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GREEN BONDS IN INDIA: SEBI REGULATION AND SUSTAINABLE FINANCE

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ABSTRACT

Green bonds have become an important vehicles for financing environmentally friendly projects and the global shift to a low carbon economy. The importance of building a strong green bond market has grown in India in line with its climate goals under the Paris Agreement and its target of becoming a net zero by 2070. This paper discusses about the legal and regulatory landscape of green bonds in India, including the work of the Securities and Exchange Board of India (SEBI), the Sovereign Green Bond Framework and other regulatory efforts aimed at fostering sustainable finance.

The research is doctrinal, using the analysis of statutes, regulations, policy documents, government reports and relevant literature. It examines in detail the current regulatory framework's effectiveness to achieve transparency, to prevent greenwashing, and to increase transparency and disclosure standards and to boost investor confidence. The paper also highlights several key challenges, such as a lack of a holistic green taxonomy, reporting quality issues, weak take-up in the market and implementation gaps.

The study concludes that although India has set up a regulatory framework for green bonds, it needs more legal and policy-level interventions to bring Indian regulations closer to international ones and boost investment in sustainable infrastructure. It ends with suggesting a green taxonomy that can be adopted nationally, better disclosure and verification systems, more robust regulation and harmonisation with global best practices to boost sustainable finance in India.

CHAPTER - 1 INTRODUCTION

Green Bond is a kind of financial instrument which can be utilized in order to invest in environmental protection projects. It works as a conventional bond, where an investor provides capital to the government, company or organisation and the investor receives back the capital and interest at the end of the bond.

However, the distinction is that the funds invested via the Green Bond have to be allocated to environment friendly projects, such as:

- Renewable energy resources such as (solar, wind, hydro)
- Transportation with zero carbon emissions (electric vehicles, metro systems)
- Waste management and recycling.
- Energy-efficient infrastructure and Green buildings

Green Bonds are a way for governments and companies to raise funds, while also having a positive impact when it comes to climate change. Many more people, investors and institutions are now interested in sustainability and environmental protection, giving rise to their increasing popularity.[1]

The Regulation of Green Bonds with respect to India is well defined and has a very good framework. The issuance and listing of Green Bonds are done as per the guidelines of Securities and Exchange Board of India (SEBI). SEBI (Issue and Listing of Non-Convertible Securities) Regulations, 2021[2]. In 2023, SEBI also released a Circular[3] which is in line with the increase in transparency and prevention of Green washing. It requires the issuers to be assigned to specific green categories (renewable energy, clean transportation, pollution control, green buildings, water management) and for issuers to report annually on the environmental impact and on the use of proceeds.

In recent years, the Green Bond market has emerged as a huge market in India with the public sector companies, banks and renewable energy companies issuing bonds to fund the country's

[1] Iberdrola, What Are Green Bonds https://www.iberdrola.com/sustainability/investments-green-bonds
[2] Securities and Exchange Board of India, SEBI (Issue and Listing of Non-Convertible Securities) Regulations, 2021 https://www.sebi.gov.in/legal/regulations/jul-2023/securities-and-exchange-board-of-india-issue-and-listing-of-non-convertible-securities-regulations-2021-last-amended-on-july-6-2023-_73664.html?utm_source=chatgpt.com
[3] SEBI/HO/DDHS/DDHS-RACPOD1/P/CIR/2023/023 https://www.sebi.gov.in/legal/circulars/feb-2023/revised-disclosure-requirements-for-issuance-and-listing-of-green-debt-securities_67837.html

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climate and net zero emission targets 2070.[4]

CHAPTER - 2 HISTORY AND EVOLUTION OF GREEN BOND

It is important to note that the emergence of Green Bonds goes hand-in-hand with the growing global focus and demand for dedicated financing tools to implement sustainable actions to mitigate climate risks. The idea has its roots in 2007 with the Swedish pension funds who, together with the World Bank, discussed the financing model for climate-related projects. This has resulted in the issuance of the first Green Bond in the world in 2008 which has created a structured financial instrument for environmental investment.[5]

Green Bonds took time to develop as available funding options to address the scale of the environmental challenges (e.g. clean energy transition, pollution, global warming etc.) were limited. India became part of the green bond issuing countries in 2015. The country's inaugural green bond was issued by Yes Bank in February 2015 for raising ₹1,000 crore for investing in renewable energy projects such as solar, wind power and the like.[6]

CHAPTER - 3 PURPOSE OF GREEN BONDS[7]

Green Bonds are targeting to create a safe system to finance projects for the environment. Over the years, and in India, Green Bonds have been an important tool to support sustainable development. Their main functions are to:

3.1. In response to Climate Change

Green Bonds finance projects to reduce carbon emissions: solar power plants, wind power plants and energy-efficient buildings.

Past experience:

World Bank's inaugural green bonds (2008-2015) resulted in various renewable energy investments and millions of tonnes of CO_2 emissions were avoided.

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[4] Government of India, Press Information Bureau, Prime Minister Announces India's Net Zero Target by 2070 at COP26 (1 November 2021) https://www.pib.gov.in/PressReleasePage.aspx?PRID=1768712&reg=3&lang=2

[5] World Bank, World Bank Green Bonds: Background and History (World Bank Treasury) https://thedocs.worldbank.org/en/doc/460121522347658092-0340022018/original/publicationpensionfundservicegreenbonds201712.pdf

[6] CDKN, India strengthens its credentials for green bond issue (Feature, 21 June 2016) https://cdkn.org/story/feature-india-strengthens-credentials-green-bond-issue

[7] (The Journal of Indian Institute of Banking & Finance, July–September 2023) https://www.iibf.org.in/documents/BankQuest/6.%20.pdf

ISSN: 2582-6433

3.2. To raise money to buy Green Infrastructure

Green infrastructure investments like the metro, EV charging network, waste management system and water treatment plants will need massive investment. Green Bonds contribute towards competitively raising long-term financing.

Past experience:

Clean transportation projects have been undertaken and green bonds have been issued in many countries, including China and the U.S.

Indian urban centres have attempted to raise green funds to encourage urban clean mobility and urban waste management in cities like Pune and Indore.

3.3. Attract ESG-Focused Investors

Give investors a specific investment opportunity for those who want to invest with Environmental, Social, and Governance (ESG) in mind.

3.4. To help achieve India's Climate Targets (Net Zero by 2070)

India has committed to emission reductions and to increasing its clean energy usage. Green Bonds contribute to mobilizing this massive capital that is needed to meet these goals.

3.5. Help to coordinate National & Global Climate Commitments.

Support alignment with targets like the Paris Agreement, SDGs and national targets (e.g. India's Net Zero 2070).

3.6 CHALLENGES

1. Poor tax incentives or subsidies: Green bonds are not as attractive as normal bonds, because there are no tax incentives or subsidy.
2. There are gaps in data and disclosure - data is limited and not standardized, therefore data is not available to make informed investment decisions, transparency and due diligence.
3. Lack of a common green taxonomy:
4. The insufficient harmonisation also creates uncertainty in the eligibility of projects that can be supported, uncertainty in investments in support across borders, and an additional compliance risk.[8]

[8] Cledwyn Fernandez, *Challenges and Opportunities of Green Bonds for Infrastructure Financing* (T20 Policy Brief, Global Solutions Initiative, July 2023) https://www.global-solutions-initiative.org/wp-

CHAPTER - 4. INDIA'S GREEN BOND REGULATORY FRAMEWORK

There is no proper structure for Green Bonds in India. The green bond market is still not well regulated in India.

4.1 Constitutional and Regulatory Framework for Green Bonds in India

The launch of Green Bonds in India is part of a larger constitutional framework which places a high premium on environmental protection and sustainable development. This constitutional support provides the platform and foundation for the regulatory framework of India, which includes SEBI regulations, Companies Act and Government guidelines.

Article 48A is a statement to the State to take action to protect and improve the environment and Green Bonds is one of the ways to do this, by investing in renewable energy, in pollution control and other sustainable infrastructure.

Article 51A(g) calls upon citizens to protect natural environment and Green Bonds are green investments, which allow citizens and investors to be a part of the protection of the natural environment.

The right to environment has been interpreted as the right to a clean and healthy environment in Article 21 which is a right to life. Green Bonds are a way of funding environmentally sustainable projects which helps the State to meet this constitutional responsibility.

Indian framework will have green bonds restricted to green projects and transparency and accountability of the issuers.

4.2 SEBI REGULATION

4.2.1. Regulation of Green Bonds by SEBI is necessary

Green Bonds are a type of debt security. Green Bonds are issued, listed and traded in the securities market, therefore, it is the responsibility of SEBI to keep the process transparent, fair and investor friendly.

4.2.2. SEBI provides formal Guidelines for Green Debt Securities and hence brings regulatory clarity.

SEBI began taking formal measures to regulate green bonds in 2016 by releasing a Concept Paper on the Issuance of Green Bonds (December 2015)[9] and opening the floor for public

content/uploads/2025/03/ T20_PB_TF5_2_Challenges_and_Opportunities_of_Green_Bonds_for_Infrastructure_Financing.pdf

[9] Securities and Exchange Board of India, Concept Paper on the Issuance of Green Bonds (December 2015) https://www.sebi.gov.in/sebi_data/attachdocs/1449143298693.pdf? utm_source=chatgpt.com

comments to form a framework for green bonds. In this regard, SEBI has released the SEBI Circular on 30 May 2017 titled "Disclosure Requirements for Issuance and Listing of Green Debt Securities" (hereafter the Green Bond framework 2016-17).[10] It was India's first sector regulator for green bonds. The requirements in the circular were as follows: Eligible green categories, declaration of use of proceeds, project assessment and selection, management of proceeds, regular reporting on environmental impact.

4.2.3. SEBI (Issue and Listing of Non-Convertible Securities) Regulations, 2021

Regulation 2(1)(q) defines Green Debt Securities as debt securities issued for the financing or refinancing of projects in certain green categories: renewable and clean energy, clean transportation, pollution prevention, water and waste management, sustainable buildings, sustainable land use, biodiversity conservation, climate change adaptation, energy efficiency and sustainable infrastructure. This provision renders what can be termed as a Green Bond in India legally.

4.2.4. SEBI has also issued a Circular in 2023 that would restrict the definition of transparency and address the problem of greenwashing.

The circular has been issued by SEBI to bring about betterment of the rules in India pertaining to Green Debt Securities (Green Bonds). The rules have been in existence earlier which SEBI had made more aligned to global Green Bond Principles as well as to curb greenwashing (false green claims).

As a result, the company must declare green financing intentions, the selection of green projects, the green standards and/or green taxonomies used, the tracking of green financing, the use of green financing proceeds, and how environmental and/or social risks will be managed prior to the issuance of green bonds. The process should be subject to an independent third party review.[11]

The issuer has to report on the use of the money, the leftover money and the impact of each project on the environment on a regular basis after listing. Disclosures should be audited by an independent auditor and added to the annual report and appropriate information from the BRSR.

The purpose of this circular is to promote transparency, protect investors from fraudulent green

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[10] Securities and Exchange Board of India, Disclosure Requirements for Issuance and Listing of Green Debt Securities (Circular No SEBI/HO/DDHS/CIR/P/2017/05, 30 May 2017) https://www.sebi.gov.in/legal/circulars/may-2017/disclosure-requirements-for-issuance-and-listing-of-green-debt-securities_34988.html?utm_source=chatgpt.com

[11] SEBI/HO/DDHS/DDHS-RACPOD1/P/CIR/2023/023 https://www.sebi.gov.in/legal/circulars/feb-2023/revised-disclosure-requirements-for-issuance-and-listing-of-green-debt-securities_67837.html

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labelling, and also to encourage sustainable finance in India.

4.2.5. Regulation 12A – Disclosure Requirements for Green Debt Securities (GDS)

The Securities and Exchange Board of India (Issue and Listing of Non-Convertible Securities) (Third Amendment) Regulations, 2024, introduced Regulation 12A - Disclosure Requirements for Green Debt Securities (GDS), which enhances the regulatory framework for Green Bonds in India. This provision mandates detailed and compulsory disclosures made by an issuer before it is able to issue or list Green Debt Securities. The issuers must clearly state what is the environmental benefit or sustainability or climate goal of the project in Regulation 12A. They should also explain the evaluation and selection of green projects, eligibility and internal screening process for transparency in identification of green projects. Moreover, under Regulation 2(1)(q), the issuers must state the green category in which the loan falls, like renewable energy, clean transportation, pollution control, water and waste management or energy efficiency. The regulation must have in place a robust tracking and management of proceeds, such as disclosure of monitoring systems, separation of accounts and what to do with the unutilised proceeds. Issuers also need to differentiate financing and refinancing of green projects to not mislead the allocation of funds and to communicate the risks of green projects such as environmental risks, operational risks and reputational risks. Further, pursuant to Regulation 12A, statements as to external review or certification or the reasons for not obtaining external review or certification are required. The purpose of the insertion of Regulation 12A is to prevent greenwashing, increase investor confidence, promote transparency and align India's green bond regime with the international ones such as ICMA Green Bond Principles.[12]

4.3. What is Blue Bond and Yellow Bond?

Under SEBI’s revised framework for Green Debt Securities (GDS) in 2023, SEBI introduced Blue Bonds and Yellow Bonds as sub-categories of green bonds:under sec - 2(10) and 2(11) of SEBI (Issue and Listing of Non-Convertible Securities) (Amendment) Regulations, 2023 (dated 3 February 2023).

1. Blue Bonds: bonds issued to finance sustainable water and marine economy projects such as sustainable shipping, clean water supply, water recycling and projects related to the support of marine ecosystems etc.
2. Yellow Bonds: To raise funds for solar projects and activities related to the entire solar

[12] Securities and Exchange Board of India, SEBI (Issue and Listing of Non-Convertible Securities) Regulations, 2021 [Last amended on 11 December 2024)

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industry such as solar value chain, solar power generation etc.

These target investors that are looking to invest in some particular environmental segments within the general one of Green Debt Securities.[13]

4.4 What is Environmental, Social and Governance (ESG) Investing?

ESG is an acronym of the terms Environmental, Social, and Governance. ESG investing is investment in businesses that are good stewards of the environment, people and society, and that have proven to be good managers and act ethically. ESG is more than just about the profit – it's about the company's behavior and risk management.[14]

ESG can help investors to determine which companies are more stable and sustainable over the long-term. Green Bonds are one part of an ESG investment, which focuses on the environmental aspect, including renewable energy, clean water and pollution prevention.[15]

ESG investing is officially acknowledged by SEBI in India. According to Regulation 2(1)(oa) of the SEBI (Issue and Listing of Non-Convertible Securities) Regulations, 2021, "ESG Debt Securities" are defined as "green debt securities", "social bond" or "sustainability bond" or "sustainability linked bonds" or any other bonds issued in accordance with international environmental, social, and governance (ESG) principles as adapted by SEBI from time to time.

4.5 SEBI has issued BRSR (Business Responsibility and Sustainability Report) under regulation 34(2)(f) of LODR Regulations to lay focus on how a company is operated responsibly and sustainably in the context of Environment, Social Responsibility and Governance (ESG). It requires companies to reveal the facts and figures that underlie their environmental impacts, the way they interact with workers and their communities and the ways they govern themselves, and helps investors scrutinize corporate sustainability.

The BRSR has been established in 2021 and has been made mandatory for the top 1000 listed companies in India from FY 2022-23 and supersedes the earlier Business Responsibility Report (BRR).

How BRSR works: Companies are required to disclose quantitative and qualitative information

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[13] Securities and Exchange Board of India, SEBI (Issue and Listing of Non-Convertible Securities) (Amendment) Regulations, 2023 (dated 3 February 2023) https://www.sebi.gov.in/legal/ regulations/feb-2023/securities-and-exchange-board-of-india-issue-and-listing-of-non-convertible-securities-amendment-regulations-2023_67798.html

[14] IBM, Environmental, Social and Governance (ESG), IBM (2025) https://www.ibm.com/think/topics/environmental-social-and-governance

[15] SEBI/HO/DDHS/DDHS-POD-1/P/CIR/2025/84 https://www.sebi.gov.in/legal/circulars/jun-2025/ framework-for-environment-social-and-governance-esg-debt-securities-other-than-green-debt-securities-_94424.html

regarding their social, environmental and governance challenges, including energy consumption, water consumption, emissions and waste management, employee welfare, customer relationships, and community engagement, ethics, transparency and compliance, among others. This is so that investors can compare the ESG performance of companies.

Global: Linkage between BRSR and Green Bonds: Green Bonds finance projects, which have direct impact on improving the environment of a company, as reflected in BRSR, such as renewable energy, clean transport, water management and pollution control. If a company were issuing 'Green Bonds', then the company would have to state the use of the proceeds and the benefits to the environment, as BRSR would require it. BRSR and Green Bonds reflect the company's commitment towards sustainability and makes it more attractive for the investors who are ESG investors.

4.6 What is RBI Sovereign Green Bonds?

Sovereign Green Bonds are bonds issued by the Government of India that have the sole purpose of raising money for environment-friendly projects like renewable energy, clean transportation, water management, biodiversity conservation and climate adaptation. The issuance and management of these bonds by Reserve Bank of India (RBI) on behalf of Government ensure efficient functioning of the market.

The Government of India has now announced to issue Sovereign Green Bonds in the Union Budget 2022-23 and India has initiated its first move towards sovereign green finance by issuing sovereign green bonds in January 2023.[16]

The launch of Sovereign Green Bonds was to raise capital for green initiatives in the government sector, make green projects more affordable and demonstrate India's dedication to global climate action and achieving Net Zero by the year 2070. They also want to build a strong green finance ecosystem in India by creating an environment that welcomes private and foreign investment and the creation of transparency in the utilization of public funds.

While it is functioning, Government decides on the green projects to be financed and the RBI conducts auctions of such bonds, which can be accessed by the banks and financial institutions etc. The proceeds are deposited in the Consolidated Fund of India, but can only be used for approved green projects. The use of the fund and its environmental consequences are subject to a special monitoring committee of the government and annual reports are issued on the utilisation of the funds and the outcomes of the projects, ensuring the necessary accountability

[16] Reserve Bank of India, Issuance Calendar for Marketable Sovereign Green Bonds: FY 2022–23 (Press Release, 6 January 2023 https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx? prid=55004&utm

and transparency.

CHAPTER - 5. INTERNATIONAL FRAMEWORK

5.1 The International Capital Market Association – Green Bond Principles (GBP)

First published in 2014 by the International Capital Market Association (ICMA), the ICMA Green Bond Principles (GBP) are voluntary international guidelines, which ensure that funds raised through a green bond are used for an environmentally worthwhile project. They are of international importance since the Paris Agreement (2015) and are revised annually. Now, they are followed by all the issuers as well as regulators of the world, including India (SEBI), UK, EU, USA and Singapore.

Purpose:

GBPs are a universal set of guidelines to help improve transparency, credibility, investor confidence and to prevent greenwashing.

Four Core Principles:

A. Use of Proceeds – money must be spent on an eligible green project(s).
B. Project Evaluation & Selection – well-defined environment goals and decision criteria.
C. Management of Proceeds – Funds tracked separately.
D. Reporting – Reporting in accordance with use of proceeds and the impact on the environment annually.[17]

5.2. GREEN BOND ISSUANCE - GLOBAL TRENDS

United States

No specific mandatory green-bond laws in the U.S.: green bonds are issued on market-led principles (ICMA Green Bond Principles) and issuer principles (corporate, municipal issuer). At the federal level, there have been discussions on sovereign green bonds, in the form of reports by the U.S. Treasury and the composition of advisory committees, but the U.S. Treasury has yet to develop a long-term sovereign green bond initiative that is predominantly market led and disclosure-based as of mid-2024.

How they issue (typical steps): issuer sets up a "Green Bond Framework" (Use-of-Proceeds (UoP), selection, management, impact reporting), if desired, has an external

[17] International Capital Market Association (ICMA), *Green Bond Principles* (June 2021) https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Bond-Principles-June-2021-140621.pdf

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review/certification and markets the bond to investors (typically for municipal green bonds). ICMA GBP is the most popular voluntary standard.[18]

China

China has strong policy/regulatory support, with multiple regulators (PBoC, NDRC, CSRC) issuing official guidance and a Green Finance Endorsed Project Catalogue (taxonomies) that are used for bond eligibility. The state is providing a platform for green bond issuance through local government/ quasi-sovereign issuance, explicit state catalogues and incentives. In recent years, China has emerged as one of the world's biggest markets for green bonds.[19]

How they are issued: issuers qualify projects using domestic catalogues; project demand is created by regulators and state-owned banks; international credibility can be achieved by obtaining external reviews/certification (e.g., Climate Bonds). Top down taxonomy and policy support are key to scale up.

France

The French sovereign bond issuer, Agence France Trésor, issues the sovereign Green OATs (Green OAT = green sovereign bonds). France has an official green OAT framework and has green OATs (regular syndications/taps) worth many billions of euros, with detailed allocation & performance reports, published on an annual basis. France has a well-established and transparent sovereign programme.

How they are issued: AFT begins with defining eligible expenditure and then issues green OATs via syndication/secondary taps to form large, liquid lines, and generates annual allocation & performance reports linked to the expenditure and metric.

5.3 Top 10 Countries with the Highest Green Bond Issuance According to the Climate Bonds Initiative – Global State of the Market Report 2024[20]

Rank	Country / Issuer Source	Aligned Green Bond Issuance in 2024 (USD bn)
1	United States (USA)	84.7 bn
2	Germany	73.3 bn
3	China	68.9 bn
4	France	58.6 bn

[18] https://www.epa.gov/statelocalenergy/municipal-bonds-and-green-bonds

[19] https://www.climatebonds.net/files/documents/publications/China-Green-Bond-Market-2019-Research-Report_2025-02-17-163051_qijt.pdf?

[20] **Climate Bonds Initiative**, Global State of the Market: Green Bonds 2024 (2025) https://www.climatebonds.net/files/documents/publications/Climate-Bonds_Sustainable_Debt_2024_Global-State-of-the-Market_24-Sep-2025.pdf

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5	**Supranational** (e.g., EU, multilateral)	**48.3 bn**
6	**United Kingdom (UK)**	**31.9 bn**
7	**Italy**	**26.7 bn**
8	**Netherlands**	**23.9 bn**
9	**Sweden**	**22.9 bn**
10	**Spain**	**22.2 bn**

5.4 The status of India in Green Bond Issuance

According to the report – India Sustainable Debt State of the Market 2024 by Climate Bonds Initiative and MUFG Bank:

India is also one of the top emerging market green bond issuers in the world.[21]

India's climate finance market is dominated by green bonds (83%) as the main instrument. India had an estimated green bond–led issuance of USD 55.9 billion as per December 2024.

So far, the Government of India has issued a total of 08 tranches of sovereign green bonds for a total of INR 477 billion (approx. USD 5.7 billion), which has strengthened the green bond market in India and the domestic green yield curve.

CHAPTER -6 CONCLUSION

Green bonds have a major role to play in mobilising finance for climate change and sustainable development projects and as an investment vehicle that is clear and responsible for investors. The UK, France and Germany have done well as they had strong sovereign green bonds, a clear standard according to international best practice, and regular reporting and reporting to create investor trust.

The reason behind the noncompetitive status of India (until now there were no sovereign green bonds):

The key reasons for India's lag are the limited number of green bond issuances by companies, the high green certification and verification fees, lack of a uniform green taxonomy, and investor awareness and greenwashing. Moreover, there are several businesses which are opting for bank loan rather than bonds in India and this is restricting the issuance of green bonds.

21 https://www.linkedin.com/posts/mufg_sustainablefinance-greenbonds-transitionfinance-activity-7344267031396962305-rShM?

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CHAPTER -7 SUGGESTION

1. Cut down on issuance and verification fees.

Standardise disclosure formats and offer financial support for the cost of third-party verification to reduce costs of green bond issuance. This will encourage other companies to proceed with green bonds, instead of bank loans.

2. Grow the number of investors and demand from the market

Discover and promote issuance volumes by raising awareness of and providing policy support for pension funds, insurance companies, mutual funds and foreign investors.

3. Offer policy support/ incentives

Incentive, for instance, Tax benefit, Guarantee or Credit Enhancement for Green bonds, especially first time issuers and Infrastructure issuers.

In the United States, Clean Renewable Energy Bonds and Qualified Energy Conservation Bonds give tax credits to the holders of green bonds and provide subsidies for interest payments of the bonds to the issuers. Likewise, the Chinese governments of different provinces have also brought in green bond subsidy in China.[22]

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[22] https://www.lexology.com/library/detail.aspx?g=3b859fca-b9e0-405a-9004-e8e3ac693123&utm_source=chatgpt.com