

GREEN BONDS TO FINANCE INFRASTRUCTURE DEVELOPMENT: INTERNATIONAL EXPERIENCE AND IMPLICATIONS FOR IMPLEMENTATION IN VIETNAM

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Abstract: As Vietnam confronts rapid urbanization and mounting environmental pressures, traditional public funding and bank lending fall short of financing the estimated USD 480 billion needed for sustainable infrastructure by 2030. Green bonds-fixed income instruments dedicated to projects with clear environmental benefits-have mobilized over USD 1 trillion globally, financing renewable energy, clean transport, water management, and climate resilient urban works. This paper examines international best practices across Europe, North America, and Asia Pacific, then assess Vietnam's emerging green bond market-highlighting its legal framework for sovereign, municipal, and corporate green bonds, recent sovereign and corporate issuances; propose actionable recommendations to help Vietnam achieve its net zero emissions commitment by 2050.

Keywords: Green bonds, infrastructure development, international experience, Vietnam.

TRÁI PHIẾU XANH TÀI TRỢ CHO PHÁT TRIỂN CƠ SỞ HẠ TẦNG: KINH NGHIỆM QUỐC TẾ VÀ HÀM Ý ĐỐI VỚI VIỆC TRIỂN KHAI TẠI VIỆT NAM

Tóm tắt: Khi Việt Nam đối mặt với đô thị hóa nhanh chóng và áp lực môi trường ngày càng gia tăng, nguồn vốn công truyền thống và tín dụng ngân hàng không đủ để tài trợ cho 480 tỷ USD cần thiết cho cơ sở hạ tầng bền vững đến năm 2030. Trái phiếu xanh - công cụ thu nhập cố định dành riêng cho các dự án mang lại lợi ích môi trường rõ ràng - đã huy động hơn 1 nghìn tỷ USD trên toàn cầu, tài trợ cho năng lượng tái tạo, giao thông sạch, quản lý nguồn nước và các công trình đô thị thích ứng với biến đổi khí hậu. Bài viết này khảo sát các thực tiễn tốt nhất quốc tế tại châu Âu, Bắc Mỹ và châu Á - Thái Bình Dương, sau đó đánh giá thị trường trái phiếu xanh đang hình thành tại Việt Nam - làm nổi bật khung pháp lý cho trái phiếu xanh chính phủ, địa phương và doanh

ngành, cùng các đợt phát hành gần đây; đồng thời đề xuất các khuyến nghị thiết thực để giúp Việt Nam đạt cam kết phát thải ròng bằng “0” vào năm 2050.

Từ khóa: Trái phiếu xanh, phát triển cơ sở hạ tầng, kinh nghiệm quốc tế, Việt Nam.

1. Introduction

Rapid urbanization in Vietnam has created an urgent need for sustainable infrastructure. Existing transportation networks, water and sanitation systems, waste management facilities, and energy supply are under significant strain, while climate change and environmental pollution exacerbate these challenges. Green bonds—which allocate proceeds exclusively to environmentally beneficial projects such as renewable energy, clean public transport, and flood resilience—offer a mechanism to mobilize large-scale private capital, alleviate pressure on public budgets, and accelerate the transition to green urban development.

For Vietnam, issuing green bonds brings multiple advantages: it attracts both domestic and international investment; enhances transparency and accountability through environmental impact reporting; and strengthens the reputation of local governments and issuers. Since the first sovereign green bond in 2021 and subsequent issuances by EVN Finance and BIDV, the market has begun to take shape. Expanding green bond issuance can finance urban green infrastructure projects, improve quality of life, and support Vietnam’s commitment to achieving net-zero emissions by 2050.

This article will analyze the benefits of green bonds for urban infrastructure development, the prospects for developing the green bond market in Vietnam and propose some measures to develop the market.

2. Methodology

To analyze the international experience and derive actionable insights for Vietnam, this study employs a mixed methods approach comprising:

Literature Review: Systematic examination of academic articles, multilateral development bank reports, and market studies on green bonds and infrastructure finance. Key sources include the International Capital Market Association’s Green Bond Principles, Climate Bonds Initiative taxonomies, World Bank impact reports, and peer reviewed research on “greenium” and investor behavior.

Comparative Case Studies: Detailed review of flagship green bond programs in Europe (EU Green Bond Standard; sovereign and supranational issuances), America, Brazil, China, India and Indonesia. Each case is evaluated on regulatory design, credit enhancement mechanisms, external review practices, and market outcomes.

Regulatory and Market Analysis for Vietnam: Assessment of Vietnam's current legal framework, policy instruments, and market activity (sovereign and corporate issuances to date). Data are drawn from the State Securities Commission's Bond Market Reports and official Ministry of Finance publications.

3. Results and Discussion

3.1. Overview

3.1.1. Definitions

Green bonds are bonds issued to raise capital for projects that have environmental benefits, help reduce the impact of climate change and promote sustainable development. The main difference between green bonds and conventional bonds is that the capital raised must be used for "green" projects such as renewable energy, sustainable transport, natural resource protection and climate change adaptation. International organizations have proposed many concepts of green bonds such as:

According to the International Capital Market Association (ICMA), "A green bond is any type of debt instrument whose proceeds are used exclusively to finance or refinance, in whole or in part, new or existing green projects and which complies with the Green Bond Principles (GBP)". (ICMA, 2021 - Green Bond Principles).

According to the Climate Bonds Initiative (CBI, 2023): "Green bonds are

financial instruments issued to finance projects that bring environmental benefits, meeting standards set by international organizations to ensure transparency and accountability".

The World Bank defines: "Green bonds are financial instruments that help mobilize capital in the global capital market to support projects that have positive impacts on the environment and climate". (World Bank, 2022 - Green Bond Impact Report)

In Vietnam, the 2020 Environmental Protection Law introduces the concept: green bonds are bonds issued by the Government, local authorities, and enterprises in accordance with the provisions of the law on bonds to mobilize capital for environmental protection activities and investment projects that bring environmental benefits.

In general, Green Bonds are usually issued by governments, financial institutions, businesses or local authorities to finance green projects such as renewable energy, sustainable public transport, wastewater management, and biodiversity protection.

3.1.2. Issuance standards

To ensure transparency and credibility, green bonds must comply with international standards issued by reputable financial and environmental organizations. Some popular standards include:

The Green Bond Principles (GBP) developed by the International Capital Markets Association (ICMA), focusing on four elements: capital use, project assessment process, capital management, and periodic reporting (ICMA, 2021).

The Climate Bonds Standard (CBS) issued by the Climate Bonds Initiative (CBI), provides rigorous criteria to ensure

that green bonds truly support climate goals (Climate Bonds Initiative, 2023).

The EU Green Bond Standard (EU GBS), proposed by the European Commission, requires green bonds to comply with reporting and third - party verification regulations (EU Commission, 2022).



Figure 01. Some international green bond standards

(Source: Author's own compilation)

These standards generally require green bonds to meet the following conditions:

- Clear use of funds: Only pre-identified green projects can be financed.
- Project evaluation and selection: Projects must be reviewed and selected based on strict environmental criteria.
- Transparent capital management: Issuers must ensure that funds raised from green bonds are monitored and not misused.
- Regular reporting: Issuers are

responsible for publishing reports on the use of funds and the environmental impact of the project.

Thanks to these standards, green bonds have become a reliable financial instrument for raising capital for sustainable projects, while increasing investor confidence.

3.1.3. Certifications and credit ratings

To ensure transparency and credibility, green bonds are often rated and certified by independent

organizations. This helps ensure that green bonds meet international standards, while also creating investor confidence. Some popular credit rating and certification organizations include:

- **Climate Bonds Initiative (CBI):** Provides certification according to climate bond standards, ensuring that green bonds meet carbon emission reduction requirements (Climate Bonds Initiative, 2023).

- **Standard & Poor's Green Evaluation:** Evaluates the greenness of bonds based on the environmental impact of the projects they finance (S&P Global Ratings, 2022).

- **Moody's Green Bond Assessment:** Rates green bonds based on environmental criteria and the transparency of the issuer (Moody's, 2022).

3.2. Benefits of green bonds

Green bonds bring many benefits to stakeholders, including issuers, investors and the whole society. Issuing and investing in green bonds not only brings financial benefits but also contributes to promoting sustainable development and minimizing negative impacts on the environment.

3.2.1. For urban infrastructure development

Green bonds play a crucial role in supporting sustainable urban infrastructure development. They help

mobilize long-term capital for environmentally friendly projects such as electric buses, metro systems, public bicycles, and renewable energy sources like solar and wind. These investments contribute to improving air quality, reducing emissions, and enhancing urban resilience. Additionally, green bonds finance water and waste management infrastructure, including modern wastewater treatment systems and recycling facilities, helping create cleaner and healthier living environments.

Beyond environmental improvements, green bonds enhance quality of life and public health by reducing greenhouse gas emissions from private vehicles and industrial activities. Cleaner air lowers the risks of diseases such as lung cancer and cardiovascular disorders, as highlighted by the World Health Organization (WHO). Moreover, green bonds promote economic transformation by encouraging investment in green sectors like clean energy, sustainable construction, and efficient waste management. This helps stimulate industries such as solar panel manufacturing, electric vehicle production, and eco-friendly building materials.

Green bonds also attract both domestic and international investment, especially from funds focused on sustainability. Institutions such as the World Bank and BlackRock increasingly prioritize green investments, helping

issuers access capital at more favorable rates. As a result, green bonds support job creation and labor upskilling in fields like renewable energy, environmental engineering, and clean technology. According to IRENA and the ILO, the global renewable energy sector created 12.7 million jobs in 2021, and this figure could reach over 30 million by 2030-supported in part by green bond financing.

Furthermore, green bonds encourage technological innovation by funding R&D in energy storage, carbon capture, and smart infrastructure. These investments increase resource efficiency and competitiveness. The growth of the green bond market also contributes to forming a sustainable financial system, where investors and institutions apply ESG standards to reduce environmental risks. In the long term, this helps improve capital access and market credibility for environmentally responsible issuers.

Finally, green bonds enhance climate resilience by financing projects that mitigate the impact of extreme weather and rising sea levels. These include smart drainage systems, green roofs, and urban forests, which reduce flooding, lower temperatures, and absorb CO₂. Cities like Singapore have used green bond capital to fund its “City in Nature” strategy. Similarly, green bonds are used to construct energy-efficient buildings that meet Net Zero standards-an approach already adopted in the European Union. Collectively, these benefits make

green bonds a vital tool for achieving sustainable development and climate adaptation goals globally.

3.2.2. For issuers

Issuing green bonds brings many important benefits to businesses. First of all, this is a sustainable source of finance, helping businesses mobilize capital for projects related to environmental protection, renewable energy and other social activities. In addition, green bonds also contribute to enhancing the reputation of businesses, creating a positive image and attracting attention and trust from the community, customers and investors.

In addition, issuing green bonds helps businesses diversify their investor portfolio, attract long-term capital and open up new business opportunities in line with the trend of sustainable development. Not only does it benefit businesses, it also contributes to economic and social development by investing in green projects, aiming for a sustainable future and protecting the environment for future generations. Furthermore, businesses can access new capital from investors interested in sustainable development, helping to expand financial opportunities and long-term development.

3.2.3. For investors

In addition to the benefits for the issuing enterprise, green bonds also bring

many practical values to investors. First of all, this is an attractive investment channel with competitive yields, helping investors not only seek profitable opportunities but also support meaningful green projects.

In addition, green bonds help investors diversify their investment portfolios, reduce risks and create stable income from many different sources. Investing in this type of bond also contributes to promoting sustainable development, meeting environmental, social and governance (ESG) criteria. This is especially important in the context of the world focusing on solutions to adapt to climate change, ensure food security and improve public health.

In addition, investing in green bonds helps increase the transparency of the issuer, bringing higher trust to investors. Not only does this type of investment provide financial benefits, it also creates added value for society and the environment. By investing in green projects, investors not only protect their own interests but also join hands to solve urgent community problems, moving towards a more sustainable future.

3.3. International experience

Green bonds were first issued in 2007 by the European Investment Bank. In 2008, the World Bank also participated in issuing this type of bond to meet the needs of a group of Swedish pension funds that wanted to invest in projects to

improve the climate environment. The birth of green bonds has opened up an effective financial channel, helping to mobilize capital from investors to finance projects to protect the environment and respond to climate change.

Although the green bond market developed quite slowly in the early stages, in the next decade, the growth became strong thanks to global green initiatives, typically the Paris Agreement on climate change and the United Nations Sustainable Development Goals. More and more governments and large corporations are participating in this market to mobilize capital for green projects. Currently, green bonds have been issued in more than 30 countries, mainly in major economies such as the US, UK, France, Canada and China.

3.3.1. The European Union (EU)

The European Union (EU) is one of the pioneers in using green bonds to finance sustainable urban projects. Between 2014 and 2023, the share of green bonds in total bond issuance in the EU increased from 0.3% to 6.8%. This growth reflects the EU's commitment to financing environmentally sustainable projects and the increasing demand among investors for green financial products. In 2023, the cumulative value of green bonds issued in Europe reached approximately USD 1.4 trillion, underscoring the region's leadership in the global green bond market.

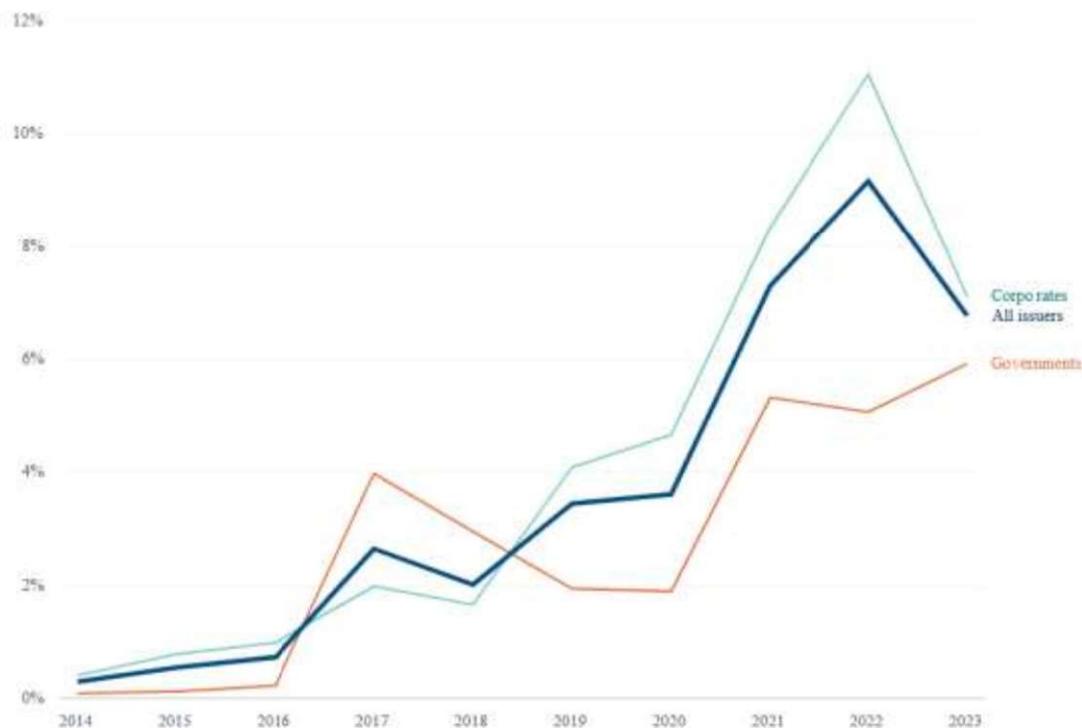


Figure 02. Green bonds as a percentage of total bonds issued by corporations, by governments, and by both corporations and governments in the EU-27, 2014-2023

(Source: Europa)

The European Union (EU) stands out as a global leader in this field, having developed a mature green bond market supported by robust regulations and wide stakeholder engagement. Vietnam, as an emerging green finance market, can draw valuable lessons from the EU's experience to scale up its own sustainable finance initiatives.

One of the EU's key strengths lies in its comprehensive regulatory framework, including the EU Green Bond Standard (EuGBS) and the EU Taxonomy for Sustainable Activities. These instruments have enhanced the credibility, transparency, and comparability of green bonds, thereby

fostering investor confidence. The EU also benefits from active participation by both the public and private sectors. Corporations and governments alike have issued green bonds at significant volumes, with corporate green bonds reaching over 11% of total corporate bond issuance in 2022. Government-issued green bonds have also grown steadily, reflecting institutional commitment. Another major advantage is the EU's ability to mobilize large-scale funding for the green transition. As of 2023, the region had issued over USD 1.4 trillion in cumulative green bonds, funding a wide range of sustainable initiatives, including renewable energy, clean transportation, and green infrastructure. Finally, the high

standards of reporting and verification in the EU have increased investor trust and expanded market participation. Transparent use of proceeds, third-party verification, and regular impact reporting are now standard practice.

Despite its success, the EU's green bond market faces several challenges. One notable issue is the complexity and cost of compliance with stringent regulatory standards, particularly the EU Taxonomy and EuGBS. This may deter smaller issuers or those in underdeveloped regions. Another challenge is market volatility. In 2023, green bond issuance in the EU declined compared to the previous year, largely due to rising interest rates and inflation, which increased borrowing costs. This highlights the vulnerability of green finance to macroeconomic conditions. The EU also contends with uneven sectoral and regional distribution of green bond proceeds. Wealthier countries and high-profile sectors such as energy and transport often dominate green financing, leaving less-developed regions behind.

Vietnam can draw several strategic lessons from the EU experience. First, it should prioritize the development of a clear green finance framework, including a national green taxonomy and standardized reporting guidelines. These measures would strengthen the market's foundation and align Vietnam with global investors' expectations. Second,

institutional capacity building is essential. Ministries, banks, and bond issuers need to be trained in green finance practices, including project selection, verification, and impact reporting. Third, Vietnam should take steps to expand market participation by offering incentives, reducing issuance costs, and conducting awareness campaigns for both issuers and investors. Lastly, Vietnam must place a strong emphasis on transparency and accountability. Ensuring that green bond proceeds are used appropriately and reporting their environmental impacts will be critical to establishing credibility and attracting long-term investment.

3.3.2. China: The World's Largest Issuer of Green Bonds

Over the past decade, China has asserted itself as one of the global leaders in green finance, particularly through the issuance of green bonds. Since 2016, when the Chinese green bond market began to surge, the issuance volume has experienced strong and consistent growth.

In 2014, the total value of green bonds issued stood at just USD 1 billion. However, by 2016, this figure had skyrocketed to USD 36.2 billion, positioning China as one of the fastest-growing green bond markets in the world. By 2023, the issuance reached a record high of USD 131.3 billion - the highest globally for that year, according to the Climate Bonds Initiative (CBI, 2024).

Table 01. Green Bond Issuance Data in China (2014-2023)

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Issuance Value (USD Billion)	1,0	3,5	36,2	37,1	42,8	55,8	44,0	68,2	83,2	131,3

(Source: CBI, Statista)

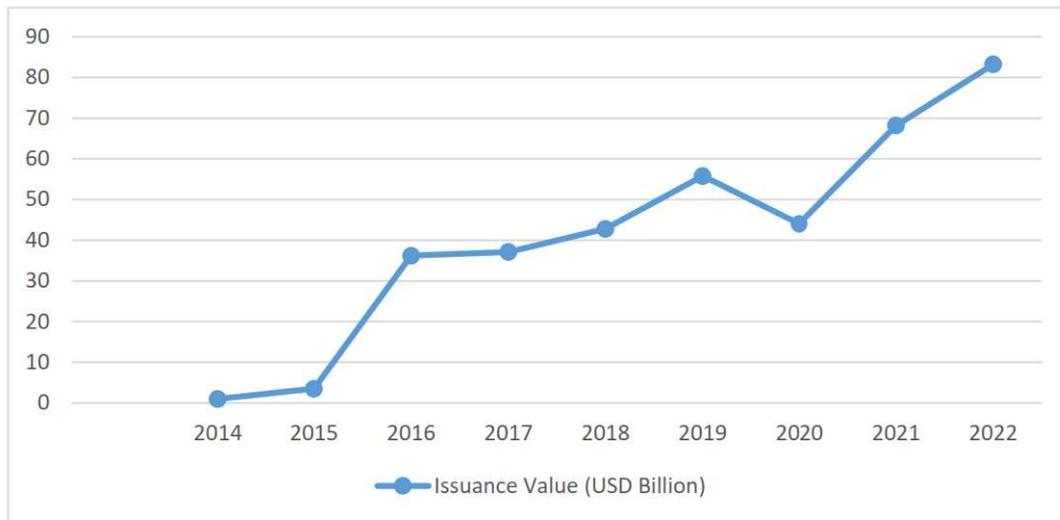


Figure 03. Green Bond Issuance Data in China (2014-2023)

(Source: CBI, Statista)

Green bond issuance in China has delivered a wide range of benefits while also revealing several challenges that need to be addressed for the market to mature further.

On the positive side, one of the most significant advantages is strong government policy support. Regulatory bodies such as the People’s Bank of China (PBoC) and the China Securities Regulatory Commission (CSRC) have issued detailed guidelines to promote green finance, enhancing investor confidence and market integrity. In addition, China enjoys a large and diverse

issuer base, dominated by state-owned enterprises (SOEs), commercial banks, and local governments. This structure has enabled the country to achieve global leadership in issuance volume, with a record USD 131.3 billion issued in 2023—making it the largest green bond market in the world. Another key strength lies in the development of domestic green finance standards, such as the Green Bond Endorsed Project Catalogue, which is increasingly being aligned with international taxonomies. Finally, the sectoral diversification of bond proceeds—covering renewable energy, clean transportation, water resource

management, and pollution control-demonstrates a well-rounded commitment to environmental sustainability.

Despite these strengths, several disadvantages persist in China's green bond market. A primary concern is the lack of full alignment with international standards such as the Green Bond Principles (GBP) by ICMA or the criteria set by the Climate Bonds Initiative (CBI). As of 2023, only around 64% of Chinese green bonds met international definitions. This contributes to greenwashing concerns, where funds may be allocated to projects with questionable environmental benefits. Moreover, the market remains overly reliant on SOEs and commercial banks, potentially crowding out innovation and private sector participation. Regional disparities are another issue, with most issuances concentrated in financial hubs like Beijing and Shanghai, leaving less-developed regions underserved. Lastly, transparency and post-issuance reporting remain inconsistent, with some issuers failing to disclose how funds are used or what environmental impact is achieved-undermining market credibility.

Vietnam can draw several important lessons from China's experience in green bond development. First, strong government leadership and clear regulatory frameworks are essential. Vietnam should develop its own green taxonomy, green bond standards, and a national strategy to encourage issuance

while ensuring environmental integrity. Second, Vietnam should balance public and private sector participation. While government-backed issuers can play a catalytic role, policies must also support and incentivize private companies, especially SMEs, to enter the green finance space. Third, enhancing transparency and alignment with international norms is crucial for credibility and attracting foreign capital. Vietnam must promote independent third-party verification, consistent reporting, and clear impact metrics to meet global investor expectations. Finally, Vietnam should adopt inclusive policies to address regional gaps, ensuring green finance reaches underserved communities and sectors, particularly those most vulnerable to climate change.

3.4. Legal regulations, current status and development prospects of green bond market in Vietnam

3.4.1. Legal regulations

Vietnam is gradually building a legal framework to support green bond issuance across government, local authorities, and corporates:

- **Government Green Bonds:** Under Decree 95/2018, sovereign green bonds follow the same issuance, custody, and listing procedures as other government debt, with issuance proposals governed by Article 21.

- Local Authority Green Bonds: Decree 93/2018 requires provincial People’s Committees to prepare and report a project list financed by local green bonds, in line with a Prime Minister–approved plan.

- Corporate Green Bonds: Decrees 163/2018, 153/2020, and 65/2022 detail issuance principles, use-of-proceeds rules, and disclosure requirements to ensure transparency and proper management of green corporate bond funds.

Key policy decisions include:

- Decision 2183/QĐ-BTC (2015): Action plan for green finance products, including green bonds.

- Decision 1191/QĐ-TTg (2017): Roadmap to develop Vietnam’s bond market (2017-2020), with measures to promote green bond issuance toward 2030.

- Securities Law (2019): General principles for bond issuance and trading, emphasizing international standards and transparent disclosure.

- Environmental Protection Law (2020): Article 150 defines eligible issuers (government, local authorities, enterprises) and mandates use of proceeds for environmental projects, with required environmental impact reporting and incentives.

- Decree 08/2022 (amended by 65/2022 and 08/2023): Detailed guidance

on green corporate bond issuance, fund management, and disclosure, requiring separate accounting of proceeds and regular audited reporting on fund use and project impact.

Together, these regulations align Vietnam’s green bond market with international best practices, attract green capital, and support the country’s sustainable development and emission-reduction goals.

3.4.2. Current status

In Vietnam, green bonds play an important role in building a sustainable economy and responding to climate change. The trend of investing in clean energy projects and minimizing negative impacts on the environment is increasingly expanding, promoting the use of green bonds as an essential capital mobilization tool. This not only helps attract investment but also contributes to realizing the country's sustainable development goals. Since 2012, Vietnam has implemented a green finance orientation according to the National Green Growth Strategy, focusing on developing green financial products in the stock market to provide financial resources for sustainable growth. The Government and the Ministry of Finance have also issued important documents such as Resolution No. 24-NQ/TW, Decision No. 2183/QĐ-BTC and Decision No. 1191/QĐ-TTg, aiming to

build and perfect the financial framework for the green market as well as green financial products. In addition, the State Securities Commission (SSC) has coordinated with international

organizations such as IFC to develop standards and guidelines on green bonds, contributing to raising awareness and promoting the development of this type of finance.

Table 02. Selected Green Bond Issuances in Vietnam

Issuer	Year of Issuance	Issue Value (VND billion)	Maturity
Local Government Issuers			
Ho Chi Minh City	2016	3,000	15 years
Ba Ria - Vung Tau	2016	500	5 years
Corporate Issuers			
Trung Nam Solar Power JSC and Trung Nam JSC	2019	3,045	10 years
Electricity Finance Joint Stock Company	2022	1,700	5 years
Vietcombank (Joint Stock Commercial Bank for Foreign Trade of Vietnam)	2024	2,000	5 and 10 years
HDBank (Ho Chi Minh City Development Bank)	2024	3,000	2, 3, and 5 years

(Source: Nguyen Thi Lien, Pham Hong Hanh)

A number of localities, enterprises and organizations in Vietnam have pioneered the issuance of green bonds to raise capital for environmentally friendly projects. The first issuances were made by local governments (Ho Chi Minh City and Ba Ria - Vung Tau) in 2016, primarily for infrastructure projects, signaling early policy engagement in green finance.

In July 2022, the Electricity Finance Joint Stock Company (EVN Finance) launched the first green bond issuance in Vietnam according to the ICMA Green Bond Principles, with a total value of more than VND 1,700 billion. This issuance was partially guaranteed by GuarantCo - a multinational guarantor company - with a level of USD 50 million

(equivalent to VND 1,150 billion). This is the first time in Vietnam that a bond issuance has received a guarantee from a prestigious international organization, contributing to ensuring safety for investors in the green energy sector, while creating a premise for the sustainable development of green projects.

The private sector began to engage more actively from 2019, led by Trung Nam Group in renewable energy. In recent years, financial institutions such as Electricity Finance Company, Vietcombank, and HDBank have also issued green bonds, suggesting growing interest from the banking sector in sustainable finance. BIDV became the first bank in Vietnam to successfully issue green bonds in accordance with the ICMA Green Bond Principles, with a value of up to VND 2,500 billion. The mobilized capital will be used to finance green projects, promote energy saving, reduce greenhouse gas emissions and protect the environment, in accordance with BIDV's Green Bond Framework. Notably, this is also the first time in the Vietnamese capital market that a domestic bond issuance with a Green Bond Framework has been highly rated by a leading credit rating agency such as Moody's.

Notably, the maturity terms vary, from 2 to 15 years, indicating flexibility in financing needs. The participation of commercial banks in 2024 marks a promising step toward the integration of green finance into Vietnam's broader

capital markets, especially with large issuances exceeding VND 2,000-3,000 billion. These trends demonstrate Vietnam's efforts to align with global sustainable development goals while diversifying financing sources for green infrastructure, energy, and climate-resilient projects.

3.4.2. Development prospects

Vietnam's bond market is facing many opportunities for strong development thanks to sustainable economic growth, green investment trends, supportive policies of the Government and the increasing participation of foreign investors. These factors not only promote the domestic bond market but also create conditions for Vietnam to integrate more deeply into the international financial market.

a, Economic Growth and High Capital Mobilization Demand

Vietnam is one of the fastest growing economies in Southeast Asia, with an average GDP growth rate of over 6% over the past many years (World Bank, 2023). To maintain this growth rate, the demand for long-term capital mobilization through bonds is increasing, especially in the fields of infrastructure, renewable energy and real estate.

In the field of infrastructure and transportation, the Vietnamese Government aims to develop a series of important projects such as the North-South Expressway, metro lines in Hanoi and Ho Chi Minh City. Ho Chi Minh City,

as well as the seaport system. These are areas with large capital needs, creating conditions for the development of the corporate bond and government bond markets. In addition, the real estate sector is also one of the largest bond-issuing industries today, contributing to promoting market liquidity.

b, Green Investment Trends and ESG

Along with the global investment trend, investors are increasingly interested in ESG (Environmental, Social and Governance) criteria in making investment decisions. This opens up great opportunities for the green bond and sustainable bond market in Vietnam. The Vietnamese Government has committed to achieving net zero emissions by 2050 at the COP26 Conference, creating a strong driving force for the development of green financial instruments, including green bonds. Some enterprises and financial institutions such as EVNFinance, BIDV, and Ho Chi Minh City have pioneered the issuance of green bonds to finance sustainable development projects. This trend not only helps mobilize capital more effectively but also attracts the attention of foreign investors interested in sustainable development.

c, Government Support Policies

In order to promote the bond market, the Vietnamese Government has issued many important policies to improve the transparency and stability of the market. Decree 65/2022/ND-CP

specifically regulates the issuance of corporate bonds, enhances the responsibility for information disclosure and protects the rights of investors. The Securities Law 2019 also plays an important role in creating a legal framework for the listed bond market and secondary trading. In addition, the Government's Capital Market Development Plan 2021-2030 aims to increase the proportion of the bond market to 50% of GDP by 2030, demonstrating its determination to develop this sector sustainably and in the long term.

d, Foreign Investor Participation

Vietnam's bond market is attracting great attention from foreign investors thanks to its growth potential and the Government's open-door policy. Free trade agreements such as EVFTA and RCEP facilitate foreign capital flows into the Vietnamese bond market. In addition, Vietnam has the opportunity to be upgraded from a frontier market to an emerging market, which will help attract more investment capital into corporate and government bonds.

e, Technology Application and Market Digitalization

The application of financial technology (Fintech) and Blockchain can improve the transparency and efficiency of the Vietnamese bond market. In the world, many countries have applied Blockchain technology in the issuance

and trading of bonds, helping to reduce costs and increase transaction speed. Vietnam is also testing an electronic bond trading platform, helping to improve transparency and attract more investors to participate.

4. Recommendations

Completing the legal framework and supporting policies

Vietnam needs to quickly complete the legal framework and policies to increase transparency and attract investors to green bonds. First of all, it is necessary to issue a set of national criteria for green bonds, in line with international standards such as ICMA's Green Bond Principles (GBP) or CBI's Climate Bonds Standard (CBS). In addition, the government should apply preferential policies such as corporate income tax exemption, registration fee exemption or support for assessment and certification costs for organizations issuing green bonds. Furthermore, it is necessary to develop risk guarantee and insurance mechanisms, allowing the State Bank, the Ministry of Finance or international financial institutions to participate in guaranteeing part or all of the value of green bonds.

Developing the supply of green projects in urban areas

The government should develop a list of urban infrastructure projects that are prioritized for funding from green bonds, including public transport (trams, electric buses), renewable energy (solar

and wind power projects), and urban water and waste treatment systems. The public-private partnership (PPP) model should be promoted to mobilize private sector participation in sustainable urban infrastructure projects. In addition, the government can create a green project support fund to provide initial financing for projects that meet green criteria before issuing bonds to the market.

Expanding the market, investors

An important factor to promote green bond issuance is to expand the market size, especially attracting the participation of domestic and foreign investors. First of all, encouraging the participation of foreign investors is an important solution. Vietnam can do this by joining global green finance initiatives and signing cooperation agreements with international financial institutions such as the Asian Development Bank (ADB), the World Bank (WB) and the International Finance Corporation (IFC). This cooperation will not only help enhance the reputation of the Vietnamese green bond market but also help attract international capital to sustainable urban infrastructure projects.

In addition, to ensure investor confidence, it is necessary to build a transparent mechanism and disclose information on the issuance and use of capital from green bonds. Establishing a regular reporting system for projects funded by green bonds will help improve transparency and create a reliable

information channel for market participants. In addition, to meet the diverse needs of investors, it is necessary to diversify green bond products. In addition to local government bonds, Vietnam can develop more types of bonds such as corporate green bonds, infrastructure green bonds and green bond funds. Expanding the product portfolio will not only increase market flexibility but also create more investment opportunities, thereby attracting more capital sources for green projects.

5. Conclusion

Green bonds represent a pivotal instrument for financing Vietnam's transition to sustainable, resilient urban infrastructure. By directing capital exclusively to projects with clear environmental benefits—such as renewable energy, clean public transport, water management, and climate-resilient works—green bonds can bridge the substantial financing gap that traditional public budgets and bank loans cannot fill. International experience demonstrates that clear taxonomies, robust regulatory frameworks, sovereign or multilateral support for credit enhancement, rigorous external review, and active engagement of diverse investor segments are critical success factors.

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