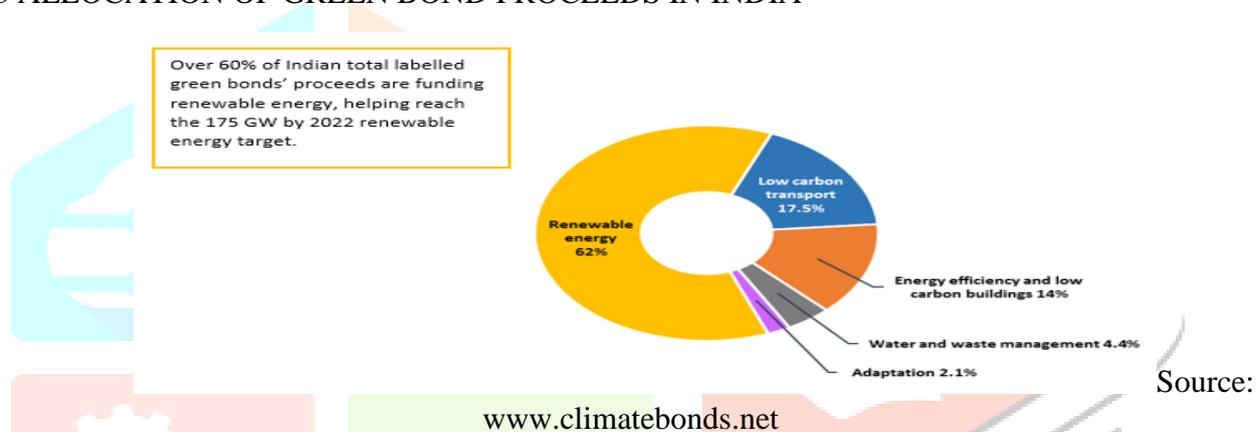
6.2. GREEN BOND ISSUERS IN INDIA



Source: www.bloomberg.com

Interpretation: From the above diagram, it is observed that, Greenko is the largest issuer of Green bonds in India. Greenko Group is funding hydro, solar, and wind power projects in several Indian states.

6.3 ALLOCATION OF GREEN BOND PROCEEDS IN INDIA



Interpretation: From the above pie chart, we can say that 62% of the proceeds are used to fund renewable energy

7. FINDINGS OF THE STUDY

- ★ The rate of issuance of green bonds in India is changing year by year, showing a corresponding growth rate with the issuance of all sustainable bonds in the Indian market.
- ★ Greenko Group (non- government) is the largest issuer of Green bonds in India compared to government organizations.
- ★ More than 60% of the proceeds from Green bonds are invested in projects focusing on the renewable energy sector.

8. SUGGESTIONS

- To promote investments in green projects, the guidelines issued by SEBI should be strengthened more.
- To attract more individual investors, government should take necessary steps to conduct investor education program.

9. CONCLUSION

In this busy world, climate change has become a key issue in the last decade. When searching for investment Avenue, the individual investors prefer climate- oriented investment avenues. Green bonds are one of the innovative financial instruments, designed to finance the transition to a low-carbon economic system. Green investments play a crucial role in the transition to a low-carbon economy, helping compact climate changes and promote sustainable development. These investments also have the potential to create new jobs, drive innovations and foster long term economic growth.

Green bond issuance has the potential to mobilize substantial capital for sustainable projects in India and contribute to the country's climate goals. As per the unpublished data from climate bonds, India is the

sixth largest issuer of green, social, sustainable, sustainability linked and transition bonds in the Asia Pacific Region. Sovereign Green bonds will play an important role in supporting India's green transition to meet its recently updated targets of reducing emission by 2030 and achieving net-zero by 2070.

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