ENERGY TRANSITION PARTNERSHIP

Powering Prosperity and Enabling Sustainability in South East Asia

Advisory Services to Support the Strengthening of Green Financing Landscape

ANALYSIS OF GREEN FINANCE LANDSCAPE IN VIET NAM

PREPARED BY

DEPOCEN
better informed, better decisions
Development and Policies Research Center

Climate Transition Ltd

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Executive Summary

The world is grappling with escalating challenges from climate change. Greenhouse gas (GHG) emissions continue to rise, increasing by 1.1% in 2023, setting another record high. Meanwhile, global temperatures have reached 1.48°C above pre-industrial levels, underscoring the critical need for decisive climate action. The Paris Agreement highlights the need to limit global warming to well below 2°C, with efforts to restrict it to 1.5°C to avoid the worst outcomes. Achieving the Paris temperature goals requires a dramatic escalation in funding - an estimated USD 4.84 trillion annually between 2024 and 2030. This is where green finance plays a critical role.

Defined in this report as the channeling of private funds toward green industries and sustainable development, green finance encompasses various instruments, including green bonds, green credit, green insurance, and green stocks. Green finance spans across several broad categories of sustainable development-focused activities, and the key sectors identified as priorities include renewable energy, energy efficiency, green buildings, carbon capture and storage, pollution control and prevention, sustainable land management, transport, water, and environmental protection. Currently, the global green finance market is on a strong growth trajectory. Green bond issuances, for instance, reached $872 billion in 2023, marking a 3% increase from the previous year and bringing the total issuance to over $4 trillion since 2018.

In the case of Viet Nam, a country both vulnerable to and contributing to climate change, the need to accelerate green finance is critical. Viet Nam's emissions reached 344 MtCO2eq in 2022 and are projected to rise further to 515 MtCO2eq by 2030. This trajectory underscores the urgency of aligning with the Paris Agreement's temperature goals and advancing global net-zero pathways – a commitment Viet Nam has formally adopted. The country has laid a certain foundation for green finance through the National Green Growth Strategy (2014–2020) (Decision No. 1393/QĐ-TTg). This framework has since been updated with the National Green Growth Strategy for 2021–2030 (Decision No. 1658/QĐ-TTg), which includes a vision toward 2050. These strategies prioritize integrating green finance into economic planning.

However, Vietnam faces challenges akin to other developing nations, including gaps in harmonized regulatory frameworks, limited funding sources, insufficient expertise, and low awareness of green finance, particularly in assessing environmental and social risks. These issues undermine investor confidence and stifle the growth of the green finance market. Beyond these local challenges, financiers also encounter broader systemic issues, such as difficulties in accounting for environmental externalities in financial decision-making and maturity mismatches for long-term green projects, as many investors prioritize short-term returns. Information asymmetries, driven by inconsistent market terms and standards, exacerbate the situation by hindering accurate measurement of current green finance flows

and their impacts. This lack of clarity further deters investment, as it results in inadequate analysis and an uncertain understanding of green finance's true potential. Overcoming these intertwined barriers is essential to unlocking the power of green finance, ensuring Vietnam's alignment with global climate targets, and fostering sustainable development.

Recognizing the critical role of green finance in advancing sustainable development in Viet Nam, this report examines the current state and scope of green finance in the country. It explores the government's efforts to develop green financial markets, the interplay between macroeconomic conditions and green finance growth, and the various green financing instruments and mechanisms in use. The report also integrates international best practices while considering the local context. Its goal is to support the scaling up of green finance by providing market actors and policymakers with a comprehensive overview of the current landscape, along with actionable recommendations for aligning Vietnam’s green finance sector with global trends.

This report focuses specifically on green financial products and tasks under the purview of the Ministry of Finance (MOF). On August 15, 2024, MOF issued Decision No. 1934/QD-BTC, which promulgates the Action Plan for the Implementation of the National Strategy for Green Growth (2021–2030). This action plan outlines various tasks aimed at developing the green financial market. Among these tasks, there is an increasing emphasis on advancing instruments such as green bonds, green insurance, carbon-regulating tax revenue tools, financial incentives, and the carbon market.

In light of areas where research support is currently lacking, where renewed perspectives are needed, and based on consultations with stakeholders within the MOF, this report does not provide a comprehensive account of the full scope of Viet Nam's green finance landscape and aims to cover the following key areas:

i. Green bonds
ii. Green index
iii. Green insurance
iv. Green funds
v. Mandatory Environmental, Social, and Governance Disclosure
vi. Green financial incentives and disincentives to promote sustainable development

This report provides a general analysis of green finance in the context of climate change and across sectors such as renewable energy, environmental protection, water, and transport, recognizing its role in mobilizing resources for the overall transition to a green economy. In addition, it offers more detailed recommendations and analysis specifically for the energy sector. This focus is driven by the urgent need to mobilize significant financial resources for energy transition, which amounts to approximately 134.7 billion USD until 2030 and another 399.2 to 523.1 billion USD for the period from 2031 to 2050. Green financing initiatives are critical for accelerating Vietnam's energy sector, but reforms are necessary to facilitate progress.

Some key findings include:

1. **Macro-economic situation in Viet Nam affecting green finance and current state:**

- The current macro-economic situations in Viet Nam, including increasing GDP and private sector and foreign direct investment (FDI) and stable domestic revenues, implicate a relatively attractive investment environment for investors. However, there are certain concerns, particularly related to slower growth in public investments for large-scale green infrastructure projects. For example, in the energy sector, public utilities, such as EVN, often lack the financial capacity to invest in green infrastructure or purchase renewable energy. This financial capacity issue stems from persistent losses, significant accumulated debt, and reduced equity capital.
- Green projects often have long investment horizons (up to 20 years) and high capital costs, while available credit sources typically offer short- to medium-term funding. This mismatch limits the flow of capital into green initiatives and affects project bankability by complicating revenue streams and increasing perceived risks. Issues like restrictive commercial terms, limited creditworthiness of project counterparts, and lengthy licensing processes further delay the launch of new green projects.
- Therefore, innovative financing instruments are necessary to attract private and international support, with green finance playing a key role in this process

2. **Green finance system and initiatives in Viet Nam**

- Vietnam's green finance governance has evolved through a comprehensive strategic and legal framework, starting with the National Green Growth Strategy (2014–2020) and updated for 2021–2030, which emphasizes integrating green finance into economic planning.
- Various government bodies, such as the MOF and the State Bank of Vietnam (SBV), lead green finance development through policies, financial incentives, and market mechanisms. The MOF focuses on improving fiscal policies, mobilizing resources, and developing green financial markets, including green bonds and carbon markets. Efforts to promote green finance include policy development, resource mobilization, capacity building, and international cooperation.
- From international experience, scaling up green finance requires coordinated, multidimensional efforts from governments, businesses, and individuals, as green technologies and industries demand diverse funding sources. Governments play a key role by creating regulatory frameworks, offering policy incentives, and mobilizing public investments to reduce risks and attract private capital. Central banks and regulators support green finance through measures like climate risk assessments and the issuance of green bonds. Private investors, while cost-sensitive, are crucial, and public sector participation can catalyze substantial private investment. Commercial and development banks act as intermediaries, offering green loans and blended finance to de-risk projects. Institutional investors, including pension funds, are increasingly focusing on ESG assets but need strong policy frameworks to shift investments toward green finance. Lastly, international financial institutions and

multinational organizations provide concessional loans, technical support, and global best practices to promote consistency and transparency in green finance markets.

- In the case of Viet Nam, we highlight that **effective government leadership and coordination are crucial in removing barriers to green financial development.** MOF should collaborate with other important actors, including SBV, Ministry of Planning and Investment, Ministry of Natural Resources and Environment, to eliminate obstacles to green finance across sectors. Engagement with financial institutions, institutional investors, international institutions, multinational organizations, and private sector is also crucial to level the play field for green finance, thereby incentivizing further investment.

3. Application of and recommendations for green finance instruments in Viet Nam

- Developing and expanding a range of green finance instruments would attract diverse investors. This diversification would broaden access to green finance across various enterprises and sectors. However, the pros and cons of each instrument need to be considered thoroughly to ensure effective implementation.

i. Green bonds:

- A major barrier for the improvement of the green bond market is the insufficient market depth, with a limited investor base, particularly among institutional investors who are less familiar with green bonds. Additionally, low liquidity, lack of a clear regulatory framework, and high issuance costs deter potential market participants. The absence of standardized definitions and verification processes also raises concerns about "greenwashing," undermining investor confidence.
- To overcome these barriers, recommendations include increasing investor awareness, expanding public-private partnerships, enhancing liquidity through improved secondary markets, and streamlining regulations to align with international standards. Additionally, developing a stronger pipeline of eligible green projects and providing technical support to issuers are crucial for market expansion

ii. Green index:

- The development of green indices in Vietnam, such as the Vietnam Sustainable Development Index (VNSI), presents both barriers and opportunities. On one hand, the country faces challenges such as limited ESG Environmental, Social, Governance) data disclosure from companies, a lack of standardized reporting practices, and a low level of investor awareness about sustainable investment. Additionally, the absence of robust index formulation methods hinders the growth and influence of green indices.
- Oportunities exist in leveraging international expertise, particularly from developed markets, to improve Vietnam’s green evaluation systems. Collaborations with foreign index institutions can introduce best practices, while enhancing ESG data disclosure can boost the credibility and relevance of green indices. Institutional investors, including social security funds and insurance asset management firms, could play a significant role in promoting green investment by integrating green indices into their portfolios. Furthermore, developing a diverse range of green investment products

tailored to the needs of the Vietnamese market, such as themed funds and separately managed accounts (SMAs), would deepen the market's engagement with sustainability and expand green finance's reach.

iii. Green insurance:

- The insurance market in Vietnam, comprising life, non-life, and auxiliary services, has significantly contributed to the country's economic and social development, supporting macroeconomic stability, complementing social welfare policies, and promoting investor confidence. Despite steady growth in total assets, with a notable rise of 11.12% in 2023, the green insurance sector remains underdeveloped, hindered by limited recognition and low awareness of environmental protection coverage. While some firms offer insurance products for renewable energy, environmental liabilities, and green construction, the lack of a comprehensive legal framework, limited product diversity, and low insurance penetration impede market expansion.
- Opportunities exist, particularly in green insurance for sectors like electric vehicles, as Vietnam's electric vehicle market is expected to grow significantly by 2028. Government initiatives, such as the national green growth strategy, provide a foundation for promoting green insurance. However, further policy interventions are needed, including compulsory pollution liability insurance for high-risk industries, clearer risk assessment standards, and public-private risk-sharing mechanisms. Additionally, incentives like tax benefits for insurers managing climate risks and penalties for fossil fuel investments could help align the insurance sector with national climate goals, driving the growth of green insurance products.

iv. Green funds

- The development of green funds has seen many challenges; the lack of a clear regulatory framework and diversified revenue sources have hindered the effectiveness of existing green funds like Vietnam's Environmental Protection Fund (VEPF). The fund's reliance on limited financial channels, such as state budget allocations and environmental fines, restricts its capacity to scale up its impact, especially in the renewable energy sector. Additionally, the absence of a finalized structure for the fund complicates its operations, making it difficult to attract sufficient private capital or optimize project outcomes.
- If green funds are to be implemented, proper legal frameworks, capacity-building programs, and stronger monitoring mechanisms should be in place.

v. Mandatory Environmental, Social, and Governance Disclosure:

- Vietnam's progression towards mandatory ESG (isclosure presents both barriers and opportunities. The country's current regulatory framework, introduced through Circular No. 96/2020/TT-BTC, mandates reporting on key sustainability metrics such as greenhouse gas emissions and resource consumption, but it remains limited in scope compared to more comprehensive frameworks in the EU or Singapore. A key barrier to effective implementation is the absence of a finalized ESG taxonomy and standardized reporting framework, which hampers the comparability and reliability of disclosures.

- However, this also presents an opportunity for Vietnam to strengthen its regulatory infrastructure and align more closely with international standards, attracting foreign investment and fostering greater corporate transparency. To enhance the effectiveness of ESG disclosures, Vietnam must establish clear reporting guidelines, improve consistency across sectors, and address challenges related to ESG rating agencies' methodologies. By doing so, Vietnam can unlock the potential for sustainable business practices and solidify its position in the global market.

4. Green financial incentives and disincentives to promote sustainable development

- MOF has implemented various fiscal incentives and disincentives to support renewable energy development. These measures include tax exemptions and reductions on corporate income taxes (CIT), import duties, and value-added tax (VAT), particularly for new renewable energy projects. For instance, renewable energy enterprises can benefit from a reduced CIT rate of 10% for 15 years and exemptions from land rent and import taxes on essential equipment for the first four years of operation. Furthermore, preferential loans and government funding for research and development (R&D) in renewable energy are available, providing crucial financial support. These incentives help offset high initial investment costs, thus encouraging both domestic and international investments in the sector.
- In terms of disincentives, there are effective and evolving systems in place. There are some challenges, however. For example, while the Environmental Protection Tax (EPT) has seen increased contributions to the national budget, it still represents a relatively small portion of the fiscal landscape, and its coverage is limited to only a few sectors. This restricts its ability to drive broad environmental change. The Environmental Protection Fee (EPF), aimed at penalizing polluting activities, has similarly contributed modestly to the national revenue and has had limited success in influencing consumer behavior or promoting sustainable practices. To strengthen the renewable energy transition, MOF could expand the scope of these taxes and fees to cover more sectors and introduce measures such as carbon taxes, which could better align with international climate commitments.
- To further improve existing incentives and disincentives, MOF should consider key criteria such as: alignment with existing policy context, ensuring the incentives would lead to investment that would not otherwise occur (additionality), resource-efficiency, targeting incentives to address specific risks without excessive coverage, transparency and predictability, and involving diverse stakeholders in the design and implementation process.
- These steps will help create an environment conducive to green investment while avoiding distortions that could undermine private sector participation. Another important strategy is detailed coordination frameworks outlining the roles of different agencies in managing resource extraction, including tax authorities and environmental agencies. This would clarify responsibilities for leading and collaborating on specific issues, ensuring accountability in enforcement.

The next report will focus on mapping green financing collaborations between MOF and development partners, with an emphasis on priority areas. It will include a review and assessment of past and ongoing initiatives, identifying areas that require additional focus and support. Based on this analysis, the report will offer strategic recommendations to MOF for structuring and advancing green financial development efforts.

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Glossary

Term	Definition
Green Finance	Financial activities aimed at promoting sustainable development, specifically those that increase financial flows towards environmental sustainability priorities like renewable energy, energy efficiency, and pollution control.
Green Financial System	A series of policies, institutional arrangements, and related infrastructure that direct private funds towards green industries through various financial instruments, aiming to mobilize investments for sustainable development activities. This system integrates environmental and social risks into financial decision-making.
Green Financial Market	A market where financial products and services related to environmental sustainability are traded, such as green bonds, sustainable investment funds, and other eco-friendly investment instruments.
Green Investment	The allocation of financial resources towards projects or companies that support environmental sustainability goals, including renewable energy, energy efficiency, sustainable agriculture, and more.
Green Bonds	Debt securities issued to raise capital for environmentally friendly projects, such as renewable energy or pollution control.
Green Insurance	Insurance products that focus on covering risks related to environmental protection and sustainability, like renewable energy projects or climate-related liabilities.
Green Funds	Investment funds that specifically target environmentally sustainable projects or companies, focusing on sectors like renewable energy and green technologies.
Environmental, Social, and Governance (ESG)	A set of criteria used to measure the sustainability and ethical impact of an investment in a company or business. ESG covers environmental protection, social responsibility, and governance practices.
Greenwashing	The act of misleading stakeholders about the environmental benefits of a product, service, or investment, often with exaggerated claims of environmental sustainability.
Equity Financing	Raising capital by selling shares in a company. This can also be used in green finance to fund renewable energy companies or green technology ventures by attracting investors who are committed to sustainability.
Debt Financing	Raising capital through borrowing. In green finance, this often refers to funding green projects through loans, bonds, or other debt instruments issued for environmentally sustainable purposes.
Credit Risk	The risk that a borrower may not repay their debt as agreed. In green finance, this could involve the evaluation of environmental and sustainability risks that might impact the ability of borrowers to meet their financial obligations.
Green Financial Intermediaries	Financial institutions (such as banks, investment funds, and insurance companies) that facilitate investments in green projects by managing the flow of funds into sustainable development activities.

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Chapter 1: Introduction

1.1. Background and Context

The world is grappling with escalating challenges from climate change. Greenhouse gas (GHG) emissions continue to rise, increasing by 1.1% in 2023, setting another record high. Meanwhile, global temperatures have reached 1.48°C above pre-industrial levels, underscoring the critical need for decisive climate action. Even minor temperature increases—such as a tenth of a degree—can trigger significant environmental shifts, including changes in ocean currents and the release of methane from thawing permafrost. These changes risk creating irreversible impacts on ecosystems and human societies. The Paris Agreement highlights the need to limit global warming to well below 2°C, with efforts to restrict it to 1.5°C to avoid the worst outcomes. Aligned with the Paris Agreement, there has been a notable increase in investments in clean energy technologies such as renewables, electric vehicles, and energy storage systems. However, achieving the Paris temperature goals requires a dramatic escalation in funding - an estimated USD 4.84 trillion annually between 2024 and 2030.

Green finance plays a pivotal role in addressing this funding gap. Traditional fiscal approaches risk leading to unsustainable debt levels, making it essential to mobilize private sector investments in green initiatives. In recent years, global momentum for green finance has been bolstered by initiatives like the G20, the Financial Stability Board, and the Paris Agreement. Green financial instruments, such as sustainable bonds and green investments, have gained significant traction, channeling private funds into sustainable projects and reducing reliance on government budgets. Through mechanisms like transparent sustainability reporting, green taxonomies, and strengthened regulations, green finance provides the foundation to accelerate the transition to a low-carbon, climate-resilient global economy. Despite commitments from various stakeholders—including 479 global investors and numerous companies, cities, and civil society organizations under the NAZCA platform—green finance remains underdeveloped. Only a small percentage of global bonds are labeled green, and less than 1% of institutional investors' holdings are allocated to green infrastructure assets. To meet the investment needs required for global development and climate targets, these flows must increase substantially. However, current approaches lack the systematic methods and consistent metrics necessary to accurately track progress and identify financing gaps. And significant gaps remain in defining, measuring, and scaling green financial flows.

In the case of Vietnam, a country both vulnerable to and contributing to climate change, the need to accelerate green finance is critical. Vietnam’s emissions reached 344 MtCO2eq in 2022 and are projected to rise further to 515 MtCO2eq by 2030. This trajectory underscores the urgency of aligning with the Paris Agreement’s temperature goals and advancing global net-zero pathways – a commitment Viet Nam has formally adopted. The country has laid a

certain foundation for green finance through the National Green Growth Strategy (2014–2020) (Decision No. 1393/QĐ-TTg). This framework has since been updated with the National Green Growth Strategy for 2021–2030 (Decision No. 1658/QĐ-TTg), which includes a vision toward 2050. These strategies prioritize integrating green finance into economic planning. Specific initiatives, such as the Action Plan for the Financial Sector to Implement the National Strategy on Green Growth, outline clear objectives for mobilizing green financial resources. However, Vietnam faces challenges akin to other developing nations, including gaps in harmonized regulatory frameworks, limited funding sources, insufficient expertise, and low awareness of green finance, particularly in assessing environmental and social risks. These issues undermine investor confidence and stifle the growth of the green finance market. Beyond these local challenges, financiers also encounter broader systemic issues, such as difficulties in accounting for environmental externalities in financial decision-making and maturity mismatches for long-term green projects, as many investors prioritize short-term returns. Information asymmetries, driven by inconsistent market terms and standards, exacerbate the situation by hindering accurate measurement of current green finance flows and their impacts. This lack of clarity further deters investment, as it results in inadequate analysis and an uncertain understanding of green finance's true potential. Overcoming these intertwined barriers is essential to unlocking the power of green finance, ensuring Vietnam's alignment with global climate targets, and fostering sustainable development.

1.2. Green finance: Definition and Areas of Coverage

Globally, green finance is typically defined as financial activities aimed at promoting sustainable development. Most countries, international organizations, and financial institutions define green finance based on their underlying motivations and/or the intended outcomes of financial activities—specifically, a financial activity is considered green if its ultimate goal is tied to real-economy efforts focused on sustainability[1,2]. One widely adopted definition is from the UN Environment Program, which describes green financing as efforts to increase the level of financial flows (from banking, micro-credit, insurance, and investment) from the public, private, and not-for-profit sectors to sustainable development priorities.[3]"

According to the analysis by World Bank[4], green finance spans across several broad categories of sustainable development-focused activities, and the key sectors identified as priorities include:

1. **Renewable energy**: Investments in solar, wind, and hydroelectric power generation

[1] CICC Research, CICC Global Institute. (2022). Green Finance: Clarifying Functions and Capacity. In: Guidebook to Carbon Neutrality in China. Springer, Singapore. https://doi.org/10.1007/978-981-16-9024-2_4
[2] GIZ and IFC. 2017. Green Finance: A Bottom-up Approach to Track Existing Flows.
[3] UNEP. Green financing.
[4] GIZ and IFC. 2017.

2. **Energy efficiency:** Initiatives like cogeneration and smart grids that optimize energy use.
3. **Green buildings:** Construction and renovation of energy-efficient and environmentally friendly buildings.
4. **Carbon capture and storage:** Technologies designed to capture and store carbon emissions.
5. **Pollution control and prevention:** Efforts to reduce pollution and manage waste, including waste treatment and recycling.
6. **Sustainable land management:** Projects aimed at sustainable agriculture and forestry practices.
7. **Transport**: Investments in electric and hybrid vehicles, as well as urban rail/metro systems.
8. **Water**: Water efficiency initiatives and wastewater treatment.
9. **Environmental protection**: Projects focused on conserving ecosystems and adapting to climate change, such as biosystem adaptation.

These areas reflect a growing consensus on what constitutes green finance, although there are country-specific variations. Some definitions include activities like nuclear power or noise abatement, which may not be universally accepted as green by all stakeholders. **This diversity highlights the importance of tailored definitions that consider local contexts and development priorities.**

In Viet Nam, there is no formal definition on green finance or the overarching green financial system officially adopted in regulatory documents. But studies focusing on the Vietnamese context have compared the differences between conventional financial and green financial system[5].Understanding the principles of these two systems is essential. Conventional financial system supports economic efficiency by directing capital from less profitable sources to more productive ones, primarily through indirect financing via intermediaries and direct financing in primary markets. However, aligning capital flows with sustainability is challenged by the issue of environmental externalities. Resources like clean air and water have intrinsic, often unmonetized value as public goods, which traditional markets overlook, making it difficult for the financial system to allocate funds appropriately. Green finance, therefore, is considered a policy-driven requirement for a sustainable economy.

The importance of greening the financial system extends beyond lending and investment standards. It considers the impact of both environmental and social risks on the financial system and the reciprocal impact of the financial system on these risks. This paradigm shift includes recognizing the costs of pollution and the value of environmental assets through

[5] National level science and technology program. Research on Key Scientific and Social Humanities Issues Serving Economic-Social Development – Topic: Development of the Green Financial System to Promote the Green Economy in Viet Nam. Code: KX.01.27/16.20

clear policies and market signals. It also emphasizes the need for liquidity for environmental assets, rigorous environmental risk management, and improved corporate accountability, aiming to influence asset values and investor behavior toward sustainability.

Given the lack of a comprehensive and unified definition of the green financial system, here, **we define a "green financial system" as a series of policies, institutional arrangements, and related infrastructure developments that direct private funds toward green industries through various financial instruments, including loans, private equity, bonds, stocks, insurance, and other financial services**. In this framework, a green financial system enables the circulation of green finance toward sustainable investment activities via green financial intermediaries and the green financial market. Additionally, we recognize that the overall structure of a green financial system does not significantly differ from that of a conventional financial system. The primary distinction lies in the characteristics of the participants engaged in the capital flow process and the intended use of the mobilized funds (Figure 1).

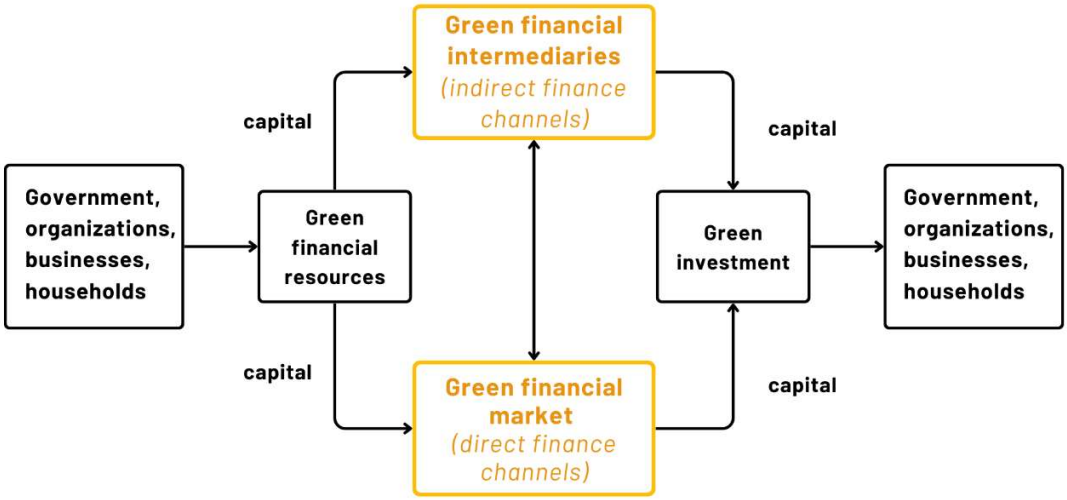


Figure 1. Structure of the green financial system. Source: Author's adaptation based on models presented in Research Code KX.01.27/16.20[6]

1.3. Aim and scope of the report

Recognizing the critical role of green finance in advancing sustainable development in Vietnam, this report examines the current state and scope of green finance in the country. It explores the government's efforts to develop green financial markets, the interplay between macroeconomic conditions and green finance growth, and the various green financing instruments and mechanisms in use. The report also integrates international best

[6] National level science and technology program. Research on Key Scientific and Social Humanities Issues Serving Economic-Social Development – Topic: Development of the Green Financial System to Promote the Green Economy in Viet Nam. Code: KX.01.27/16.20

practices while considering the local context. Its goal is to support the scaling up of green finance by providing market actors and policymakers with a comprehensive overview of the current landscape, along with actionable recommendations for aligning Vietnam's green finance sector with global trends.

This report focuses specifically on green financial products and tasks under the purview of the Ministry of Finance (MOF). On August 15, 2024, MOF issued Decision No. 1934/QD-BTC, which promulgates the Action Plan for the Implementation of the National Strategy for Green Growth (2021–2030). This action plan outlines various tasks aimed at developing the green financial market. Among these tasks, there is an increasing emphasis on advancing instruments such as green bonds, green insurance, carbon-regulating tax revenue tools, financial incentives, and the carbon market.

In light of areas where research support is currently lacking, where renewed perspectives are needed, and based on consultations with stakeholders within the MOF, this report will cover the following key areas of green finance:

vii. Green bonds
viii. Green index
ix. Green insurance
x. Green funds
xi. Mandatory Environmental, Social, and Governance Disclosure
xii. Green financial incentives and disincentives to promote sustainable development

This report provides a general analysis of green finance in the context of climate change and across sectors such as renewable energy, environmental protection, water, and transport, recognizing its role in mobilizing resources for the overall transition to a green economy. In addition, it offers more detailed recommendations and analysis specifically for the energy sector. This focus is driven by the urgent need to mobilize significant financial resources for energy transition, which amounts to approximately 134.7 billion USD until 2030 and another 399.2 to 523.1 billion USD for the period from 2031 to 2050[7]. Green financing initiatives are critical for accelerating Vietnam's energy sector, but reforms are necessary to facilitate progress.

The report is structure as follows:

- **Chapter 1** provides an overview of the macro-economic situation in Viet Nam and its impact on green finance. It covers key factors such as economic growth, investment trends, fiscal policy, and the structure of the financial market. The chapter also discusses the critical role of infrastructure, particularly in the energy transition, and highlights the motivations and challenges surrounding the financing of renewable

[7] Decision No. 500/QD-TTG dated May 15, 2023, of the Prime Minister approving the National Power Development Plan for the period 2021-2030, with a vision to 2050.

energy projects. Additionally, it examines the contribution of green finance in driving the shift to renewable energy.

- **Chapter 2** introduces the green finance system in Viet Nam, defining green finance and its key components. This chapter discusses the governance structures in place for green finance and offers a review of the landscape, providing an overview of initiatives and the roles of various stakeholders in driving green finance forward.
- **Chapter 3** focuses on specific green finance instruments such as green bonds, green indices, green insurance, and green funds. This chapter explores the current applications of these instruments in Viet Nam, evaluating their potential and existing barriers. It also offers recommendations for improving and scaling these financial products to increase their effectiveness in supporting sustainable development.
- **Chapter 4** examines the role of financial incentives and disincentives in promoting sustainable financial products. This chapter discusses the impact of existing incentives and disincentives on the green finance market, with a particular focus on renewable energy projects. It also evaluates how current policies could be strengthened to encourage more investment in green technologies and initiatives.
- **Chapter 5** looks at global trends in green finance and discusses potential directions for Viet Nam to mobilize resources in the energy sector. The chapter analyzes key barriers to financing clean energy and green finance development, while providing recommendations for strengthening Viet Nam's green financial market.

Chapter 2: The Macro-Economic Situation in Viet Nam Affecting Green Finance and Overview of Current State

The **macro-economic environment plays a crucial role in shaping the trajectory of green finance, influencing its development, accessibility, and adoption.** This chapter examines the macro-economic situation in Viet Nam, identifying its impact on green finance and providing an overview of its current state. It analyzes specifically indicators such as economic growth, sectoral impacts, investment trends, fiscal policy, real interest rates, and capital market development. These factors are interconnected and reflect both opportunities and obstacles that the country faces in advancing its green finance agenda.

2.1. Economic Growth and Stability

Viet Nam has emerged as one of the fastest-growing economies in Southeast Asia. Despite challenges such as global economic slowdowns and the COVID-19 pandemic, the economy has shown resilience. This robust growth provides opportunities for integrating green finance mechanisms into the broader economic framework. However, **the capital-intensive nature of green projects demands greater financial innovation and investment.**

Viet Nam's GDP grew by 7.40% in Q3 and by 6.82% over the first nine months of 2024 (Figure 2), driven mainly by the industrial and construction sectors (contributing 48.88% of the GDP increase) and services (47.04%). As these sectors grow, there is likely an increased demand for investments in sustainable and energy-efficient infrastructure, which green finance can support. In terms of industrial production and manufacturing, power generation grew by 11.11%, underscoring the growing energy demands. Looking ahead to the fourth quarter, the government's focus on accelerating public disbursement and investment activities aims to ensure the achievement of socio-economic targets set for the 2021-2025 development plan.

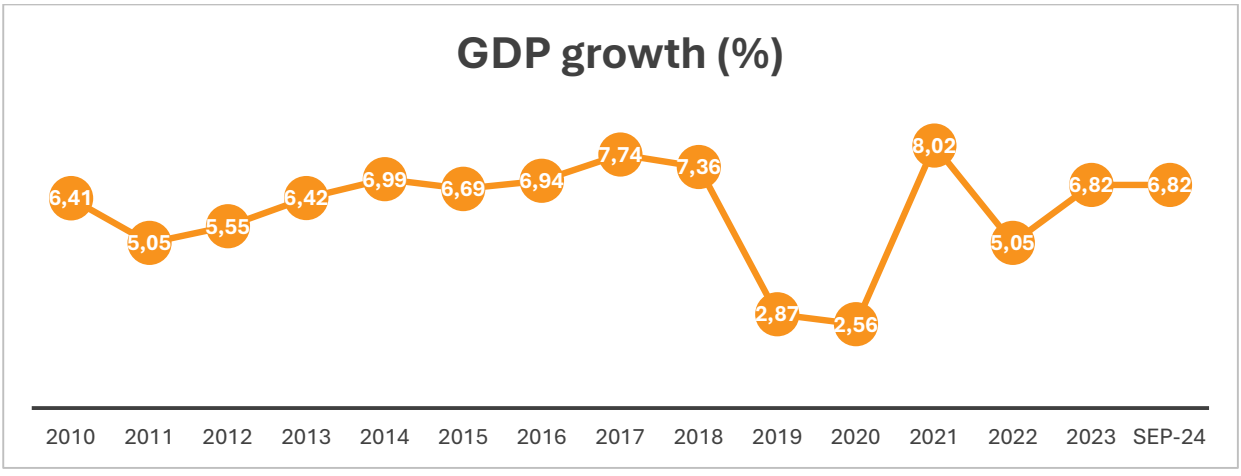


Figure 2. GDP growth rate for the first 9 months compared to the same period in previous years, 2011-2024 (%). Source: Author's visualization based on General Statistics Office, Ministry of Planning and Investment[8]

Viet Nam's economic structure has remained relatively stable over recent years, with the agriculture, forestry, and fisheries sector contributing around 11.78%-12.93% of GDP, the industrial and construction sector fluctuating between 35.39%-38.18%, and the services sector maintaining a proportion of approximately 41.26%-42.58%. This structure has significant implications for the development of green finance in Viet Nam.

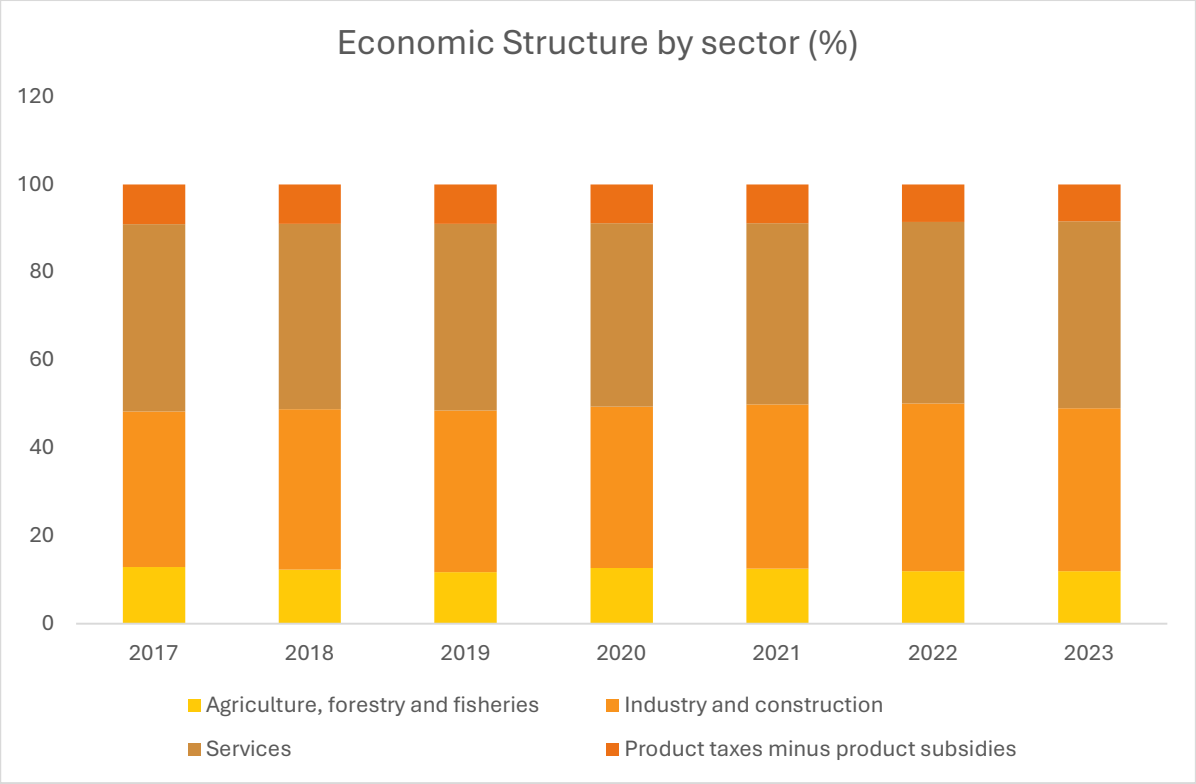


Figure 3. Economic structure by sector. Source: Author's visualization and calculation based on General Statistics Office, Ministry of Planning and Investment[9]

The industrial and construction sector, contributing 37.12% to Viet Nam's GDP in 2023, is a cornerstone of economic growth but a significant source of greenhouse gas emissions due to heavy reliance on fossil fuels and resource-intensive production processes. Major industries, including manufacturing, mining, and construction, face challenges in transitioning to sustainable operations given their high capital demands. Green finance

[8] General Statistics Office. https://www.gso.gov.vn/bai-top/2024/10/bao-cao-tinh-hinh-kinh-te-xa-hoi-quy-iii-va-9-thang-nam-2024/

[9] General Statistics Office. https://www.gso.gov.vn/bai-top/2024/10/bao-cao-tinh-hinh-kinh-te-xa-hoi-quy-iii-va-9-thang-nam-2024/

offers solutions through mechanisms like green bonds and sustainable loans to support energy-efficient technologies and renewable energy integration. Public-private partnerships (PPPs) can drive green infrastructure projects such as eco-industrial parks and green buildings, aligning with global sustainability goals. Additionally, carbon pricing mechanisms can incentivize industries to adopt cleaner and more efficient technologies.

The services sector, contributing 42.54% to Viet Nam's GDP in 2023, plays a key role in sustainable development with relatively lower direct environmental impacts. Rapid growth in tourism, financial services, and trade underscores the need to integrate environmental, social, and governance (ESG) criteria across service delivery. Tourism, a vital component, heavily depends on natural resources, creating a strong demand for sustainable tourism financing. Green finance can support eco-tourism initiatives, sustainable hotels, and low-carbon transportation systems, ensuring environmental conservation. Financial institutions are increasingly incorporating ESG factors into lending and investments, aligning capital flows with sustainability objectives. Furthermore, digital transformation and green fintech solutions can enhance transparency and efficiency in green finance, driving innovation and accountability across the sector.

The agriculture, forestry, and fisheries sector, contributing 11.96% to Viet Nam's GDP in 2023, is vital for rural livelihoods but highly vulnerable to climate change. The sector faces challenges from land use changes, deforestation, and intensive farming, which contribute to greenhouse gas emissions and environmental degradation. Green finance presents opportunities to address these challenges by supporting sustainable farming practices, such as organic agriculture and efficient water management. Carbon offset projects, like afforestation and reforestation, can attract international investment and mitigate emissions. Additionally, green credit and microfinance can empower smallholder farmers to adopt climate-smart technologies, enhancing resilience and productivity. Integrating green finance into this sector is essential for balancing economic growth, sustainability, and climate adaptation in Viet Nam.

The State Bank of Viet Nam (SBV) has maintained a relatively stable monetary policy, with inflation kept under control at around 3-4%. From 2012 onwards, inflation has remained relatively stable, averaging between 2% and 6% annually. This stability has persisted in recent years, with inflation recorded at 3.25% in 2023, signaling a favorable macroeconomic environment for financial planning and investment. Stable inflation is critical for long-term investments in green projects, as it ensures predictable returns. Interest rate policies and credit support programs also influence the affordability and availability of green finance instruments.

Real interest rates stabilized, peaking at 8.99% in 2015, and have since ranged between 3% and 7%, reaching 7.28% in 2023. Positive real interest rates provide a stable return on investments, encouraging private sector participation in green finance initiatives. For

example, the high real interest rate of 7.28% in 2023 presents an opportunity to attract foreign investment in long-term green projects, such as renewable energy and sustainable infrastructure. However, **high real interest rates, while beneficial for attracting investment, can increase borrowing costs for domestic green projects, posing challenges for smaller firms and local governments. Moreover, large-scale green infrastructure projects risk straining public finances or triggering inflationary pressures if not carefully managed.**

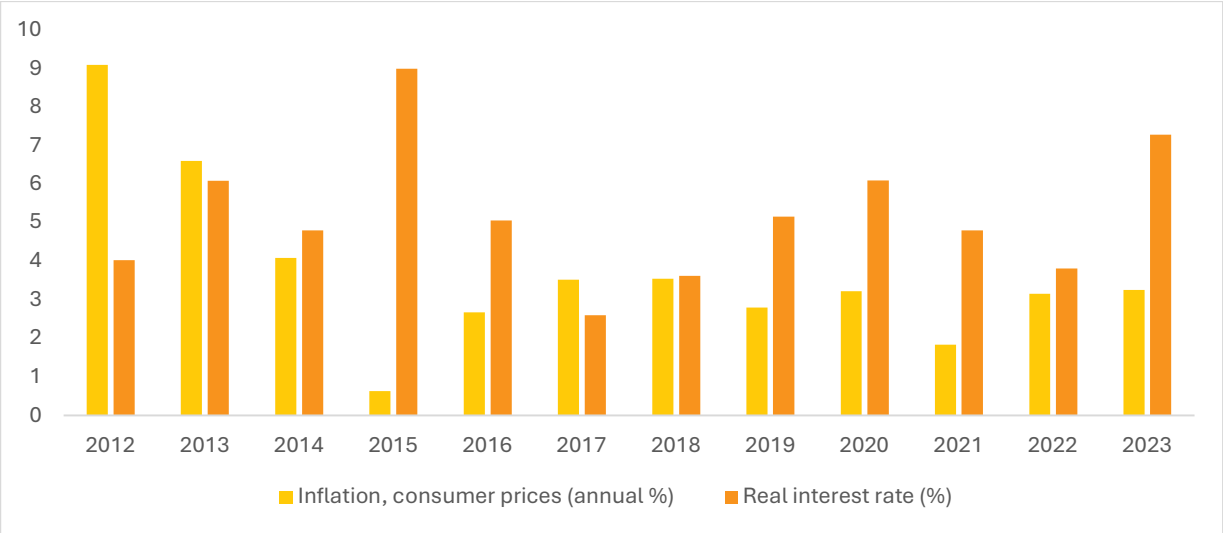


Figure 4. Inflation and real interest rates from 2012 to 2023. Source: Author's visualization and calculation based on World Development Indicators

2.2. Investment

Total investment in Viet Nam has grown steadily from 1,044.88 trillion VND in 2010 to 3,423 trillion VND in 2023, reflecting a robust overall investment climate. However, the growth rate of total investment has shown signs of moderation, with peaks in earlier years (e.g., 13.48% in 2017) followed by slower growth (e.g., 3.17% in 2021). The increasing dominance of non-government investment indicates a shift in the economic structure toward greater private sector participation. The overall growth in total investment provides a solid foundation for green finance. However, **the slower growth in recent years, particularly in government investment, suggests the need for innovative financial instruments such as green bonds, carbon credits, and PPPs to sustain green finance momentum**. Additionally, a strategic reallocation of funds from conventional to green sectors is essential to maximize the environmental and economic benefits.

Government investment demonstrates consistent growth, rising from 364.28 trillion VND in 2010 to 954 trillion VND in 2023, though its share of total investment has fluctuated. The year-on-year growth rates for government investment are relatively moderate, with notable peaks (e.g., 18.56% in 2012) but several years of lower growth (e.g., 2.22% in 2018). Public investment disbursement improved in September, reaching VND 47 trillion, although

cumulative disbursement for the year stands at just 47.3% of the annual plan. This shortfall highlights ongoing challenges in the timely execution of public investment projects. However, Viet Nam's fiscal position remains strong, with a budget surplus of VND 191.9 trillion, providing the government with fiscal space to implement expansionary policies, including tax exemptions and sectoral support measures, particularly for areas impacted by natural disasters.

Government investment has traditionally been crucial for initiating large-scale infrastructure and sustainability projects. However, the slower growth in government contributions may limit its ability to lead green finance initiatives unless policy frameworks explicitly prioritize green projects. Allocating a defined portion of public investment to renewable energy, public transportation, and green infrastructure could strengthen the impact of this sector.

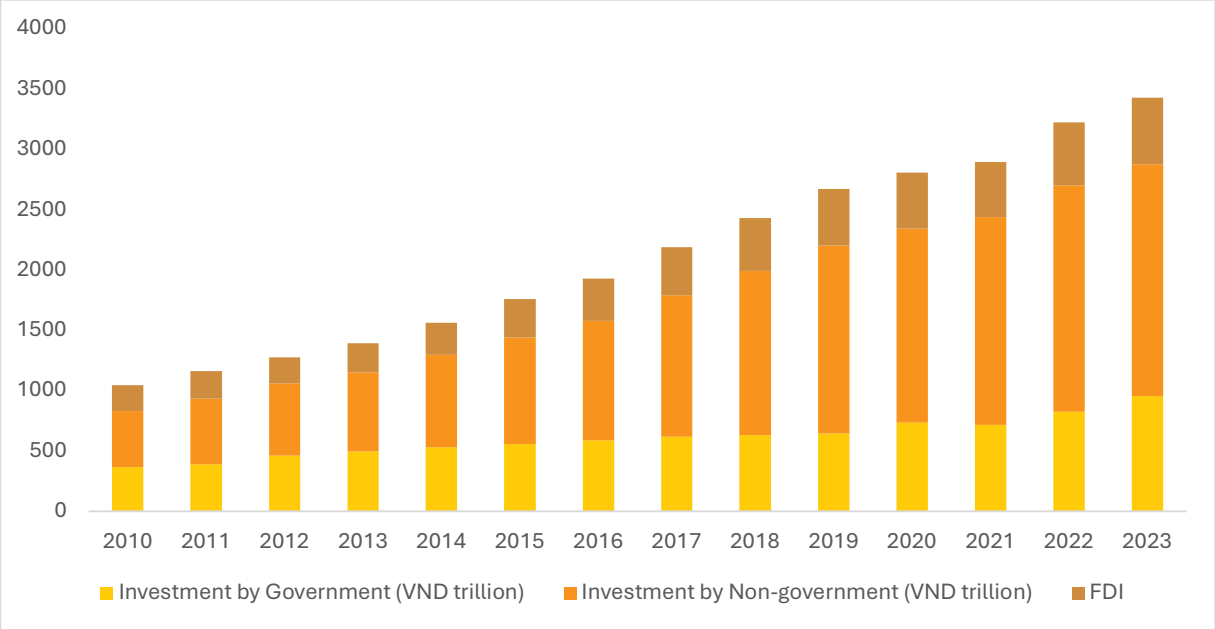


Figure 5. Investment in Viet Nam from 2010 to 2023. Source: Author's visualization and calculation based on MPI's data.

Non-government investment has grown substantially, rising from 466 trillion VND in 2010 to 1,920 trillion VND in 2023, with consistently strong growth rates (e.g., 18.74% in 2017). The private sector is now the largest contributor to total investment, consistently increasing its share over time. The rapid expansion of non-government investment presents significant opportunities for green finance development. Private sector involvement is crucial for scaling up green projects, such as renewable energy plants, sustainable urban development, and environmentally friendly technologies. Policies that incentivize private green investments, such as tax benefits, subsidies, and public-private partnerships (PPPs), can further mobilize this sector's resources toward sustainability goals.

FDI offers opportunities to introduce advanced green technologies and international expertise to Viet Nam. FDI has shown consistent growth, increasing from 214.5 trillion VND in 2010 to 550 trillion VND in 2023, with a more volatile growth rate. FDI growth peaked in 2015 (19.86%) but experienced several years of decline or stagnation (e.g., -3.67% in 2012 and -1.31% in 2020). Despite fluctuations, FDI remains a critical component of Viet Nam's investment structure, particularly in industries such as manufacturing, infrastructure, and technology. Many multinational investors are aligning with global sustainability trends, and Viet Nam can attract green FDI by creating favorable conditions, such as streamlined approval processes, investment in green zones, and adherence to international environmental standards. However, the volatility in FDI growth underscores the need for stable and transparent policies to sustain green-focused foreign investment.

The characteristics of investment in Viet Nam reveal a transition from public-sector dominance to a greater reliance on private sector and foreign investment. This shift offers opportunities for scaling up green finance, particularly through private sector mobilization and FDI. However, to fully capitalize on these opportunities, Viet Nam must establish strong policies and incentives that align investment flows with sustainability goals. These measures include enhancing public-private collaboration, attracting green FDI, and ensuring that public investment prioritizes green infrastructure and technologies.

2.3. Fiscal Policy and Public Finance

Green finance’s effectiveness is closely tied to the fiscal system, which plays a crucial role in creating an enabling environment. An efficient fiscal system provides the necessary infrastructure and research and development (R&D) funding to maximize the impact of green finance. This, in turn, supports investments in innovative, eco-friendly technologies that help reduce environmental pollution.

Viet Nam's fiscal situation from 2016 to mid-2024 reveals notable trends in domestic revenue, oil dependency, trade balance, and international aid. These patterns provide critical insights for understanding the country's financial landscape, particularly in the context of transitioning toward green finance.

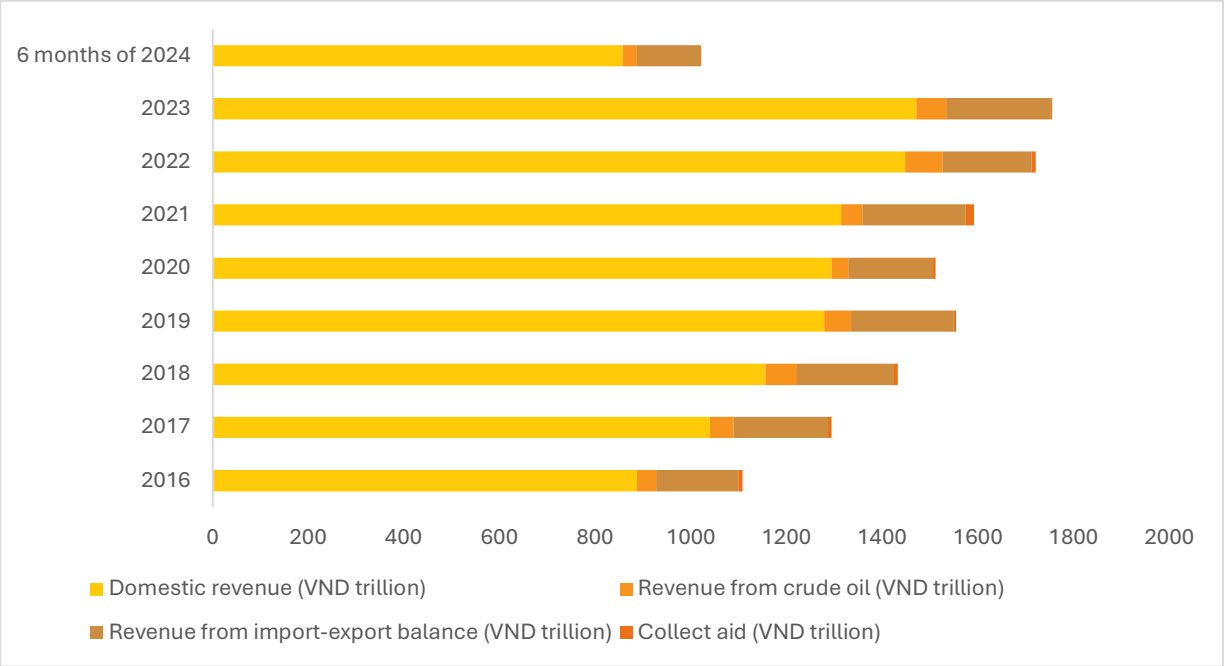


Figure 6. Viet Nam's fiscal revenues from different sources from 2016 to first six months of 2024. Source: Author's visualization and calculation based on data of MOF

Domestic revenue demonstrates relatively stable growth, with notable increases in certain years (e.g., 17.18% in one period). However, the low or stagnant growth in other years, such as 1.23% and 1.51% respectively in 2020, 2021, highlights potential vulnerabilities in the domestic revenue base. A stable and growing domestic revenue stream is essential for financing long-term green initiatives, as it provides a predictable source of funds. The overall positive trend suggests potential for allocating portions of domestic revenue to green projects, but fluctuations indicate the need for diversified revenue streams to sustain green finance commitments.

The revenue from crude oil exhibits significant volatility, with sharp declines in some years (e.g., -38.49% and -20.69% respectively in 2020 and 2023) and steep increases in others (e.g., 75.05% in 2022). Such instability poses challenges for green finance development. While spikes in oil revenue could temporarily increase fiscal capacity, reliance on this source is inconsistent with sustainable development goals. Over time, Viet Nam could redirect proceeds from crude oil revenue to support energy transition initiatives, such as funding renewable energy projects, reducing fossil fuel dependency, and promoting energy efficiency.

Revenues from the import-export balance have experienced a downward trajectory, interrupted by recovery periods post-pandemic. This pattern illustrates the vulnerability of trade-dependent revenues to external shocks. However, promoting sustainable products and eco-certifications through green finance could strengthen Viet Nam's export

competitiveness in environmentally conscious markets. Strengthening trade policies to incentivize sustainable exports and green technologies could help stabilize this revenue source and align it with green finance objectives.

International aid, which once played a modest role in Viet Nam's fiscal framework, has dwindled significantly from 0.76% of total revenue in 2016 to nearly negligible levels in 2024. This decline reflects the nation's financial independence but also signals reduced external financial buffers. In this context, **green finance offers an avenue to attract international support through climate-focused grants and partnerships. While aid could be strategically utilized for pilot green projects or capacity-building efforts, it should not form the backbone of green finance development.**

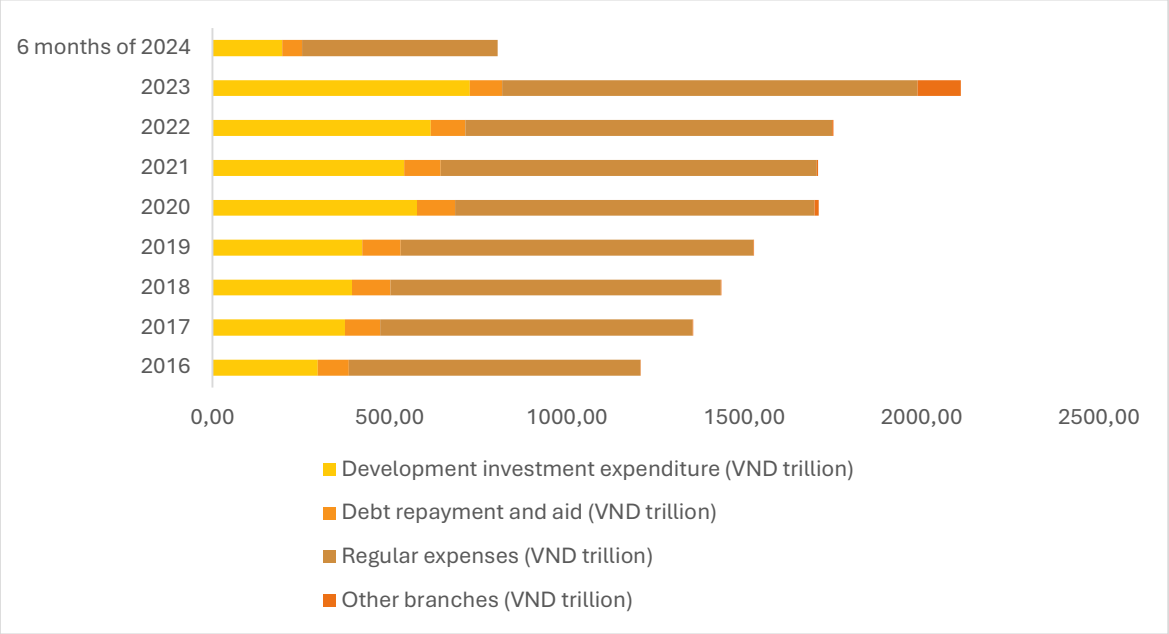


Figure 7. Viet Nam's expenditure and expenses from 2016 until first 6 months of 2024. Source: Author's visualization and calculation based on data by MOF Viet Nam

Concerning on the government expenditure, development investment expenditure, which experienced a steady increase, holds potential for supporting green initiatives if allocated effectively to projects such as renewable energy, sustainable infrastructure, and pollution control. Similarly, the declining expenditure on debt repayment and aid creates fiscal space that can be leveraged to issue green bonds or subsidize environmentally friendly projects. However, the steady rise in regular expenses indicates a growing allocation toward administrative and operational costs, which could limit discretionary funding for transformative green initiatives unless sustainability-focused programs are incorporated within these expenses. Additionally, expenditures in miscellaneous budget categories exhibit irregular patterns, with a notable spike in one year, suggesting a lack of systematic

planning. Without consistent investment in targeted green projects, the potential for long-term green finance development could be compromised.

Notably, Viet Nam's fiscal policy focuses on maintaining budgetary discipline while increasing public investment in infrastructure and social welfare. However, limited fiscal space and a reliance on traditional energy sources hinder the allocation of resources to green initiatives. Public finance plays a crucial role in catalyzing private sector participation in green finance, necessitating reforms to integrate environmental considerations into budgeting.

2.4. Structure of the financial market and notable developments in the capital market

Since 2010, there have been various strategies, plans, and roadmaps for the development of the stock market and bond market developed and revised. Particularly, the period up until 2020 marked significant progress in the capital market's development. The legal foundation for capital market operations was established and continuously refined. Notable regulatory advancements include the 2007 decision approving the development plan for Viet Nam's capital market, the 2010 amendments to the Securities Law, the 2017 Public Debt Management Law, and the 2019 Securities Law. These legislative measures, along with guidelines from the government, Ministry of Finance, and State Bank of Viet Nam, have created a coherent legal framework aligned with international standards. The market's infrastructure, organization, issuance processes, and regulatory mechanisms have been strengthened.

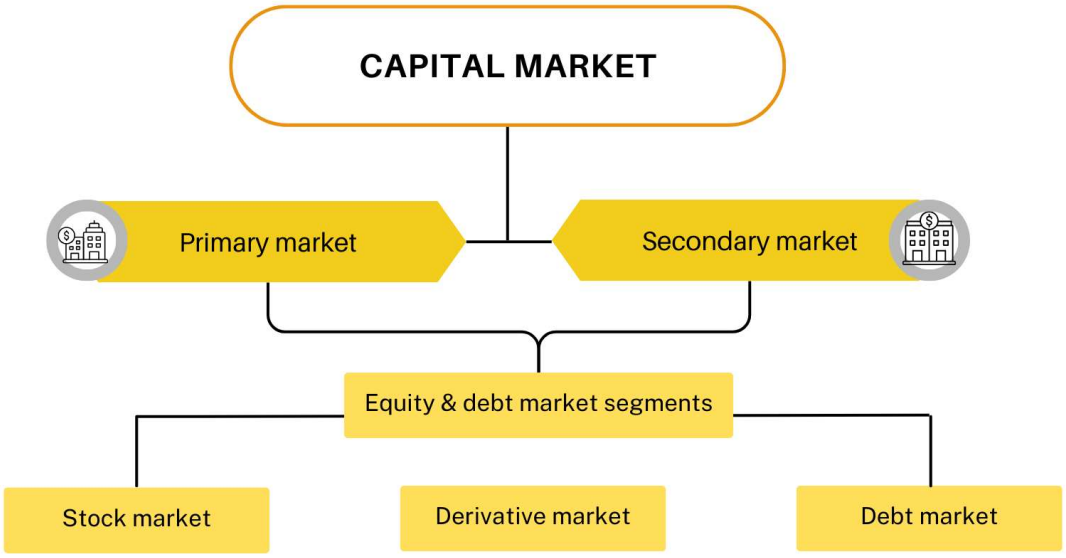


Figure 8. Model of the capital market. Source: Author's visualization.

Viet Nam's financial market comprises two primary components: the monetary market and the capital market (Figure 8). The total assets of credit institutions in the banking sector grew from 190.05% of GDP in 2021 to 205.44% in 2022, indicating the sector's dominant role in Viet Nam's financial market. Credit growth reached 9% by September, reflecting stronger lending activity compared to previous years. This expansion in credit signals increased liquidity and a conducive environment for private sector investment and consumption. Furthermore, the government's strategic focus on enhancing financial inclusivity and supporting green finance initiatives is anticipated to bolster credit growth further in the coming quarters.

This growth reflects the increasing capacity of banks to provide loans and credit to various economic sectors. The banking sector's large share in the financial market positions it as a key player in green finance. Banks can facilitate green finance through tailored products such as green loans and sustainability-linked financing. However, **the lack of specific green banking frameworks and incentives may limit their contributions.** Policymakers should encourage green credit policies and provide financial institutions with incentives to fund renewable energy projects, green infrastructure, and environmentally friendly businesses.

However, the rising NPL ratio, reaching 4.5% by the end of 2023 and 4.99% by April 2024, adds pressure on banks' balance sheets and reduces their risk appetite for new lending. Real estate loans, which constitute 20% of NPLs, are particularly vulnerable, creating challenges for green finance development in this sector. To mitigate risks and support green finance, banks need improved credit risk management tools tailored to green projects, which often involve unique risks such as technology adoption and regulatory uncertainty. Additionally, government-backed guarantees for green loans can encourage lending in sustainable sectors without significantly increasing NPLs.

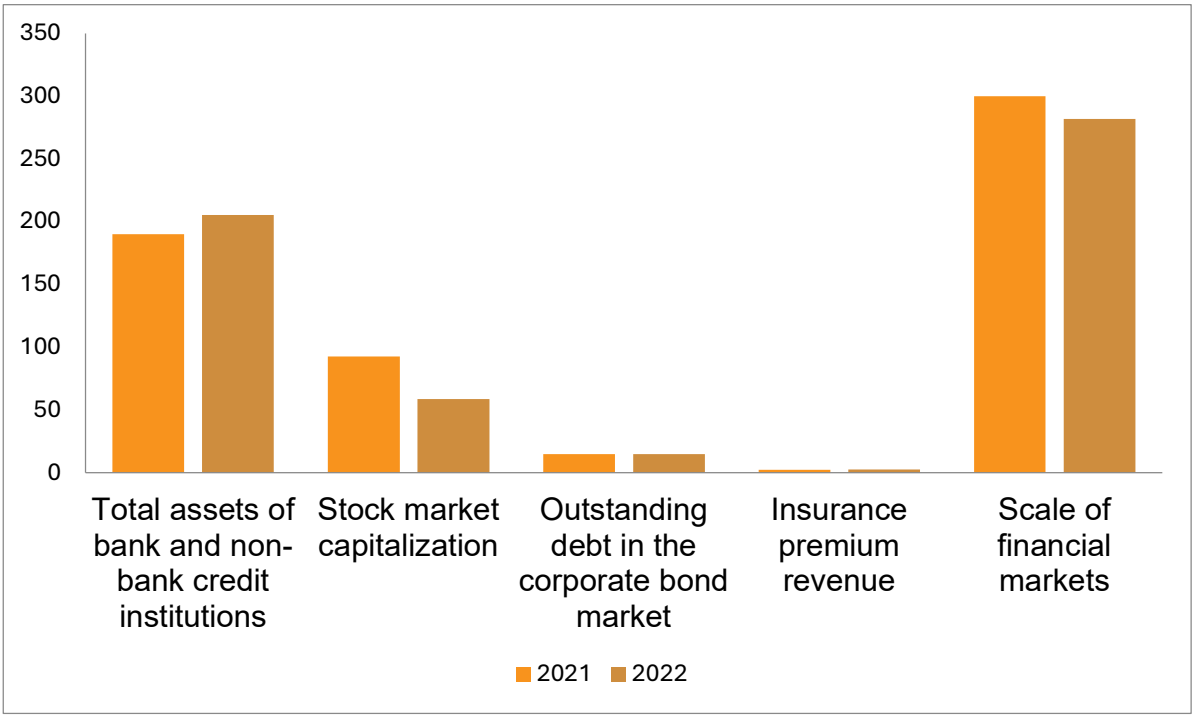


Figure 9. Comparison of key financial market indicators in 2021 and 2022. Source: Author's visualization and calculation based on data of MOF, SBV

The Vietnamese capital market has progressively evolved in structure, incorporating stock markets, bond markets, and derivatives markets. By the end of 2020, the capital market's size reached 131.95% of GDP, with equity market capitalization at 84.12% of GDP and the bond market at 47.83% of GDP, surpassing the targets set in the Financial Strategy, Stock Market Development Strategy, and Bond Market Development Roadmap. Specifically, the government bond market stood at 28.3% of GDP, and the corporate bond market at 17.1% of GDP. The equity market capitalization growth rate was 23.7% per year, making it the highest growth market within ASEAN.

Out of all markets, the stock market is playing a pivotal role. The stock market is segmented into three areas: the Ho Chi Minh Stock Exchange (for large enterprises), the Hanoi Stock Exchange (for medium and small enterprises), and the Unlisted Public Companies Market (Upcom) for public companies not listed on the main exchanges. In addition to basic stock products, new financial instruments such as mutual fund certificates and covered warrants have emerged. By the end of 2020, there were three closed-end mutual funds, one real estate mutual fund, and seven exchange-traded funds (ETFs), with a total of 149 million mutual fund certificates listed. The total net asset value of listed ETFs was approximately VND 14.5 trillion. The covered warrants market, operational since June 28, 2019, had 295 covered warrant codes issued on 25 underlying stocks from eight issuers by December 31, 2020. However, the fluctuation in stock market capitalization could restrict opportunities for

companies to raise equity for green investments. Developing a dedicated green segment in the stock market, such as green indices or platforms for trading green securities, could attract investors focused on sustainability. This would also enhance transparency and encourage businesses to adopt environmentally sustainable practices to appeal to investors.

Since 2009, the Ministry of Finance has organized the issuance and trading of government bonds, government-guaranteed bonds, and local government bonds, with the government bond market being a central component. Corporate bond markets have seen two methods of issuance: public and private placements.

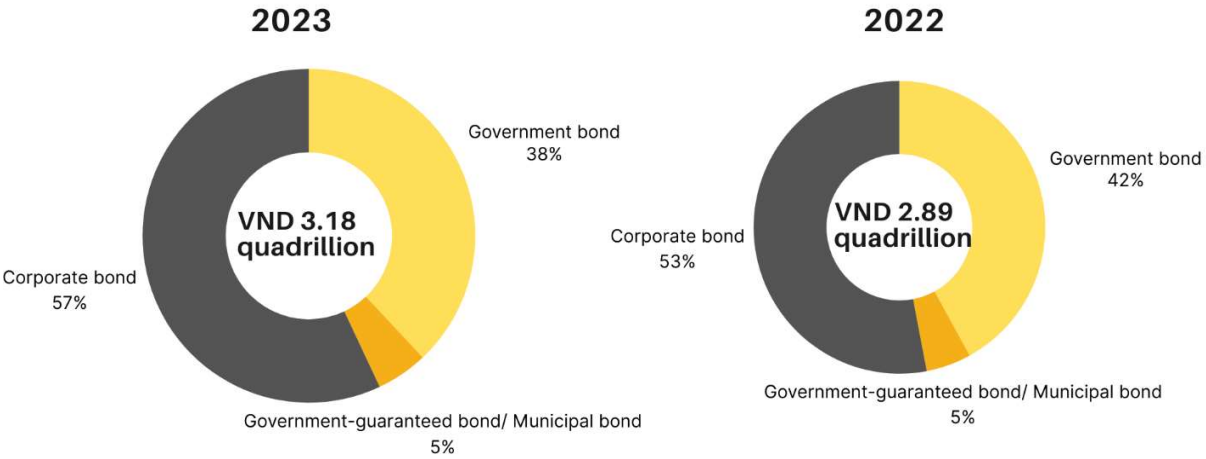


Figure 10. Size of Viet Nam's bond market. Source: Author's adaptation from figure in Viet Nam Bond Market Association[10]

The bond market has seen significant expansion, with the total market size growing from 2.89 quadrillion VND to 3.18 quadrillion VND, reflecting a 10% increase. Despite the growth, the proportion of government bonds decreased from 42% to 38%, indicating a strategic shift by the government toward alternative financing methods. In contrast, corporate bonds rose from 53% to 57%, highlighting a growing trend of businesses seeking capital through the bond market. However, concerns arise within the energy sector, where corporate bond issuance dropped in 2023, potentially hindering investment in critical infrastructure projects related to energy transition.

The corporate bond market's outstanding debt remained relatively stagnant. This suggests limited growth in bond issuance by corporations, potentially due to regulatory or market challenges. The corporate bond market has significant potential to drive green finance by issuing green bonds. However, the stagnant growth indicates that the market has yet to fully capitalize on this opportunity. Introducing guidelines and incentives for green bond issuance,

[10] Viet Nam Bond Market Association. https://vbma.org.vn/storage/reports/April2024/VBMA_BOND MARKET REPORT 2023.pdf

coupled with investor education on sustainable investing, could stimulate growth. Green bonds could serve as a critical tool for financing large-scale renewable energy, clean transportation, and other environmentally friendly projects.

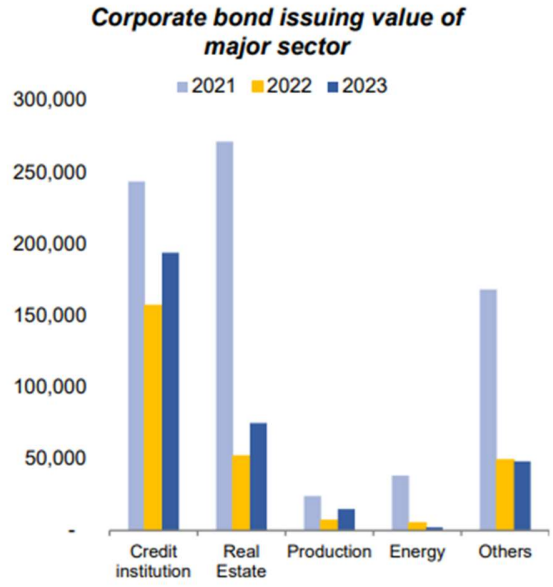


Figure 11. Corporate bond issuing value of major sector. Source: Viet Nam Bond Market Association[11]

The derivatives market was officially launched on August 10, 2017. The introduction and operation of this market have met initial goals of structural enhancement, product diversification, and the provision of new risk management tools, contributing to the stability of the underlying stock market.

Insurance revenue increased from 2.56% of GDP in 2021 to 2.76% in 2022, reflecting modest growth. Although the sector represents a small share of the financial market, its growth indicates a rising awareness of risk management. The insurance sector can play a supportive role in green finance by providing coverage for green projects, such as renewable energy installations or climate resilience initiatives. Additionally, insurance companies can channel their investment portfolios into sustainable assets. Strengthening the role of the insurance sector in green finance would require incentivizing insurers to underwrite and invest in environmentally sustainable projects.

Viet Nam's financial market exhibits significant growth potential, bolstered by an evolving capital market, positive macroeconomic indicators, and increasing public-private sector collaboration. The emphasis on green finance is crucial for achieving sustainable

[11] Viet Nam Bond Market Association. https://vbma.org.vn/storage/reports/April2024/VBMA_BOND MARKET REPORT 2023.pdf

development goals, positioning the country to attract both domestic and international investments in renewable energy and sustainable projects. While challenges persist, especially in public investment execution and certain sectors' financing, Viet Nam's proactive policy measures and robust economic fundamentals create a favorable environment for the continued development of its financial market and green finance initiatives.

The overall contraction of the financial market presents a challenge for mobilizing resources for green finance. To counter this, **Viet Nam's financial system needs targeted strategies to attract sustainable investments, such as creating enabling policies for green financial instruments (e.g., green bonds, green equity funds) and encouraging institutional investors to allocate funds toward sustainability-focused portfolios**.

2.5. Infrastructure and Energy Transition

The previous sections outlined the broader financial landscape, highlighting both opportunities and challenges in scaling up green finance in Viet Nam. This section shifts focus to the specific financing challenges related to the country's energy transition, exploring in detail how green finance can play a critical role in addressing these challenges.

2.5.1. Motivations for Accelerating Green Energy Deployment

As indicated in Figure 1, Viet Nam has recorded impressive gross domestic product (GDP) growth over the past decade. However, this economic momentum has coincided with a significant rise in electricity demand, which has escalated at an annual rate of 9%, placing Viet Nam among the highest in the world for growth in power consumption. Government forecasts indicate that this trend will continue, projecting an annual growth rate of electricity consumption between 10-12% through 2030. Such rapid demand is anticipated to outpace supply, as demonstrated by the unprecedented daily power consumption that exceeded 1.0019 billion kWh in May 2024, attributed to extreme temperatures nationwide. This marked the first instance in history where national daily consumption surpassed 1 billion kWh[12], reflecting a 9.5% increase from the previous year[13]. The surge in electricity demand is likely to strain the existing grid infrastructure and necessitate optimization within Viet Nam's power generation mix, potentially increasing reliance on coal-fired and gas power plants.

[12] EVN 2024 National power consumption increased, surpassing 1 billion kWh/day for first time, EVN continues to recommend economical use of electricity https://en.evn.com.vn/d6/news/National-power-consumption-increased-surpassing-1-billion-kWhday-for-first-time-EVN-continues-to-recommend-economical-use-of-electricity-66-142-4134.aspx#:~:text=According%20to%20data%20from%20the,peak%20of%201.0019%20billion%20kWh.

[13] Government News. https://baochinhphu.vn/nhu-cau-dien-mien-bac-tang-vot-evn-thuc-hien-hieu-qua-tiet-kiem-dien-va-dieu-chinh-phu-tai-102240614101617373.htm

As of January 2024, Viet Nam's energy supply remains heavily dependent on fossil fuels, with approximately 60.9% sourced from coal, oil, and gas[14].

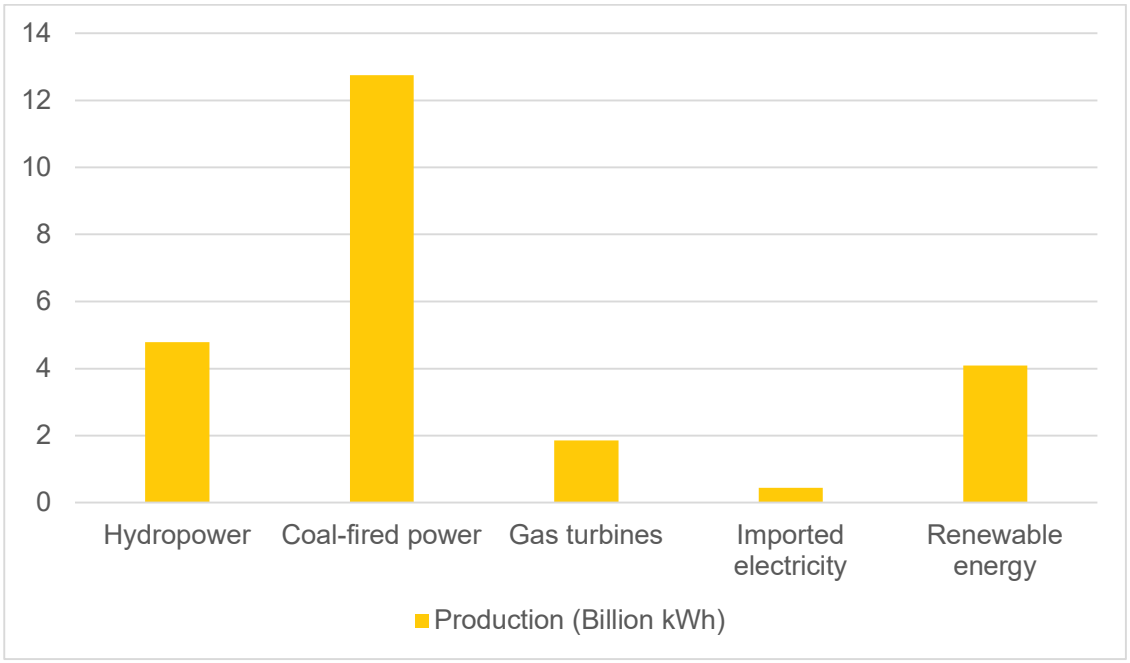


Figure 12. Breakdown of Electricity Generation by Source in January 2024. Source: Author's visualization based on EVN's data.

Since 2015, rising domestic energy needs have compelled Viet Nam to import coal to meet demand. Nevertheless, the country harbors substantial untapped potential for renewable energy (RE), particularly in wind and solar. The growth of solar capacity has been particularly impressive, with a dramatic increase between 2019 and 2020. In 2018, the country added just 97 MW of solar capacity, but this number skyrocketed to nearly 5 GW in 2019 and reached an astounding 16.5 GW in 2020, establishing Viet Nam as a leader in solar expansion for that year. Most of these capacity additions were driven by rooftop solar PV systems installed on residential and commercial properties[15]. On the other hand, Viet Nam's offshore wind power potential is estimated at approximately 600 GW, including a technical capacity of 261 GW from fixed foundation projects in waters less than 50 meters deep and 338 GW from floating foundation projects in similar depths. Some areas even experience annual wind speeds exceeding 10 m/s[16].

[14] VNEEP. https://tietkiemnangluong.com.vn/tin-tuc/chinh-sach/t31103/nang-luong-tai-tao-chiem-17-1-tong-luong-dien-san-xuat.html
[15] Climate Chance. https://www.climate-chance.org/wp-content/uploads/2022/04/bs2021_cas-detude_energie_Viet Nam_eng.pdf
[16] Viet Nam Energy Online. https://Viet Namenergy.vn/current-status-of-offshore-wind-power-and-development-direction-in-Viet Nam-31478.html

Despite this potential, only 17.1% of the total electricity generated in January 2024 came from renewable sources, with solar energy contributing 2.12 billion kWh and wind energy contributing 1.84 billion kWh (Figure 12). This heavy dependence on fossil fuels not only threatens energy security but also exacerbates environmental issues, including the detrimental impacts of climate change and local air pollution. Addressing these challenges necessitates a gradual transition towards greener and more sustainable energy sources.

A pivotal document in Viet Nam's energy planning, the Power Development Plan VIII (PDP VIII), aims to transition from a coal-reliant energy mix to one where renewable source constitute 60-70% by 2050 (Figure 13).

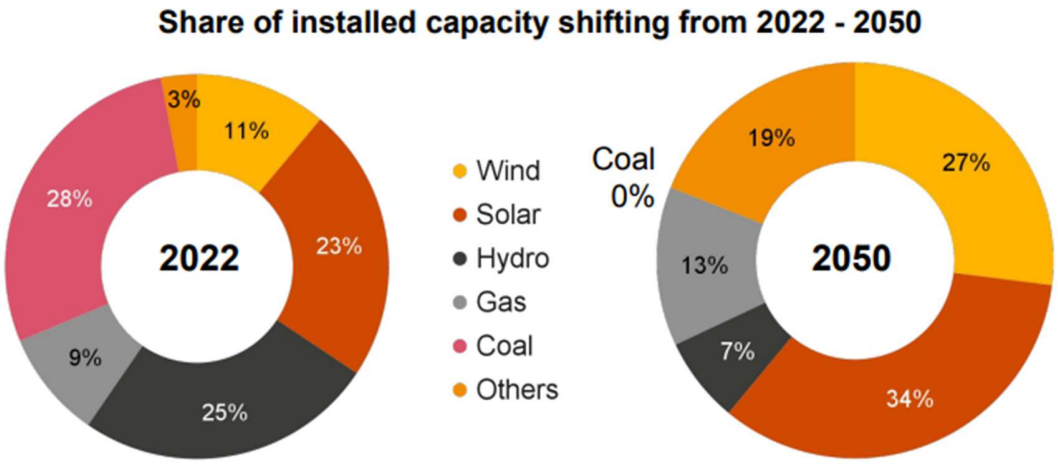


Figure 13. Share of installed capacity shifting from 2022 to 2050 by source in GW. Installed capacity projected by 2050 is based on PDP8, conditional on the materialization of the financial support by international partners. Source: PwC's visualization based on PDP VIII[17].

To support this transition, PDP VIII outlines an ambitious investment strategy, proposing USD 135 billion for the power sector from 2021 to 2030, equating to approximately 33% of the country's current GDP. This investment signifies Viet Nam's commitment to enhancing its power infrastructure and expanding capacity to meet growing energy demands. Projections suggest that investment needs will rise substantially from 2031 to 2050, estimated between USD 399 billion and USD 532 billion. Notably, funding for sustainable energy infrastructure is projected to increase markedly, from about 56% of the total investment requirement for the 2021-2030 period to approximately 92% for the 2031-2050 timeframe.

The growing demand for capital investment in the energy transition cannot be fulfilled solely through public funding. Based on the targets and development plans outlined in PDP VIII

[17] PwC. https://www.pwc.com/vn/en/publications/2023/230803-pdp8-insights.pdf

and by state-owned energy enterprises such as EVN, PVN, and Vinacomin, public sector investment is projected to account for only about 31% of the necessary funding for sustainable energy infrastructure from 2021 to 2030, and just 23% from 2031 to 2050. Given the regulated nature of electricity and transmission pricing, it is unlikely that the revenue streams and financial positions of state energy companies will significantly improve. As a result, a financing gap persists in the energy transition, highlighting the critical need for private sector involvement to bridge this investment shortfall and ensure the effective implementation of energy transition initiatives.

2.5.2. Major challenges in financing renewable energy

Achieving the global energy sector's decarbonization goals requires a transition to renewable energy to address climate change and ensure energy security. In Viet Nam, significant progress has been made, including the adoption of feed-in tariffs (FITs) and preferential tax policies, which have attracted private investment. However, challenges such as low regulated electricity prices and subsidies for fossil fuels hinder the profitability and scalability of renewable energy projects.

2.5.2.1. Financing renewable energy: Equity and debt

Renewable energy financing relies primarily on two forms: equity and debt. Equity financing involves investments from stakeholders purchasing project shares, typically during the early development or construction phases. This capital carries higher risks but offers greater returns, making it suitable for initial project stages or innovative technologies. On the other hand, debt financing provides loans from public or private entities, often used during later project stages to reduce financial risks. Public sector debt, such as concessional loans from development banks or green funds, aims to de-risk projects and attract private capital. Private debt financing, often at market rates, is accessible through investment firms and commercial banks. Both equity and debt have distinct advantages and limitations. Equity investors tolerate higher risks but expect significant returns, while debt investors focus on stable, lower risk returns over the long term. As renewable energy projects mature, they typically shift from equity reliance to lower-cost, long-term debt, broadening their investor base and reducing financing costs. Over time, this trend should ease access to affordable, long-term debt for renewables, while fossil fuel projects may increasingly struggle to secure financing, relying more heavily on equity as private lenders withdraw[18]. Importantly, governmental policies and incentives play a crucial role to direct private investment into renewables through grants, guarantees, and concessional loans - loans with more favorable terms than standard market rates[19].

[18] IEA. https://www.iea.org/reports/world-energy-outlook-2021; https://www.iea.org/reports/world-energy-outlook-2024

[19] IEA. https://www.iea.org/reports/world-energy-outlook-2021; https://www.iea.org/reports/world-energy-outlook-2024; IRENA. https://www.irena.org/Publications/2024/Jul/Renewable-energy-statistics-2024

2.5.2.2. Capital sources for renewable energy in Viet Nam and associated challenges

Despite Viet Nam's progress in promoting renewable energy, significant challenges persist in mobilizing suitable capital sources. While the country has implemented mechanisms like FITs, there are challenges linked to low regulated electricity prices, fossil fuel subsidies, limited long-term financing options, underdeveloped capital markets, and restrictive national debt policies.

The first challenge concerns the regulated electricity price, which negatively impacts the profitability of renewable energy (RE) projects and the overall stability of the electricity sector. Currently, the average selling price of electricity is 6.92% lower than the production cost, with production costs exceeding 2,088.90 VND/kWh compared to an average selling price of only 1,953.57 VND/kWh. This low pricing is partly due to government policies that subsidize the energy sector.

According to IMF calculations, Viet Nam's total energy subsidies amounted to $7 billion, representing 1.7% of GDP. This highlights significant financial commitments primarily aimed at maintaining energy accessibility. The reliance on fossil fuel subsidies, including explicit subsidies at $50 billion (12.6% of GDP) and implicit subsidies at $56 billion (14.3% of GDP), places a heavy burden on the national budget. Such financial strains raise concerns about Viet Nam's ability to meet its greenhouse gas emission reduction commitments and climate goals, especially in an increasingly sustainability-focused global context.

Moreover, a significant portion of fossil fuel subsidies in Viet Nam is indirect, primarily benefiting state-owned enterprises in energy production and distribution. These indirect subsidies manifest through lax environmental regulations, low-interest credits, and preferential access to labor, land, and essential inputs like coal and petroleum products. This situation results in forgone state tax revenues and increases public debt. The misalignment between production costs and selling prices creates a cycle of financial losses, leading to substantial deficits for the state-owned Electricity of Viet Nam (EVN). This disparity jeopardizes EVN's financial viability and impedes its capacity to attract essential investment for future growth. The uncertainty surrounding EVN's creditworthiness further undermines investor confidence.

Amidst these challenges, Viet Nam's **financial system remains underdeveloped, significantly limiting its ability to provide long-term capital**. The banking sector shows a weak proficiency in assessing green credit, which is critical for supporting sustainable investments. While domestic banks have historically dominated financing in the energy sector, their short-term lending tenors and high-interest rates are inadequate for the substantial investments required for a successful energy transition. The mismatch between the typical lifespan of energy assets, often exceeding 20 years, and the short- to medium-term structure of loans leads project developers to rely on initial onshore financing to meet immediate development deadlines, often seeking refinancing options later. Additionally,

significant refinancing burdens and restricted access to offshore financing due to regulatory barriers complicate the refinancing of existing onshore loans with foreign loans, exacerbating the financing gap for clean energy projects that depend on suitable long-term financial products.

Furthermore, the overall **underdevelopment of Viet Nam's capital markets presents another obstacle**. Alternative financing from capital markets, such as bonds and stocks, is essential to meet the ambitions outlined in the PDP VIII, but these options remain in the early stages of development and are underutilized for energy investments. The corporate bond market, which began to gain traction in 2019, lacks depth in energy transition investments, as it is predominantly driven by the financial institution and real estate sectors. Energy corporate bonds represent only a minor share of the market, hindered by a limited base of institutional investors, such as insurance companies and pension funds.

Lastly, **overarching national debt management policies restrict the flow of concessional finance essential for these critical investments**. The challenges associated with issuing clean energy-focused bonds, such as green bonds and sustainability-linked bonds, are further compounded by complex procedures, high transaction costs, and a lack of transparency and adequate credit rating agencies.

Addressing these challenges is vital for enhancing the stability of the electricity sector and ensuring the successful implementation of Viet Nam's renewable energy initiatives.

2.5.3. The Role of Green Finance in Transitioning to Renewable Energy

In the context of Viet Nam, green finance can play a crucial role in accelerating the transition from fossil fuels to renewable energy. One notable financial instrument, green bonds, has proven effective in accelerating the adoption of renewable energy in Southeast Asia. For example, green bonds have successfully financed wind and solar energy projects in Indonesia and the Philippines, offering a valuable model for Viet Nam’s renewable energy potential.

Given the growing significance of green finance in the energy transition, there is an urgent need for proactive national financial policies. Governments and regulatory bodies must promote the development of green finance by enhancing access to preferential funding, providing clear frameworks for green investments, and effectively directing resources toward renewable energy projects[20]. These policies should address the inherent risks of renewable energy projects, such as market volatility and technological uncertainties[21]. Green financial

[20] Benkhodja, M. T., Fromentin, V., & Ma, X. (2023). Macroeconomic effects of green subsidies. Journal of Cleaner Production, 410, 137166. https://doi.org/10.1016/j.jclepro.2023.137166

[21] Chebotareva, G., Strielkowski, W., and Streimikiene, D. (2020). Risk assessment in renewable energy projects: A case of Russia. Journal of Cleaner Production, 269, 122110. https://doi.org/10.1016/j.jclepro.2020.122110

policies can identify suitable funding sources, mitigate risks through instruments like blended finance, and minimize potential losses associated with these challenges.

To establish a strong green financial ecosystem, Viet Nam urgently needs to develop the following components, as already aligned in the National Green Growth Strategy:

1. **Mobilizing green finance**: Encouraging domestic and international investment in green projects, including renewable energy, energy efficiency, and sustainable infrastructure;
2. **Utilizing green finance for investments**: Prioritizing resource allocation toward projects that align with environmental and social goals;
3. **Establishing green financial intermediaries**: Creating institutions that facilitate the flow of green finance, such as green investment banks or funds;
4. **Building a green financial market**: Strengthening capital markets to support green bonds, loans, and other instruments tailored to Viet Nam's energy transition needs.

The next section provides an analysis of the governance structure surrounding green finance in Viet Nam, examining the existing regulatory frameworks, institutional arrangements, and policy guidelines that shape the green finance landscape. It explores the roles of key governmental bodies, particularly MOF, financial institutions, and international partnerships in steering the country's green finance initiatives. Effective governance in green finance is crucial as it ensures alignment with national sustainability goals and provides the necessary regulatory clarity to guide green investments.

Chapter 3: Green Finance Governance and Initiatives in Viet Nam

Chapter 2 underscores Viet Nam's growing need for capital to sustain its economic growth while addressing pressing environmental and sustainability challenges. This demand goes beyond traditional funding sources and requires a more comprehensive greening of the financial system. Effective governance is essential in developing this green financial system. **Chapter 3 focuses on the regulatory and institutional frameworks overseeing green finance in Viet Nam, and the importance of coordination and governance in driving this transition.** We discuss international experiences before diving into the local context, providing diverse perspectives that highlight effective governance models.

3.1. Multidimensional efforts across stakeholders are needed to scale up green finance

Green finance **requires coordinated, multidimensional efforts across governments, businesses, and individuals to achieve sustainable economic growth and environmental goals.** This is because as a diverse range of funding sources is essential to meet the resource needs of green technologies and industries, each with unique motivations and models. Key sources include domestic public funds from national governments and development institutions, foreign public funds from international bodies, multilateral and bilateral development banks, and private sector funds from both local and global investors. Additionally, whilst these stakeholders drive the development of green financial system, the challenge is that they establish their own criteria for sustainability, green lending, and investing. This results in multiple approaches to achieving their own objectives.

3.1.1. Government roles in green finance

Green finance encompasses government efforts to establish regulatory frameworks, align financial flows, and apply policy incentives. In many cases, national government-led green finance frameworks are essential for the transition to a sustainable economy. For instance, the UK's Green Finance Strategy has set the groundwork for aligning the financial sector with net-zero goals by promoting green bonds, green gilts, and ESG disclosures. Initiatives like the Bipartisan Infrastructure Law, CHIPS and Science Act, and Inflation Reduction Act in the U.S. are designed to crowd in private investment by supporting key sectors such as clean energy and semiconductor technologies. China offers another example by mandating standardized reporting of green loans for its largest banks. This regulatory framework has not only increased transparency but also facilitated the tracking of green finance flows. These government-driven initiatives help catalyze private sector participation by mitigating risks and enhancing long-term market predictability. One of the examples from governmental-led efforts include the UK's issuance of Green Gilts—raising £9.9 billion in 2022-2023. This highlights that government-backed green bonds can help fund clean

energy projects and enhance market liquidity. China's mandatory green loan reporting for major banks demonstrate how regulatory frameworks can increase transparency and track green finance flows.

Importantly, several factors support large-scale capital mobilization that governments should consider. First, government investments can reduce perceived risks by providing initial funding and demonstrating commitment to long-term goals. This reduces the uncertainty for private investors, making them more willing to allocate resources to emerging sectors with potentially high returns but higher initial risks. In addition, public investment can fill critical gaps in infrastructure and early-stage development, addressing market failures and incentivizing private sector participation. Governments can focus on areas where private investment might be hesitant, such as in the development of new green technologies or in sectors with high initial capital requirements, like clean energy or semiconductor manufacturing. This strategic role ensures that public spending complements and accelerates private sector efforts rather than competing with them. Furthermore, public investments often involve regulatory frameworks, subsidies, or incentives that create a more favorable environment for private capital.

3.1.2. Central banks and regulatory authorities

Central banks and financial regulators are crucial in shaping the green finance landscape. They integrate climate-related risks into monetary policy, supervision, and financial stability assessments. For example, the Bank of England has incorporated climate risk stress testing to evaluate the financial system's resilience under various climate scenarios. Additionally, central banks incentivize green finance by implementing measures such as capital requirements, preferential lending rates, and mandatory climate disclosures. The European Central Bank (ECB) has introduced climate-related disclosure requirements for financial institutions within its jurisdiction, promoting transparency.

To further support innovation, central banks facilitate the development of green bonds, sustainability-linked loans, and other innovative financial instruments. An example is the issuance of green bonds by several central banks to support renewable energy projects. They also collaborate with global bodies like the Network for Greening the Financial System (NGFS) to share best practices. For instance, the NGFS provides guidelines on how central banks can integrate climate risks into their operations and policies.

3.1.3. Private investors are integral but cost-effective

Private investors are highly cost-sensitive, and their willingness to finance green projects depends significantly on governments' ability to mitigate risks and ensure expected returns. Government participation can catalyze private investment, especially in sectors like clean energy and energy infrastructure where high upfront costs and long-term returns can deter private sector involvement[22]. Even modest public sector investments can trigger substantial

[22] Boushey, H. 2023. The Economics of Public Investment Crowding in Private Investment. White House.

private capital flows, acting as a catalyst for larger-scale investment mobilization. This multiplier effect is particularly evident in green finance, where public investment has the potential to attract significant private capital. Research from UNESCAP illustrates this dynamic by demonstrating that a $10 billion government investment in climate-related projects could leverage between $50 and $150 billion from private investors[23].

3.1.4. Commercial and development banks

Banks serve as critical intermediaries for financing green initiatives. They offer green loans tailored for renewable energy, energy efficiency, and sustainable agriculture. For instance, HSBC launched a Green Loan proposition specifically for companies investing in environmentally friendly projects. These banks embed ESG criteria into credit assessments and decision-making processes. Development banks such as the ADB integrate ESG criteria into their lending portfolios to enhance sustainability.

Moreover, banks mobilize blended finance by partnering with development finance institutions (DFIs) to combine concessional and private funding, reducing project risks. An example is the World Bank Group's use of blended finance mechanisms to de-risk renewable energy projects in emerging markets. They also provide advisory services to businesses transitioning to sustainable practices. Many banks offer technical assistance to help clients comply with ESG standards and adopt green practices.

3.1.5. Institutional investors

Green finance projects are inherently long-term, requiring alignment of financial, environmental, and economic priorities. As such, investors seek stable, well-defined policy frameworks that offer predictable returns. Institutional investors, including pension funds, insurance companies, and wealth funds, are expected to increase their ESG-related assets under management (AuM) globally to US$33.9 trillion by 2026, up from US$18.4 trillion in 2021. With a projected compound annual growth rate (CAGR) of 12.9%, ESG assets are on track to comprise 21.5% of total global AuM within the next five years[24]. In the UK alone, these assets totaled £8.79 trillion in 2020[25]. Despite their significant role in capital markets, institutional investors in the UK have made limited progress in addressing the net-zero investment gap. For example, in 2016, only 1% of institutional portfolios were allocated to

[23] UNESCAP. https://repository.unescap.org/bitstream/handle/20.500.12870/1547/ESCAP-2010-FS-Financing-inclusive-green-future-overview.pdf?sequence=5&isAllowed=y

[24] PwC. https://www.pwc.com/id/en/media-centre/press-release/2022/english/esg-focused-institutional-investment-seen-soaring-84-to-usd-33-9-trillion-in-2026-making-up-21-5-percent-of-assets-under-management-pwc-report.html

[25] Persad, K., Xu, B., and Greening, P. 2024. Institutional Institutional investor behaviour and the energy transition: A complexity framework for accelerating sustainable finance from UK investors. https://doi.org/10.1016/j.eneco.2024.107444

low-carbon assets, while fossil fuel exposures accounted for approximately 7% in equities and 45% in broader portfolio exposure globally[26].

The limited involvement of institutional investors in green finance, despite their capacity, may stem from an overreliance on market-based solutions that fail to address the complexity of the low-carbon transition. Traditional market mechanisms often undervalue the risk-adjusted returns of green assets compared to conventional investments, thereby limiting alignment with sustainable investment needs. The concentration of fossil fuel holdings in institutional portfolios illustrates an ongoing preference for traditional assets, delaying the shift toward sustainable alternatives. Therefore, beyond market mechanisms, a strong policy framework with targeted government incentives, regulatory backing, and consistent support is essential to reduce risks associated with green projects. Such a framework would provide the predictability and assurance necessary for institutional investors, enabling a broader allocation toward green finance.

3.1.6. Multinational organizations and international financial institutions (IFIs)

IFIs and multinational organizations catalyze green finance markets by providing concessional loans, guarantees, and risk-sharing mechanisms for green projects. For instance, the Global Environment Facility (GEF) funds projects aimed at mitigating climate change impacts. They share best practices and build institutional capacity for green finance. Organizations such as the International Finance Corporation (IFC) provide technical support to enhance green finance readiness in developing countries.

Furthermore, IFIs lead efforts to create consistent green finance taxonomies and ESG benchmarks. The Climate Bonds Initiative has developed certification standards for green bonds to ensure transparency and credibility. They work with national regulators to align local policies with international frameworks. For example, the United Nations Environment Programme Finance Initiative (UNEP FI) collaborates with banks globally to integrate ESG considerations into their operations.

3.2. Green finance governance and review of landscape in Viet Nam

The governance framework for green finance in Viet Nam, as showed in the below diagram, illustrates a comprehensive but evolving system with significant progress in aligning national strategies with global sustainability goals.

[26] Ameli, N., Drummond, P., Bisaro, A. *et al*. Climate finance and disclosure for institutional investors: why transparency is not enough. *Climatic Change* **160**, 565–589 (2020). https://doi.org/10.1007/s10584-019-02542-2

***Strategic Framework**:* The National Green Growth Strategy (2014–2020) (Decision No. 1393/QĐ-TTg) laid the groundwork for Viet Nam's green finance ecosystem. It has since been updated with the National Green Growth Strategy for 2021–2030 (Decision No. 1658/QĐ-TTg), with a vision toward 2050. These frameworks prioritize integrating green finance into economic planning. Specific action plans, such as the Action Plan for the Financial Sector to Implement the National Strategy on Green Growth, provide clear goals for mobilizing green financial resources.

For the 2021–2030 period, according to the National Green Growth Strategy for 2021–2030 with a vision to 2050 (Decision No. 1658/QD-TTg dated October 1, 2021), the directions and solutions for developing green finance include:

1. Reviewing, amending, and supplementing policies on the management and use of state budget expenditures to promote green growth.

2. Developing and improving preferential financial policy tools, programs, and solutions to encourage the green capital market and green insurance; using taxes and fees to regulate unreasonable consumption behaviors harmful to health, culture, and the environment.

3. Establishing a carbon market aimed at developing a comprehensive emissions trading mechanism based on market principles.

Legal framework: The foundational legal framework supporting the development of green finance includes the Law on Environmental Protection, the Law on Environmental Protection Tax,…

***Developing green financial instruments, particularly green credit and bonds**:* Between 2015 and 2022, the green finance market in Viet Nam laid its foundation and evolved, consisting of three components: the green credit market, the green equity market, and the green bond market.

Green credit in Viet Nam is built on three pillars:
1. Promoting green credit growth (as reflected in the banking sector's action plans)
2. Enhancing environmental and social risk management in credit granting activities (Directive No. 03/CT-NHNN dated March 24, 2015, issued by the Governor of the State Bank of Viet Nam to encourage green credit growth and manage environmental and social risks in credit activities)
3. Developing green banking (Decision No. 1604/QD-NHNN, approving the Green Banking Development Scheme in Viet Nam)

Development of the green bond market is integrated into the general roadmap for developing the bond market. However, it must adhere to the regulations on issuance, registration, depository, listing, and trading under the general bond regulations. There are currently no special classifications or specific guidelines for green bonds. The establishment of a framework for developing the green capital market has been reflected through the review and improvement of green development policies, including:

1. Studying the establishment of a green financial framework for activities in the capital market, such as green listing requirements for stocks, sustainability reporting, and supervisory criteria aligned with green standards.

2. Issuing regulations and guidelines on reporting environmental and social risk management (Environment (E), Social (S), and Governance (G)) for listed companies.

3. Committing to promoting sustainable development in the stock market as a member of the United Nations Sustainable Stock Exchanges (SSE) Initiative.

Sector-Specific Focus*:* Policies such as Decision No. 882/QĐ-TTg prioritize green finance for sectors like renewable energy, housing, and environmental protection, aiming for sectoral integration of sustainability goals.

Viet Nam's approach includes multiple layers of regulations, decrees, and action plans issued by key institutions such as the Ministry of Planning and Investment, the Ministry of Finance, the State Bank of Viet Nam (SBV), and the Ministry of Natural Resources and Environment. The institutional arrangements for developing green finance in Viet Nam involve the following entities: Ministry of Planning and Investment (MPI), the Ministry of Finance (MOF), the State Bank of Viet Nam (SBV), and the Ministry of Natural Resources and Environment (MONRE). Within the overarching green growth framework (Decision 882), MPI serves as the central entity for green growth implementation, with responsibilities ranging from fortifying the legal framework to promoting green investments and enhancing the national green economic sector. MOF assumes oversight of green bonds, green insurance, green stocks and financial incentives for green investments, whereas SBV is charged with the oversight of green credits. MONRE is tasked with the development of green taxonomy and the monitoring of the Environmental Protection Fund.

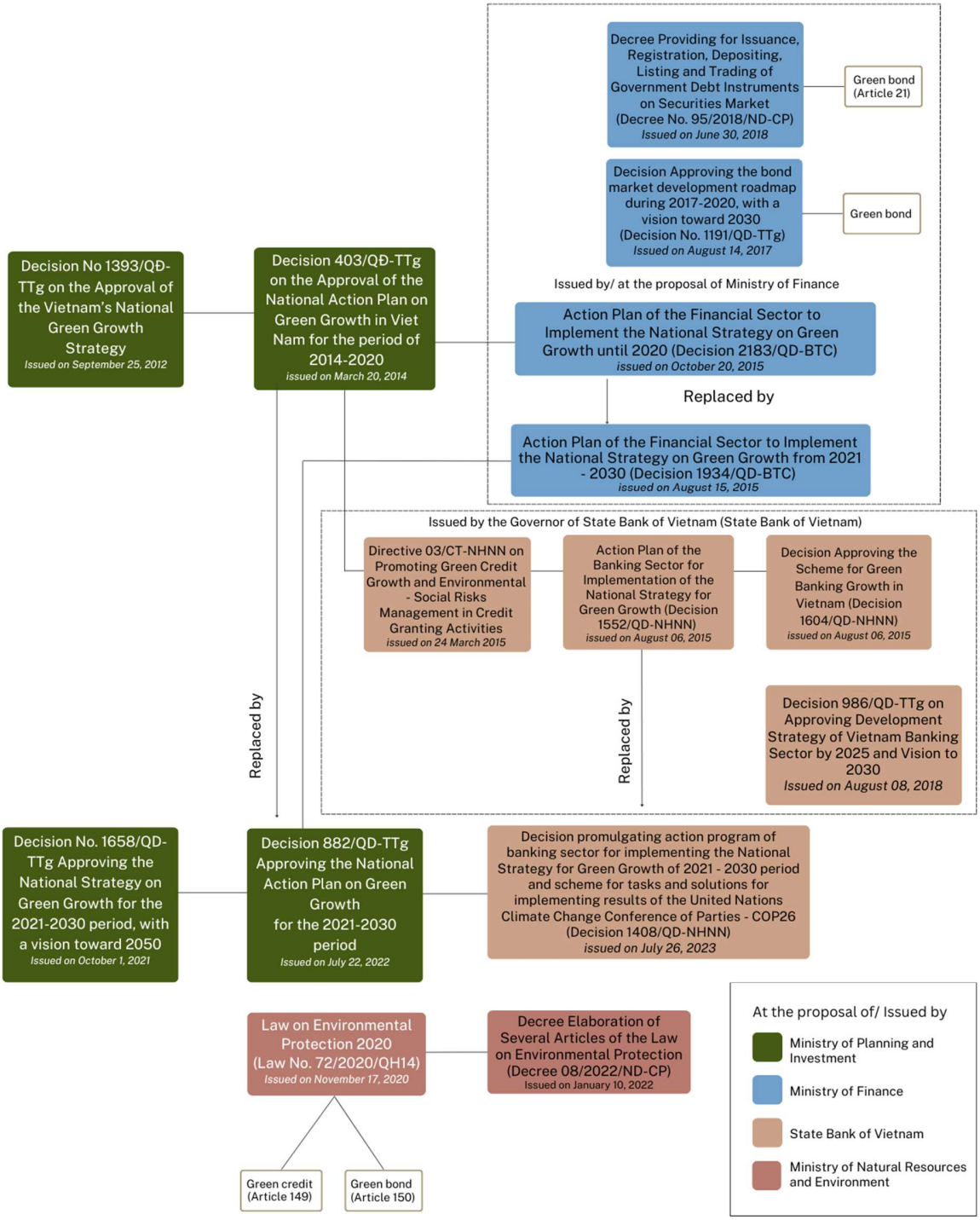


Figure 14. Key legal documents related to green finance in Viet Nam issued by different governmental entities

The Ministry of Finance (MoF) is one of the leading governmental entities responsible for the development of green financial markets. Some of MoF's mandates include:

i. Improving policies on management and use of state budget;

ii. Studying and improving fiscal incentives such as taxes and fees to promote green finance and climate actions;

iii. Mobilizing external resources (loans, aids) from international organizations;

iv. Developing financial markets (green bonds, green insurance, carbon market, etc.).

Regarding the current progress, the MoF has issued a number of decrees and circulars aimed at enhancing green finance to support Viet Nam's sustainable development and energy transition (Figure 5). A notable initiative involves the State Securities Commission collaborating with the Climate Bonds Initiative to develop comprehensive guidelines for issuing Green Bonds, Social Bonds, and Sustainable Bonds. These guidelines serve as a roadmap for applying the relevant standards, aiming to mobilize resources from both domestic and international capital markets to support sustainability and environmental protection. Green government bonds, or G-bonds, operate under Decree No. 95/2018/ND-CP, along with related decrees that specify the procedures for their issuance, registration, and trading. For corporate green bonds, Decree No. 153/2020/ND-CP establishes a robust regulatory framework, closely aligning with general rules for corporate bonds. This decree outlines principles governing issuance, the use of proceeds, and disclosure requirements, ensuring compliance with environmental standards.

The most recent document is Decision No. 1934/QD-BTC, which approves the Ministry's Action Plan for implementing the National Strategy on Green Growth for the period of 2021-2030. By outlining specific responsibilities and tasks for various departments within the MoF, the decision ensures an organized approach to executing the National Strategy and underscores the Vietnamese government's commitment to sustainable development by linking financial policies with green growth initiatives.

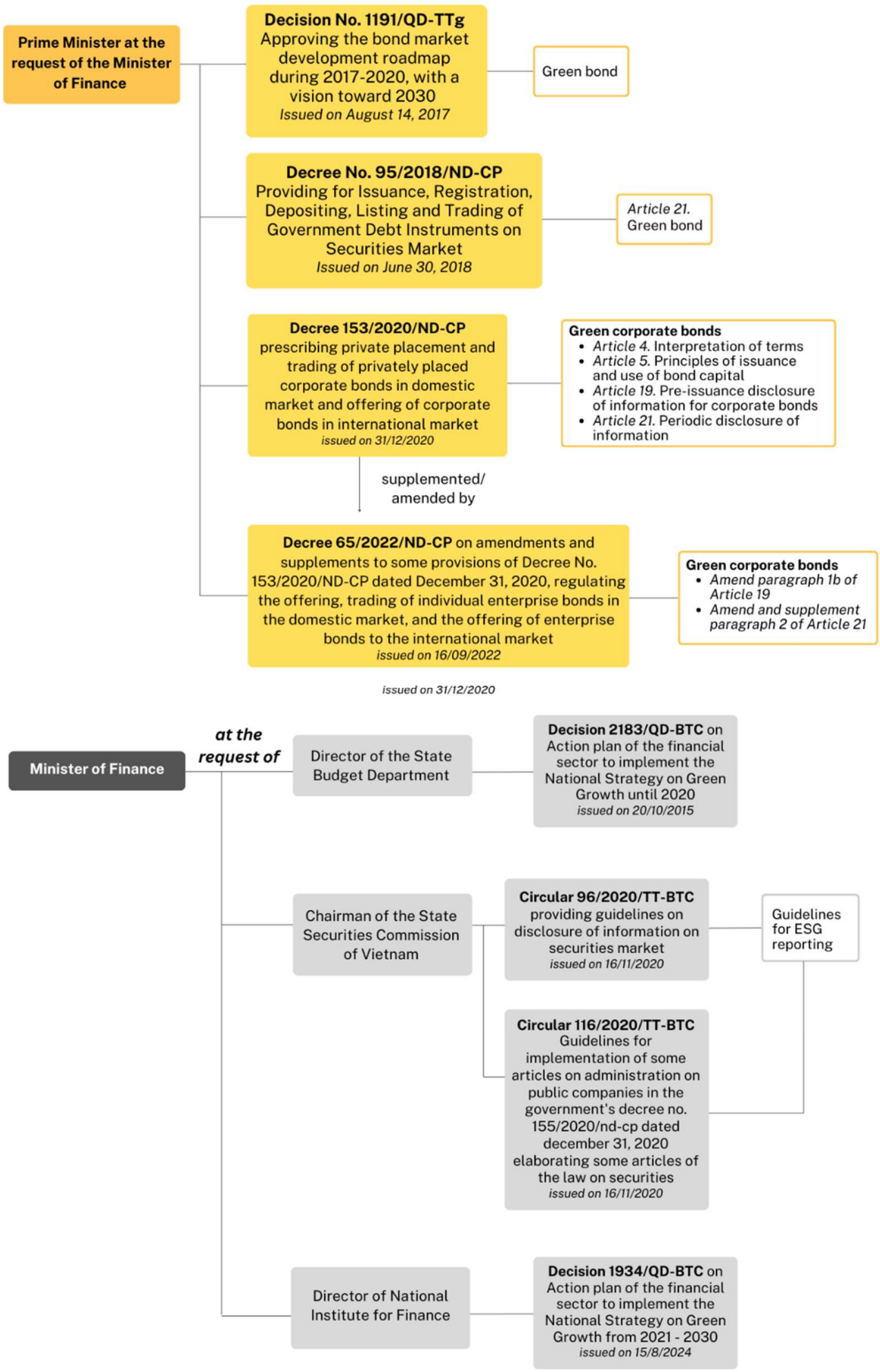


Figure 15. Key documents issued/ proposed to the Prime Minister by MOF directly relevant to green finance. Source: Authors' compilation.

According to Decision 1934/QD-BTC promulgating action plan of MOF of Viet Nam for implementation of National Strategy for Green Growth during 2021 – 2030, a few pillars underpinning the green market development in Viet Nam, including:

i. **Policy and institutional development:** Build and enhance frameworks and policies to align economic restructuring with green growth and integrate green objectives across economic and social plans.
ii. **Green finance infrastructure:** Establish standards and processes for green listing, sustainability reporting, and compliance with green finance criteria in capital markets
iii. **Resource mobilization for green investment**: Enhance specific green market products and instruments such as green bonds, government/ local bonds, green indices for sustainable investment and monitoring, and green insurance
iv. **Capacity building and awareness:** Promote green finance literacy through training programs and public awareness campaigns, encouraging green consumption and lifestyle practices. Emphasis is on educating both policymakers and the private sector to support sustainable production and consumption.
v. **International cooperation:** Leverage foreign capital and technical assistance for green finance and climate initiatives through active engagement with international partners. Collaborate on knowledge-sharing and technology transfer to support green growth at the global and regional levels.
vi. **Innovation and technology in green finance:** Encourage the use of digital and information technology in green growth management, supporting efficient and innovative solutions to meet sustainability goals.

The next Chapter dives into the current status of and recommendations for green finance instruments in Viet Nam. The selection of the instruments was based on discussion with stakeholders within MOF and our analysis on the research needs.

Chapter 4: Applications of and recommendations for green finance instruments in Viet Nam

The Vietnamese government has shifted its focus toward green financial instruments, including green bonds, green index, green funds, ESG disclosure, and emerging tools like green insurance, to mobilize capital for green growth and the energy transition. Each of these instruments requires further research and institutional support, as their effectiveness remains limited. The following section examines the development of these green financial instruments, with a focus on those currently under the oversight of MOF and gaining increased attention.

4.1. Green bonds

4.1.1. Potential of green bonds for sustainable financing

Green bonds are increasingly recognized as pivotal financial instruments aimed at funding environmentally friendly projects and assets and can unlock substantial and long-term non-bank funding for clean energy projects. According to the Climate Bonds Initiative (2022)[27], global green bond issuance reached a record USD 862 billion in 2022, signaling growing investor confidence in sustainable finance to address environmental challenges. These funds have been critical in financing renewable energy, sustainable infrastructure, and energy efficiency projects. In the European Union (EU), green bonds are a core component of the financing strategy for the EU Green Deal, which aims to achieve carbon neutrality by 2050[28]. Countries such as the Netherlands and Germany have issued sovereign green bonds to fund projects aimed at reducing carbon emissions and creating jobs in renewable energy sectors. Meanwhile, emerging markets such as China and India are also leveraging green financial instruments to scale renewable energy infrastructure and meet global climate targets.

The green bond market commenced with the issuance of the "climate awareness bond" by the European Investment Bank in 2007, marking the introduction of the first green bond. A pivotal moment for the market's subsequent development occurred in January 2014, when the International Capital Market Association (ICMA) introduced the Green Bond Principles (GBPs). According to ICMA, there are four main types of green bonds, including: 1) standard green use of proceeds bond; 2) green revenue bonds; 3) project bonds; and 4) secured

[27] Climate Bonds Initiative. (2023). *Green bonds global state of the market 2022*. Climate Bonds Initiative. https://www.climatebonds.net

[28] European Commission. (2021). *EU Green Deal and green bond issuances*. European Commission. https://www.ec.europa.eu

green bonds[29]. In terms of issuing green bonds, there are four main steps demonstrated in figure 6.

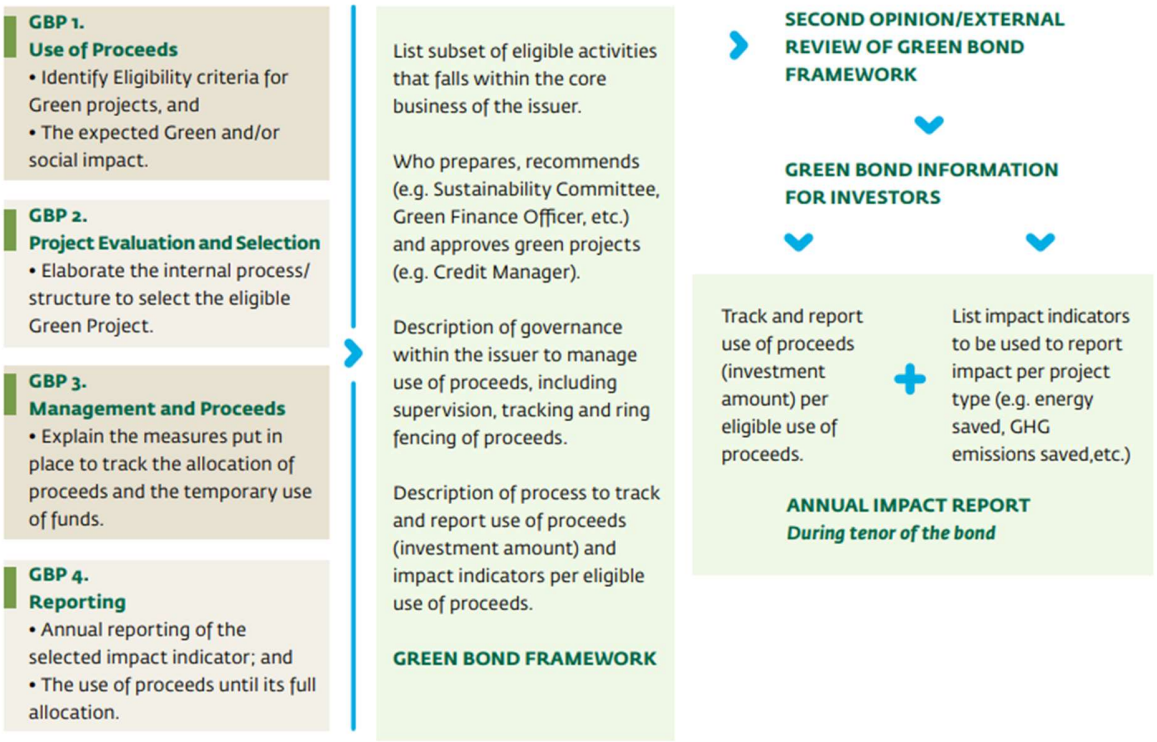


Figure 16. Main steps in issuing a green bond. Source: Green Bond Handbook[30]

Historically, bond financing has faced limitations for pre-construction and construction-stage projects, primarily due to the lack of established operational track records. However, the emergence of green bonds offers a promising alternative, as these financial instruments can be tailored to align with investors' risk profiles throughout the project lifecycle. Green bonds not only cultivate a more stable and expansive investor base but also generate increased demand from investors. Furthermore, they signal a strong commitment to decarbonization, enhancing the issuing firm's reputation[31].

Looking ahead, anticipated declines in interest rates in both the United States and Europe are set to enhance global green bond issuance in 2024, creating favorable conditions in the

[29] ICMA. 2021. Green Bond Principles: Voluntary Process Guidelines for Issuing Green Bonds. https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Green-Bond-Principles-June-2022-060623.pdf

[30] Green Bond Handbook: A Step-by-Step Guide to Issuing a Green Bond. https://www.ifc.org/content/dam/ifc/doc/mgrt/202203-ifc-green-bond-handbook.pdf

[31] According to Annex B: High level equivalence across classification standards of the Green Project Mapping. 2021. https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Project-Mapping-June-2021-100621.pdf

debt market for both investors and issuers. In 2023, green debt sales reached an impressive $492.30 billion, up from $446.18 billion the previous year, with Europe accounting for nearly half of the global market, according to the Climate Bonds Initiative. This growth is particularly remarkable considering the tightening monetary policies of most global central banks[32]. And compared to developed countries, developing ones have seen limited expansion in the local green bond markets. In the case of the BRICS countries, the issuance of green bonds and related policy initiatives remain scarce or are still in the early stages, with China being the notable exception. The Chinese green bond market has experienced significant early growth, driven by strong support from public institutions and the People's Bank of China (PBoC)[33].

[32] S&P Global. https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/global-green-bond-sales-to-get-boost-in-2024-as-interest-rates-may-fall-80251156

[33] Oxford Institute for Energy Studies. 2022. Financing the Energy Transition: The Role, Opportunities and Challenges of Green Bonds. https://www.oxfordenergy.org/wpcms/wp-content/uploads/2022/02/Financing-the-Energy-Transition-The-Role-Opportunities-and-Challenges-of-Green-Bonds-ET07.pdf

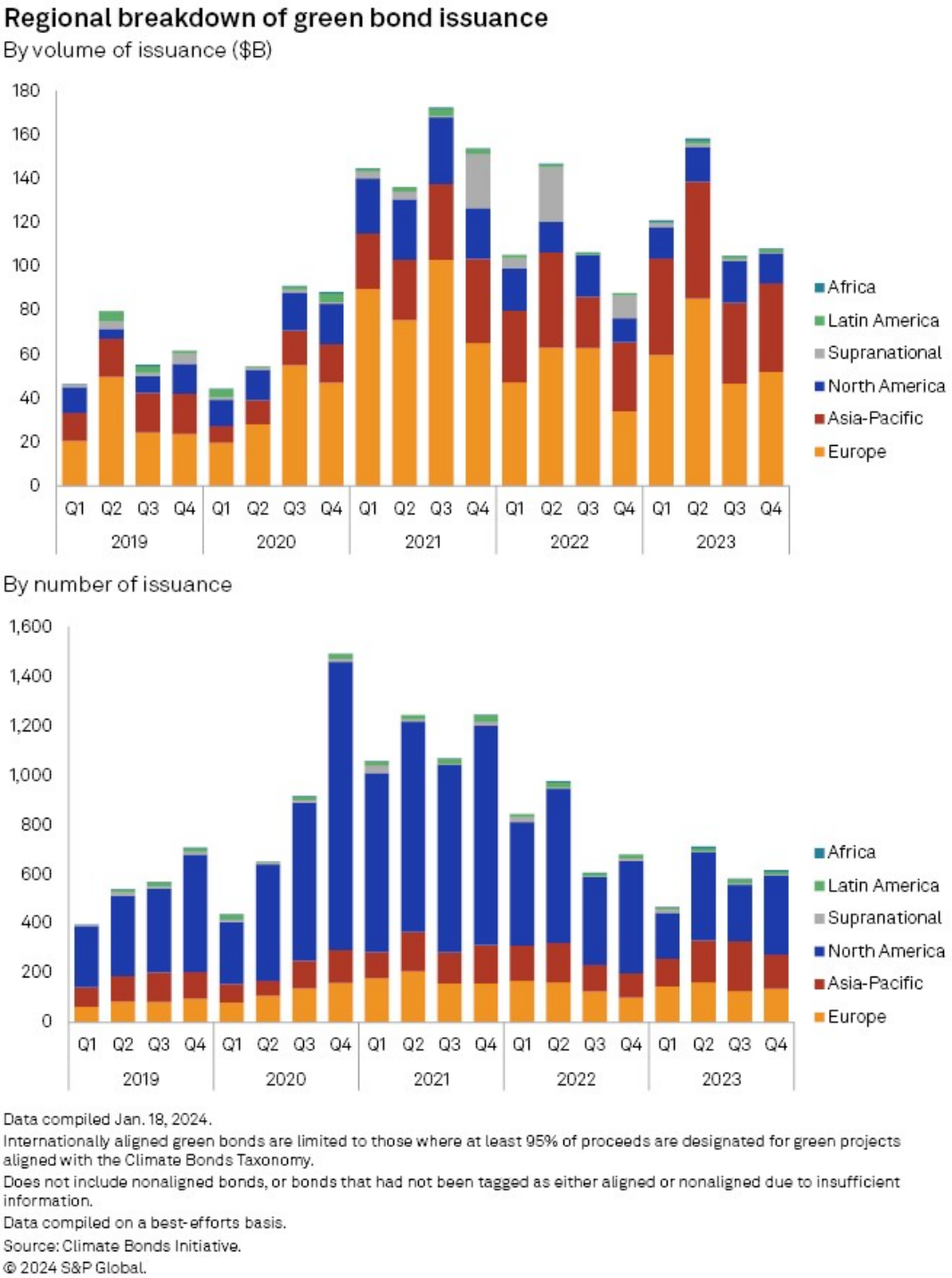
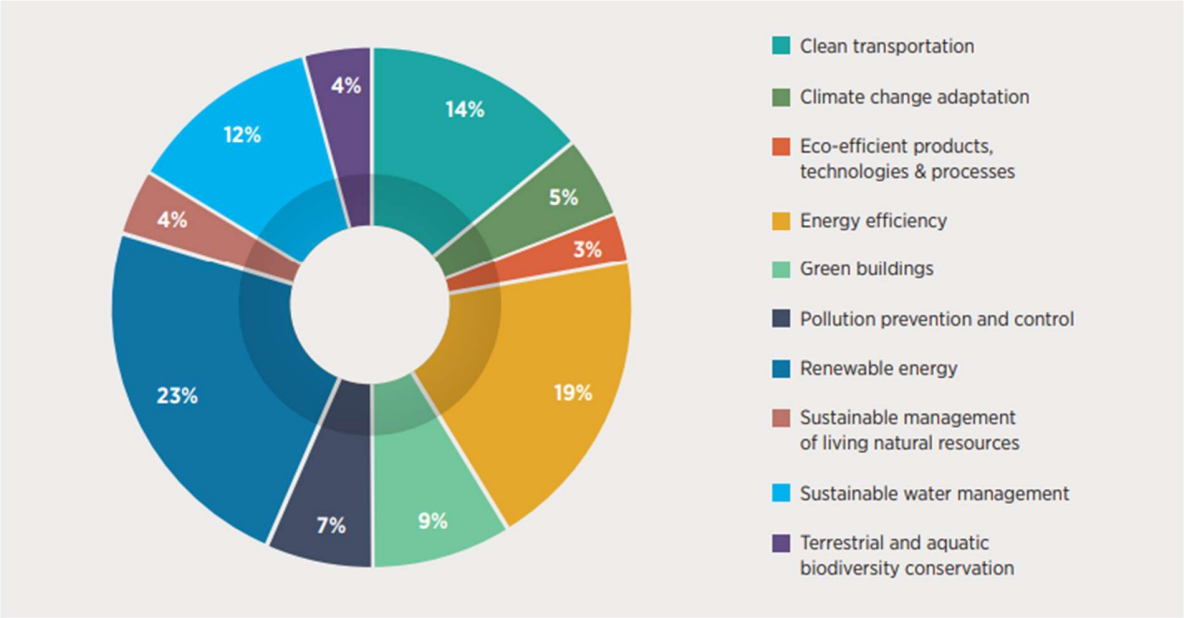


Figure 17. Regional breakdown of green bond issuance. Source: Climate Bonds Initiative and taken from S&P Global

The Green Bond Principles place a strong emphasis on renewable energy and energy efficiency within their eligible project categories, underscoring the critical role these

initiatives play in stimulating green bond issuance. Notably, renewable energy projects dominate the green bond market, followed closely by energy efficiency initiatives and clean transport solutions. Most green bonds finance multiple categories of "green" projects. In a review of over 4,300 green bonds, 50% allocated their proceeds to renewable energy, while 16% were dedicated exclusively to renewable energy assets. Furthermore, green bonds focused on renewable energy typically feature larger issuance sizes, averaging between USD 100 million and USD 500 million, compared to an average issuance size of less than USD 100 million for all green bonds.



IRENA analysis based on data from the Environmental Finance Bond Database (subscription required)
**2019 includes data up to and including November 2019.*

Figure 18. Breakdown of green bond issuances by use of proceeds, by cumulative volume (USD), 2010-2019. Source: IRENA Renewable Energy Finance Brief[34]

4.1.2. Need to accelerating growth and support for green bonds in Viet Nam

On December 4, 2018, the Vietnamese government introduced Decree No. 163/2018/ND-CP, establishing the first legal framework for corporate bond issuance in the country. This decree aimed to create leverage for increased investment in green projects within the private sector. Subsequently, on December 31, 2020, the government issued Decree No. 153/2020/ND-CP, which replaced Decree No. 163/2018/ND-CP. This new regulation delineated the guidelines for private placements and the trading of privately placed

[34] : IRENA (2020), Renewable energy finance: Green Bonds (Renewable Energy Finance Brief 03, January 2020), International Renewable Energy Agency, Abu Dhabi

corporate bonds in the domestic market, as well as the offering of corporate bonds in international markets.

Moreover, the 2020 Environmental Protection Law formally acknowledged green bonds as a crucial economic instrument for environmental protection. According to Clause 1, Article 150 of this law, "Green bonds are bonds issued by the government, local authorities, or enterprises in accordance with the legal regulations on bonds to raise capital for environmental protection activities and projects that yield environmental benefits." This recognition underscores the importance of green bonds in advancing Viet Nam's sustainable development goals.

To further enhance the green bond market, the Ministry of Finance has actively pursued collaborations at both international and local levels, aligning with ASEAN standards and providing incentives, such as reduced service fees for green bond transactions. Additionally, on November 17, 2021, the Ministry of Finance issued Circular No. 101/2021/TT-BTC, guiding issuers and investors of green bonds to enjoy a 50% discount on the service fees for green bonds in the stock market.

No.	Legal document	Area of focus	Description
1	**2020 Law on Environmental Protection**	General regulations	In 2020, the National Assembly passed the Environmental Protection Law, which came into effect on January 1, 2022. Article 150 specifically addresses green bonds, stating: i. Green bonds are issued by the government, local authorities, or enterprises according to bond laws to raise funds for environmental protection activities or investment 2projects with environmental benefits. ii. Funds raised from green bonds must be accounted for and monitored in accordance with bond regulations and used for environmental protection projects or investments that provide environmental benefits. iii. Issuers of green bonds must provide investors with information on environmental impact assessments and environmental permits for the investment projects using funds from the green bonds. iv. Issuers and investors of green bonds are entitled to benefits according to legal provisions. v. The government provides detailed guidance on this in a decree implementing the Environmental Protection Law.
2	**Decree No. 08/2022/ND-CP** on Implementing the	General regulations	On January 10, 2022, the government issued Decree No. 08/2022/ND-CP, which provides specific

	Environmental Protection Law		regulations related to green bond issuance, including: i. Defining the purposes of green bonds. ii. Principles for managing funds raised from green bonds. iii. Disclosure and reporting requirements. iv. Incentive policies for green bond issuers and investors.
3	**Decree No. 95/2018/ND-CP** (dated June 30, 2018) outlines the issuance, registration, custody, listing, and trading of government debt instruments on the securities market.	Regulations on Green Government Bonds	Article 21 specifies the process for issuing green government bonds, as well as the content of the green bond issuance proposal. The issuance, registration, custody, listing, and trading of green government bonds follow the same procedures as other government debt instruments.
4	**Decree No. 93/2018/ND-CP** (dated June 30, 2018) governs local government debt management	Regulations on Green Local Government Bonds	Article 8 stipulates that the issuance of green local government bonds must comply with regulations for local government bonds. Provincial People's Committees are required to report the list of projects using the funds raised from these bonds, following guidelines from the Ministry of Finance. The issuance is conducted based on a proposal approved by the Prime Minister and guided by the Ministry of Finance.
5	**Decree No. 153/2020/ND-CP** sets out principles for issuing and utilizing green corporate bonds, including disclosure requirements. Decree No. 65/2022/ND-CP amends certain provisions of Decree 153/2020/ND-CP	Regulations on Green Corporate Bonds	i. Article 5: Funds raised from green bond issuance must be separately accounted for, monitored, and disbursed for environmental protection projects or projects with environmental benefits. ii. Article 19 and Article 21 (amended by Decree No. 65/2022/ND-CP) regulate disclosure, accounting, management, disbursement, and environmental impact assessments. iii. The issuance, registration, custody, listing, and trading of green corporate bonds are conducted similarly to regular corporate bonds.
6	**Incentive Policies for Green Bonds**	Incentives	i. **Service Fee Incentives:** Under Circular No. 101/2021/TT-BTC, issuers and investors of green bonds are entitled to a 50% reduction in the following service fees: (i) Listing registration. (ii) Listing management. (iii) Trading. (iv) Securities registration. (v) Partial securities deregistration. (vi) Securities custody. ii. **Tax Incentives:** The Ministry of Finance is expected to propose income tax incentives

			for corporate and personal income generated from green bonds as part of the revision of the Law on Corporate Income Tax, the Law on Personal Income Tax, and related guiding documents. iii. **Other Incentives:** Public investment projects funded by green bonds issued by the government or local authorities are prioritized for full funding according to the implementation schedule in the medium-term and annual public investment plans.

Table 1. Legal framework surrounding green bond in Viet Nam

In Viet Nam, the adoption of bonds, particularly green bonds, is gaining significant momentum as a vital means of financing sustainable projects. In 2023, the bond market grew to a size of more than USD0.8 billion. Over 80% of the volume comes from government debt, with development banks being the second-largest issuer type. The journey towards green bond issuance commenced on October 20, 2016, when the Ministry of Finance approved the "Pilot Project for Issuing Local Government Bonds." The initial offerings featured municipal bonds from Ho Chi Minh City and Ba Ria-Vung Tau, alongside corporate bonds from EVN Finance and BIDV. These early issuances laid the groundwork for Viet Nam's engagement with green finance and set the stage for future advancements in this area.

Most recently, in 2023, Symbiotics Investments arranged a $9 million green bond for Gia Lai Electricity Joint Stock Company, which is listed on the Securities Official List of the Luxembourg Stock Exchange. This development highlights the increasing presence of sustainable financing in Viet Nam's energy sector and underscores the commitment of international investors to support environmentally friendly projects in the country. Furthermore, leading private sector developers, including Gia Lai Electricity, obtained international certification, such as the Climate Bonds Standard, for green bond issuance in June 2024, paving the way for local developers to issue green bonds to international bondholders in the future.

Given all these efforts, from 2019 to 2023, Viet Nam issued $1.157 billion in green bonds. According to data from various official sources, including the Climate Bonds Initiative (CBI), Viet Nam News Agency, and the National Institute for Finance (MOF), there have been 18 public green bond issuances in Viet Nam from 2018 to 2022. The majority of the capital raised (57%) is allocated to renewable energy, which is the primary focus of Vietnamese stakeholders, alongside waste management and agriculture. This includes EVNFinance, which issued 1.725 trillion VND in 2022, and BIDV, which issued 2.5 trillion VND in 2023. Currently, Viet Nam is the second-largest market for green bond issuance in the ASEAN region, reaching 1 billion USD, only behind Singapore.

Type	Issuer	Date	Amount	Coupon rate	Tenor	Purpose
Local Government Green Bonds	Ho Chi Minh City	2016	VND 3,000 billion	N/A	15 years	Fund local budget projects, including 11 environmental projects
	Bà Rịa–Vũng Tàu Province	2016	VND 500 billion	6.7%	5 years	Fund local budget projects, including 1 environmental project
Corporate Green Bonds	BIM Land (BIM Real Estate)	May 2021	USD 200 million	7.375%	5 years	Develop real estate projects, including several environmentally friendly projects
	EVNFinance	June 2022	VND 1,725 billion (USD 75M)	6.7%	10 years	Renewable energy projects. First issuance in local currency with partial guarantee by GuarantCo (USD 50 million)
	Vingroup	2022	USD 425 million	3.25%	5 years	Sustainable bond with option for Vinpearl shares
	BIDV (Bank for Investment and Development of Viet Nam)	October 2023	VND 2,500 billion (~USD 104 million)	N/A	5 years	Finance green projects: energy savings, emission reduction, environmental protection. First domestic green bond issuance by a bank under ICMA's Green Bond Principles and 1st domestic bonds to received Moody's scoring for green bond framework
	SeABank	July 2024	USD 75 million (25M for ocean protection)	N/A	N/A	Green projects, with USD 25M focused on ocean and marine protection

Table 2. Major green bond issuances in Viet Nam (2016 – 2024)

Despite the increasing recognition and utilization of green bonds as an effective tool for mobilizing capital for environmentally sustainable projects, their issuance value remains relatively modest compared to the overall size of the Vietnamese bond market, which was valued at $104.6 billion in 2019 and $324.1 billion during the first nine months of 2020. Moreover, enterprise participation in the green bond market has been limited, with most current green bond issuance projects primarily supported by the government and local authorities.

4.1.3. Barriers for green bond market and recommendations for progress

To effectively develop the green bond market, it is essential to understand and analyze the common barriers that can impede the growth of this market and negatively impact issuers, investors, and the external review process. Coordination across different entities, particularly MOF, MPI, and MONRE, is also key to ensure effectiveness.

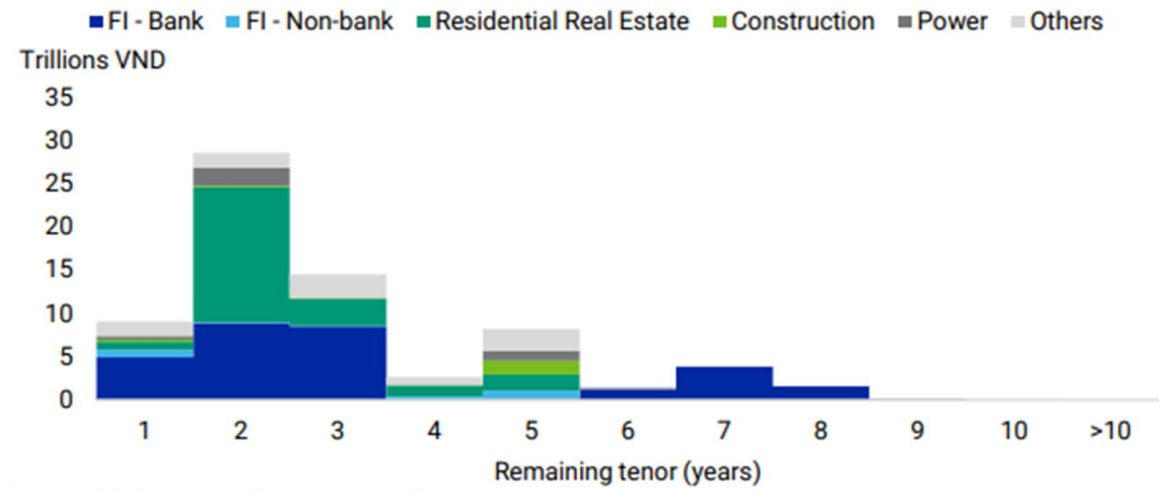
A critical challenge in developing a green bond market is the insufficient market depth and a limited investor base. Green bonds appeal primarily to a niche segment of investors who prioritize environmental, social, and governance (ESG) criteria. In many emerging markets, including Viet Nam, the traditional investor base may not be fully aware of or incentivized to invest in green bonds. Institutional investors, such as pension funds and insurance companies, typically focus on assets with proven long-term returns and lower perceived risks. According to VIS Rating, Viet Nam's corporate bond market lacks institutional investors with long-term investment strategies and the risk tolerance necessary to navigate short-term market fluctuations, especially when compared to more developed markets in the region. This lack of adequate demand, combined with unfamiliarity with green bonds, hampers efforts to scale the market. Additionally, data indicates that nearly half of bond repayment delays between 2022 and 2023 involved newly formed companies with weak financials, which nevertheless managed to issue bonds at attractive interest rates. Many of these bonds continue to be traded on the secondary market at yields that do not significantly exceed those of financially stable companies[35]. This situation highlights a critical aspect: issuers must demonstrate strong financial health, as the price and interest rates of bonds are directly influenced by the issuer's financial stability and the cash flow generated from underlying projects. Unlike dividends, bond interest must be paid at predetermined intervals, necessitating that issuers rely on steady revenue streams.

To address these barriers and enhance the green bond market, it is essential to build awareness among investors regarding the benefits of green bonds, particularly their potential to yield competitive returns while contributing to environmental objectives. Engaging institutional investors and enhancing greater public-private partnerships can

[35] VIS. https://visrating.com/research/view/corporate-bond-market-review-september-2024.250

also help broaden the investor base, thereby increasing market participation and promoting sustainable finance initiatives.

Liquidity, or the ability to buy and sell assets easily without affecting their price, is a key factor in the attractiveness of any financial market. Green bonds, however, often suffer from low liquidity, particularly in emerging markets where secondary markets are underdeveloped. This is primarily due to the small size of the market and the "buy-and-hold" nature of many green bond investors, who prioritize long-term investment over short-term trading. The low liquidity of green bonds can deter some institutional investors who prefer to invest in more liquid assets that can be easily traded in secondary markets. Without an active secondary market, green bonds may also suffer from higher yields, which can increase the cost of borrowing for issuers. Currently, in the case of Viet Nam, there is need for increased liquidity. According to the data provided by the Viet Nam Bond Market Association, the secondary market witnessed a decline in total trading volume (from 2,811.10 billion VND in 2021 to 1,622.05 billion VND in 2023)[36]. This highlights a liquidity issue that could deter potential investors. To **enhance liquidity, governments and financial regulators can consider enhancing secondary markets specifically for green bonds.** This could involve creating incentives for market-makers, improving bond trading platforms, and supporting liquidity-enhancing mechanisms like bond indices and exchange-traded funds (ETFs) focused on green bonds.



Source: HNX, Vietnam Investors Service

[36] https://vbma.org.vn/en/market-data/secondary-market

Figure 19. Monthly trading volume by sectors and trade bond tenors in August 2024. The volume by power sector remains significantly lower compared to others. Source: Viet Nam Investors Service[37]

A well-defined regulatory framework is crucial for enhancing investor confidence and encouraging issuers to enter the green bond market. While many countries, including Viet Nam, have begun to develop legal frameworks for green bonds, inconsistencies and gaps in regulations can create uncertainty. For instance, green bond standards and definitions may vary across jurisdictions, leading to confusion and a lack of coherence in the market. In Viet Nam, the 2020 Law on Environmental Protection and subsequent decrees provide a solid foundation for the green bond market. However, there is still a need for clear, consistent guidelines that align with international standards such as the Green Bond Principles (GBP) and the Climate Bonds Initiative (CBI). MONRE has been drafting regulations on green taxonomy but has not finalized them, creating difficulties for companies navigating the market.

Moreover, the lack of enforcement mechanisms and insufficient oversight in ensuring that green bond proceeds are used for environmentally beneficial projects poses a significant challenge. **Developing and implementing robust regulations, clear environmental criteria, and standardized reporting requirements** is crucial for the credibility and transparency of the green bond market. This will help ensure that green bonds maintain their environmental integrity and build investor trust. Some regulations, like Decree 95, Decree 153, and Decree 65, have been issued to address bond issuance. But gaps remain, particularly in defining and monitoring green criteria before and after issuance.

Green bonds often carry higher upfront issuance costs compared to traditional bonds. This is due to additional requirements for certification, verification, and ongoing environmental impact reporting. Issuers may also face difficulties in identifying suitable green projects, meeting eligibility criteria, and conducting environmental assessments, which can add to the complexity and cost of issuance. Smaller entities, particularly in the corporate sector, may find it financially prohibitive to issue green bonds due to these additional costs. In Viet Nam, corporate issuers may also lack the technical expertise needed to comply with environmental impact assessments and reporting standards.

To reduce these barriers, governments can offer subsidies, tax incentives, or other financial mechanisms to offset the costs associated with green bond issuance. Additionally, simplified guidelines and technical support can help smaller issuers navigate the green bond process more effectively. As seen in Viet Nam, companies like BIDV have

[37] https://visrating.com/wp-content/uploads/2024/09/VIS-Rating-Report-Corporate-Bond-Market-Review-12-Sep-2024-EN.pdf

issued green bonds following international standards, but there is still room to improve local guidelines to ease the process for other companies.

The availability of eligible green projects is a fundamental driver for the growth of the green bond market. In many countries, including Viet Nam, the pipeline of green projects is often insufficient. While sectors such as renewable energy, energy efficiency, and sustainable transport are key areas for green bond investment, the limited number of projects that meet the required environmental standards restricts the scope for green bond issuance. The lack of green projects is often compounded by insufficient public-private collaboration and a lack of capacity at the local government level to identify and manage these projects. Additionally, long-term planning and financing for such projects may be hampered by bureaucratic hurdles and regulatory delays. **Developing a clear pipeline of green projects requires better coordination between public and private stakeholders, long-term planning, and government support**. The creation of specialized green project development funds or platforms can help streamline project identification, approval, and financing, making it easier for issuers to access green bond markets. MPI is actively involved in selecting suitable green projects and facilitating green bond issuance as part of their strategy for promoting green finance in the country.

The credibility of green bonds hinges significantly on the transparency surrounding the use of their proceeds. In the absence of standardized definitions and verification processes, there is a considerable risk of "greenwashing," where bonds are marketed as environmentally friendly despite lacking substantial ecological benefits. Such practices can undermine market integrity and erode investor confidence.

International standards, such as the Green Bond Principles (GBPs) established by the International Capital Market Association (ICMA) and the Climate Bond Standard (CBS) developed by the Climate Bonds Initiative (CBI), offer a framework for defining green bonds. However, the application of these standards varies across the market. The GBPs are widely adopted due to their flexible requirements and clear guidelines for project selection and fund allocation. However, they do not provide definitive criteria for what constitutes green economic activities and only suggest third-party external reviews. Conversely, the CBI's Climate Bond Standard imposes stricter criteria, including a detailed taxonomy for categorizing green activities and mandates certification from approved reviewers. By 2020, around a quarter of all green bonds issued globally adhered to the CBI standard, reflecting a growing recognition of the necessity for higher market standards. Despite this, the enforcement of these standards is inconsistent, contributing to market fragmentation and varying interpretations in local markets.

Furthermore, the verification process, which involves external reviews and environmental audits, can be both costly and time-consuming for issuers. To ensure the credibility of the green bond market, **rigorous standardization and third-party verification are**

essential to confirm that projects financed through these bonds align with established environmental goals. Governments can play a crucial role by adopting internationally recognized standards and establishing local certification agencies to streamline the verification process.

Despite the growing prominence of green bonds, especially in the context of Viet Nam, where the recent certification of the Green Finance Framework by Dien Gia Lai signifies a commitment to sustainable finance. However, several shortcomings hinder the full realization of the green bond market's capacity to mobilize capital effectively for environmentally sustainable projects. The concept remains contentious, particularly regarding the evolving definitions and criteria for what constitutes a green investment. Such discussions are essential as the global community grapples with the responsibilities of investors in the face of climate change.

4.2. Green index

4.2.1. Definition and international experience of green indices

Globally, green indices, also known as sustainability indices, play a critical role in driving sustainable investment and promoting corporate sustainability. Major economies, particularly in Europe and North America, have established leading green indices that focus on environmental, social, and governance (ESG) aspects, which guide investors towards companies demonstrating high sustainability standards. These indices are built upon complex criteria that evaluate environmental impact, social responsibility, and governance practices. Some notable international green indices include:

- **Dow Jones Sustainability Index (DJSI)**: One of the earliest indices focused on sustainability, widely regarded for its influence in shaping green investments.
- **FTSE Good World Social Index**: Assesses companies based on environmental and social criteria.
- **MSCI ESG Index Series**: Divided into sustainability, responsible investment, and environmental indices.
- **NASDAQ Clean and Green Energy Index** and **S&P Global Clean Energy Index**: Focus on clean energy technologies.
- **Wilderhill Clean Energy Index (ECO)** and **US Clean Technology Index (CTIUS)**: Specifically target clean energy companies.

These indices are essential in guiding capital towards green enterprises, offering investors a reduced-risk portfolio with environmental and sustainability credentials. By integrating environmental criteria into financial markets, green indices incentivize companies to improve environmental performance while reducing their capital costs.

Increased investment in green enterprises, spurred by these indices, promotes higher price-to-earnings (P/E) ratios for sustainable companies, supports the growth of green sectors, and motivates non-listed companies to embrace environmentally responsible practices. Green indices also help investors mitigate environmental risks by consolidating reliable data on corporate sustainability performance. This approach reduces the risks associated with unsustainable business practices focused solely on short-term returns. Additionally, by enhancing transparency and showcasing companies with superior environmental and governance performance, green indices make it easier for investors and customers to make informed choices, placing pressure on companies excluded from these indices to adopt more sustainable practices.

Despite these (intended) benefits, the international experience of green indices reveals several challenges and lessons, particularly for emerging markets aiming to build robust green finance systems. One of the primary challenges is market integration and investor awareness. Green indices are well established in developed markets, but emerging markets often struggle with adopting these frameworks and educating investors on the value of sustainable investments. The consistency, availability, and reliability of ESG data is another challenge, as effective green indices depend on standardized data collection and verification to ensure transparent and comparable sustainability metrics. Balancing the desire for long-term impacts with the need for short-term returns also poses a challenge, as green investments often require a longer horizon to yield returns, potentially deterring investors focused on immediate gains. To attract and sustain green investment, regulatory incentives or policy support may be necessary, especially in less mature markets.

Emerging markets, such as China, are taking early steps to establish green indices, such as the TEDA EP Index and the CSI-CT ESG 100 Index, but these markets face limitations in available green funds, which can restrict investment opportunities for both domestic and international investors. As China's experience shows, while the market potential for green indices is significant, the path to establishing a sustainable and influential green financial system involves overcoming market, data, and incentive challenges.

4.2.2. Green index in Viet Nam: More developments needed

In tandem with advances in green financial instruments, the launch of the Viet Nam Sustainable Development Index (VNSI) in July 2017 marked a significant milestone in promoting sustainable investment. Initiated by HOSE in collaboration with the German Agency for International Cooperation (GIZ) and the Viet Nam State Securities Commission (SSC/ MOF), VNSI evaluates listed companies based on over 100 criteria, following the OECD's corporate governance principles and the Global Reporting Initiative's (GRI) sustainability reporting standards. VNSI reflects the growing trend toward sustainable investment by applying Environmental, Social, and Governance (ESG) benchmarks. These include setting standards for listed companies' sustainable

development, guiding institutional and individual investors in identifying “green” investments, enhancing sustainable growth across the economy, and enhancing best practices in ESG. It also adds a new investment tool that bolsters stock market growth and economic sustainability.

The VNSI selection process involves market capitalization-weighted calculations adjusted for free-float ratios, updated every 5 seconds in real time (Ho Chi Minh City Stock Exchange, 2017). Only companies within the VN100 demonstrating the highest sustainable development performance are eligible. Prospective stocks undergo a strict screening that excludes companies deriving significant revenue from industries counter to sustainable principles, such as tobacco, nuclear energy, weapons, gambling, casinos, alcohol, and similar sectors. After exclusions, HOSE assigns sustainability scores on a 100-point scale through a detailed evaluation, with the top 20 companies gaining entry into the VNSI. The 15 highest-ranking stocks are guaranteed inclusion, while stocks ranked 16-25 are prioritized if already in VNSI; otherwise, new stocks are added to maintain 20 constituents. Stocks removed from the VN100 are automatically excluded from VNSI as well.

By focusing on companies with strong ESG practices, VNSI aims to empower investors to align with sustainable governance principles. Notable green stocks on VNSI include Vinamilk (VNM), which operates Vinamilk Green Farms designed to minimize emissions and regenerate resources; VinFast (VIC), committed to producing electric vehicles and advancing sustainable technology; and FPT (FPT), which supports digital transformation and human resource development, thereby creating jobs and boosting profits. Currently, few energy sector companies are represented in the VNSI.

Figure 20. Trends of VN-Index and VNSI during the same period. Source: Bloomberg and compilation by BIDV[38]

The growth in profits of companies within the VNSI index is higher than the average of the VN-Index. Despite seven years since its introduction, VNSI still lacks sufficient information dissemination, and investor awareness of sustainability remains low. To strengthen ESG integration and support green stocks, the State Securities Commission, along with the International Finance Corporation (IFC), Global Reporting Initiative (GRI), Hanoi Stock Exchange (HNX), and HOSE, has launched training programs to improve listed companies' capacity for ESG disclosure. These standards, coupled with an ESG reporting guidebook, offer essential tools to help businesses assess risks and practices, further advancing Viet Nam's sustainable investment landscape.

4.2.3. Improving green indices

While green indices and sustainable investments have proven their value in driving corporate and environmental responsibility globally, achieving widespread adoption and impact, particularly in emerging economies, will require addressing these core challenges through regulatory support, investor education, and standardized data practices.

One of the primary opportunities for advancing green indices in Viet Nam lies in drawing upon the extensive experience of and collaborating with developed markets, especially in Europe and North America, where sophisticated green evaluation systems and indicator formulation methods are already established. These regions have developed frameworks that encourage sustainable investment, with green indices that assess companies based on environmental, social, and governance (ESG) standards. Vietnamese financial institutions can benefit significantly from these experiences to promote the domestic green market. **Leveraging collaborations with experienced foreign index institutions can expedite the process**. For instance, the collaboration between Shenzhen Securities Information Co., Ltd. and FTSE to develop an environment and technology index demonstrates the potential for strengthening green indices through global partnerships. This collaboration not only introduces best practices from overseas markets but also tailors them to fit Viet Nam’s specific needs, enabling the creation of indices that resonate with both domestic and international investors.

Improving corporate ESG information disclosure represents a vital challenge and opportunity for the growth of green indices in Viet Nam. A notable obstacle to the influence of green indices in Viet Nam is the limited information disclosure by listed companies and the absence of robust, targeted index formulation methods. In comparison, overseas index institutions benefit from comprehensive data sources, which include corporate disclosures, surveys, public information, and direct corporate communication. Third-party

[38] https://www.tinnhanhchungkhoan.vn/nhieu-thach-thuc-voi-dong-von-xanh-tai-viet-nam-post353458.html

auditing has even been introduced to increase transparency. For Viet Nam to create more effective and reliable green indices, efforts must be made to ensure that **companies disclose comprehensive environmental and sustainability data**. This includes encouraging non-profit research and third-party institutions to conduct independent assessments and ratings of company sustainability performance, which can serve as an essential resource for index development. By improving disclosure practices, Vietnamese companies can enhance their attractiveness to environmentally conscious investors, while the index institutions gain access to reliable data, enhancing the indices' credibility and market relevance. This improvement would ensure that green indices in Viet Nam more accurately reflect companies' environmental impacts and sustainability commitments, ultimately encouraging more responsible corporate behavior.

Institutional investors play a crucial role in the development and adoption of green investment products. In developed markets, pension management institutions have become significant players in green investments, signaling the importance of institutional backing for sustainable financial products. However, in Viet Nam, large domestic institutional investors, including social security funds and insurance asset management institutions, largely rely on traditional large-cap stock indices. To promote green investment, these investors should be encouraged to incorporate green indices into their portfolios and performance benchmarks, enhancing a green investment culture. This shift would increase demand for green investment products, supporting the growth of a sustainable investment ecosystem. As institutional investors adopt green indices, they will set an example for smaller investors and elevate green finance to a core element of Viet Nam’s financial market. With stronger institutional participation, green indices would not only gain credibility but also promote a market environment conducive to sustainable investment and environmental responsibility.

A diverse range of green investment products is essential for meeting the varied needs of the Vietnamese market. Asset management institutions have an opportunity to expand their green investment offerings by developing themed funds, such as green, sustainability, and ethical funds, based on green indices. Beyond public placement funds, institutions could create innovative products, including collective wealth management and separately managed account (SMA) options tailored to specific client values. SMA wealth management products, in particular, offer customization that aligns closely with investor priorities, enhancing client engagement in green finance. Additionally, exploring new green investment methods allows asset management institutions to identify unique advantages, anticipate potential challenges, and address barriers to diversification. With indices as a foundation, these institutions can leverage customer data, research, and index-driven insights to design products suited to varied investment horizons and data needs. Furthermore, **expanding investment to support green startups and ventures**, particularly in sectors like environmental protection, renewable energy, sustainable

agriculture, and clean production, could deepen the impact of green finance. By enhancing a diverse and dynamic green investment market, asset management institutions can play a pivotal role in driving sustainable economic development in China, appealing to a broader range of investors and enhancing the overall resilience of the financial market.

4.3. Green insurance

4.3.1. Emerging option with high potential

The rapid advancement of renewable energy technologies, coupled with evolving distribution methods and innovative business models, has introduced a range of complex risks for the insurance sector. Prototypical equipment, including specialized turbine blades and gearboxes, along with novel maintenance methods, necessitates ongoing technical assessments and enhanced underwriting capabilities. This is essential for effectively benchmarking and managing these risks. Furthermore, innovative financing and ownership structures designed to enhance cost efficiency could jeopardize long-term loss performance, while intensified natural hazards, exacerbated by climate change, introduce additional uncertainties, making renewable energy investments particularly precarious for insurers and investors alike.

For example, risk exposure in the wind energy sector varies significantly between onshore and offshore projects. Onshore wind farms frequently encounter gearbox failures and fires, which can lead to significant serial losses. Natural hazards such as lightning and windstorms further complicate matters, often resulting in structural damages, including turbine collapses. In contrast, offshore wind farms face substantial losses from sub-sea cables, which account for 70-80% of total claims. These cables are particularly vulnerable to damage during transport and installation, as well as from marine anchors or vessels. The claims costs for offshore projects can sometimes reach ten times those of onshore projects due to the challenging logistics of repairs and weather-dependent access. Similarly, solar photovoltaic (PV) systems are exposed to various risks, including natural perils like windstorms, hail, and floods, as well as operational risks such as theft and transformer fires, which can result in significant business interruptions. Additionally, battery storage and distribution systems present unique risks, including hazards like thermal runaway, while undersea interconnectors share vulnerabilities with sub-sea cables, complicating the energy distribution network. Overall, renewable energy projects encounter numerous and evolving risks throughout their lifespan, ranging from engineering challenges during the initial development phase to supply chain disruptions and operational risks once the projects are active.

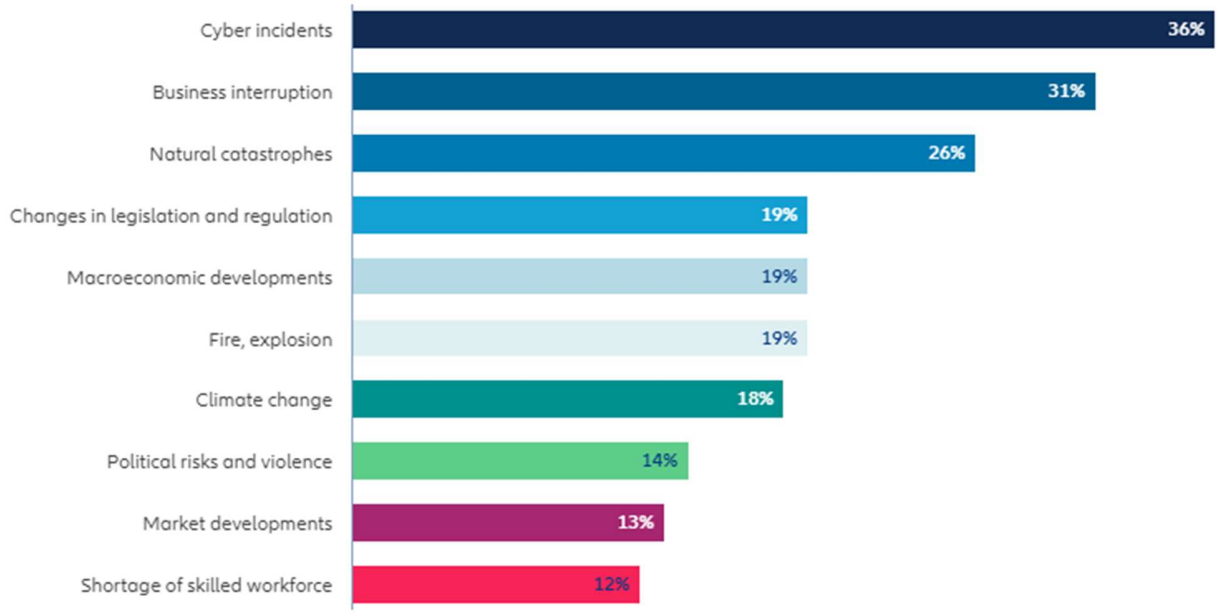


Figure 21. Most important global business risks in 2024. Source: Allianz Risk Barometer 2024[39].

To attract investments, renewable energy projects must be structured as bankable opportunities. Historically, funding has come from venture capitalists attracted to the high-risk/high-reward potential of these projects, as well as from industrial capital from project developers and corporations. Effective risk transfer—typically achieved through insurance rather than derivatives or catastrophe bonds—is crucial for securing project financing. Consequently, the renewable energy insurance sector has drawn significant capital, resulting in a soft market. The sector's premiums have expanded in tandem with the industry's installed capacity, increasing by approximately 8% annually since 2010. However, the frequency and severity of loss events across renewable segments have raised concerns regarding rate adequacy and deductible levels. High-impact events, such as typhoons and recurrent theft and fire incidents, highlight the volatility within renewable energy markets[40].

The insurance industry plays a pivotal role in supporting the global energy transition, acting as a risk carrier, risk manager, and investor. As a risk carrier, insurers provide coverage for green infrastructure and renewable energy projects, helping to de-risk these initiatives, which in turn lowers capital costs and encourages investment in sustainable technologies. This support is essential, as green technology and renewable energy projects are capital intensive and typically financed by major banks and institutional

[39] Allianz. https://commercial.allianz.com/news-and-insights/reports/allianz-risk-barometer.html#download
[40] WeESG. https://global.insure-our-future.com/wp-content/uploads/sites/2/2022/12/WeESG-Insuring-Renewable-Energy-Projects-FINAL-0922.pdf

investors, who require adequate insurance coverage for these assets. By insuring projects and technologies focused on energy efficiency and emissions reduction, insurers promote the adoption of climate-friendly practices across their value chains, benefiting policyholders, investee companies, and the wider community.

If countries successfully build the renewable energy capacity they have targeted, investments in green energy could generate an additional USD 237 billion in energy sector-related insurance premiums by 2035. However, the transition to a green economy necessitates global collaboration, and fragmentation due to geopolitical and security concerns could hinder the coordinated action required for success. The concept of "insuring green" involves providing insurance coverage for renewable energy systems, sustainable infrastructure projects, and emissions-reducing technologies. However, insuring green infrastructure does not equate to lower risk, as the untested nature of some green technologies, transition risks, and potential challenges related to climate vulnerabilities and political risks pose significant challenges. Insurers thus face the dual mandate of supporting sustainable projects while maintaining commercial viability and complying with corporate governance and prudential regulations. They must also navigate a complex regulatory landscape, including specific rules such as the EU's 2019 Capital Requirements Regulation, which offers preferential treatment for environmentally focused public infrastructure projects[41].

In addition to traditional insurance, the industry is evolving toward "green insurance," where existing products are adapted to promote policyholder behaviors that align with climate objectives. By offering tailored products and financial incentives, insurers encourage climate-conscious decisions, such as adopting renewable energy sources or enhancing resilience against climate risks. While there is currently no unified definition of green insurance, it generally encompasses insurance products designed for the development, production, and use of green products or the responsibilities associated with their production and use. The overarching goal is to contribute to environmental protection and combat climate change. According to the United Nations Environment Programme (UNEP), green insurance includes a variety of products and services aimed at minimizing risks related to climate change and environmental pollution. These offerings may encompass coverage for renewable energy projects, environmental liability insurance, and other solutions aimed at mitigating adverse environmental impacts. "Green risk management" further extends this support by equipping clients with tools to

[41] Swiss Re. https://www.swissre.com/press-release/From-friend-shoring-and-reshoring-to-energy-and-food-insecurity-new-Swiss-Re-Institute-study-examines-insurance-in-a-multi-polar-world/5e84a0cc-98b9-4a6a-8cb0-a3a732699f5e#:~:text=If%20countries%20deliver%20on%20building%20all%20the%20renewable,energy%20sector%20of%20USD%20237%20billion%20by%202035.

assess and mitigate the physical, transition, and liability risks associated with climate change.

The range of green insurance products is expanding, with major ones being:

i. **Environmental Liability Insurance:** The most common form of green insurance, especially relevant for pollution-contributing industries. This type covers the costs of restoring contaminated areas and compensating affected parties, playing a crucial role in regulating pollution and safeguarding the environment. Various subtypes include:
    - Legal liability for pollution
    - Contractor pollution liability
    - Commercial pollution liability
    - Pollution liability at facilities
    - Environmental lender liability
    - Coverage for emergency costs and crisis management

ii. **Green Renewable Energy Insurance**: Investment in renewable energy (e.g., solar and wind) is vital for addressing climate change but carries high costs and risks. Insurers offer policies to support technology development, covering construction and technical risks while providing revenue loss support during disruptions. Homeowners using renewable energy also benefit from promotional packages.

In China, green insurance has been perceived as an emerging yet important tool to integrate environmental sustainability within the financial system. The government endorses a compulsory environmental pollution liability insurance (EPLI) system which aims to address claims arising from bodily injury and property damage due to hazardous waste released during company operations. With this, the Chinese government seeks to enhance corporate accountability and encourage more responsible environmental practices among businesses. Following, these have been piloted initiatives in sectors such as photovoltaic power generation, green technology, and equipment. In July 2023, the People's Insurance Company of China (PICC) unveiled the nation's inaugural comprehensive property insurance designed specifically for the operational phase of natural gas differential pressure power generation and refrigeration systems. Aimed at helping enterprises navigate risks tied to emerging technologies, this initiative provides coverage for equipment losses due to natural disasters, accidents, and unforeseen events in residual pressure power generation and refrigeration systems. And insurance companies like Yingda, Pacific, Ping An, and PICC provide risk protection to photovoltaic companies for solar panels' long-term quality and power guarantee. These exploratory efforts underscore the commitment to enhancing environmental sustainability and aligning insurance practices with the evolving landscape of green and eco-friendly industries.

As part of the green transition, insurers are increasingly withdrawing support from “brown” industries, including coal, oil, and gas, under rising scrutiny from shareholders, regulators, and the public. While the US faces anti-ESG litigation and other challenges, regulatory pressures in regions like the UK and EU necessitate transparency in emissions disclosures and transition planning. Beyond underwriting, insurers serve as major investors, managing over $40 trillion globally, and are adopting stewardship strategies such as “green pills”—contractual obligations for greenhouse gas reductions—to influence climate resilience in their investment portfolios.

4.3.2. Viet Nam’s green insurance landscape: Growing attention and opportunities

The insurance market in Viet Nam focuses on three sectors: life insurance, non-life insurance, and auxiliary insurance services (consulting). After more than 30 years of establishment, the sector has made significant contributions to economic and social development, including:

- Supporting macroeconomic stability policies and increasing savings and accumulation within the economy.
- Complementing social welfare policies by enabling individuals to arrange their financial protection independently and ensuring compensation in the event of accidents or illnesses, without relying on state budget support.
- Providing financial protection for investors, allowing them to operate confidently without resorting to credit solutions or other financial reserves.
- Promoting international economic integration and cooperation, thus contributing to urgent government-targeted programs.

In 2023, the total assets of the insurance industry are estimated to reach 913.336 trillion VND, representing an increase of 11.12% compared to the same period in 2022. Among these, non-life insurance companies are projected to account for 126.837 trillion VND, while life insurance companies are estimated at 786.499 trillion VND. Overall, the insurance sector is expected to reinvest approximately 757.652 trillion VND back into the economy, reflecting a growth of 12.56% compared to the previous year. This includes non-life insurance companies contributing about 67.648 trillion VND and life insurance companies around 690.004 trillion VND[42].

Green insurance in Viet Nam is still in its early stages, with recognition lagging behind that of more developed nations. However, the growing demand for enhanced environmental protection and sustainable development is expected to stimulate an upward trend in both insured coverage and the premiums allocated for green investments. For instance, while Viet Nam currently lacks comparable services, the electric vehicle

[42] VnEconomy. https://vneconomy.vn/nhin-lai-thi-truong-bao-hiem-nam-2023-va-du-bao-nam-2024.htm

market is projected to expand significantly, reaching 1 million units by 2028, up from approximately 1,000 units today, according to forecasts from the Viet Nam Automobile Manufacturers Association. This growth presents new opportunities for companies to engage in green insurance for motor vehicles. Such scenarios underscore the need for Viet Nam to prioritize the development of green insurance products.

According to Decision No. 1658/QD-TTg, issued by the Prime Minister on October 1, 2021, the national strategy for green growth spans from 2021 to 2030, with a vision toward 2050. This decision assigns the Ministry of Finance the responsibility of developing and refining preferential financial policy tools and programs aimed at enhancing the green capital and insurance market. This initiative is further supported by Decision No. 1934/QD-BTC. As part of the strategy for the development of the Vietnamese insurance market, approved by the Prime Minister in early January 2023, green insurance has been identified as a key area for promotion. Specifically, in the realm of environmental pollution insurance, the government issued Decree No. 08/2022, which mandates that 17 types of large-scale production and service businesses must acquire insurance coverage. This regulatory framework provides a solid foundation for insurers to innovate their product offerings and encourages practices that align with principles of environmental sustainability.

Prominent companies in Viet Nam that are advancing green insurance products include Bao Viet Group, PVI Insurance Corporation, and Postal Insurance Corporation (PTI). Their primary offerings encompass insurance for renewable energy projects, environmental liability insurance, and coverage for green construction initiatives. Nevertheless, these products currently represent only a fraction of the potential scope of green insurance.

At present, the number of products that can be classified as green insurance in Viet Nam remains limited. The lack of widespread recognition of the concept poses significant challenges for public understanding, thereby hindering the market's development. Additionally, Viet Nam's insurance penetration rate is relatively low and has shown signs of decline following a period marked by a "crisis of confidence." This backdrop exacerbates the difficulties associated with developing traditional insurance products, making the expansion of green insurance particularly challenging.

Despite these obstacles, the current low penetration rate presents a unique opportunity for the advancement of green insurance. Rather than adopting a sequential approach where traditional insurance products are established first before transitioning to green insurance, it is possible to integrate both simultaneously. This dual approach allows for the public to be introduced to and educated about green insurance from the outset, thereby enhancing greater awareness of environmental protection issues.

No.	Company	Insurance product	Key coverage
1	Bao Viet Tokio Marine Insurance Co., Ltd.	Environmental Liability Insurance	- Claims from third parties regarding environmental pollution incidents, environmental damage, cleanup costs, emergency response costs, and defense costs
2	AIG Viet Nam	Environmental Pollution Liability Insurance for Contractors	- Comprehensive protection against pollution incidents arising from contractor activities, whether from sudden accidental pollution or gradual pollution; - Liability insurance for pollution caused by the insured's premises or business activities
3	Chubb Insurance Co.	Contractor Pollution Liability Insurance	- Liability for third-party bodily injury, property damage, ingress, impact, or obstruction; - Coverage for cleanup costs arising from claims related to third-party demands; - Costs include all demands covered under the insurance contract.
4	Fubon Insurance	Environmental Liability Insurance	- Liability costs for pollution at the insured location regarding existing conditions; - Costs for cleanup at the insured location regarding new pollution; - Claims from third parties for bodily injury and property damage at the insured location; - Claims from third parties for cleanup costs arising from pollution outside the insured location related to existing conditions; - Claims from third parties for cleanup costs arising from pollution outside the insured location related to new conditions; - Claims from third parties for bodily injury and property damage outside the insured location.

Table 3: Some insurance products linked to environmental protection in Viet Nam

The development of green insurance products in Viet Nam poses significant challenges for insurance companies. While some firms have introduced products like public liability and third-party liability insurance that include limited coverage for environmental liability, these offerings primarily protect against unforeseen accidents rather than gradual pollution[43]. Several factors impede the growth of green insurance in the country. First, there is a notable absence of specific legal frameworks and regulations governing green insurance, particularly in the realm of environmental pollution coverage. Additionally, the lack of guidelines regarding coverage scope and liability limits further complicates matters. Awareness and accountability among production and business entities concerning green insurance remain low, which hinders market growth. Moreover, the diversity of green insurance products in Viet Nam is limited, primarily reflecting traditional insurance offerings. This narrow focus diminishes the motivation for insurance companies to engage in green insurance initiatives. Their primary goals tend to center around achieving competitive premium levels, accurately assessing claims ratios, and preventing instances of insurance fraud, leaving little incentive to explore innovative green solutions.

4.3.3. Recommendations for establishing a green insurance system

Access to insurance plays a critical role in securing financing for renewable energy projects, yet various barriers impede its widespread availability. While these obstacles may not fundamentally restrict renewable energy growth, they reveal key areas where intervention from the insurance industry, regulators, and policymakers can promote sectoral expansion.

In terms of the **legislative framework and compulsory insurance**, efforts to introduce relevant policies and regulations remain hindered by the absence of a national legislative mandate for compulsory pollution liability insurance. Current laws mainly encourage research and development of this insurance type, falling short of mandating it, which limits its effectiveness. MOF should lead the development of comprehensive regulations that clearly define companies' obligations to participate in pollution liability insurance. Such regulations should detail criteria for participation, the underwriting process, and penalties for non-compliance, ensuring consistent enforcement at local levels. Weak enforcement of existing environmental laws often results in companies viewing the financial impact of violations as negligible. Regulations should particularly target high-risk industries, such as heavy metal mining, chemical manufacturing, and hazardous waste management. Drawing on examples from the U.S., Germany, and Russia, a list of compulsory participants could be created to ensure extensive coverage. Additionally, piloted initiatives, similar to China's programs across various provinces, could be implemented to test the feasibility of compulsory insurance models in promoting accountability in high-risk sectors.

[43] Nhip Cau Dau Tu. https://nhipcaudautu.vn/kinh-doanh/bao-hiem-xanh-cho-toa-sang-3351670/

Insurance product development and risk assessment also face significant challenges due to inconsistent standards for indemnities associated with environmental damage, limiting the creation of effective insurance products. Insurance companies often struggle to assess risks accurately and set appropriate premiums, which complicates the claims process. To create a conducive legal environment for green insurance, it is essential to strengthen regulations on tort liabilities for environmental pollution. This includes establishing clear indemnity standards for environmental incidents, encompassing personal injuries, property damage, and ecological restoration costs. Responsible parties should face strict legal repercussions that extend beyond administrative penalties, including civil and criminal liabilities, to incentivize companies to invest in pollution liability insurance.

Developing comprehensive standards for risk evaluation is also essential for effective insurance product design and pricing. Standards should include measures for assessing economic losses from environmental incidents. Involving independent third-party evaluation agencies can provide objectivity in determining damages and liabilities, improving the insurance claims process and enhancing the system's overall credibility.

In addition, **supporting policies and incentives** are crucial to overcoming barriers to pollution liability insurance. A corporate environmental credit system could serve as a basis for setting insurance premium rates and incentivizing sound environmental practices. Regular assessments of corporate environmental credits would provide objective data for insurance underwriting, while companies with favorable ratings could qualify for incentives like lower premium rates or tax deductions, enhancing greater participation in green insurance.

The MOF should also consider **public-private risk-sharing mechanisms** to support blended insurance products that use both public and private funding to distribute risks. Blended products could allow development finance institutions (DFIs) to cover initial "first loss" components of projects, reducing risks for private insurers and encouraging broader participation. Such mechanisms could lower barriers to entry, making renewable projects more attractive to insurers, particularly in emerging markets like Viet Nam, where perceived risks may otherwise deter investment.

Addressing high-risk areas and climate challenges is also vital, particularly in regions prone to typhoons and other extreme weather events, which pose significant risks for offshore wind projects. Insurers face substantial exposure when covering such projects, as extreme weather can cause costly damages. While some insurers are using tailored risk assessments to mitigate these investment risks, additional support from government and financial institutions could further alleviate these challenges. The MOF could consider incentives for insurers that manage climate-related risks, including tax benefits for

covering high-risk renewable projects, to balance economic risk while supporting renewable energy development.

The **evolution of renewable technologies** introduces additional underwriting challenges. Advances like lighter photovoltaic panels and larger wind turbines present potential vulnerabilities to extreme weather events, yet insurers often lack sufficient real-world data on these technologies for accurate underwriting. Implementing a standardized evaluation period or certification system for new technologies could validate their performance prior to deployment, establishing national benchmarks that reduce underwriting uncertainties, build insurer confidence, and accelerate technology adoption.

Finally, **aligning insurance with national climate goals** remains a pressing issue. Despite the growing demand for renewables, many insurers continue to invest in fossil fuels due to their profitability, which conflicts with renewable energy underwriting. Gradually reducing financial incentives for fossil fuel insurance while promoting favorable conditions for renewable projects could prove beneficial. Potential measures include subsidies or tax breaks for insurers prioritizing renewable projects and penalties for fossil-fuel-heavy portfolios. Additionally, a “green insurance transition plan” from the Ministry could establish progressive targets for insurers to shift away from fossil fuel investments, thereby aligning the insurance sector with national climate objectives.

4.4. Green funds

4.4.1. Experience of developing green funds

Green funds are specialized investment vehicles focused on supporting companies and projects that prioritize environmentally friendly and sustainable practices. These funds evaluate both economic viability and the environmental impact of their investment choices. The concept of green industry funds includes several categories based on government involvement: government-backed environmental protection funds, public-private partnerships (PPP) green funds, and market-driven green funds. Additionally, the types of green funds vary by investment focus, such as green industry investment funds, green bond funds, green share funds, and hybrid green funds. Each type has unique goals, funding sources, operational structures, and management styles.

In developed countries, green industry funds show a range of structures and management approaches. The United States, for instance, primarily relies on mutual funds, consortiums, and insurance companies as key sources of industry investment funds, which are often structured as limited partnerships. This model brings together institutional investors, such as pension funds, and individual investors as limited partners, with general partners—usually technical experts—leading fund operations, investment selection, and risk assessment. The US model emphasizes venture investment in early-stage high-tech companies, with capital exit strategies like Initial Public Offerings (IPOs)

and mergers and acquisitions. Japan, in contrast, structures its funds around large corporations, banks, and limited liability companies, often under local government oversight. Japanese industry funds focus more on the later stages of corporate development rather than start-ups, a trend shaped by conservative risk management approaches and the banking backgrounds of many fund managers. The European model is similar to Japan's, with industry investment funds mainly driven by banks and targeting corporate expansion and mergers and acquisitions.

4.4.2. Current green fund situation and shortcomings

According to Clause 19, Article 4 of the State Budget Law, a State Financial Fund is a fund established by authorized agencies and operates independently from the state budget. The fund's revenue sources and expenditures are designated to fulfill specific tasks as stipulated by law. On August 12, 2024, the Ministry of Finance issued Decision No. 1900/QĐ-BTC to establish the Fund Management Board. Currently, there are 23 State Financial Funds established or managed by ministries and central agencies. Among the national operational funds, the Viet Nam Environmental Protection Fund (Quỹ bảo vệ môi trường Việt Nam - VEPF) is the most relevant initiative for renewable energy, although its scope extends to various project types. Other funds in Viet Nam are relatively small and limited in their scope and scale. The VEPF, which operates under the Environmental Protection Law and Decision No. 78/2014/QĐ-TTg, is managed by the Ministry of Natural Resources and Environment. Viet Nam currently lacks dedicated funds specifically aimed at the sustainable energy sector, encompassing both renewable energy and energy efficiency projects. While the emerging trend of green funds holds promise, its impact may remain limited until challenges related to regulatory frameworks, funding sources, and other factors are effectively addressed.

The VEPF is a state financial institution with legal status, a separate balance sheet, and its own seal. It can open accounts with the State Treasury and banks both domestically and internationally. The fund operates on a non-profit basis but must ensure capital recovery and cover management costs. Its revenue sources include:

- Environmental fees and charges
- Voluntary contributions from individuals and businesses
- Donations in cash or in kind from domestic organizations, local authorities, the government, and international organizations
- Fines for activities that adversely impact environmental quality or other economic instruments such as waste discharge fees, transferable permits, and environmental taxes
- Interest and other earnings generated from the fund's activities

The fund typically provides financial assistance through preferential terms, non-repayable grants, and long-term loans offered at interest rates lower than prevailing market rates. To date, it has funded over 350 projects and provided financial support for more than 200 initiatives aimed at reducing environmental pollution. However, financial assessments indicate troubling shortfalls that raise concerns about the fund's operational effectiveness and its capacity to fulfill its mandate. As of December 31, 2021, the fund's self-accumulated capital stood at 475.288 billion VND, with accumulating surpluses from 2016 to 2021 showing a declining trend—from 61.719 billion VND in 2016 to just 14.178 billion VND in 2021. The fund also manages resources entrusted for on-lending by the World Bank, with an outstanding balance of 46.6 billion VND as of the same date. Disbursements from the World Bank have shown a downward trend, decreasing from 12.2 billion VND in 2016 to only 1.5 billion VND in 2019. Concurrently, the fund has faced rising principal repayments, reaching 11.145 billion VND by 2020 and 2021, further indicating mounting financial pressure[44].

One of the reasons for the fund's shortfalls is linked to the absence of a finalized Prime Minister's Decision regarding the fund's organizational structure and financial mechanisms. Without a clear regulatory framework, the fund cannot optimize its operations or maximize its impact on environmental protection initiatives. In addition, the fund's revenue sources include allocations from the state budget (main), compensations for environmental damages, certified emission reductions (CERs) from clean development projects, and contributions from various organizations and individuals. However, these sources are not sufficiently diversified, limiting the fund's capacity to generate sustainable revenue streams. This reliance on a narrow range of funding sources restricts its ability to respond to the growing demands for environmental protection and undermines its long-term financial viability. In fact, the fund focuses predominantly on small projects aimed at assisting households and businesses in adopting cleaner production technologies.

Overall, the limited diversification of revenue sources, combined with a lack of robust legal frameworks and operational guidelines, significantly hampers the fund's effectiveness in addressing Viet Nam's pressing environmental challenges.

4.4.3. Recommendations for developing green funds

To enhance the effectiveness and sustainability of green funds, particularly in the context of renewable energy and energy efficiency projects, several recommendations can be articulated. First, it is imperative to **establish a comprehensive legal and regulatory framework** that clearly delineates the structure, governance, and operational mechanisms of the fund. This framework should be aligned with national environmental

[44] Tap Chi Tai Chinh. https://tapchitaichinh.vn/nang-cao-hieu-qua-hoat-dong-cua-quy-bao-ve-moi-truong-viet-nam.html

policies and international best practices, ensuring that the fund operates with transparency and accountability[45].

Second, **diversifying revenue sources is essential for the fund's long-term financial stability**. Since many sustainable energy projects carry high risk and are less suited to traditional fiscal credit, financing from private capital sources can strengthen fund stability. This can be achieved by enhancing partnerships with private sector stakeholders, international organizations, and philanthropic entities. By attracting private investments and leveraging public-private partnerships, the fund can create a more resilient financial base that supports a wider array of renewable energy and energy efficiency projects.

Furthermore, the fund should prioritize **capacity-building initiatives aimed at improving project implementation and financial management skills** among potential beneficiaries. Providing technical assistance and training to project developers can enhance the quality and feasibility of proposed initiatives, increasing the likelihood of successful project outcomes.

Lastly, **establishing strong monitoring and evaluation frameworks** is critical to assessing the impact of funded projects and ensuring continuous improvement. Regular evaluations will not only measure the effectiveness of funded initiatives but also inform future funding decisions and policy adjustments. By implementing these recommendations, green funds can significantly contribute to advancing renewable energy and energy efficiency goals, ultimately enhancing sustainable development and environmental protection.

4.5. Mandatory Environmental, Social, Governance Disclosure

4.5.1. Increasing adoption of ESG disclosure as a mandatory regulatory measure

In recent years, Environmental, Social, and Governance (ESG) disclosures have emerged as pivotal measures globally, intended to promote transparency, accountability, and sustainability within corporate operations. Across different regions, approaches to implementing these requirements vary, reflecting both local priorities and broader global standards. Most of these disclosures are made voluntarily, driven by investor and societal demand for more reliable ESG data[46] and following frameworks developed by international organizations, such as the International Sustainability Standards Board

[45] Tap Chi Cong Thuong. https://tapchicongthuong.vn/hieu-qua-kinh-te-va-moi-truong-cua-quy-bao-ve-moi-truong-viet-nam-71106.htm

[46] Emirhan Ilhan, Philipp Krueger, Zacharias Sautner, Laura T Starks, Climate Risk Disclosure and Institutional Investors, The Review of Financial Studies, Volume 36, Issue 7, July 2023, Pages 2617–2650, https://doi.org/10.1093/rfs/hhad002

(ISSB). Various jurisdictions have also implemented or plan to implement mandatory ESG disclosure requirements to better monitor corporate ESG actions, such as in the US (Securities and Exchange Commission 2024 mandate), EU (Non-Financial Reporting Directive in 2014, replaced by Corporate Sustainability Reporting Directive in 2022), China (ISSB reporting by 2026), and Singapore (ISSB reporting by 2027). Despite its significance, the literature on mandatory ESG disclosure remains limited[47], and the few studies that exist mainly focus on its informational and incentive roles in disciplining corporate behavior[48].

The European Union (EU), China, and Singapore exemplify three distinctive approaches to ESG disclosure, each grounded in unique regulatory frameworks and each carrying significant implications for corporate practices both domestically and internationally. This diversity in policy design illustrates the range of mechanisms available to regulators to promote sustainable practices, while the interconnected nature of global supply chains means these frameworks also have wide-reaching effects, setting precedents for emerging markets considering their own ESG strategies.

The EU leads with an extensive, highly integrated framework for mandatory ESG disclosures, designed to promote sustainable finance and combat greenwashing while raising global standards. Since 2021, the Sustainable Finance Disclosure Regulation (SFDR) has required financial market participants to disclose sustainability-related information, with a strong emphasis on investment transparency. This measure was later expanded by the Corporate Sustainability Reporting Directive (CSRD) and the Corporate Sustainability Due Diligence Directive (CSDDD), which collectively impose rigorous requirements on both EU and non-EU companies conducting significant business within the EU[49]. Companies must assess and disclose both their ESG-related impacts and the risks they face from sustainability issues, adopting what is known as a "double materiality" approach. These directives are bolstered by the EU Taxonomy and the Carbon Border Adjustment Mechanism (CBAM)[50], frameworks that guide investments in green activities and set emissions-related parameters for imported goods.

China has made significant strides in environmental, social, and governance (ESG) disclosure to enhance corporate transparency and sustainable practices. Recent milestones include the "Action Plan on Promoting the High-quality Development of the

[47] Christensen, H.B., Hail, L. & Leuz, C. Mandatory CSR and sustainability reporting: economic analysis and literature review. Rev Account Stud 26, 1176–1248 (2021). https://doi.org/10.1007/s11142-021-09609-5

[48] Singapore Green Finance. https://www.singaporegreenfinance.com/sgfc-research/the-externalities-of-esg-disclosure/

[49] Eurocham VN. https://eurochamvn.org/wp-content/uploads/2024/01/2.-ESG-Disclosure-Brief-Research-July-2024.pdf

[50] Depocen. https://depocen.org/wp-content/uploads/2024/01/DEPOCEN-Topical-discussion-_-CBAM-_-ENG.pdf

ESG System (2024-2027)," launched by Beijing's Development and Reform Commission, which targets a 70% disclosure rate among companies in Beijing by 2027, with large enterprises encouraged to lead in ESG reporting. Nationally, the "Sustainability Reporting Guidelines for Listed Companies" from the Shanghai Stock Exchange (SSE), the Shenzhen Stock Exchange (SZSE) and the Beijing Stock Exchange (BSE) establish China's first unified ESG reporting standards, setting benchmarks across listed companies. The Guidelines outline requirements for reporting on critical areas such as climate change, pollution control, ecosystem protection, circular economy practices, rural revitalization, and contributions to China's national development strategy, among others. ESG disclosure obligations differ by stock exchange:

- **SSE**: Required for SSE 180 Index companies, Kechuang 50 Index companies, and dual-listed companies in Shanghai and overseas.
- **SZSE**: Required for Shenzhen 100 Index companies, ChiNext Index companies, and dual-listed companies in Shenzhen and overseas.

Mandatory ESG disclosures for these companies must be filed by April 30, 2026, for the 2025 reporting year. For BSE-listed companies, all disclosures are currently encouraged but remain voluntary[51].

Additionally, the People's Bank of China now integrates ESG criteria in credit assessments to promote sustainability in corporate lending. By April 2024, nearly 2,000 A-share companies had issued ESG reports, with high disclosure rates in sectors like banking and steel; 80% of state-owned enterprises (SOEs) also report ESG data. China's ESG investments reached a record RMB 33.06 trillion (US$4.56 trillion) by Q3 2023, with notable growth in ESG funds and indices. In May 2024, the Ministry of Finance introduced draft standards aligned with the International Sustainability Standards Board (ISSB), which are expected to be mandatory by 2030[52]. These standards aim for consistent, comparable ESG reporting across companies, emphasizing the importance of reliable sustainability data for investors and stakeholders.

Singapore's approach to ESG disclosure, while also rigorous, is more targeted and less extensive in its requirements, making it highly adaptable within Southeast Asia's developing regulatory landscape. Starting in 2016, the Singapore Stock Exchange (SGX) introduced a "comply or explain" sustainability reporting mandate, allowing companies flexibility while requiring disclosure of core metrics on climate and social impact. This has since evolved, with further guidance outlining 27 ESG metrics and requiring climate-related disclosures in line with the standards set by the Task Force on Climate-Related

[51] Clydeco. https://www.clydeco.com/en/insights/2024/06/china-commits-to-new-esg-disclosure-requirements-f

[52] China Briefing. https://www.china-briefing.com/news/china-releases-esg-reporting-standards-for-businesses/

Financial Disclosures (TCFD). The Monetary Authority of Singapore (MAS) has strengthened the framework by mandating that ESG-focused funds transparently report their sustainability goals and methods, alongside a newly developed Singapore-Asia Taxonomy, which assigns specific criteria for green and transitional activities using a color-coded system. Singapore's incremental approach offers a model for emerging economies in Southeast Asia, demonstrating how ESG disclosure can be promoted with regulatory flexibility that encourages business adaptation while strengthening investor confidence in corporate accountability.

4.5.2. Viet Nam: Nascent progression but increasing efforts

Viet Nam, as an emerging market, is actively developing its ESG disclosure regulations to align with global standards and establish a foundation for corporate transparency. In 2021, MOF introduced Circular No. 96/2020/TT-BTC, which requires public companies, listed organizations, and certain corporations to report on specific ESG metrics. Compared to the EU's Corporate Sustainability Reporting Directive (CSRD), however, Viet Nam's regulation has a narrower scope, both in terms of entities covered and the depth of information required. Currently, Vietnamese companies must disclose data on greenhouse gas emissions, resource consumption, and community involvement, representing an initial step rather than a fully comprehensive framework.

While not as extensive as regulations in the EU or Singapore, Circular No. 96 is an important advancement, mandating reporting on key sustainability metrics and positioning Viet Nam to strengthen corporate governance and attract foreign investment. This incremental approach reflects Viet Nam's pragmatic adaptation to its developing market context, setting essential ESG benchmarks with room for refinement as domestic capacities and international standards evolve.

A significant barrier to cohesive ESG reporting in Viet Nam, however, is the lack of a finalized taxonomy and standardized framework, which limits the comparability and clarity of disclosures across sectors. Addressing this gap could be a crucial next step for Viet Nam in establishing a more robust and aligned ESG reporting system. Furthermore, the absence of a finalized taxonomy and standardized framework in Viet Nam stands as a barrier to more cohesive and comparable ESG reporting.

4.5.3. Recommendations for effective ESG information disclosure

The case for implementing comprehensive environmental information disclosure in Viet Nam is becoming increasingly clear in light of global trends and the potential benefits this practice brings to national and international markets. As capital flows across borders and corporate competition intensifies, Viet Nam must align with international standards to ensure it remains attractive to investors. Major economies, including the EU, the United States, Japan, and other developed nations, have already established compulsory or semi-compulsory disclosure regulations, setting a strong precedent for the necessity of

environmental transparency. In these regions, reporting requirements span from environmental policies and corporate governance to detailed climate-related data such as greenhouse gas emissions and ecosystem impacts.

However, there are several challenges associated with the implementation of mandatory ESG disclosure that Viet Nam must consider. Currently, there is no universal standard for ESG reporting. Firms may report according to various frameworks such as GRI, SASB, TCFD, and others, which leads to inconsistency and complexity in reporting. This issue is particularly challenging for smaller firms that may lack the resources to comply with multiple reporting frameworks, potentially reducing the comparability and transparency of ESG data. Establishing a clear set of ESG reporting standards will be crucial to reduce this complexity and improve the consistency and reliability of disclosed information. Additionally, unlike financial data, ESG information is often complex, unstructured, and difficult to quantify. This makes it challenging to determine which information is material to investors. While companies provide extensive ESG data, much of it may not be relevant for making investment decisions. **To improve the effectiveness of ESG disclosures, clear guidelines are needed to define what constitutes material information, tailored to the specific needs of different industries.** This will help investors better integrate ESG data into their analyses.

Another key challenge lies with ESG rating agencies, which evaluate firms' ESG performance. However, the lack of transparency in their methodologies, combined with the absence of standardization, can lead to inconsistent and unreliable ratings. This confusion can hinder ethical investment decisions. **To improve the value of ESG ratings, greater transparency and standardization are needed, ensuring that investors have access to dependable, comparable information.**

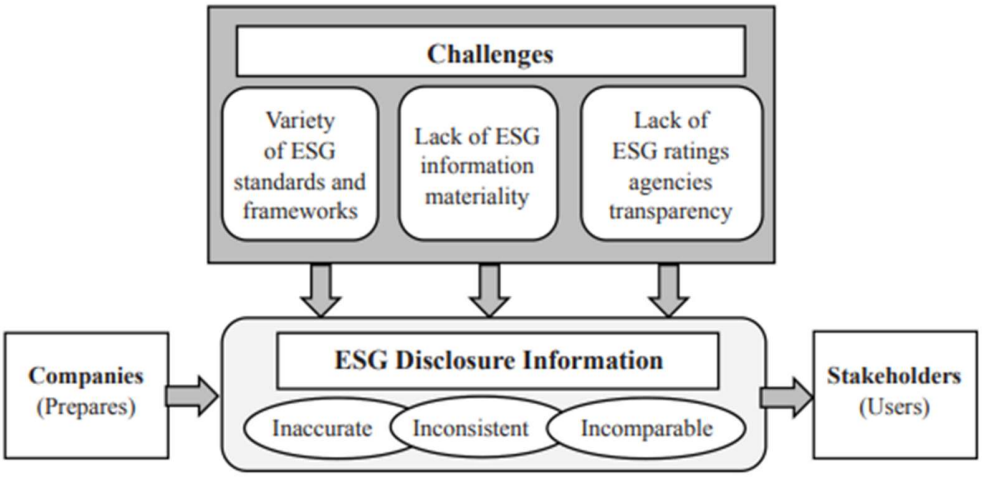


Figure 22. Three potential challenges hindering effective ESG disclosure. Source: Moharram et al. 2024 [53]

The **roles of the State Securities Commission along with other national stock exchanges** are becoming increasingly vital as it works to develop and implement regulations for mandatory ESG disclosures.

[53] Moharram, A. H., Hashim, H. A., Alahdal, W. M., and Adnan, S. B. M. 2024. Should ESG disclosure be mandatory? An overview. Journal of Sustainability Science and Management 19 (3): 221-236. http://doi.org/10.46754/jssm.2024.03.015

Chapter 5: Green Financial Incentives and Disincentives to Promote Sustainable Financial Products

5.1. The role of financial incentives and disincentives

5.1.1. Financial incentives and disincentives to promote resource mobilization

Governments worldwide have implemented financial incentives to accelerate the deployment of renewable energy and energy efficiency technologies. By 2015, at least 48 countries had established such incentives to create a foundation that complements regulatory policies like renewable energy targets and standards. Financial incentives address key barriers by enhancing access to capital, reducing upfront costs, lowering financing costs, and supporting new market creation. These incentives often play a vital role in broader clean energy strategies, supporting regulatory measures and enabling scaled deployment of sustainable technologies[54]. A notable example is the United States, where income generated from green bonds issued by local governments is tax-exempt. Additionally, the Inflation Reduction Act allocates nearly $400 billion in tax credits for both large-scale and household decarbonization initiatives, including credits for heat pumps and electric vehicles. Similarly, countries like Thailand are encouraging the carbon credit market and green bond development by exempting or reducing corporate income tax on income derived from carbon credit transfers. In the United Kingdom, an energy incentive scheme offers households near renewable projects, such as wind farms, a 20-50% discount on their energy bills to enhance support for renewable energy developments[55].

Tax measures, grants, and loan programs are among the most common financial incentives supporting renewable energy and energy efficiency. Tax incentives, such as corporate income tax credits, personal income tax deductions, and property tax incentives, provide deductions or credits based on technology investments. Production tax credits, for example, incentivize ongoing energy production by basing benefits on the actual energy generated. Additionally, property tax reductions and VAT exemptions target renewable installations to reduce property and sales tax burdens, while accelerated depreciation aids in deferring tax liabilities, benefiting large-scale renewable projects during early development.

[54] NREL. https://www.nrel.gov/docs/fy16osti/65541.pdf

[55] World Economic Forum. https://www.weforum.org/agenda/2023/05/renewable-energy-incentives-households-countries/

Direct cash incentives, such as rebates, grants, and performance-based incentives, also play an essential role in supporting clean energy efforts. Rebates are typically applied post-purchase to items like energy-efficient appliances and renewable systems, providing immediate financial support without repayment requirements. Grants fund initial phases like research, feasibility studies, and installations, while performance-based incentives reward technologies based on their actual output, creating incentives for reliable, high-performance systems. These direct cash incentives are often combined in hybrid models, increasing support for clean energy deployment by encouraging initial investment and ongoing performance.

Carbon pricing is considered an effective disincentive. The primary goal of carbon pricing, which includes mechanisms like carbon taxes or cap-and-trade systems, is to directly raise the cost of using fossil fuels and other high-emission activities. By putting a price on carbon, it encourages the adoption of cleaner technologies and practices, as companies and individuals seek to minimize costs associated with carbon emissions.

5.1.2. Fossil fuel subsidies can deter green investment

While financial incentives and disincentives play a crucial role in advancing green technologies, governments must also consider fossil fuel subsidies that could undermine progress. These subsidies distort market dynamics and create an uneven playing field. By artificially lowering the cost of conventional energy, these subsidies hinder the competitiveness of renewable energy technologies. As a result, they not only delay the energy transition but also discourage private investment in clean energy.

On a global scale, fossil fuel subsidies represented about 0.5% of world GDP, with some developing nations dedicating up to 7% of their GDP to these subsidies (UNCTAD, 2023). Redirecting these funds could provide a much-needed boost to renewable energy projects, helping to make clean energy a more financially viable alternative. For instance, in 2022, fossil fuel subsidies surged to a staggering $1 trillion, nearly eight times the amount spent on renewable energy subsidies in 2017 (IEA, 2023). This stark imbalance distorts energy prices and discourages private sector investment in green technologies.

In countries like Indonesia, fossil fuel subsidies have led to overconsumption, which directly competes with renewable energy development. Similarly, in regions like the Middle East and North Africa, where fossil fuel subsidies are common, energy costs are often artificially low, making renewable energy projects less appealing to investors.

However, the process of phasing out fossil fuel subsidies is fraught with challenges. In countries that heavily rely on fossil fuels for both energy and revenue, sudden subsidy removal could lead to energy supply disruptions and economic instability. Additionally, while fossil fuel subsidies provide affordable energy to low-income communities, they are often regressive, benefiting wealthier consumers disproportionately. Powerful fossil fuel

companies with significant political influence may resist subsidy cuts to protect their profits, further complicating the transition.

Nevertheless, the potential savings from eliminating fossil fuel subsidies are substantial. According to the International Monetary Fund (IMF), these funds could be redirected to support renewable energy infrastructure, create jobs in the clean energy sector, and ensure that vulnerable communities continue to have access to affordable energy. Transitioning away from fossil fuel subsidies requires a careful balance, addressing both the needs of the energy industry and the welfare of vulnerable populations, while accelerating the shift to a low-carbon economy.

Incentive and disincentive design requires alignment with overarching policy objectives, with strategies that address broader goals, such as improving livelihoods, enhancing economic development, and expanding energy access for low-income communities. Policymakers base effective incentive designs on comprehensive market, financial, and technical analysis to ensure programs complement existing private sector efforts and address specific community needs. Transparent information sharing and inclusive stakeholder engagement further support successful program implementation and allow for ongoing improvements, helping align incentive programs with national energy goals and available resources.

5.2. Current applicable incentives and disincentives for renewable energy projects in Viet Nam

MOF, which oversees taxation and energy tariff policies, has devised various interventions aimed at alleviating costs associated with renewable energy investments and operations and promoting environmentally friendly and low-emission projects. Generally, some key policies and actions MOF have been implemented to attract green investment and support sustainable development broadly include tax and fee regulations and preferential tariff categories. In terms of policy design, there has been a comprehensive tax system encompassing two groups: restrictive group (financial disincentives) referring to taxes on activities/products harmful to the environment (e.g., resource tax, environmental protection tax) and encouragement group (financial incentives) referring to support aimed at incentivizing environmental protection (e.g., corporate income tax incentives, import tax incentives). This section will focus on widely applicable incentives and disincentives for the renewable energy sector to provide a holistic overview.

The Vietnamese government supports renewable energy production through various financial incentives, including land-use preferences and research and development (R&D) funding. Under land-use regulations like the non-agricultural land use tax and Decree No. 118/2015/ND-CP, renewable energy projects can receive exemptions and

reductions on land rent, with some projects exempt from land rent fees for up to 11 years. However, despite the introduction of these measures, their application remains somewhat limited, focusing mainly on tax and duty reductions to ease the financial challenges facing renewable energy enterprises. A detailed overview of fiscal incentives and disincentives for renewable energy projects, compared to standard rates, illustrates these advantages (Table 4).

Type of incentives and disincentives	Legal basis	Description relevant to the energy sector
Corporate Income Tax Incentives	Corporate Income Tax Law	• Income from implementing new investment projects in environmental sectors is subject to a 10% tax rate for 15 years. For large-scale and high-tech or new technology investment projects requiring special attraction, the period of applying the 10% preferential tax rate can be extended. • Income from implementing new investment projects is exempt from tax for 4 years, with a 50% reduction in the tax payable for the following 9 years.
Import Tax Incentives	Export Tax and Import Tax Law	• Income from implementing new investment projects in environmental sectors is subject to a 10% tax rate for 15 years. For large-scale and high-tech or new technology investment projects requiring special attraction, the period of applying the 10% preferential tax rate can be extended. • Income from implementing new investment projects is exempt from tax for 4 years, with a 50% reduction in the tax payable for the following 9 years.
VAT Incentives	Value Added Tax Law	• Input VAT on goods and services incurred during the cumulative investment period that has not been deducted can be refunded if certain conditions are met simultaneously (declaration method, business license/approval document for conditional investment and business activities...). • Furthermore, some incentives and support regarding land (exemption, reduction of land use fees, land rent, land use tax), subsidies for environmental protection products and services as regulated, are also applicable.

Financial disincentives	Environmental Protection Tax (EPT)	• Under the 2010 Environmental Protection Tax Law, EPT is an indirect tax levied on products or goods that negatively impact the environment when used. In the energy sector, it primarily targets fossil fuels such as gasoline, diesel, and coal (lignite, anthracite, other types of coal). • According to Circular 152/2011/TT-BTC, ETP = Quantity of Taxable Goods x Absolute Tax Rate. Absolute Tax Rate is specified in the Tax Rate Schedule issue under Resolution 579/2018/UBTVQH14. For example: Gasoline (excluding ethanol): 4,000 VND/liter; Diesel: 1,500 VND/liter
	Environmental Protection Fee (EPF)	• Environmental protection fees are levied on waste that causes pollution. The fee system started with the 2001 Laws on Fees and Charges and has evolved since then. • The most recent decree 153/2024/ND-CP issued on November 21, 2024 specified environmental protection fees for air emissions and will take effect on January 5, 2025. • Regulated facilities include industries like steel production, thermal power plants, cement production, oil refining, etc. • A fix fee structure of 3,000,000 VND/year is applied for non-monitored facilities. There is a variable fee for pollutants (e.g., Nox, SOx, CO) but applied based on emission levels, with reductions for low concentrations.

Table 4. Key financial incentives and disincentives applicable to the energy sector in Viet Nam

In terms of import duties, Viet Nam employs three distinct rates: ordinary, preferential, and special preferential rates, calculated according to the World Trade Organization (WTO) Valuation Agreement. Renewable energy companies benefit from exemptions on imported machinery, equipment, tools, and materials used in production for their first four years of operation. According to Clauses 11 and 13 of Article 16 of Law No. 107/2019/QH13 on export and import tax, projects in specially incentivized sectors are eligible for import duty exemptions on goods for fixed assets and for five years on

materials, parts, and components not produced domestically.[56] This exemption helps lower initial capital costs for renewable energy developers.

MOF is also studying adjustments to the **Special Consumption Tax** (SCT) for environmentally friendly goods under a draft SCT law amendment. As part of the SCT law reform, the Ministry is also revisiting SCT rates for green vehicles. For instance, hybrid cars using less than 70% gasoline enjoy a reduced SCT rate, and electric cars with nine seats or fewer have benefited from a reduced rate of 3% (from 15%) since March 1, 2022. Additionally, pickup trucks with dual passenger and cargo functionality are subject to reduced SCT and registration fees, aligning with international tax practices. Countries like Singapore and the Philippines apply similar tax rates for these vehicles as for standard cars. In Viet Nam, since April 10, 2019, the first-time registration fee for such pickup trucks has been set at 60% of the fee for passenger vehicles, supporting urban traffic management and ensuring tax policies align with vehicle usage[57].

For value-added tax (VAT), Viet Nam applies rates of 0%, 5%, and 10%, depending on the type of goods and services. According to Clause 25, Article 4 of Circular No. 219/2013/TT-BTC, dated December 31, 2013, issued by the Ministry of Finance, which guides the implementation of the Value-Added Tax Law and Decree No. 209/2013/ND-CP dated December 18, 2013, the Government's detailed regulations state that "Goods and services provided by households and individual businesses with annual revenue of 100 million VND or less" are exempt from value-added tax (VAT). So renewable energy projects benefit from VAT exemptions on equipment purchases and a 0% VAT rate, significantly lowering operational expenses.

Under corporate income tax (CIT) regulations, renewable energy enterprises in Viet Nam can qualify for preferential tax rates if they operate in incentivized investment sectors or designated investment areas. Decree No. 218/2013/ND-CP sets the standard CIT rate at 20%[58], with higher rates (32%-50%) for oil and gas. However, renewable energy projects enjoy a reduced CIT rate of 10% for 15 years, extendable to 30 years for large-scale or technologically advanced projects[59]. Additionally, these projects receive a four-year CIT exemption, followed by a 50% reduction for nine years. Projects in economically disadvantaged regions can receive a 17% CIT rate for 10 years, with complete tax exemption for the first two years, followed by a 50% reduction for the next four years. In extremely disadvantaged areas, a more favorable 10% CIT rate is available for 15 years,

[56] Bo Tai Chinh. https://mof.gov.vn/webcenter/portal/btcvn/pages_r/l/tin-bo-tai-chinh?dDocName=MOFUCM177755

[57] Tai San Cong. https://taisancong.vn/bo-tai-chinh-de-xuat-uu-dai-thue-khuyen-khich-phat-trien-san-xuat-xe-than-thien-voi-moi-truong-19247.html

[58] Bao Chinh Phu. https://baochinhphu.vn/du-an-nang-luong-tai-tao-nang-luong-sach-duoc-uu-dai-thue-102291218.htm

[59] Bao Chinh Phu. https://baochinhphu.vn/du-an-nang-luong-tai-tao-nang-luong-sach-duoc-uu-dai-thue-102291218.htm

along with a four-year exemption and a 50% reduction for the subsequent nine years. For rooftop solar projects, guidance is provided through Ministry of Finance Official Letter No. 1543/BTC-CST.

Moreover, the Ministry is considering additional CIT exemptions for income from carbon credit transactions and green bonds, expecting minimal fiscal impact from these exemptions. To further support emissions reductions, it proposes amending the CIT Law to include tax exemptions for all types of emission reduction certificates. The draft revision includes exemptions for Certified Emission Reductions (CERs), carbon credit transactions, and green bond interest income, aiming to create a comprehensive environmental finance framework.

The Ministry has also reviewed the need for clearer guidelines on tax exemptions for both Certified Emission Reductions (CERs) and Voluntary Emission Reductions (VERs), given both promote emissions reductions and environmental awareness. Currently, only income from CERs is tax-exempt, while income from VERs is not, due to differences in registration standards and transaction forms. Therefore, the Ministry of Finance has proposed amending the CIT Law to include tax exemptions on income from all emission reduction certificates. Under the revised draft, income from CERs, initial carbon credit transactions, green bond interest, and initial green bond transfers would be tax-exempt, creating a comprehensive policy framework for environmental finance in Viet Nam.

Alongside the SCT adjustments, corporate income tax (CIT) incentives under Decree 218/2013/ND-CP are also being emphasized for green initiatives. Generally, the CIT rate stands at 20%, but new projects in prioritized sectors, including renewable energy, advanced technology, and infrastructure development, can qualify for a preferential CIT rate of 10% for 15 years, as per Article 15. This incentive also includes a tax exemption for four years, followed by a 50% CIT reduction for the next nine years. For example, new solar power projects that align with clean and renewable energy production criteria are eligible for these incentives. For rooftop solar projects, the Ministry has provided specific guidance through Official Letter No. 1543/BTC-CST, ensuring businesses can apply the correct CIT incentives based on the nature and scope of their investments[60].

Renewable energy projects also benefit from **access to preferential loans.** While companies typically borrow from commercial sources at market rates, investors in renewable energy can secure loans covering up to 80% of the project's investment costs. Government Decree 75/2011/ND-CP further ensures that wind power projects, in particular, are eligible for these government credit incentives, offering additional financial support to renewable energy developers.

[60] https://taisancong.vn/bo-tai-chinh-de-xuat-uu-dai-thue-khuyen-khich-phat-trien-san-xuat-xe-than-thien-voi-moi-truong-19247.html

In terms of **financial disincentives, there are two main ones: environmental protection tax (EPT) and environmental protection fee (EPF)**. Under the 2010 Environmental Protection Tax Law, EPT is an indirect tax levied on products or goods that negatively impact the environment when used. In the energy sector, it primarily targets fossil fuels such as gasoline, diesel, and coal. Viet Nam's environmental protection fee system has evolved, starting with the 2001 Law on Fees and Charges, which listed 73 fees, including EPFs for solid waste and environmental impact assessments. The law has been updated multiple times, including the introduction of the 2015 Fee and Charge Law, which restructured EPFs into five categories: mining, wastewater, air emissions, environmental impact assessments, and environmental restoration plans. On November 21, 2024, MOF issued decree 153/2024/ND-CP issued on November 21, 2024 specifying environmental protection fees for air emissions and poised to take effect on January 5, 2025. It applies to industries like steel production, thermal power plants, cement production, oil refining, etc.

5.3. Analysis and paths forward

These fiscal measures are critical for enhancing green growth and energy transition in Viet Nam, ensuring that enterprises can more easily overcome the financial barriers associated with high initial investment costs. However, the scope of these incentives and disincentives suggests the need for broader implementation and more targeted support.

While the incentives in place have proven useful and effective in attracting investment, there are notable challenges related to the disincentive mechanisms. For example, EPF has contributed a modest share to the national budget, accounting for only 7-8% of total revenue from 2016-2019 and 16-18% from 2020-2022. This limited contribution (around 0.3% to 0.4% of the national budget during the same period) suggests that the current level of the fee is insufficient to generate substantial environmental improvements or influence meaningful changes in consumer behavior toward more sustainable practices. On the other hand, EPT, while it has grown from contributing over 1% to more than 4% of the total state revenue by 2019, still represents a relatively small portion of the overall fiscal landscape. Despite the increase in the EPT's scope, its coverage remains limited, with only eight specific sectors subject to taxation, including industrial emissions, chemicals, and electronic waste. This narrow focus means that many potentially harmful environmental activities remain outside the purview of taxation, limiting its effectiveness as a tool for driving systemic environmental change.

To address these gaps, MOF could consider **expanding the coverage of existing mechanisms to include additional sectors and better address cumulative environmental damage or lifecycle emissions. Moreover, revenue from taxes and fees should be strategically allocated and reinvested in green growth projects, such as clean energy initiatives, to maximize their environmental impact.**

Discussions are also emerging around the potential implementation of carbon taxes or the integration of carbon taxes into the existing fiscal framework, partly driven by international regulations like the Carbon Border Adjustment Mechanism. However, given the relatively strong tax and fee system in place, it is essential to analyze the risk of double-counting, where the same activities could be taxed under both existing and new carbon taxes, potentially leading to inefficiencies and financial burdens for businesses. Although the Environmental Protection Law includes recommendations for a carbon tax, in practice, EPF covers many types of taxes and clauses aligned with the concept of a carbon tax. Careful consideration of these dynamics is crucial to creating a fiscal environment that balances both environmental goals and economic growth.

To avoid crowding out private investors, **"smart" green incentives and disincentives should aim to attract additional investment and promote domestic markets for green technologies and services.** The design of such incentives must integrate with the local policy context, focusing on specific barriers and risks. This requires a strong institutional capacity to tailor incentives that reflect the unique political economy of each country. Ensuring that incentives are perceived as credible by financial markets is vital, as is demonstrating the additionality of incentives—that is, whether investments would occur without support.

By adhering to the principles of smart green incentives, Viet Nam can craft policies that not only mobilize private investment but also support the growth of sustainable markets. **Key criteria for designing such incentives include:**

- Aligning them with the existing policy context to maximize private sector mobilization
- Ensuring they lead to investments that would not otherwise occur (additionality), and resource-efficiency should be the primary goal
- Targeting incentives to address specific risks without excessive coverage
- Maintaining transparency and predictability and involving diverse stakeholders in the design and implementation processes.

These steps will help create an environment conducive to green investment while avoiding distortions that could undermine private sector participation. Another important strategy is detailed coordination frameworks outlining the roles of different agencies in managing resource extraction, including tax authorities and environmental agencies. This would clarify responsibilities for leading and collaborating on specific issues, ensuring accountability in enforcement.

Chapter 6: Global trends and potential directions for green finance to mobilize resources in the Vietnamese energy sector

6.1. Major trends in capital market products

The global green finance market continues on a strong growth trajectory, despite challenges. Green bonds are a major growth driver, with issuance volumes reaching $872 billion in 2023, a modest 3% increase from 2022, bringing the total to over $4 trillion since 2018. Sovereign issuance surged by 45%, reaching an all-time high of $120 billion, signaling a shift as investors seek stable, low-risk options in sustainable sectors amid higher interest rates.

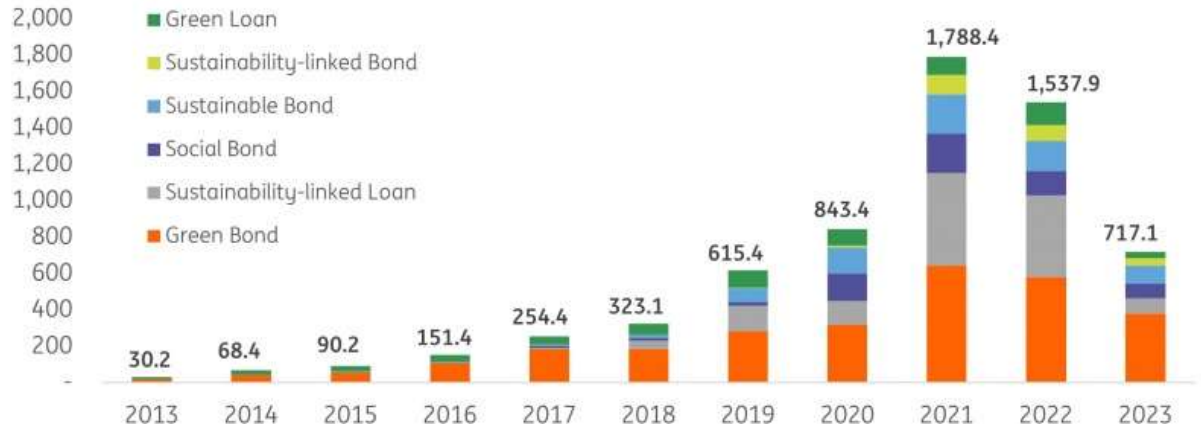


Figure 23. Global issuance of sustainable finance products (in billion $) from 2013 to January-June 2023. Source: Bloomberg New Energy Finance, ING Research.

The energy sector saw significant growth, accounting for 35% of green bond proceeds. According to the Climate Bonds Initiative, investors are increasingly willing to accept a "greenium," a slight yield discount associated with green bonds, indicating strong demand. Transparent and standardized sustainability reporting, reinforced by policy support, is essential for credibility in ESG investments and the healthy growth of sustainable finance.

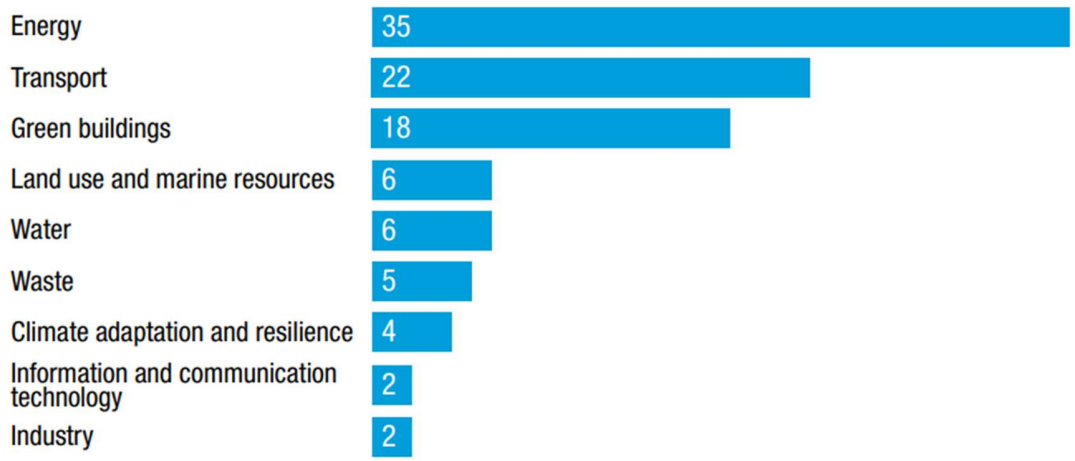


Figure 24. Global green bond issuance by sector (%) as of 2023. Source: UNCTAD[61]

In 2023, 35 economies adopted measures supporting sustainable finance, spanning national frameworks, sustainability disclosures, carbon pricing, and sector-specific regulations, including green bonds (Figure 25). The European Union leads with its robust regulatory framework, including the Taxonomy Regulation, Corporate Sustainability Reporting Directive (CSRD), and Sustainable Finance Disclosure Regulation (SFDR), providing guidance on environmentally sustainable capital allocation. Expanded taxonomies now cover climate and environmental goals in areas like water protection, circular economy, and biodiversity restoration. Asia is advancing in green finance, with Japan, China, and South Korea having established their own guidelines, while many jurisdictions align with international frameworks. For instance, Singapore has proposed ISSB-aligned disclosures starting in 2025. The ASEAN taxonomy, uniquely, aligns certain coal phase-out activities, reflecting local flexibility.

[61] UNCTAD. https://unctad.org/system/files/official-document/wir2024_ch03_en.pdf

Policy area	Economy
National strategy or framework	Argentina, Brazil, China, France, India, Japan, Mexico, Switzerland, Türkiye, United Arab Emirates, ASEAN
Taxonomy	Mexico
Sustainability disclosure	Brazil, China, France, Germany, India, Republic of Korea, United Kingdom, United States, European Union
Sector-specific measures	Argentina, Australia, Brazil, China, India, Indonesia, Italy, Mexico, Switzerland, European Union
Product-specific measures	Argentina, Australia, Brazil, China, Republic of Korea, European Union
Carbon pricing	Australia, Canada, European Union

Source: UNCTAD GSFO Sustainable Finance Regulations Platform.

Note: Sector-specific measures cover sustainable banking, insurance, investment and credit ratings; product-specific measures cover sustainable funds and bonds. Measures in development are not included.

Figure 25. Measures in six policy areas used by different economies as of 2023. Source: UNCTAD GSFO Sustainable Finance Regulations Platform

6.2. Trajectories for Viet Nam's green financial market

Viet Nam, as a rapidly developing economy in Southeast Asia, is increasingly prioritizing green finance to support its energy transition. The nation's commitment to renewable energy, particularly solar, wind, and biomass, reflects a growing alignment with global trends toward low-carbon energy systems. While Viet Nam has made strides in sustainable finance, such as establishing frameworks for green bonds and renewable energy financing, challenges remain that hinder the full mobilization of resources for the energy sector. This report analyzes the macro-economic situation in Viet Nam, together with highlighting some barriers and recommendations for improvement of selected green financial instruments.

Some key findings include:

1. **Macro-economic situation in Viet Nam affecting green finance and current state:**

- The current macro-economic situations in Viet Nam, including increasing GDP and private sector and foreign direct investment (FDI) and stable domestic revenues, implicate a relatively attractive investment environment for investors. However, there are certain concerns, particularly related to slower growth in public investments for large-scale green infrastructure projects. For example, in the energy sector, public utilities, such as EVN, often lack the financial capacity to invest in green infrastructure or purchase renewable energy. This financial

capacity issue stems from persistent losses, significant accumulated debt, and reduced equity capital.

- Green projects often have long investment horizons (up to 20 years) and high capital costs, while available credit sources typically offer short- to medium-term funding. This mismatch limits the flow of capital into green initiatives and affects project bankability by complicating revenue streams and increasing perceived risks. Issues like restrictive commercial terms, limited creditworthiness of project counterparts, and lengthy licensing processes further delay the launch of new green projects.
- Therefore, innovative financing instruments are necessary to attract private and international support, with green finance playing a key role in this process

2. Green finance system and initiatives in Viet Nam

- Vietnam's green finance governance has evolved through a comprehensive strategic and legal framework, starting with the National Green Growth Strategy (2014–2020) and updated for 2021–2030, which emphasizes integrating green finance into economic planning.
- Various government bodies, such as the MOF and the State Bank of Vietnam (SBV), lead green finance development through policies, financial incentives, and market mechanisms. The MOF focuses on improving fiscal policies, mobilizing resources, and developing green financial markets, including green bonds and carbon markets. Efforts to promote green finance include policy development, resource mobilization, capacity building, and international cooperation.
- From international experience, scaling up green finance requires coordinated, multidimensional efforts from governments, businesses, and individuals, as green technologies and industries demand diverse funding sources. Governments play a key role by creating regulatory frameworks, offering policy incentives, and mobilizing public investments to reduce risks and attract private capital. Central banks and regulators support green finance through measures like climate risk assessments and the issuance of green bonds. Private investors, while cost-sensitive, are crucial, and public sector participation can catalyze substantial private investment. Commercial and development banks act as intermediaries, offering green loans and blended finance to de-risk projects. Institutional investors, including pension funds, are increasingly focusing on ESG assets but need strong policy frameworks to shift investments toward green finance. Lastly, international financial institutions and multinational organizations provide concessional loans, technical support, and global best practices to promote consistency and transparency in green finance markets.
- In the case of Viet Nam, we highlight that **effective government leadership and coordination are crucial in removing barriers to green financial development.** MOF should collaborate with other important actors, including SBV, Ministry of Planning and Investment, Ministry of Natural Resources and Environment, to eliminate obstacles to green finance across sectors. Engagement with financial institutions, institutional investors, international institutions, multinational

organizations, and private sector is also crucial to level the play field for green finance, thereby incentivizing further investment.

3. Application of and recommendations for green finance instruments in Viet Nam

- Developing and expanding a range of green finance instruments would attract diverse investors. This diversification would broaden access to green finance across various enterprises and sectors. However, the pros and cons of each instrument need to be considered thoroughly to ensure effective implementation.

i. Green bonds:

- A major barrier for the improvement of the green bond market is the insufficient market depth, with a limited investor base, particularly among institutional investors who are less familiar with green bonds. Additionally, low liquidity, lack of a clear regulatory framework, and high issuance costs deter potential market participants. The absence of standardized definitions and verification processes also raises concerns about "greenwashing," undermining investor confidence.
- To overcome these barriers, recommendations include increasing investor awareness, expanding public-private partnerships, enhancing liquidity through improved secondary markets, and streamlining regulations to align with international standards. Additionally, developing a stronger pipeline of eligible green projects and providing technical support to issuers are crucial for market expansion

ii. Green index:

- The development of green indices in Vietnam, such as the Vietnam Sustainable Development Index (VNSI), presents both barriers and opportunities. On one hand, the country faces challenges such as limited ESG Environmental, Social, Governance) data disclosure from companies, a lack of standardized reporting practices, and a low level of investor awareness about sustainable investment. Additionally, the absence of robust index formulation methods hinders the growth and influence of green indices.
- Oportunities exist in leveraging international expertise, particularly from developed markets, to improve Vietnam’s green evaluation systems. Collaborations with foreign index institutions can introduce best practices, while enhancing ESG data disclosure can boost the credibility and relevance of green indices. Institutional investors, including social security funds and insurance asset management firms, could play a significant role in promoting green investment by integrating green indices into their portfolios. Furthermore, developing a diverse range of green investment products tailored to the needs of the Vietnamese market, such as themed funds and separately managed accounts (SMAs), would deepen the market’s engagement with sustainability and expand green finance’s reach.

iii. Green insurance:

- The insurance market in Vietnam, comprising life, non-life, and auxiliary services, has significantly contributed to the country's economic and social development, supporting macroeconomic stability, complementing social welfare policies, and

promoting investor confidence. Despite steady growth in total assets, with a notable rise of 11.12% in 2023, the green insurance sector remains underdeveloped, hindered by limited recognition and low awareness of environmental protection coverage. While some firms offer insurance products for renewable energy, environmental liabilities, and green construction, the lack of a comprehensive legal framework, limited product diversity, and low insurance penetration impede market expansion.

- Opportunities exist, particularly in green insurance for sectors like electric vehicles, as Vietnam's electric vehicle market is expected to grow significantly by 2028. Government initiatives, such as the national green growth strategy, provide a foundation for promoting green insurance. However, further policy interventions are needed, including compulsory pollution liability insurance for high-risk industries, clearer risk assessment standards, and public-private risk-sharing mechanisms. Additionally, incentives like tax benefits for insurers managing climate risks and penalties for fossil fuel investments could help align the insurance sector with national climate goals, driving the growth of green insurance products.

iv. Green funds

- The development of green funds has seen many challenges; the lack of a clear regulatory framework and diversified revenue sources have hindered the effectiveness of existing green funds like Vietnam's Environmental Protection Fund (VEPF). The fund's reliance on limited financial channels, such as state budget allocations and environmental fines, restricts its capacity to scale up its impact, especially in the renewable energy sector. Additionally, the absence of a finalized structure for the fund complicates its operations, making it difficult to attract sufficient private capital or optimize project outcomes.
- If green funds are to be implemented, proper legal frameworks, capacity-building programs, and stronger monitoring mechanisms should be in place.

v. Mandatory Environmental, Social, and Governance Disclosure:

- Vietnam's progression towards mandatory ESG (isclosure presents both barriers and opportunities. The country's current regulatory framework, introduced through Circular No. 96/2020/TT-BTC, mandates reporting on key sustainability metrics such as greenhouse gas emissions and resource consumption, but it remains limited in scope compared to more comprehensive frameworks in the EU or Singapore. A key barrier to effective implementation is the absence of a finalized ESG taxonomy and standardized reporting framework, which hampers the comparability and reliability of disclosures.
- However, this also presents an opportunity for Vietnam to strengthen its regulatory infrastructure and align more closely with international standards, attracting foreign investment and fostering greater corporate transparency. To enhance the effectiveness of ESG disclosures, Vietnam must establish clear reporting guidelines, improve consistency across sectors, and address challenges related to ESG rating agencies' methodologies. By doing so, Vietnam can unlock the

potential for sustainable business practices and solidify its position in the global market.

4. **Green financial incentives and disincentives to promote sustainable development**

- MOF has implemented various fiscal incentives and disincentives to support renewable energy development. These measures include tax exemptions and reductions on corporate income taxes (CIT), import duties, and value-added tax (VAT), particularly for new renewable energy projects. For instance, renewable energy enterprises can benefit from a reduced CIT rate of 10% for 15 years and exemptions from land rent and import taxes on essential equipment for the first four years of operation. Furthermore, preferential loans and government funding for research and development (R&D) in renewable energy are available, providing crucial financial support. These incentives help offset high initial investment costs, thus encouraging both domestic and international investments in the sector.
- In terms of disincentives, there are effective and evolving systems in place. There are some challenges, however. For example, while the Environmental Protection Tax (EPT) has seen increased contributions to the national budget, it still represents a relatively small portion of the fiscal landscape, and its coverage is limited to only a few sectors. This restricts its ability to drive broad environmental change. The Environmental Protection Fee (EPF), aimed at penalizing polluting activities, has similarly contributed modestly to the national revenue and has had limited success in influencing consumer behavior or promoting sustainable practices. To strengthen the renewable energy transition, MOF could expand the scope of these taxes and fees to cover more sectors and introduce measures such as carbon taxes, which could better align with international climate commitments.
- To further improve existing incentives and disincentives, MOF should consider key criteria such as: alignment with existing policy context, ensuring the incentives would lead to investment that would not otherwise occur (additionality), resource-efficiency, targeting incentives to address specific risks without excessive coverage, transparency and predictability, and involving diverse stakeholders in the design and implementation process.
- These steps will help create an environment conducive to green investment while avoiding distortions that could undermine private sector participation. Another important strategy is detailed coordination frameworks outlining the roles of different agencies in managing resource extraction, including tax authorities and environmental agencies. This would clarify responsibilities for leading and collaborating on specific issues, ensuring accountability in enforcement.

The next report will focus on mapping green financing collaborations between MOF and development partners, with an emphasis on priority areas. It will include a review and assessment of past and ongoing initiatives, identifying areas that require additional focus and support. Based on this analysis, the report will offer strategic recommendations to MOF for structuring and advancing green financial development efforts.